Educators Guide to What Makes A Fish A Fish?

Grade Level Pre K - K

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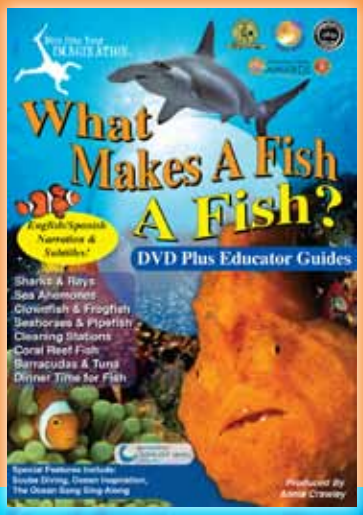
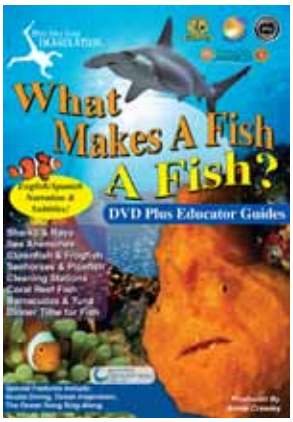
By Michele Hoffman Trotter
and Annie Crawley



Dive Into Your IMAGINATION®



Educators Guide to What Makes A Fish, A Fish? Pre-K to K Edition

By: Michele Hoffman-Trotter
& Annie Crawley, aka Ocean Annie

Dedicated to Mother Ocean,
Harriet Pergande, and Sandra Hoffman

Find More Here:

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Ocean Annie

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Educators Guide to What Makes A Fish, A Fish

Dive Into Your Imagination is changing the way a new generation views the ocean and themselves. Founder Annie Crawley, born and raised in Chicago, did not see the Ocean until College. Learning to scuba dive changed her life. Scuba diving allows people to explore, study, and experience our ocean. Dive Into Your Imagination was founded and this project was conceived to bring the ocean to children via educators by integrating all content areas, including character education and a behavioral component in which children use their imagination and become scuba divers during lessons. Students learn the golden rule of scuba diving and of life: *"If you get excited remember to: Stop, Think, Breathe slowly and then Act!"* Contact us if you are interested in bringing Annie Crawley, aka Ocean Annie, to your school system for dynamic multi-media programs designed to leave a lasting impression on students, parents, and teachers.

Our ocean is 90% unexplored; yet we are completely interconnected. Our ocean is responsible for our weather, oxygen, water, and 70% of our population relies on the resources from the sea as their main source of protein. Everything we do on land affects our ocean. We want children, educators and parents to love the ocean because we protect what we love. Dive Into Your Imagination wants you to become involved in the Ocean Revolution happening on our planet. Please call, text, email, bing, youtube, facebook, tweet, tumble, and share your experiences with us or follow us on our blogs and through social media. *We are a global society and our ocean is our universal language.*

"Sometimes we need one person to believe in us until we can believe in ourselves." As educators, you are that one person for each of your students.

Award winning Underwater Cinematographer and high definition pioneer, Tom Campbell, was that person for Annie Crawley. She met Tom on a rainy afternoon 14 years ago when Manta Queen Dr. Andrea Marshall was a student at UCSB working for him. Annie needed a member of the National Press Photographers Association to approve her application and she targeted Tom because he was her underwater photography hero. When she told Tom she wanted to specialize in the underwater realm, Tom said, "It's the toughest industry in the photographic world."

He was not kidding; his brutal honesty committed and pushed her to demand excellence. Tom left a lasting impression on Annie, as all great teachers do and his words of encouragement still ring in her head. Tom watched Annie grow and during the past decade he coached, mentored and even hired her to go on expedition. Because of Tom's guidance and willingness to mentor Annie, she too has become the teacher sharing the knowledge through her books, videos and these educator guides. A true Guru is forever the teacher, forever the student. Special thanks go to Tom Campbell for his belief in Annie, the vision of Dive Into Your Imagination, and the desire to help educate our world about our ocean.

Give thanks and gratitude for everyone and everything.

The Dive Into Your Imagination series of DVDS, books and educators guides would not have been possible without the support of grants from the Save Our Seas Foundation (SOSF). SOSF is a non-profit organization that initiates and supports numerous projects focused on conservation, awareness, research and education of the global marine environment. For more information visit www.SaveOurSeas.com

Marine ecosystems around the world have been greatly diminished due to overfishing, pollution and habitat loss. To make a difference, together we need to raise awareness, create educational programs and inspire people to appreciate the intricate nature of how we are all bound to the health of the sea. Through these materials, we hope you can teach and inspire children to become the future custodians of our marine world. As long as there are people who care and take action, we can and we will make a difference.

THANKS TO OUR CONTRIBUTORS

These lessons would not have been possible without the generous and brilliant contributions of exceptional educators, artists, and subject matter experts. We are infinitely grateful for your experience, ideas, editorial support, and unwavering belief in this project. Special thanks to Amy M. Ludwig, extraordinary educator, mother, and thought leader and Mike Braniger for believing in the vision before it was conceived!

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Michele Hoffman-Trotter wishes to personally thank Annie Crawley for her ambition, inspiration, and vision; my beautiful boy Ryan, my primary motivation for wanting to make the world a little better and cleaner; my husband Bob, my rock (and when needed my backbone); my spectacular parents, Sandy and Les who always believed I could achieve; and my Grandpa Dr. Herbert P. Albert; who had the foresight and wisdom to tell me when I was a very small child that "our future is the ocean".

We create our character and our lives. Faith, Courage, Enthusiasm coupled with Patience, Persistence, Perseverance and Passion are the seven words Annie Crawley lives by. There is great power in the words we say to ourselves and the words we give to others. Motivational Speaker Les Brown has become a force in Annie's life as he has mentored her for more than a decade.

"Can you do more than what you are doing today? Whatever goal you have, you first must believe it is possible. Embrace yourself and believe. You can go beyond what you are capable of if you believe in yourself."

Annie Crawley is a member of the Les Brown Platinum Speakers, trained by Les Brown. For more information on bringing Ocean Annie, aka Annie Crawley to your school, group, or for professional development, contact her today.

Table of Contents

HOW TO USE THIS BOOK

Whenever a scuba diver or snorkeler enters the ocean, they experience a world in which the unbelievable is real. Purple staghorn coral, rainbow fish, sharks, dolphins, sea stars and creatures that look like they come from outer space live beneath the surface of our one ocean. Human beings have a direct connection with the sea, just think of how you feel when you see a dolphin. It is our goal that you use the ocean to engage your students to learn English, Science, Geography, Communication Skills, Math and Character Education.

The more we learn about the ocean, the more we understand how it affects our weather, climate and makes earth habitable. Humans are inextricably interconnected to the ocean. New species are being found beneath the sea as the ocean is 90% unexplored. These lesson plans allow you to enter the water with your students as Imagination Explorers and scuba divers, so you can view this underwater world as a brilliant masterpiece. The ocean is an underwater living museum, providing both education and entertainment. Together, you will cultivate many ideas on this journey. Encourage your students to question all they see while guiding them to seek answers. Help them apply scientific inquiry to all aspects of their lives.

On the Dive Into Your Imagination DVDs there are always bonus materials you can view to gain a deeper understanding for what one needs to be a scuba diver and underwater explorer. You can also purchase complimentary books, DVDs and more lesson plans combining photographs, cartoon characters and high definition footage for further discovery and learning. The Adventures of Ocean Annie, Makaio, Fringy the Ichthyologist Fish and Finnagain the Friendly Shark will engage your students for hours. You may even want to visit your local scuba diving shop to discover scuba diving in a swimming pool near you!

Thank you for becoming an ocean classroom. With *The Educators Guide to Explore What Makes A Fish, A Fish,* you are going to cultivate students who want to use their imagination, learn and discover. Thanks for helping change the way a new generation views the ocean and themselves. Our ocean needs to be protected and we protect that which we love. We look forward to your emails with questions, suggestions, comments, or to find out how you can bring the real Ocean Annie to your school! Remember to keep diving into your imagination!

Hi, I'm OCEAN ANNIE!
WELCOME! We have lots of FUN tips to share with you and your students in all the lessons and activities!

INTRODUCTION

The *Educators Guide to Explore What Makes A Fish, A Fish* brings the award winning Dive Into Your Imagination DVD, *What Makes A Fish, A Fish* alive in your classroom. This guide corresponds with each chapter from the DVD of the same title produced by Annie Crawley about life in the ocean. These cross-curricular lessons are ideal for young learners and bring science together with Art, Language Arts, Geography, Math, Music, Social Studies, Movement, Teamwork, Collaboration, Character Building Skills, Imagination Play and more.

For each chapter of the video there is a lesson plan that includes:

a. Character education and imagination play for your students.

b. A set of student questions correlating to the lessons designed to prompt discussion and enhance learning during video and multi-media viewing.

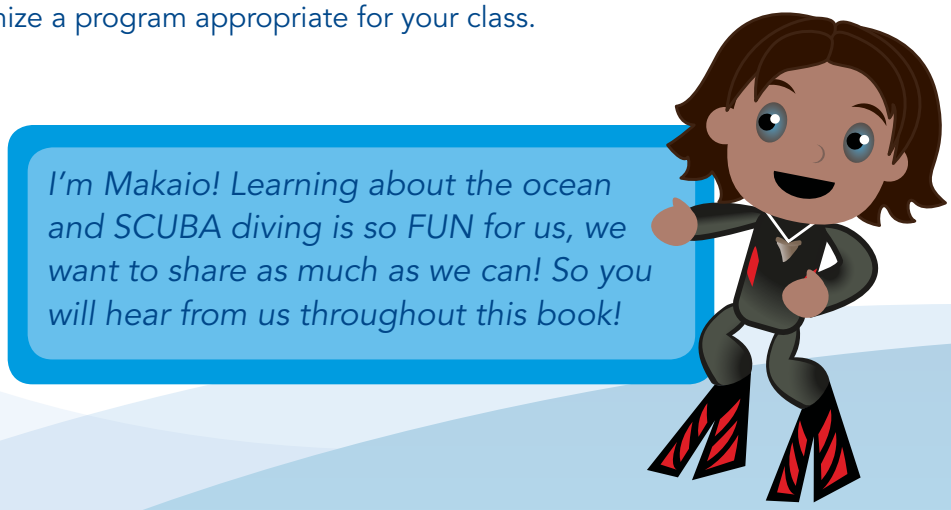
c. Ideas and support materials you can use to build learning centers in your classroom which combine science with other core subjects.

d. A glossary of scientific terms, eco-tips and websites for educator content support.

e. Suggested book lists and extension activities that can be used to bring an ocean of imagination flooding into your class.

WHO IS THIS BOOK FOR?

This book is designed for educators to use in planning ocean based activities for students combining science, literacy, math, geography, and character education. It is important to recognize individual and collective capabilities of the students in your class, and modify activities to address the needs of each student. Though each unit provides several learning station activities, we suggest choosing 2-3 of them for use at any one time. Our goal is to provide you with many tools and options in order for you to customize a program appropriate for your class.



OCEAN tips share fun and engaging ocean facts from the recommended Ocean Literacy Standards.

SCUBA tips share physical and mental behaviour tips you can use to keep your students engaged in the activities.

HOW IS THIS BOOK ARRANGED?

Each chapter of the DVD, *What Makes A Fish, A Fish,* is presented starting with an introductory question and answer section giving you the tools necessary to introduce and pre-teach important aspects of the video segment. Following each introduction are activity center concepts with extension ideas. At the end of the book is an appendix aligning each lesson with key educational standards and a master book list for suggested further reading.

Each chapter contains the following:

1. General Concepts/Topics to Teach
2. Objectives
3. Character Education
4. Treasure Chest of Vocabulary Words
5. Required Materials
6. Anticipatory Set: Lead In Questions and Answers
7. Imagination Play Script
8. Classroom Activity Stations
9. Extension Ideas and Journaling
10. CCSS Alignment
11. Book List/Applications/DVDS Specific to tie Activities and Character Education
12. Closure and Follow-Up
13. Plan for Independent Practice
14. Transcript of DVD
15. Go Blue Environmental Section

Below is an overview of what to expect in each of the sections listed above.

General Concept/Topics To Teach

This part of the book explains the key topic addressed in the lesson plans and the central ideas or take away themes for students. Science is a fundamental part of our lives and the scientific method of inquiry is a cornerstone enabling us to think logically through everyday issues. These lesson plans are underlain with science, math, English, art and imagination concepts, and include a cross curricular approach to science based thinking. In addition, the students will learn how to think, synthesize information and take a global approach to learning about our environment.

Objectives

This section explains the key purpose of the lesson and concepts or ideas that are to be conveyed in greater detail. Also included are the skills students will have an opportunity to exercise as they participate in the learning station activities.

Character Education

Dive Into Your Imagination materials encourage students to imagine they are marine biologists, scuba divers, scientists, artists, boat captains, submarine pilots, underwater filmmakers and much more. Through our specialized behavioral philosophy, we combine a solid foundation in science with imagination to achieve a cross-curricular approach to education. This methodology is designed to make science relevant in daily life and take exploration to a new depth of understanding.

Ocean Annie provides educators with a basic understanding of what it is like to be a scuba diver so you can become a Scuba Instructor in your class. You can then guide students toward becoming imagination explorers and scuba divers. Most importantly, knowing the fundamental rules of scuba diving will provide you with an opportunity to manage your classroom in a whole new way through our specialized style of communication skills. This section addresses the basics of Scuba diving and provides you with the framework needed to help your students **Stop, Think, Breathe Slowly and then Act**. This tool helps your students center their bodies and minds as they begin to explore the exciting world of science and the ocean. Use your imagination and take your students scuba diving in your classroom each day!

Treasure Chest Of Vocabulary Words

This section introduces vocabulary words unique and specific to the ocean education topics being discussed in the lesson plan. At the end of the book is a complete glossary with definitions you can use to create word lists or an Ocean Dictionary for your classroom.

Required Materials

This is a list of all items and tools needed for each lesson plan, and then within each specific activity station is a required material list for the activity.

Anticipatory Set: Lead In Questions And Answers

Lesson plans include a set of introductory discussion questions designed to assess and build students' background knowledge. There are many effective strategies teachers can use to help begin a lesson. Below are descriptions and icons of popular strategies we suggest to help get you started.

KWL

"KWL" methodology can be very effective with young learners. This strategy addresses what the students already **Know**, what they **Want** to know, and by the end of the lesson what they have **Learned**. KWL is effective even with non-readers. When educators use written lists, it provides a visual point of reference for the learner to measure progress. A discussion comparing and contrasting prior knowledge to knowledge gained is important to help the students further understand achievement and boost self-esteem.

KWL involves dividing a board or large sheet of paper into three columns labeled K, W, and L across the top. Before the activities begin, the educator will screen students for what they think they already know about the subject. Educator will collect students' ideas on the board in the "K" column. Writing a student's name or initials next to his or her fact is very empowering for them.

Next, ask students what kinds of facts they *want* to know "W" and record those in the "W" column. At this point it is time to watch the chapter of the DVD corresponding to the lesson. This is also an ideal opportunity to ask students to become buddy teams as they watch the film, and to "Think, Pair and Share" about what they experienced while watching the film. As scuba divers, working in teams comes naturally. Asking students to work as buddies as they look for information together, and share what was learned with a buddy is an easy way to increase socialization and promote consensus before fact sharing with the larger group. As students complete their activities, continue to add new facts they have learned to the "L" column.

What Makes A Fish DVD can be viewed in English, Spanish, or with *no dialogue at all*. To pick the language selection, visit the main menu of the DVD and make a choice from the tabs English, Spanish or Music Only. You can play chapters more than once to shift student focus and have complete emphasis on the visual content. Be prepared for your students to get very excited because the real ocean animals in the DVDs are professionally filmed in a way that incorporates multi-sensory stimulation. All Dive Into Your Imagination programs are designed to foster a love of the Ocean because we protect what we love.

List – Group – Label

Another effective introduction method is List-Group-Label. Begin to "List" by asking students to brainstorm words they can relate to or reminds them of the topic being discussed. For example if the subject is fish, students might suggest words like swim, fins, or gills. Record student responses, even those that do not accurately reflect the main topic.

Next, provide students with an opportunity to break into small groups or buddy teams and work to group the class list of words into subcategories. Inaccurate words may be ruled out at this time. Challenge students to explain reasoning for placing words together or discarding them.

Finally, ask students to label or title the groups of words they have formed. For example, fins, mouth, and gills could be labeled "body parts". The groupings can be revisited after watching the video to check for inaccuracies, students may also regroup or add to categories to reflect their learning.

Anticipation Guides

Another introduction exercise you can use are anticipation guides. Write several true or false statements about key ideas from the main topic in chart form. Columns can be provided following the statements for the student to check off true or false, yes/no, or agree/disagree, etc. Read each of the statements and ask students if they agree or disagree with the statement. Have the students watch the film clip paying close attention and listening for the statements they want to verify. They may take notes during this time or make changes to their anticipation guide. Bring closure to the session by rereading each of the statements and determining the correct answer. Challenge students to make changes to the false statements to make them true.

Word Maps

One final introductory exercise idea is to build word maps. Begin by selecting a key vocabulary word from the unit and placing it in the center of the map. Help students define the word by placing boxes around the key word including: definition, synonyms, and antonyms. Students can also use the word in a sentence, or draw a picture. Ask students to suggest words or phrases to put in the other boxes, which describe the key vocabulary word. The class can review the word map following the video to make changes and or additions to reflect their learning.

Imagination Play Script

Each lesson includes elements of imagination play. Everything we use in our lives from the pencils we write with, the chairs we sit in, to the mask and fins we use to snorkel began with an idea in someone's mind. Through experimentation, knowledge, education, and creativity our ideas turn into reality. Dive Into Your Imagination wants children to be able to actively use their imagination as a fundamental component of every lesson.

Science is the foundation of logical thought, directed by inquiry, curiosity, and the quest for knowledge. Science is how we figure things out. It is a systematic way of thinking. We are all scientists in our exploration of life.

By encouraging the use of imagination in children, we enhance their learning and their lives. It is important for children and adults to know they do not have to aspire to be a scientist in order to communicate ideas that are scientific. Science is important in art, entertainment, medicine, law, and every discipline in which we engage. This section will give you ideas to stimulate your students' imagination before the activity begins.

Classroom Activity Stations

A complete "materials" list provides you with items required for each activity set up. The "Objective" section describes the purpose of the activity, the skills and the abilities the activity helps your students build. A "Lesson Procedure" section details the steps of the lesson together with discussion ideas.

Extension Ideas And Journaling

This section provides you with ideas to further learning by including extra activities you can have your students do individually, as buddies, at home, or as a class. We also recommend each student creates a journal. Asking students to collect their work in a journal is an integral part of helping them to see in a concrete way how much knowledge has been gained on a subject. Compiling art work, activity sheets, vocabulary, sentences, and stories into a central point of reference, such as their own *What Makes A Fish A Fish Book*, provides students with a reflection of what they have learned.

Common Core State Standards CCSS Alignment

This section shows you how each lesson aligns directly with Common Core State Standards (CCSS). We will be building this area to demonstrate how our lesson elements align with Math, Literacy, and Science standards. As you use this guide and create other connections, please share these with us. We will be continuing to update as more and more educators use the ocean to teach math, science, and literacy! Thanks for your help in continuing to advance this guide.

Book Stalls and Master Book List

Suggested topic specific books are recommended at the end of each lesson so you can build a book stall for students to explore and further their knowledge on the subject being taught. All book suggestions have been reviewed and approved by educators and team members of Dive Into Your Imagination. They are the highest quality, accuracy, and content available for each subject on the market. The book stall list also incorporates a bonus activity, incorporating the character education topic related to the lesson. At the end of this Educators Guide, a master book list contains all of our book suggestions, including appropriate age range and a brief summary of the book.

Closure and Follow Up

Here we provide you with ways to discuss and review what the class has learned, assess learning, detail plans for independent practice, and underscore the connectivity between this activity and other academic subject areas.

The reflection discussion time can also be used to talk with students about relationships in nature and our important role in keeping the planet healthy. Tie ins can include things your students already understand, such as the way we depend on doctors and dentists to keep our own body healthy. It is essential to have respect and concern for our planet and all living things because human beings rely on nature and our ocean for a healthy planet. This relationship with nature can be similar to the relationship we have with our parents, ourselves, and loved ones. Emphasize there is no animal in the ocean or anywhere that lives completely alone or independent of other living things, we are all interconnected. Pick out elements from the lesson that demonstrates our interconnection.

Encourage students to think of ways humans rely on the ocean to illustrate the important connection that all living things have with a healthy ocean. The phytoplankton mass in our ocean is responsible for 70% of the oxygen our planet needs. Everything we do on land affects our ocean. If our Ocean is unhealthy, our planet is unhealthy.

Plan For Independent Practice

Ideas for expanding your lesson are provided here. The concepts and ideas provided here can be used to perpetuate study beyond the classroom, foster a student's independent abilities, and even create a class or school project reaching families and your community.

Transcript of DVD

The text from the DVD is provided so you can select words or review content as needed for use with your class. You can also have students practice reading the script and create their own story based on the script. Please note that a script for a DVD is not necessarily grammatically correct if reviewing from a language/literacy point of view. Scripts are created so they sound correct to the listener.

Go Blue! Environmental Section

Go Blue is information for you, and for your students to share with their families. These can be reproduced, posted, or sent home as a way for families to stay in touch with what their children are learning. They raise awareness of issues impacting ocean health and give tips and ideas about how we can all change our daily lives to help restore health to the planet. Using these concepts, families take an active role in protecting our environment. This tip section provides educators with ideas for extension activities and additional lesson plans.

Ocean Literacy

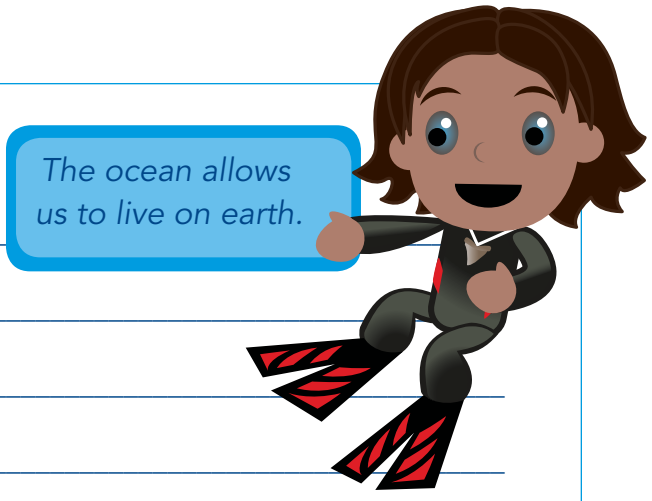
Within each activity a direct connection is drawn to principles called Ocean Literacy Standards endorsed by the National Marine Educators Association. The Ocean Literacy Campaign is a wide-ranging, collaborative and de-centralized effort by scientists and educators to create a more ocean literate society.

Standards

All of the Dive Into Your Imagination lesson plans are designed to achieve benchmarks set out under Common Core State Standards (CCSS), Mid-continent Research for Education and Learning (McCrel), and Ocean Literacy Standards (OLS). Teachers can make informed decisions and modifications as needed to align with the needs mandated by individual state or district standards. Please share with us any additional CCSS alignments you create.

Now, slip into your wetsuit, get your mask on, grab your fins. Let's get ready to Dive Into Your Imagination and explore our Underwater World! On the count of three, you know the magic words! 1, 2, 3…imagination!

NOTES



What Makes A Fish, A Fish?

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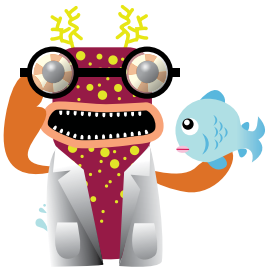


CONCEPT / TOPICS TO TEACH

Fish come in many forms, shapes, sizes, and colors, yet they share common characteristics that make them "fish". In order to be a fish, an animal must *live* primarily in water, be a vertebrate with a skeleton, use gills to breathe, have fins for propulsion, and a mouth. Fish are called ectotherms because they get heat from the outside of their body. Scientists who study fish are called ichthyologists.

Objectives:

- Students will build logic and observation skills by using a series of animal cards they will sort into groups based on common physical attributes.
- Students will develop logic and observation skills in an activity requiring them to arrange body parts on a model fish in order to build their knowledge and awareness of basic anatomy.
- Students will integrate new vocabulary in a creative design project. This exercise will help children connect the concept that letters and words have meaning.
- Students will practice with principles of geometry and spatial perception in an activity requiring them to experiment with and fit geometric shapes into a fish outline.
- Students will build their skills at spatial awareness and counting as they arrange paper scales on fish, using the scales as manipulatives.

Character Education: CREATE

We want children to grow up realizing that with every action they take, they get to choose their actions and reactions. As students grow up, you can often hear them say, "Do I have to do that?" and we want to replace the "*have*" with "*choose*" and hear them say, "*I choose to do this!*" When we grow up understanding every action is a choice, we come to realize we CREATE our lives. CREATE your life! Children state many dreams, whether it is to be a mother one day or President the next, they can achieve their dreams as long as they know the steps and goals they need to set for themselves. Children hear the word "no" thousands of times before they meet their first teacher. We want you to help them use their imagination, dream, and understand they have the ability to CREATE their life experience starting in your classroom! During this lesson, introduce the word CREATE to your students and use this concept during your lessons. Just for fun, see how many times you can incorporate the word *choose* instead of *have* into your interactions with your students!

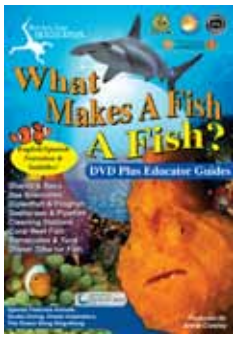
Ocean Annie and Scuba Divers choose and CREATE!

Before every trip, divers get to choose the location to travel to for scuba diving or snorkeling. Scuba Divers research and study special locations or animals they might see. The more scuba divers study and educate themselves, the more dreams they have about where they will go. Scuba diving is so much fun when you get to share experiences with a buddy. Remind your buddy teams they get to CREATE their experience in your class through their imagination. Take a moment and go over the hand signals they need to use underwater to communicate. Have them signal, it is OK to go down with their buddy. Also remind them of the hand signals to use if they get excited: Stop, Think and Breathe Slowly. Have them think about what experience they will CREATE when using their imagination and scuba diving. On the count of 3 have them say the magic word and imagine they are scuba divers! 1, 2, 3….Imagination!

Getting Started

Required Materials

- ❍ DVD "What Makes A Fish, A Fish?" by Dive Into Your Imagination
- ❍ Large Dry Erase Board/Easel and Markers



Anticipatory Set Lead-In

- ✧ Watch and become familiar with chapter one "*What Makes A Fish, A Fish?*" before playing for students.
- ✧ Review questions with students and build a brainstorming session.
- ✧ Have students use their imagination and become an ichthyologist, meaning they are scientists who specialize in the study of fish. Ask students to work independentally or with their buddy team to collect information during the run of the video clip. Play the clip and review what they learned before moving on to activities.

Treasure Chest

- Bone
- Cartilage
- Ectotherm
- Fins
- Fishes
- Gills
- Hover
- Hydrodynamic
- Ichthyology
- Ichthyologist
- Organ
- Scales
- Scientist
- SCUBA
- Skeleton
- Species
- Swim bladder
- Vertebrate
- Water

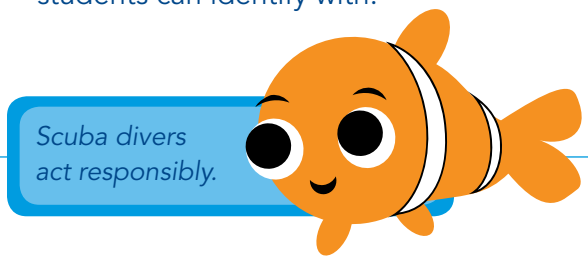
Here are some questions and answers you can use to build a brainstorming session:

KWL LGL AG WP

Questions for Students	Answers for Educators
Do fish breathe?	*Yes! They use gills to extract oxygen and other life supporting gases from the water in their environment.*
Do *all* fish swim?	*No! Some fish like frogfish have fins that are modified so that they can walk or crawl on them.*
What kinds of body parts must an animal have to *be* a fish?	*Gills for gas exchange. A backbone which is why they are vertebrates. Scales or skin. Fins to move.*
What do fish have instead of lungs?	*Gills. Gills are an organ that allows life supporting gases from the water (oxygen) to enter the body and support life function.*
What part of the body do fish use to move around and/or swim?	*Fins. Fins can be used as a rudder for steering, for propulsion, or even as modified legs for crawling.*

Video Review

- After watching the chapter about *"What Makes A Fish, A Fish"* once, or even a few times, discuss and write down additional facts, questions, and information students gained from the video for further research and discussion.
- Ask students to write a reflection in their journal about what makes a fish, a fish.
- We have the ability to create our life through our thoughts, words and actions. What we say to ourselves matters. Have students create themselves in your class. On a board, create a list of 10 positive characteristics your students can identify with.



Imagination Value

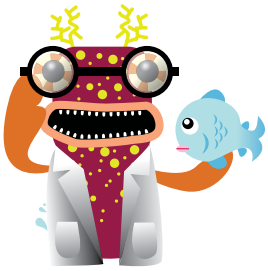
Before the activities begin, use this as an imagination exercise with your students. You can use this as a movement activity and have them act out what you are saying, or have them be silent and use only their minds. Ask children to imagine they are scuba divers or ichthyologists. By having them focus and gain a connection to the animals, they will attain critical elements of imagination play. You can read this script or use your imagination and create your own!

Imagine you are a scuba diver, underwater photographer or scientist! On the count of three, pick one and say the magic word: Imagination! 1, 2, 3…IMAGINATION!

"Imagine you are a great swimmer. You have learned how to scuba dive and enjoy watching and studying fish. You can even swim like a fish with your fins and breathe underwater because of your scuba tank of air. You get to watch fish swim all around you. You can see their beautiful scales and watch them breathe through their gills. You are diving on a coral reef and see parrotfish, clownfish, butterflyfish or maybe even a shark! Now get with your buddy and take turns using hand signals to describe your experience. By first using your imagination to be a scientist and scuba diver to study the fish, you connect with the animals. Go on, open your mind, think and use your imagination to CREATE before you start the activities. What do fish look like? What do fish eat? Where will you travel as you discover, What Makes A Fish, A Fish?"

Alternative: Imagine you are a fish living in the sea! On the count of three, say the magic word: Imagination! 1, 2, 3…Imagination!

"Imagine you are a great swimmer. You can even swim like a fish with your fins. Come on! Let's use our imagination and imagine how you would swim like a fish! Your arms and legs become fins, you have rainbow scales or skin and you breathe with your gills. You can be a parrotfish, clownfish, butterflyfish or even a shark! How do you see? What do you eat? Where do you live? Are you a tropical reef fish or do you live in a kelp forest? By first using your imagination to become the fish you will connect with the animals. Go on, open your mind, think and use your imagination to dream before you start the activities. What do you look like? What do you eat? Where will you live under the sea as you discover, What Makes A Fish, A Fish?"



CLASSROOM ACTIVITY STATION A1
WHAT IS A FISH?

Overview

Students will view a set of picture cards and divide them into two piles based on which ones they think are fish and which they think are some other kind of animal. This exercise will help build *logic, observation skills, and deductive reasoning.* It will also help them review the information from the DVD.

Materials: Animal Cards, Scissors

Talking Points

- Ask students to come up with a list of animals and record their answers where they can see it.
- Review the list of animals with students and see if any of the animals they listed are ocean animals. Put a check next to the ones that are. Affirm there are more kinds of organisms found in the ocean than on land, and many groups of animals exist *only* in the ocean including sea stars, urchins, and echinoderms.
- There are many kinds of animals living on the planet, and when there are many kinds of different animals, we can say they are *diverse*.

Lesson Procedure

1. Photocopy and cut out the set of animal cards and place them at a discovery center.
2. Lay out the animal cards on a desk or floor space with the animal pictures facing up.
3. Instruct students to make 2 piles, one that is fish and one that is "other animals".
4. When students have sorted them all, they can flip the cards over to discover whether they were right or wrong. Animals that are fish have the word "FISH" on the back; animals that are not will simply be blank.

CLASSROOM ACTIVITY STATION A1 (Continued)

WHAT IS A FISH?

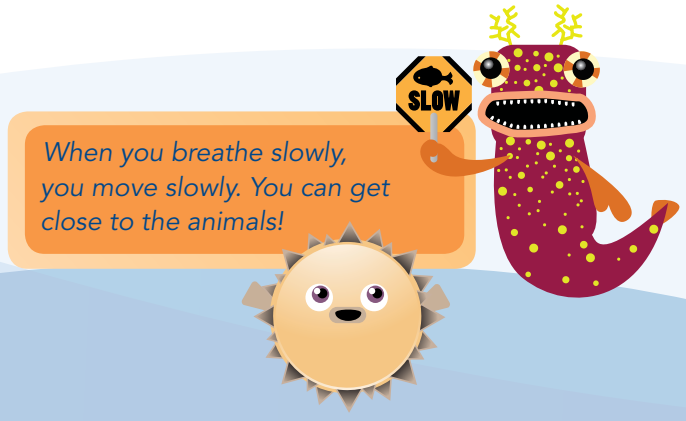
Extension Ideas

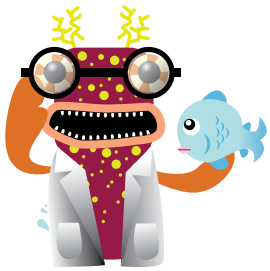
» Ask students to group them again based on where they might live such as the ocean, a farm, the rainforest or the woods. Add more animals to the deck for students to divide and arrange such as birds, reptiles, and insects.

» Set up a station with magazine clippings of different kinds of animals and ask students to work on placing them together in groups based on common characteristics. For older students, you can assign a "class" of animal for buddy teams to find and clip from magazines. Examples of animal classes could include fish, mammals, reptiles, crustaceans. You can create this into a game to see which buddy team can build his/her animal group the biggest or most diverse.

» Work with students to make a word or picture list of the things fish need to live healthy lives in their ocean home: sunlight, clean water, nutrients, salts, oxygen, waves and currents to mix the water. Include different kinds of habitats like kelp forest, rocky and coral reefs.

Notes





CLASSROOM ACTIVITY STATION A2

BUILD A FISH!

Overview

Students will review the basic anatomy of a fish by placing the body parts where they belong on a model fish. This exercise will help reinforce basic fish biology through *shape recognition* that was learned from the DVD, and employ *logic and analytical thinking* to complete the fish.

Materials: Fish Parts, Felt, Board or colorful paper, Scissors

Talking Points

- ✧ Ask students whether they can remember what kind of body parts fish have; make a list where students can see them. Replay the film chapter as needed.
- ✧ Review that fish have eyes to see, a mouth to eat, fins to help them move or swim, gills to help them breathe and scales or skin for protection.
- ✧ Ask students whether they think fish fins are always shaped exactly the same?
- ✧ Affirm that the answer is no. In fact different kinds of fish have unique fins and body shapes. Often their body shapes and colors relate to the environment in which they live. This variety reinforces and shows students how fish are diverse.

Lesson Procedure

1. Use the patterns provided in the manual to cut the fish body parts out of durable material such as the felt, board or paper.
2. Lay the fish body parts out on an open work space.
3. Instruct students to CREATE and arrange the body parts on the body shape where they would actually belong on a fish.

CLASSROOM ACTIVITY STATION A2 (Continued)

BUILD A FISH!

Extension Ideas

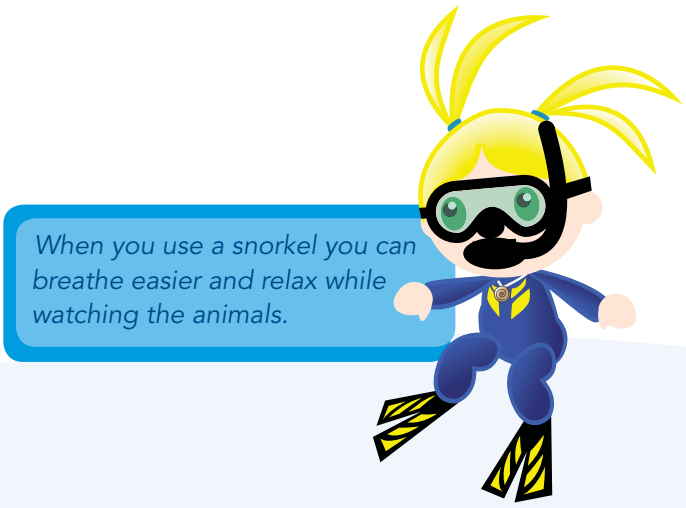
» Ask students to identify what each body part is responsible for in helping the fish function. Have students compare what is similar or different between fish and themselves.

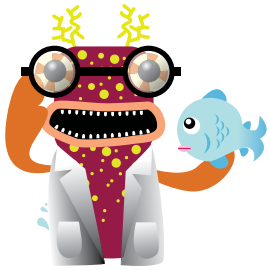
» Make up a few extra body parts that do not go on a fish to make the game more challenging or fun. You might get fish with arms and legs.

» Work with students to make a word or picture list of the things fish need to live healthy lives in their ocean home.

» Ask students in class, or as a take home assignment, what kinds of products come from fish. Examples would include food we eat, pet foods, animal feed, vitamins, leather and even glue! Ocean resources are critical to supplying humans with many products.

Notes





CLASSROOM ACTIVITY STATION A3
COOL SCHOOL

Overview

Each student will design a fish and label it with a new vocabulary word or fun fact of his/her choosing plus their own name. When all fish are complete, arrange them on a bulletin board as part of a school of fish. This project will help students build *vocabulary, creativity, artistic ability, fine motor skills, and practice counting* skills.

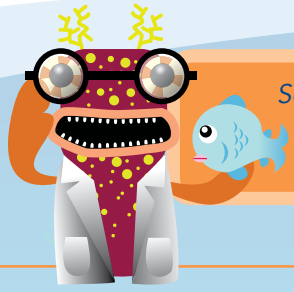
Materials: Fish Outline, Crayons, Glitter, Fabric scraps and other things students can use to design their fish, Scissors, Glue sticks, Butcher paper, Bulletin board, World map or globe

Talking Points

- Where in the ocean do fish live? *A: Fish are found throughout the entire world ocean. A globe or map can be used to demonstrate how it is possible to travel the entire ocean without crossing land. Also we teach students five names for the ocean: Pacific, Atlantic, Arctic, Indian and Southern; yet with this exercise you can show them there is only one ocean with several ocean basins we have named.*
- Do fish live in warm water and in cold water? *A: Fish are found in warm waters and even freezing water. Use a map to help students get a feel for the warm waters concentrated around the equator and the extreme cold at the poles.*
- Where do fish live and describe what those places might look like. A: Fish live in undersea forests, on coral reefs, in caves, around undersea volcanoes, etc. The more diverse the list, the more it will help students be creative when they think about how they want to design their fish. It is important for students to understand that environments on the ocean are very much like environments on land. There are mountains, forests, hot springs, etc.

Lesson Procedure

1. Cover a bulletin board with butcher paper. Decorate the background for your "cool school". Twisted streamers can be seaweed, cupcake liners can be coral polyps and colored construction paper can be your reef.
2. Provide each student with a fish shape to decorate. Once each child has finished creating their fish, help them choose and write a vocabulary word or fun fact from the lesson to write on their fish.
3. Use a world map or globe to show where different types of aquatic ecosystems are located.
4. Arrange the fish on the board in a school and use it for counting and vocabulary practice.
5. Post images from the Dive Into Your Imagination Poster Series of different types of habitats to inspire diverse designs.



Scuba divers and scientists want to protect our ocean because they know it's importance.

CLASSROOM ACTIVITY STATION A3 (Continued)

COOL SCHOOL

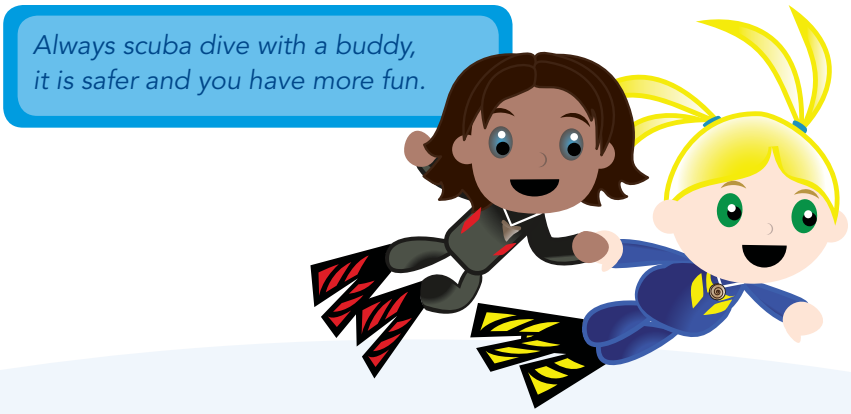
Extension Ideas

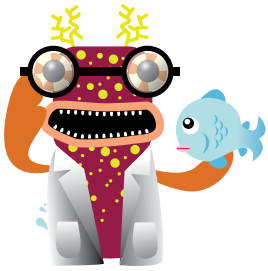
» Ask each student to create a story about their fish and where it lives. Have them share their stories with their buddy.

» Explain that fish are prehistoric and were around even before the dinosaurs. Help students use their imagination and create a story or make an additional illustration of what their fish would have been like in prehistoric times. Compare and contrast the modern with the prehistoric version.

» Get a fossil fish for your classroom. Ask students to make scientific predictions about the differences between prehistoric and modern fish. If you can, date your fossil and have students guess how old it is. Many fossils are millions of years old, yet they still resemble modern day fish.

Notes





CLASSROOM ACTIVITY STATION A4

FISH-OMETRY

Overview

Students will look at the fish outline on the wall and see how they can fit various geometric shapes into the space of a fish: triangle tails, oval body, heart mouth and so on. Participation in this activity will provide students with an opportunity to use logic, visual perceptual skills, visual organization, and deductive reasoning, while helping reinforce familiarity with basic geometric shapes and help students see how they relate to organic forms.

Materials: Fish Outline, Shape cut-outs

Talking Points

- Point out how geometric shapes are found in all living things. See if students can see geometric shapes in themselves, a neighbor or in the classroom.
- Ask students what kinds of shapes fish bodies might be? *A: Affirm that fish can be oval, round, and even irregular shapes. Explain to students this variety is called diversity.*
- Remind students that scuba divers never rush through anything. They always stop, think, breathe slowly and then act. Encourage your students to attend to precision in their activities.

The golden rule of scuba diving and life is to Stop, Think, Breathe Slowly, then Act!

Lesson Procedure

1. Place fish outlines on a bulletin board or similar work space where they can be easily seen.
2. Shapes can be made of colored paper to further categorize shapes (e.g. all circles are yellow).
3. If the shapes are laminated, double-sided tape or Velcro can be used to get them to temporarily adhere to the fish form.
4. Instruct students to see how many ways they can fit the geometric shapes into the fish outline.
5. Show the fish outline to students and see if they can recognize any familiar shapes. Coach students as needed to help point out the oval body, triangle fins, etc.

CLASSROOM ACTIVITY STATION A4 (Continued)

FISH-OMETRY

Extension Ideas

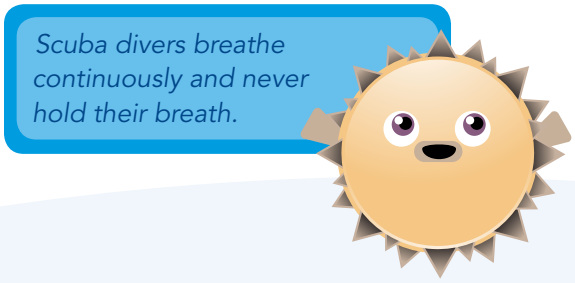
» Using geometric shapes, ask students to design their own fish or other sea animals.

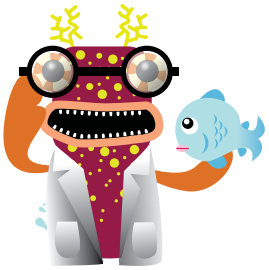
» Ask students to bring in a picture/magazine cut out from home of any animal. Arrange students in buddy teams to see how many geometric shapes they can recognize in the pictures.

» Have students create themselves with geometric shapes. What would they look like if they created their body parts with squares, ovals, rectangles, triangles and circles?

» Take a different approach to using shapes by building an ocean-themed mosaic. Pieces of paper will work, but think about being "green" and using plastic and other scraps from your recyclables too. Students can build amazing art from trash that has been properly cleaned.

Notes





CLASSROOM ACTIVITY STATION A5

COUNT MY SCALES!

Overview

Students will build a fish, and count how many scales they can fit on their fish. Through this exercise students will get practice with *fine motor coordination, counting and numbers,* and develop *deductive reasoning*.

Materials: Fish Parts, Paper Plate, Construction Paper, Scissors, Glue Stick, Pencils

Talking Points

- Explain scales are a feature of a fish's skin designed to provide protection. Scales are an adaptation that helps fish move smoothly through the water by hydrodynamics.
- Many fish have scales, hard coverings that help to protect the fish's skin.
- Some fish, like eels, hagfish and lampreys have smooth skin and no scales, they are known as scaleless fish.
- Ask students by show of hands whether sharks and stingrays are fish. Confirm they are, and explain sharks and rays have a special kind of scale called dermal denticles that look and feel like tiny teeth. They feel rough to the touch like sandpaper.

Lesson Procedure

1. Trace 2" circles on construction paper in a variety of colors and cut out enough of them to cover a paper plate for each student in class. Alternatively you can print out scales for fish or denticles for sharks from activity section templates.
2. Using the fish part stencils in this lesson plan, make a set of cut-out body parts from construction paper for each child in class.
3. Set up a work space with paper plates, glue sticks, scales and body parts.
4. Give each student a paper plate and instruct them to affix as many scales as they like using the glue sticks.
5. As students complete the bodies, assist them with arranging the body parts so they can be affixed to the fish shape with glue sticks.
6. As fish are completed, hang them around the room and ask students to count how many scales each fish has.

CLASSROOM ACTIVITY STATION A5 (Continued)

COUNT MY SCALES!

Extension Ideas

» Create a set of math problems about the fish that require students to add or subtract the number of scales together. All children will benefit from adults demonstrating addition and subtraction and using the mathematical terminology.

» Help students write stories about their individual fish or come up with a list of words to describe them.

» Fish often have different color skin to blend into their surroundings. Green fish may live in kelp forests, pink frog fish live on pink sponges and flat fish often are the same color as the sand. Fish use their color patterns to camouflage themselves in their surroundings. Ask students to describe interesting skin types or patterns on other kinds of animals. How do they use camouflage? How do people use camouflage to blend in? Ask your students how they are the same and how they are different.

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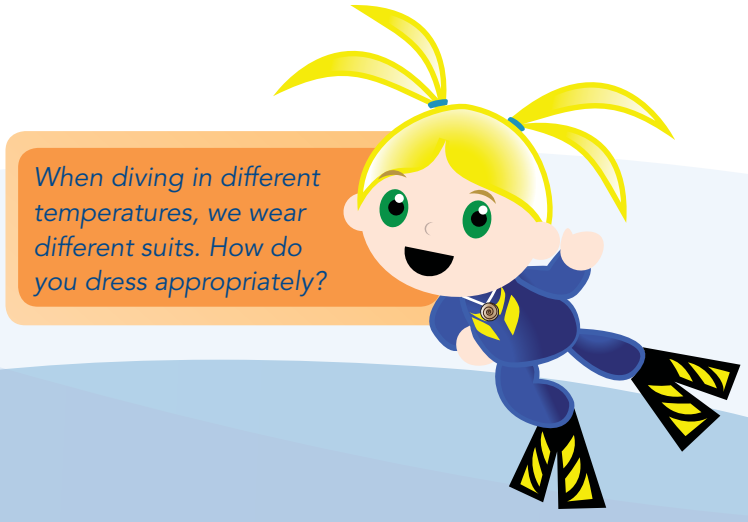
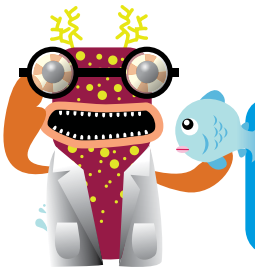


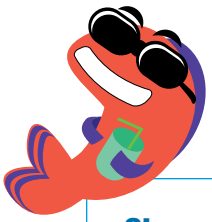


Human activities both inland and on the coast can change the shape of beaches and shores.

CLASSROOM ACTIVITY STATION A6
BOOK STALL

Overview

Provide a reading or computer area where students can look through books or other supplemental materials about the subject being discussed or reading aloud will help to build early literacy. Even if children are not reading yet, looking at pictures and building dialogue around the images or cartoon characters is helpful in *developing vocabulary, language and early literacy skills.*



Materials: *The Rainbow Fish* by Marcus Pfister

Lesson Procedure: Character Education CREATE

1. As a class, read the book "The Rainbow Fish" by Marcus Pfister. Provide students with one paper plate each, and set up a work space with scissors, glue, and a selection of craft materials that can be glued to the plate to create scales such as tissue paper, foil, or odds and ends from a recycling bin. To make fins students can add triangles cut from construction paper and a heart shape turned on its side for the mouth.
2. Spend time letting students appreciate what is special about each creation, and which things make each fish special, unique and diverse like the rainbow fish.
3. Ask students to point out the qualities they like about fish that other students created.
4. Alternatively, have each student decorate a plate with a variety of fabrics and textures, and arrange them on a large wall so that each child's plate represents a scale that is arranged into one large "class fish".
5. Discuss with students how they get to create who they are everyday in the classroom. Have them create one sentence that describes who they are. *Example: Ocean Annie is an inspiration. Everything that I do will be inspiring and this is who I am!*

Character Education: CREATE

"The future holds endless possibilities."

Fine Art Prints, posters, greeting cards and other products are available to decorate your classroom or school while inspiring your students with real ocean animals and environmental scenes. Contact us to learn more.

Coral reefs throughout our ocean are threatened because of ocean acidification. Research this topic with students and create solutions to reverse this effect.

Anemonefish in purple magnificent sea anemone, Indonesia

Book Suggestions

» DePrisco, Dorothea. *Little School of Fish*. Illus. Claudine Gevry. Inglewood, California: 2007. Grades Pre-K–K.

» Lionni, Leo. *Fish is Fish*. New York: Random House, 1974. Grades K-2. ---. *Swimmy*. New York: Random House, 1973. Grades K-2.

» Pfeffer, Wendy. *What's it Like to be a Fish? Let's Read and Find Out Science. Stage 1*. Illus. Holly Keller. New York: Harper Collins, 1996. Grades K-1.

» Pfister, Marcus. *The Rainbow Fish*. Trans. James J. Alison. New York: North-South Books, 1992. Grades pre-K–1.

Closure and Follow Up

✧ Once students have experienced the learning stations, ask students what new facts they learned from participating in the activities and reflect with the class on how much knowledge has been gathered about fish. Take time to review statements made at the start of the lesson and make corrections as needed with new facts.

✧ Spend a moment talking with students about why they think it is important fish stay healthy and abundant in the ocean.

✧ Ask students if they can hypothesize or guess why some fish school. Fish school for protection from predators and for reproduction.

✧ To reinforce learning, you can review vocabulary from your "cool school" and as a class count how many fish there are in the school.

✧ Review and reinforce behavior techniques and all the different ways they communicated as scuba divers.

Plan for Independent Practice

» Ask students to use the words from the bulletin board to construct a story independently or as a class.

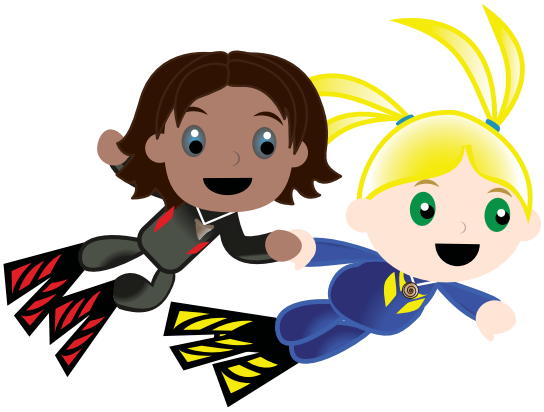
» Select stories from the suggested reading list to read as a class or for self-study.

» Play the video again for students or have them use memory recall about how fish move. During circle time students can perform a movement study and simulate the different ways they saw fish move in the video.

» Review the word CREATE with students, and discuss how it relates to their character. Encourage them to use their imagination, dream and CREATE their perfect day. What would they do? What would they learn? Who would they share it with?

DVD TRANSCRIPT

What Makes A Fish, A Fish?



Fish you say, well what is a fish?

They swim. They hover. They crawl. They stand like statues.

But they are all fish…so what is a fish?

For a creature to be called a fish, it must live in water and have a backbone.

For a creature to be called a fish, they must have "gills." Gills are what the fish use to breathe underwater. Gills are fish's lungs and they use them to breathe. Pumping water over their gills, they get oxygen from the sea.

For a creature to be called a fish, they must have scales or skin!!!

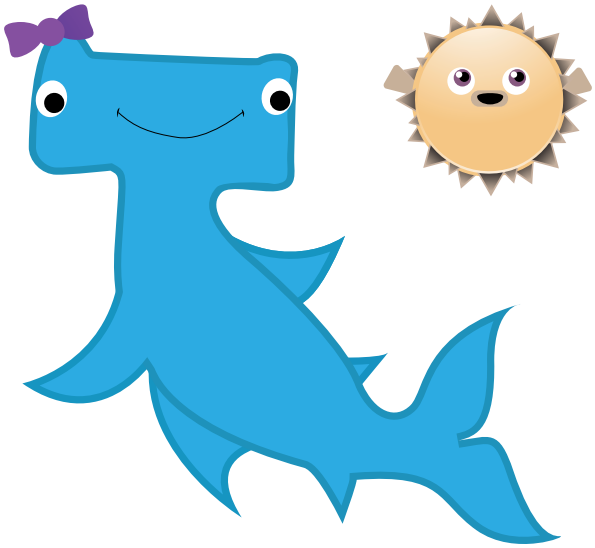
But most of all for a creature to be called a fish, a fish must have FINS.

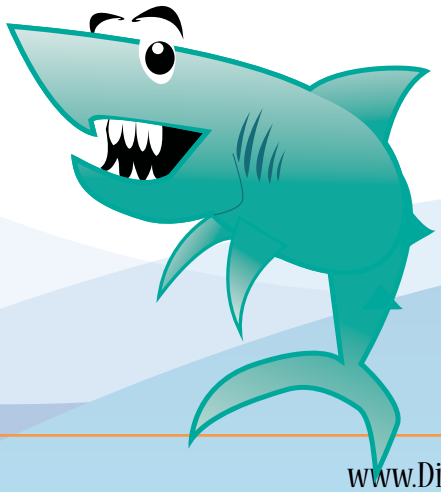
Small ones or large ones, their fins make them unique. Some fish have few fins, some fish have many fins. One fin, two fins, three fins or more.

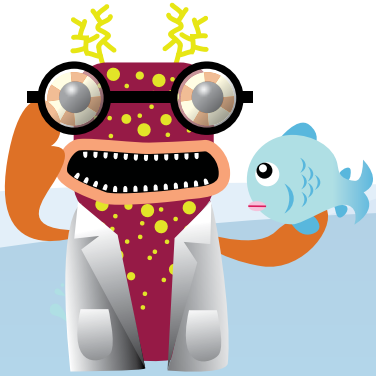
WOW...check out the huge tail fin!

Sharks are fish. And rays are fish too.

Fish, Fish, Now you know What Is a Fish.



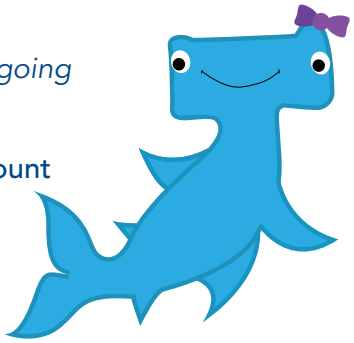




Go Blue! Ocean Annie's Tips to Help Our Environment

We should be called Planet Ocean instead of Earth because more than 70% of Earth is covered by our ocean! Although we have 5 names for our ocean based on ocean basins, we really only have one ocean. The ocean controls our weather and our climate. It is responsible for our food, oxygen, and water, yet it is salty and humans cannot drink or use salt water to live. Only about 3% of the water on our Blue Planet is fresh water. As our population grows, we need to think of ways to conserve water because human beings need fresh water to live.

Have you ever thought about how much water we use each day? Try to imagine what your day might be like if you only had one gallon of water to use a day. Could you live like that? Life as we know it cannot exist without fresh water or a healthy ocean.

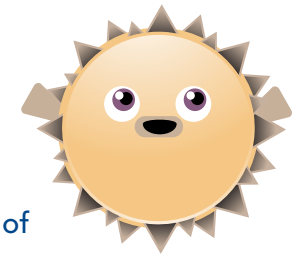


The United Nations predicts the next World War is not going to be about oil, it is going to be about water.

GO BLUE and challenge students to come up with ways they can reduce the amount of water used every day. Write a blog encouraging parents to get involved with conserving water in their homes.Here are a few examples to get you started:

Turn off the water while brushing your teeth or washing your hands.

Turn off the water when washing dishes. Make a sink for cleaning with soapy water and another for rinsing.



Only run your dishwasher with a full load on the energy and water saving cycles.

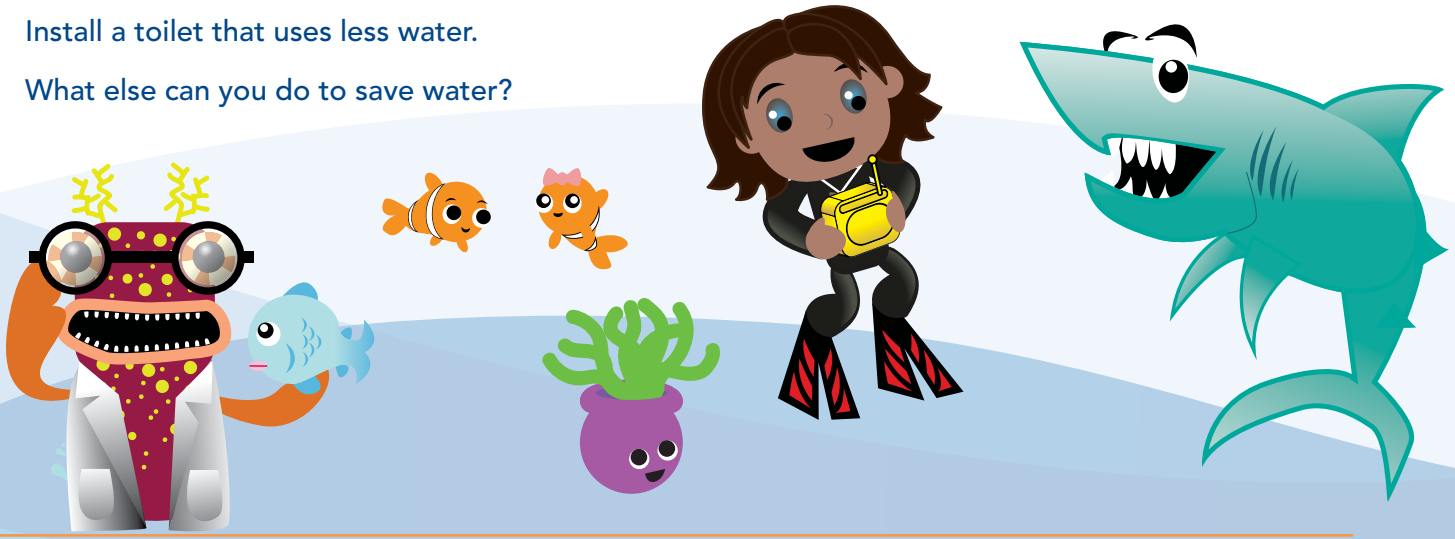
Wash clothes with a full load.

Install a water reducing showerhead.

Fix your toilet if it runs and your sinks if they drip! One drip uses hundreds of gallons of water a year.

Install a toilet that uses less water.

What else can you do to save water?



My name is Ocean Annie. I love the Ocean and everything about it. I take photographs and make films to share with kids and adults!

I am Finnagain the friendly shark who was protected and saved!

What Makes A Fish, A Fish ACTIVITIES

My name is Makaio. I love to scuba dive and explore with Ocean Annie. Learning is FUN!

My name is Fringy, the sarcastic ichthyologist fish and your guide!

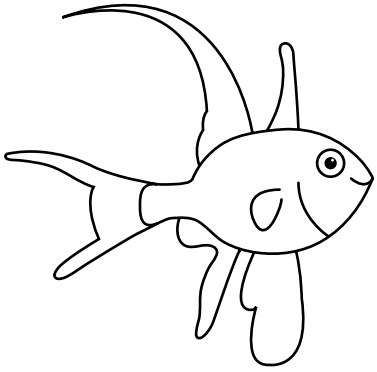
A

Name _____ Date _____

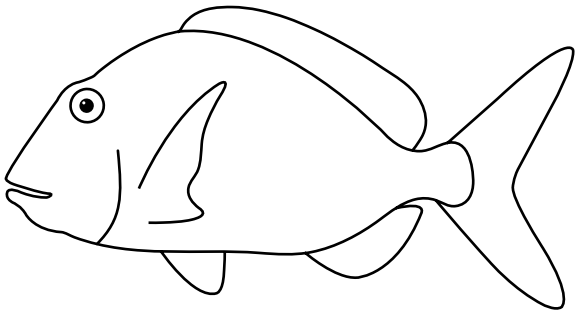
Treasure Chest of Words

bone
cartilage
ectotherm
fins
fishes
gills
hover
hydrodynamic
ichthyology
ichthyologist
organ
scales
scientist
scuba
skeleton
species
swim bladder
vertebrate
water

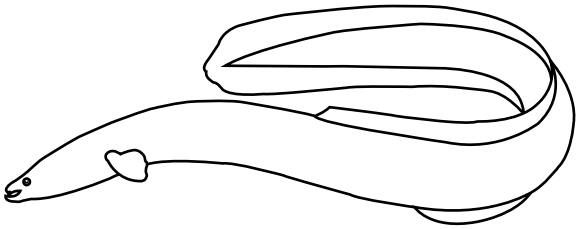
Directions: Picture on left goes with name in the right column. Fold or glue sides back to back.



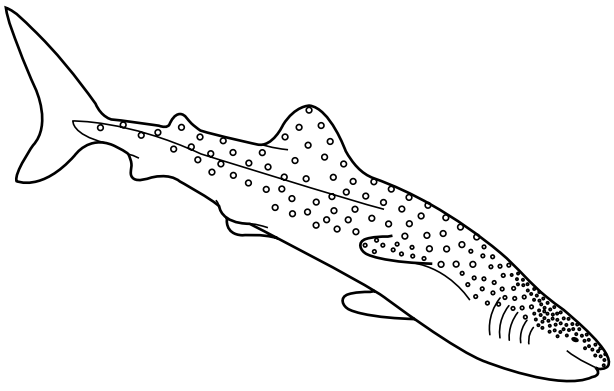
Bangaii cardinalfish fish



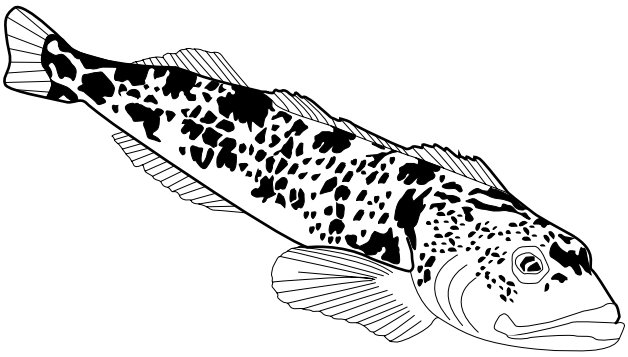
porgy fish fish



moray eel fish

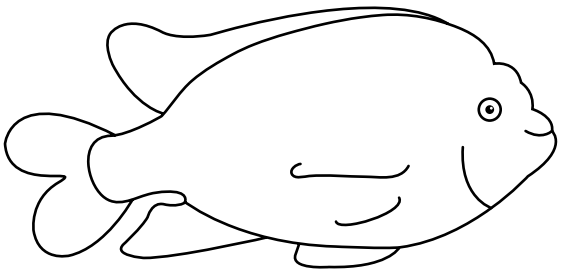


whale shark fish



lingcod

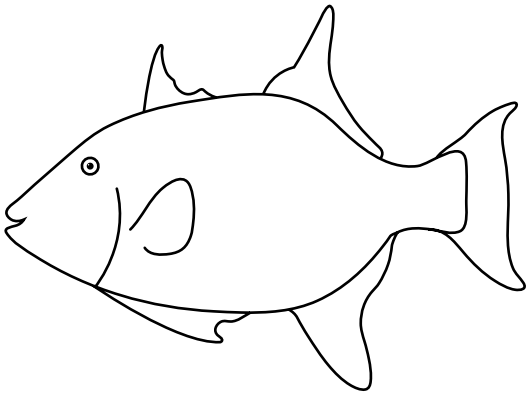
fish



garibaldi

damselfish

fish



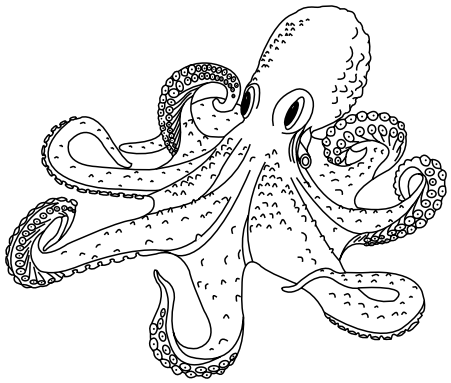
queen

triggerfish

fish

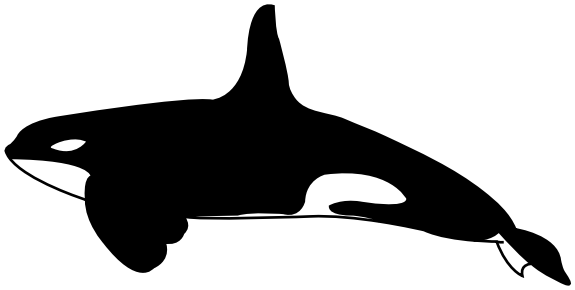
manta ray

fish



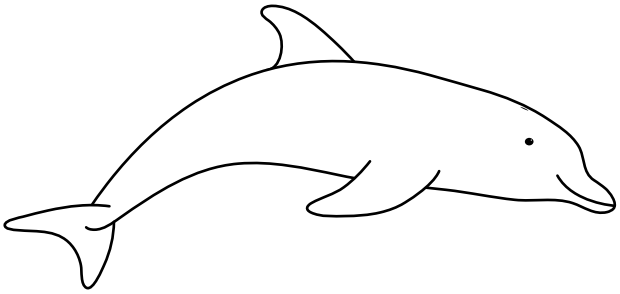
octopus

animal



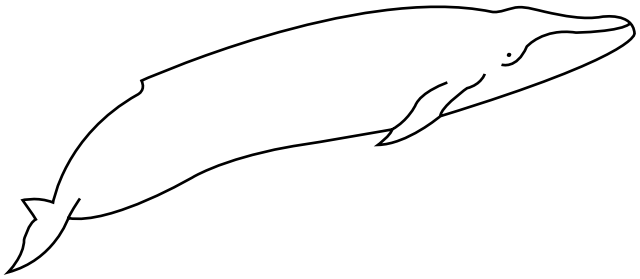
killer whale

animal



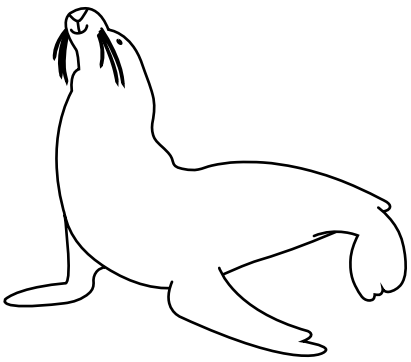
dolphin

animal



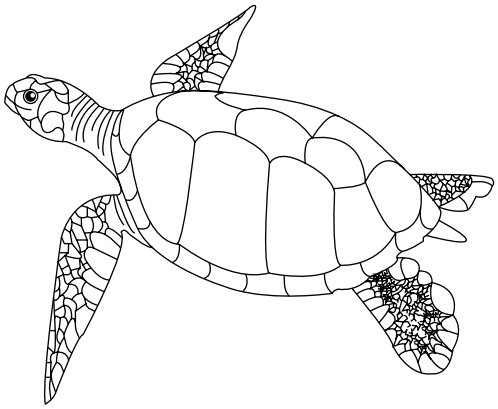
blue whale

animal



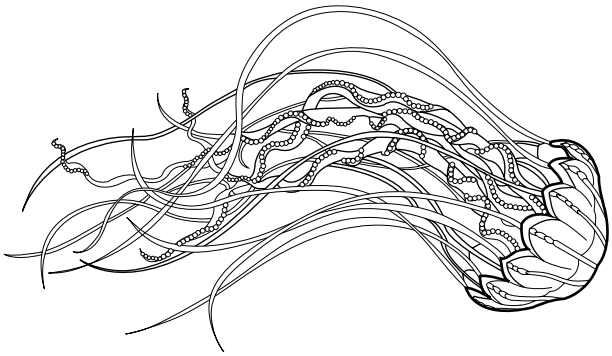
sea lion

animal



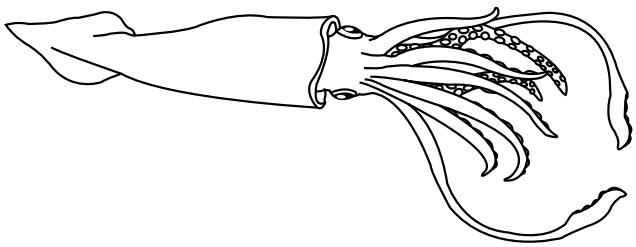
turtle

animal



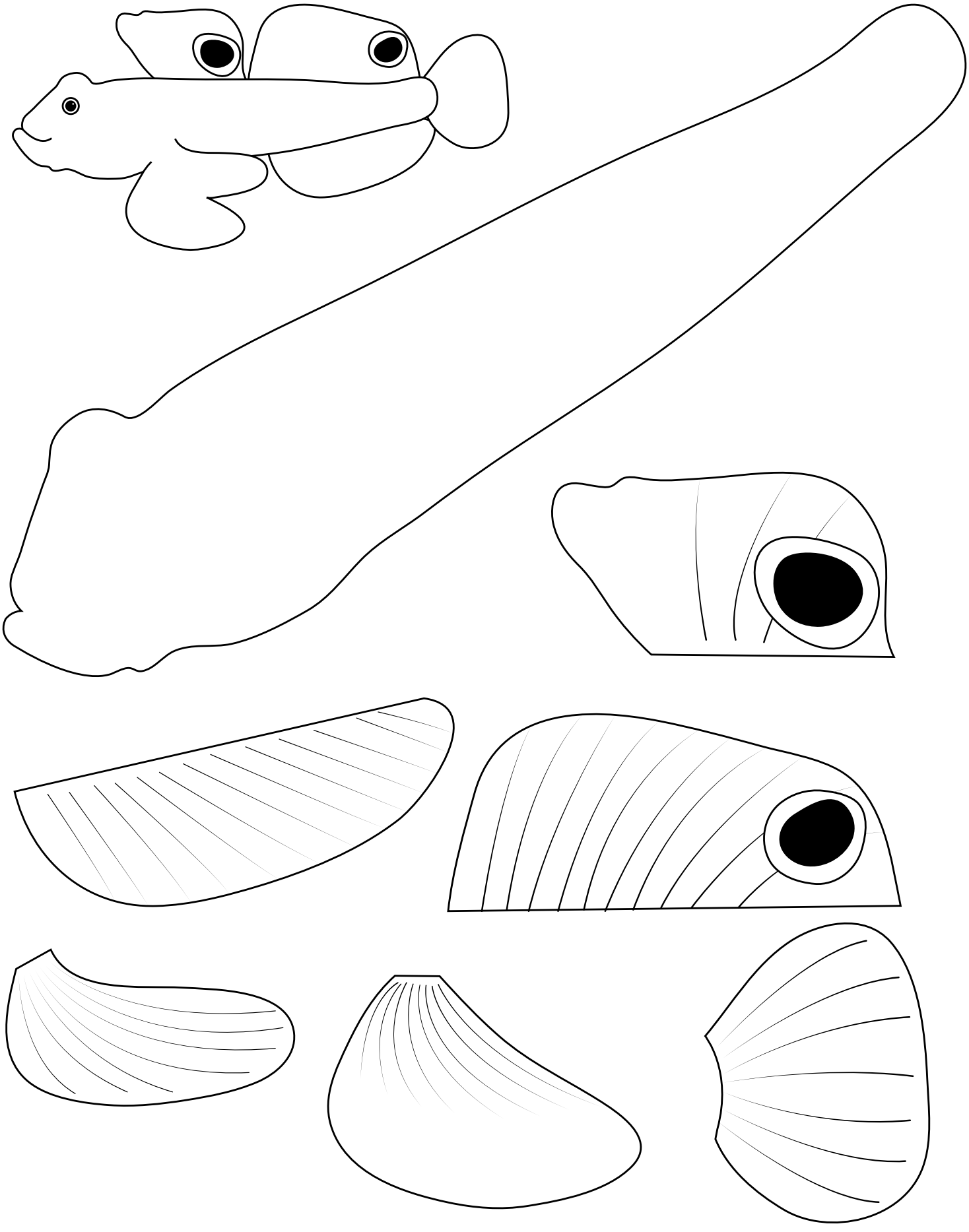
jelly

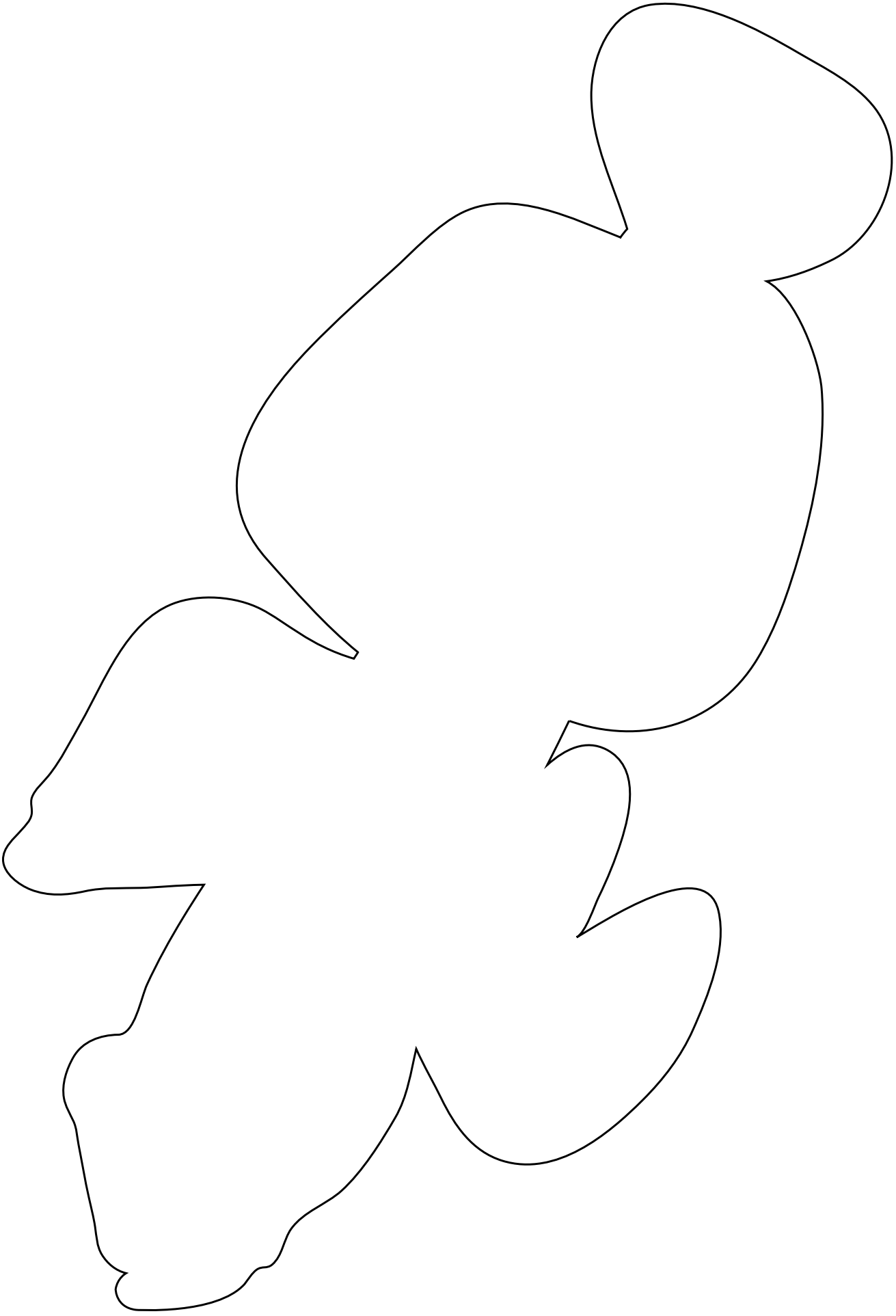
animal

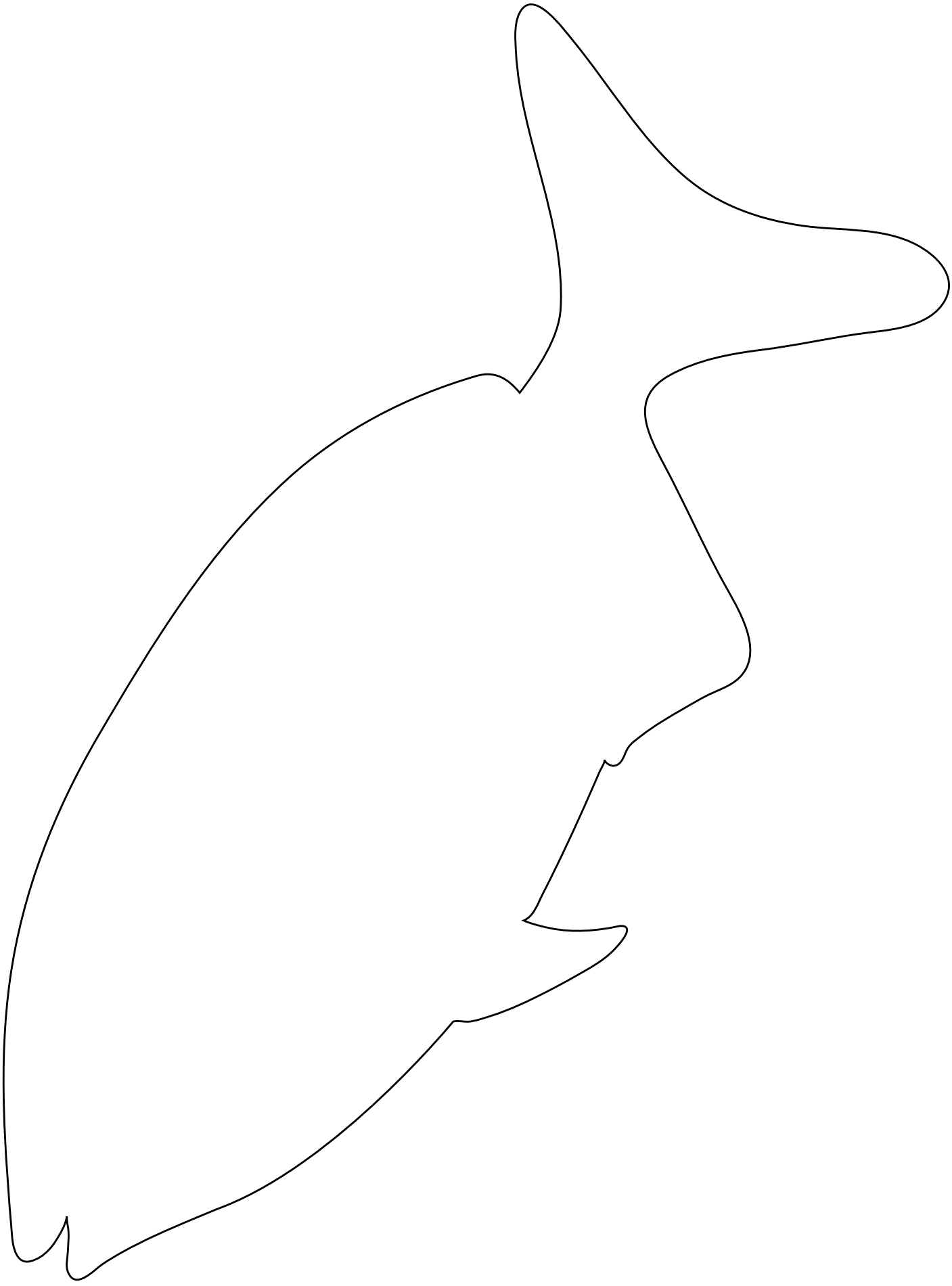


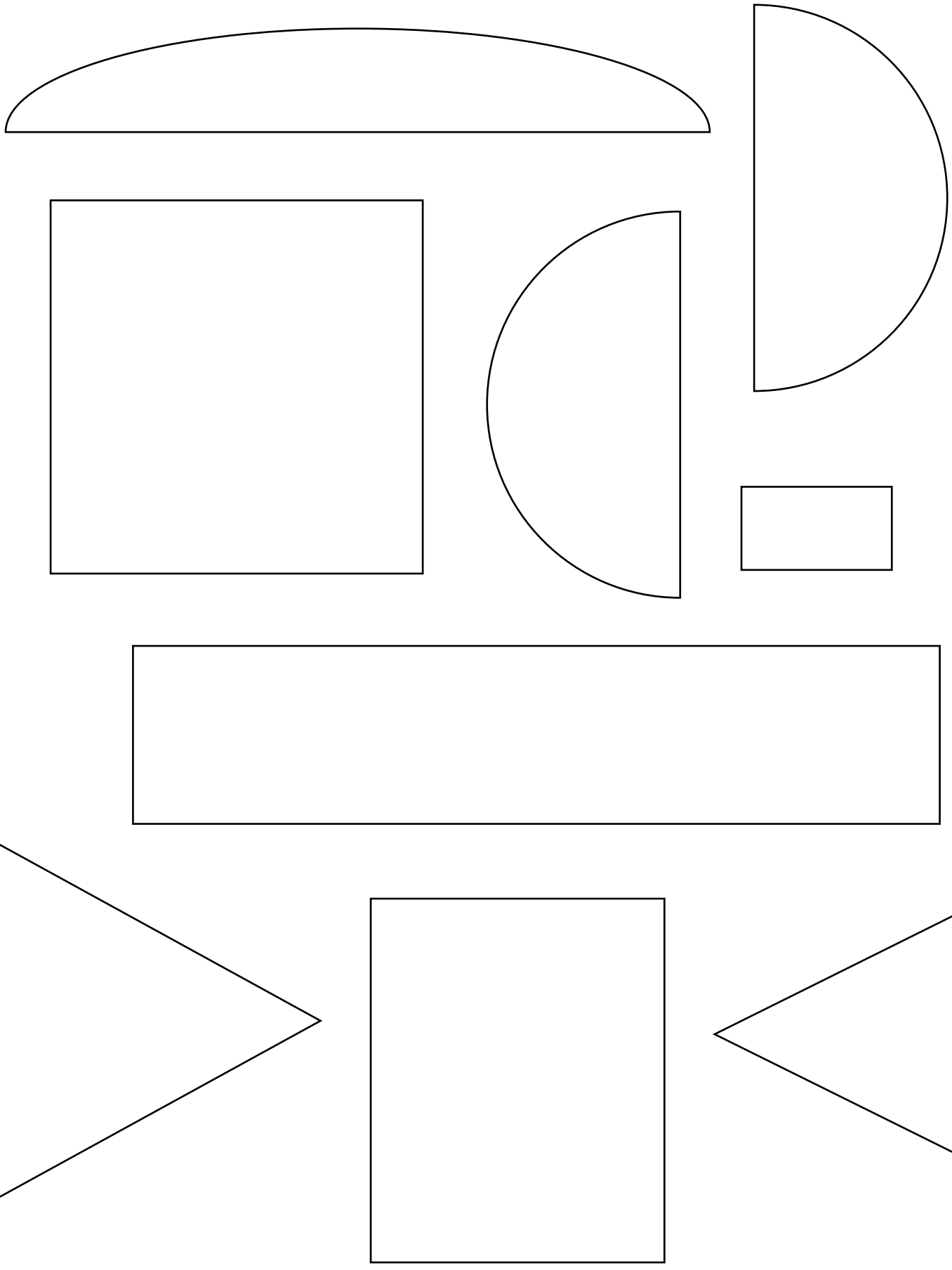
squid

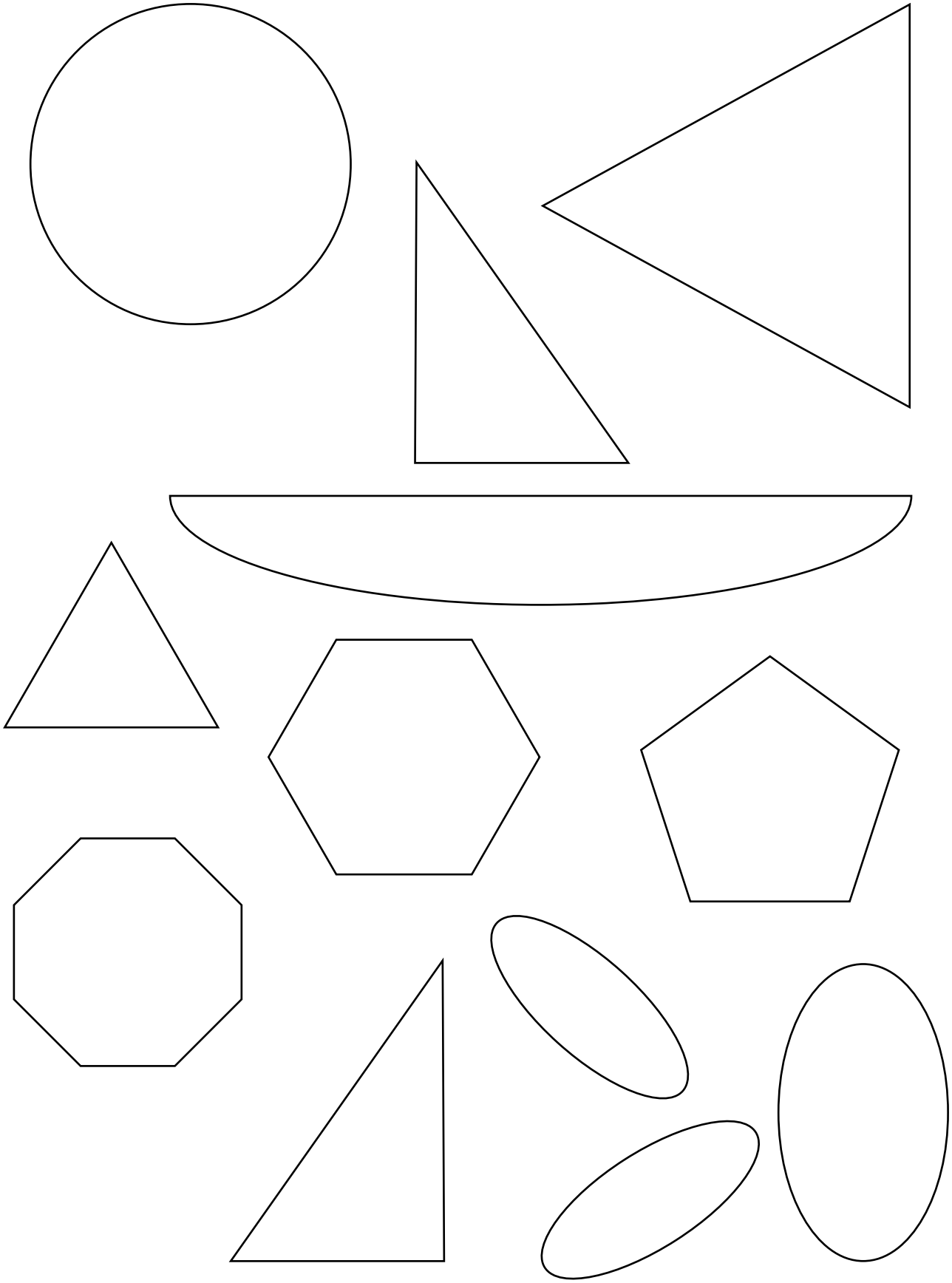
animal

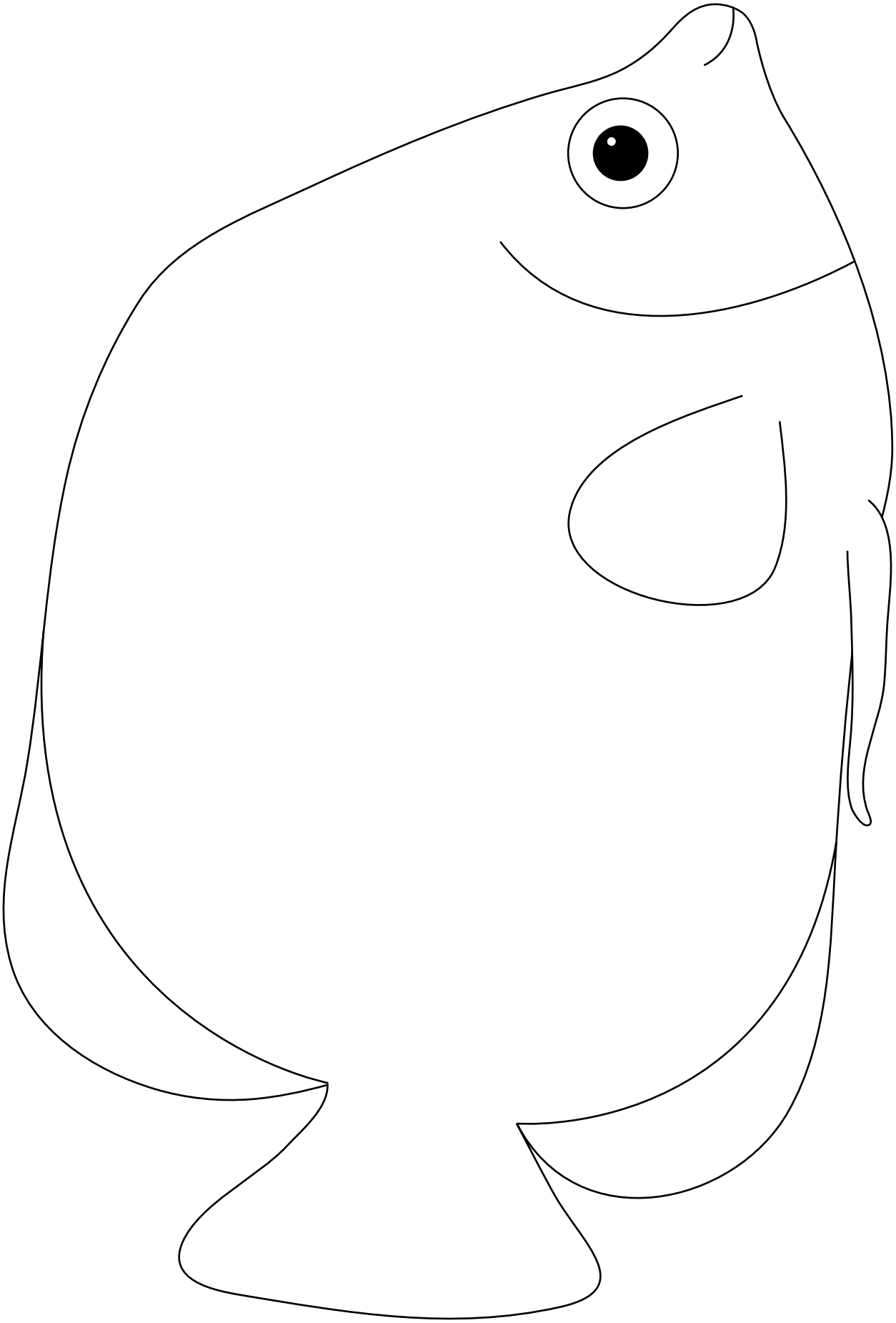


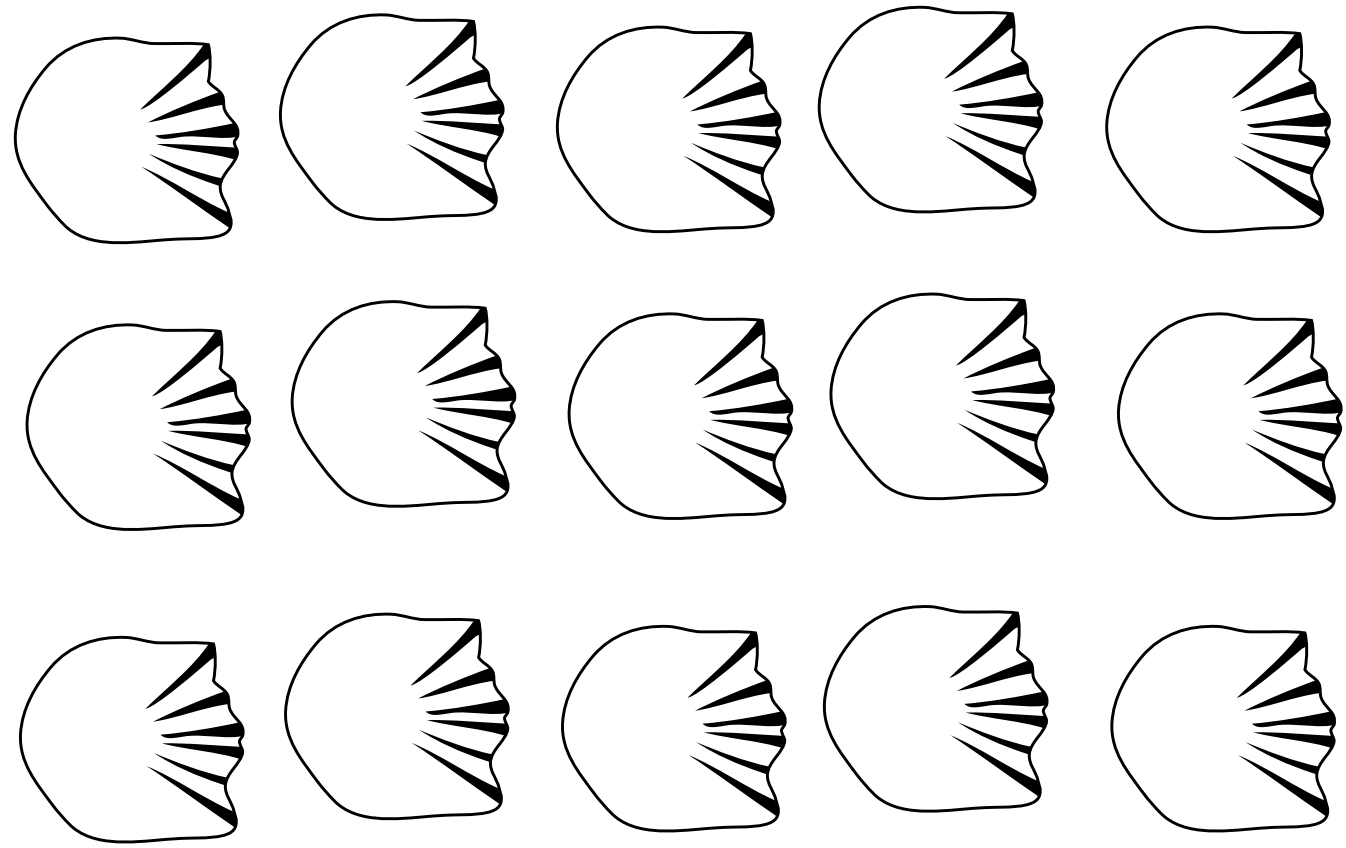


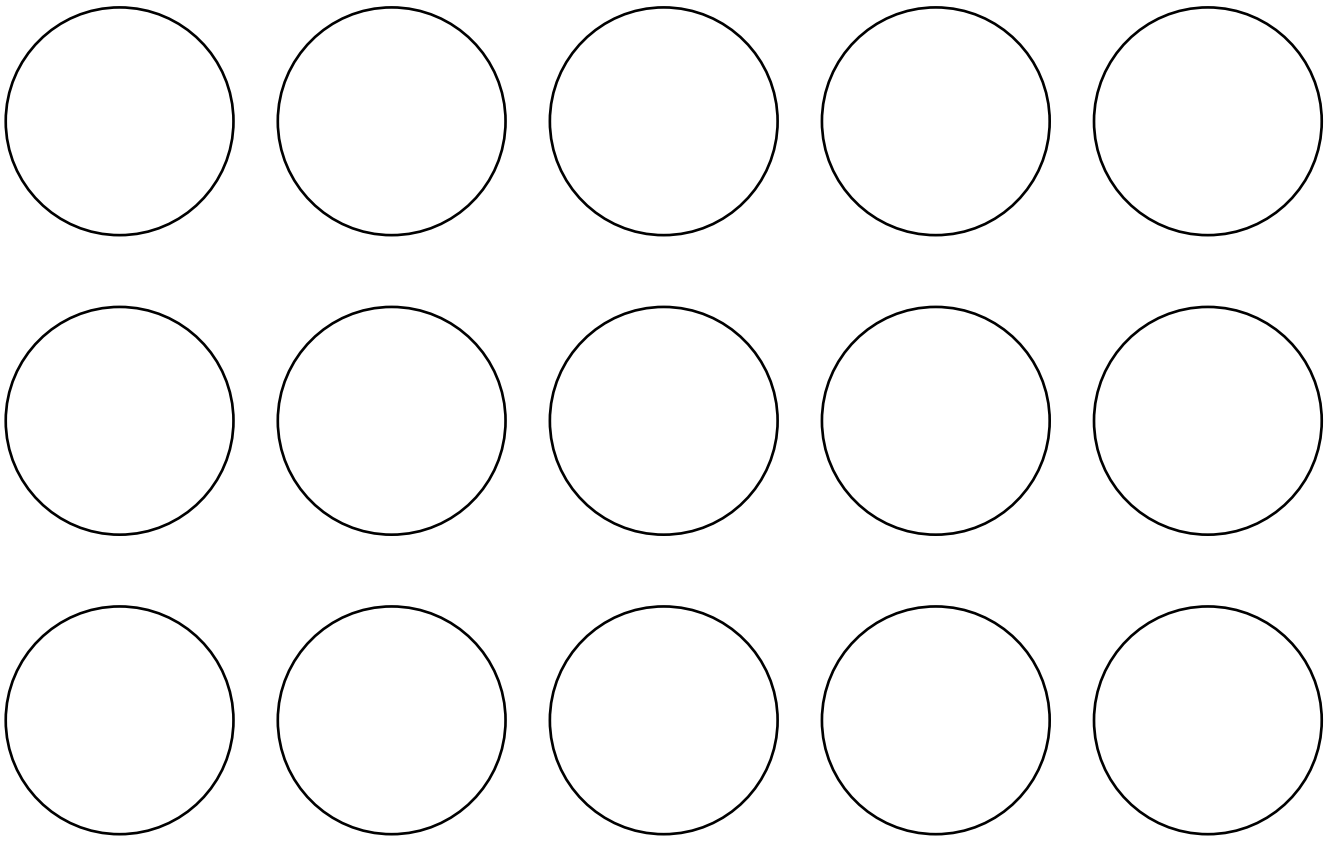






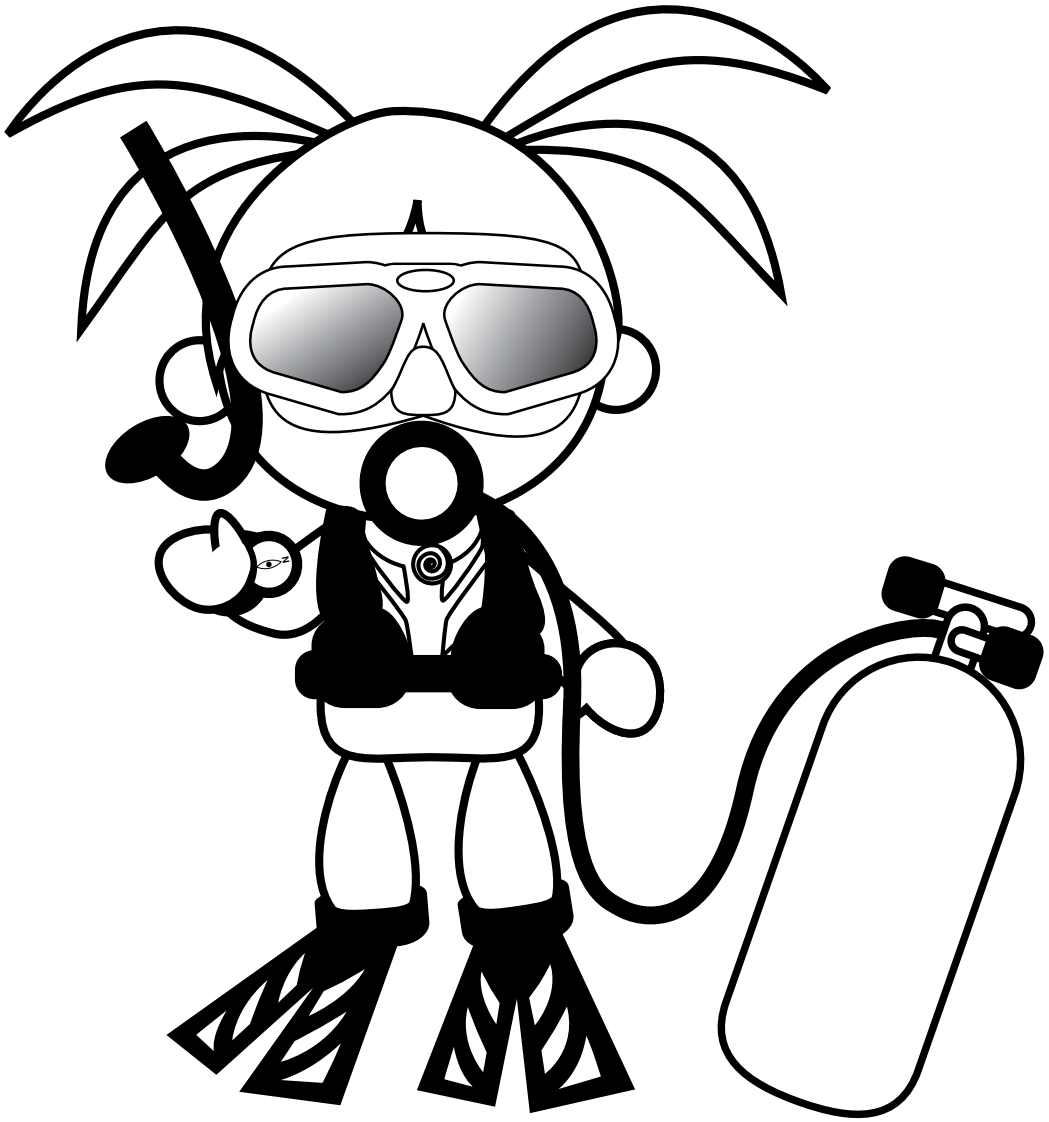






Today I learned...

Can you identify Ocean Annie's SCUBA gear?



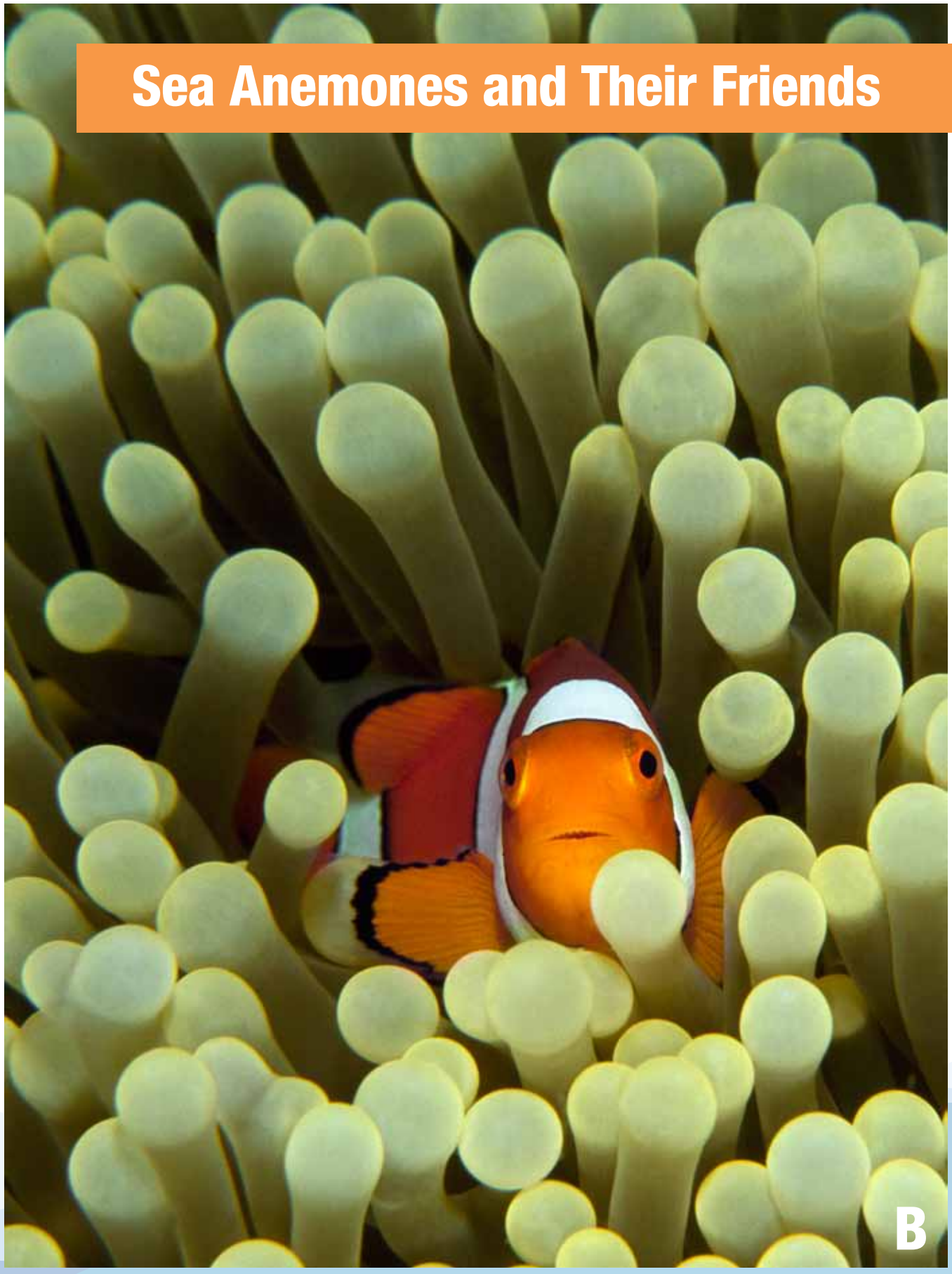
Mask

BCD Fins

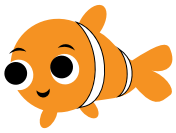
Air Tank Compass

Regulator Snorkel

Sea Anemones and Their Friends



Sea Anemones and Their Friends



CONCEPT / TOPICS TO TEACH

Survival in the ocean sometimes requires species to adapt a close working relationship with one another. Science calls this relationship "symbiosis." Symbiotic partnerships can be found throughout all parts of the ocean. The partnership between anemonefish and sea anemones is one remarkable example of this complex relationship in nature.

Objectives:

- Students will experiment with and explore the meaning of symbiosis as they work with an assigned partner throughout the day to complete tasks as a team.
- Students will spend time designing a clownfish and thinking of ways its relationship with the sea anemone is special. To develop literacy skills, students will devise words to add to their clownfish describing its unique symbiotic relationship with the anemone.
- Students will use the scientific method of inquiry as they experiment with animal shapes to see whether or not they are a symbiotic match with an anemone.
- Students will participate in an activity designed to help them visualize and describe symbiotic relationships in order to develop early literacy.
- Students will use the scientific method of inquiry to develop analytical thinking skills as they find matching pieces that work together symbiotically, and eliminate non-matches.

Character Education: ADAPT

In life, everything is constantly changing and in motion. Teaching children how to ADAPT by helping them learn to adjust to change is a vital life lesson. Teaching children to look at all the different kinds of fish that have ADAPTED to their surroundings, and then showing how we have to ADAPT every day to our surroundings helps children understand the concept of a constantly changing world. We ADAPT in simple ways such as making choices with what we wear with changing weather. Children experience other changes which require greater ADAPTIONS such as family changes, new homes, schools or siblings. You can ask students about ways they ADAPT in the classroom or at home, reinforcing the idea that things change daily and that change is not something to fear but something that happens throughout every day.

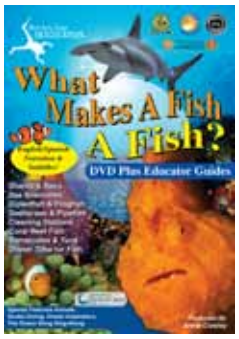
Ocean Annie and Scuba Divers ADAPT!

Because the ocean is always changing due to weather, tides, currents, and more, scuba divers must learn to ADAPT to every ocean situation. Scuba divers use different equipment for cold water than they do when scuba diving in warm tropical water. Scuba divers do not always scuba dive with the same person. Likewise, in school your students do not always get to work with the same buddy. Students have to ADAPT. An important aspect of ADAPTING is communication. As we come into contact with new people it is important to communicate before we participate in activities. Before scuba divers go underwater, buddies review hand signals so they can communicate. Take a few minutes and have your students buddy up with someone different and see how they learn to ADAPT to one another. This reinforces the connection between using good communication skills and ADAPTING to changes in our lives. Review important hand signals with your class and see if anyone needs to ADAPT a signal for scuba diving with their new buddy!

Getting Started

Required Materials

- ❍ DVD "What Makes A Fish, A Fish?" by Dive Into Your Imagination
- ❍ Large Dry Erase Board/Easel and Markers



TREASURE CHEST

- Algae
- Clownfish
- Endemic
- Invasive Species
- Invertebrate
- Naturalist
- Scientist
- Sea Anemone
- Skeleton
- Symbiosis
- Tentacles
- Vertebrate

Anticipatory Set Lead-In

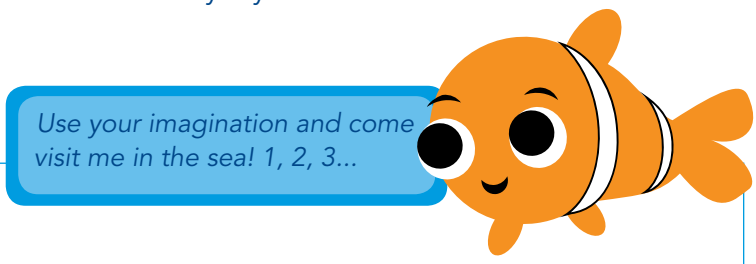
- ✧ Watch and become familiar with chapter 2 about "Sea Anemones and Their Friends" on the "*What Makes A Fish, A Fish?*" DVD.
- ✧ Explain to students that in nature, when two organisms work as a team, it is called *symbiosis.* Animals in the ocean form partnerships requiring *symbiosis.*
- ✧ Tell students in the next few minutes they will watch a short clip about symbiotic partners in the sea, sea anemones and anemonefish commonly known as clownfish.
- ✧ Before starting the film clip, have students use their imagination to become a naturalist, meaning they will be scientists who study animals in their natural surroundings or environment. Ask students to work with their team or a buddy to collect information during the run of the video clip. Play the clip and review what they learned before moving on to activities.

Here are some questions and answers you can use to build a brainstorming session:

Questions for Students	Answers for Educators
Why is a sea anemone important to the anemonefish?	*It provides the anemonefish with a protected place to live and hide. Other fish do not bother the sea anemone because the tentacles can sting.*
Is a sea anemone a plant or an animal?	*Animal. Unlike plants sea anemones cannot make their own food. Rather a sea anemone must consume food to live.*
What kinds of animals besides anemonefish can live in a sea anemone?	*Crabs and shrimp.*
Why do most animals leave the sea anemone alone?	*Sea anemone tentacles sting.*

Video Review

- After viewing the clip about "Anemones and Their Friends" once or even a few times, discuss and write down additional facts, questions, and information students gained from the video for further research and discussion.
- Ask students to write a reflection in their journal about clownfish.
- Life changes continually and we need to learn how to ADAPT. Discuss with students all the different ways they have had to ADAPT in your class, at school, at home, or playing with friends. What does it feel like to experience changes? Create a mantra, I can ADAPT to anything! Change happens everyday!



Imagination Value

When children see clownfish, many times the first word out of their mouth is "*Nemo*" after the famous cartoon character. Many cartoons are based on a combination of fact and fiction. The movies you see in the ***Dive Into Your Imagination*** series are real ocean animals. The movies are based on science and created to introduce children to real ocean animals. You can use this as a movement activity and have them act out what you are saying, or have them be silent and use their minds only. Have children use their imagination to become a scuba diver. You can read this script to them or use your imagination and create your own! On the count of three have them say the magic word...1, 2, 3 IMAGINATION!

"Clownfish live in sea anemones. Imagine you are living in the squishy, wiggly tentacles of a sea anemone. What does it feel like? Although sea anemones might look like plants growing on the rocks, sea anemones are animals. Sea anemones look like big flowers with wavy petals but the tentacles can sting animals for food or protection. A sea anemone is like a giant stomach with no eyes, ears, or nose, but it has a mouth for feeding. The sea anemone attaches to rocks with a foot. If you use your imagination and you lived in the sea anemone, you could be a clownfish, anemonefish, crab or shrimp because all of these animals make their home in the sea anemone. The sea anemone has stinging tentacles, yet clownfish are not affected by the sting of the sea anemone. The sea anemone protects the clownfish and in return the clownfish keeps the sea anemone clean. Get together with your buddy. One of you will be the sea anemone and the other an animal living in the sea anemone. When animals live together and benefit one another, these relationships are called symbiotic relationships. Our buddy teams in our class should be friendly symbiotic relationships. Your friends are really important in your life, just like the clownfish and sea anemone! Let's discover more about sea anemones and their friends! On the count of three let's say the magic word, imagination and become clownfish living in the sea when we do our activities. 1, 2, 3…IMAGINATION!"

CLASSROOM ACTIVITY STATION B1

BUDDY UP!

Overview

Students will be given a colorful fish or sea anemone and asked to find the classmate with the matching counterpart. For the rest of the day they will be a buddy team and look for ways to help each other just as the sea anemone and clownfish do. This activity will help students build *confidence and teamwork skills*, further understand biological relationships in the ocean, and reinforce key content from the video.

Materials: Sea Anemone and Clownfish Templates, Colored Construction Paper, Scissors

Talking Points

- Sea anemones and clownfish are examples of animals living in the ocean and adapted to help one another.
- When animals rely on one another to live in the ocean it is called symbiosis.
- Ask students who they have symbiotic relationships with. How do they communicate with one another? Just like in the ocean, it is important we find ways to help one another. Teamwork is an important part of our lives!
- Written and verbal communication is an important part of teamwork. How do we communicate our thoughts and feelings?

Lesson Procedure

1. Use the templates to make cut-outs of clownfish and sea anemones in color pairs, red fish matches a red anemone etc.
2. Have students sit in a circle and give each a sea anemone or clownfish.
3. Instruct students with clownfish to find the student who has a sea anemone of the color matching their fish. You can also match with numbers.
4. Students form buddy teams once they find their match.
5. For the rest of the day, students will maintain their "buddy team" and look for ways to help each other like the sea anemone and clownfish.

Scuba divers act responsibly. They take only photos and keep their hands to themselves!

CLASSROOM ACTIVITY STATION B1 (Continued)

BUDDY UP!

Extension Ideas

» Partners can make a list of ways they were able to help one another.

» Students can be asked to go home and observe how their family members help one another and discuss together the following day.

» Pair students with a different partner the next day and have them work together again. At the end of class compare whether the tasks they helped each other with were different from or the same when they changed partners. How did they have to ADAPT to a new buddy? Use this as a learning point for change and how we need to learn how to communicate, change and adapt.

Notes

The reef has living creatures. You want to look but never touch.

CLASSROOM ACTIVITY STATION B2

ANEMONE IS THE PLACE FOR ME!

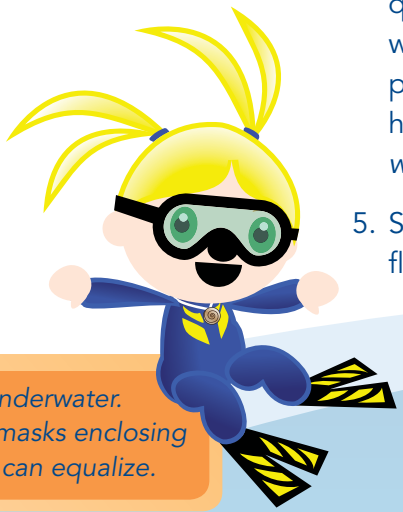
Overview

Each student will design a fold-over clownfish. Help students label their fish with ideas about why a sea anemone is the best place to be. When all clownfish are complete, arrange them on a bulletin board or wall as part of a school. This project will help students build vocabulary, creativity, artistic ability, and practice counting skills.

Materials: Butcher Paper, Tissue Paper, Fold-over Clownfish Template, Crayons or Colored Pencils, Bulletin board, Stapler/staples

Talking Points

- Why are sea anemones and clownfish special?
- Students will have a variety of answers. In nature they are special because of their symbiotic relationship with one another. The sea anemone protects the clownfish and the clownfish keeps the sea anemone clean and free of debris.
- Sea anemones are only found in the ocean. More types of organisms are found in the ocean than on land.



There is pressure underwater. Scuba divers wear masks enclosing their noses so they can equalize.

Lesson Procedure

1. Cover a bulletin board with blue or light green butcher paper and trim with edging.
2. Fashion a large sea anemone as the central point on the board by rolling the tissue paper into long tentacles and stapling it into place. Tentacles can be any color you choose.
3. Use green or red construction paper or streamers to make a ruffled/looking algae patch adjacent to the sea anemone as a nest where anemonefish lay their eggs.
4. Give each child a clownfish template to decorate. Have younger students verbalize why clownfish and sea anemones help one another. Spend time asking leading questions to help students assemble their ideas and write them down. Help transcribe ideas on the inside panel of the clownfish for students. If they can write, have them use descriptive words or sentences about *why their sea anemone home is the best place to be.*
5. Staple each fish to the sea anemone so that it can be flipped up in card like fashion to reveal student's ideas.

CLASSROOM ACTIVITY STATION B2 (Continued)

ANEMONE IS THE PLACE FOR ME!

Extension Ideas

» Students can pair and share their ideas about why the sea anemone is the best place to be. Have students illustrate and/or write a story about it. Compare the clownfish and sea anemone to your student's and their homes, and discuss why their home is the best place to be!

» Spend time in circle asking students whether they would rather be a sea anemone or one of the other animals that lives among the anemone's tentacles and why.

» Use the 1, 2, 3 Imagination technique and ask students to role-play becoming a sea anemone or clownfish. Have them imagine what it feels like to be these animals. How do they move? How do they look for food? How do they interact? Do this a couple of times and have the students trade places. These animals move very little. The sea anemone is stationed to the ground and the clownfish dances around the sea anemone. If the clownfish gets too far away they are in danger of becoming fish food.

Notes

CLASSROOM ACTIVITY STATION B3
WORKING TOGETHER

Overview

Each child will pick *one item* from a basket. In order to see how the item works, students will have to see how their item fits or doesn't by trying them with the items their buddies have selected. Participating in this activity will help students understand *sharing, deductive reasoning, logic,* as well as the basic concept behind symbiosis, and reinforcing ideas learned from the video.

Materials: Basket, Pairs of Legos® (may be designated by size or color), Plastic Easter eggs that break in half (may be designated by color, pattern, or size), Pairs of snap beads (may be designated by shape or color), Magna-Tiles or magnets

Talking Points

- Clownfish and sea anemones have a special relationship in which they work together to survive in the ocean.
- When animals help one another survive it is called symbiosis.
- Explain to students that within *some* symbiotic partnerships though each animal *could* live without their partner, the presence of the partner just makes things a little easier and work a little better. Butterflyfish and sea turtles can live quite happily without having any interaction, but when butterflyfish pick algae off the shell of a marine tutle, they get a meal. In return the sea turtle becomes clean. This is another example of a symbiotic relationship!

Lesson Procedure

1. Place all of the items loosely into a basket.
2. Instruct students to take *only one* item from the basket.
3. Explain to the students in order to make a complete "team" they must find someone in class who has an object that best fits or works together with the item they chose.

CLASSROOM ACTIVITY STATION B3 (Continued)

WORKING TOGETHER

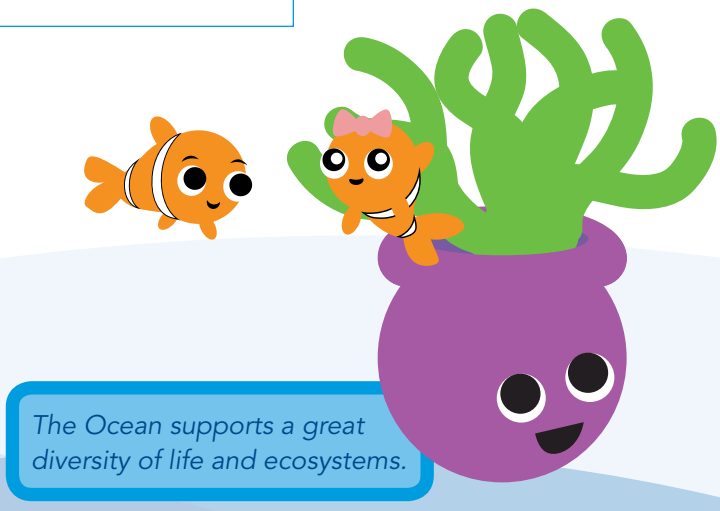
Extension Ideas

» Ask students to participate in a relay race requiring interdependence such as a three-legged race, or one requiring two people to carry an object together like a ball balanced on a piece of wood, or passing a hard boiled egg from spoon to spoon across a line. Review your hand signals!

» Arrange class into teams. Give each team a paper plate and various building materials: blocks, Legos, Lincoln logs, cards, etc. Ask each team to build a house on the plate. When teams are done, ask them to make hypotheses or predictions about which house is strongest and why. Slide the plates around gently to see which are the strongest.

» Use the "Learn to Draw A Clownfish" activity in the activity section. Brainstorm with students how they can use shapes in nature to create other animals. How many animals can they think of with circles? With triangles or squares? Once you brainstorm a list, challenge them to create the animals!

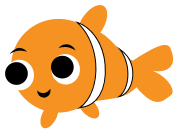
Notes



The Ocean supports a great diversity of life and ecosystems.

CLASSROOM ACTIVITY STATION B4

STICKING TOGETHER



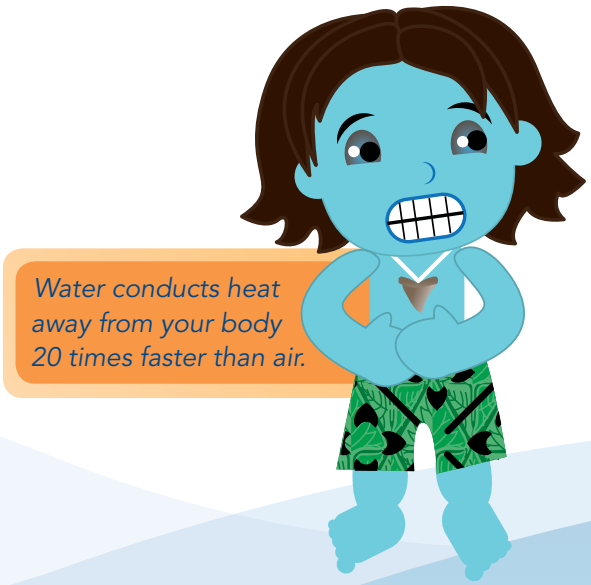
Overview

Students will use magnetic anemones to see which fish is a symbiotic fish for a sea anemone and which is not. This activity will help student's use *deductive reasoning* to recognize diversity of life in the ocean, illustrate the concept of symbiosis, and reinforce key content from the video.

Materials: Large bar magnets, Sheets of colored tissue paper, Scotch tape, Scissors, Metal paper clips, Plastic paper clips, Blue bucket labeled "Back to the Sea", Fish shapes

Talking Points

- Clownfish and sea anemones adapted to have a special relationship, they work together to survive in the ocean.
- Not all fish can coexist with an anemone, only certain animals can successfully live with anemones. It must be a "right fit" for both parties.
- Explain to students they will have an opportunity to explore how these particular animals work together.



Lesson Procedure

1. Take a sheet of tissue paper and place a magnet in the center.
2. Gather loose ends of tissue as close to the magnet as you can, twisting at the base of the magnet.
3. Place clear tape at the base of the magnet to create a "stem" for the tissue so that the loose end opens like a flower.
4. Spread remaining tissue into a wide fan, and cut tissue into strips and twist it to look like tentacles.
5. Cut a variety of fish shapes from the manual and attach metal paper clips to the symbiotic clownfishfish and plastic paper clips to all other sea animals.
6. Label the blue bucket "Back to the Sea".
7. Instruct students to see which fish are symbiotic partners and stick to the magnet anemone, and send the other ones "Back to the Sea."
8. Ask students to make hypotheses or predictions about which animals will stick and why.

CLASSROOM ACTIVITY STATION B4 (Continued)

STICKING TOGETHER

Extension Ideas

» Ask students to look through books or wildlife magazines to see if they can spot other symbiotic relationships. If students can cut out the pictures from the magazines make a bulletin board or class story about the importance of other symbiotic animal relationships.

» Ask students to look for ways they see people helping one another during a lunch period or recess and report back with what they observe. Have them observe their family and report back at school about symbiotic or beneficial relationships between people.

» Ask students to look for ways they can help people everyday and form symbiotic relationships with both their friends and family.

» Have students sit on the floor in buddy teams. Ask students to see how many ways they can find to help one another into a standing position.

Notes

CLASSROOM ACTIVITY STATION B5

WHO'S MY BUDDY?

Overview

Students will examine each fold-out in the set, *Who's My Buddy*, to discover who needs a partner to live in the sea and how they help one another survive. This activity will help students recognize important survival relationships in the ocean, make *predictions*, exercise the *scientific method of inquiry,* and *build fact recognition skills*, underscore the concept of symbiosis, and reinforce key content from the video.

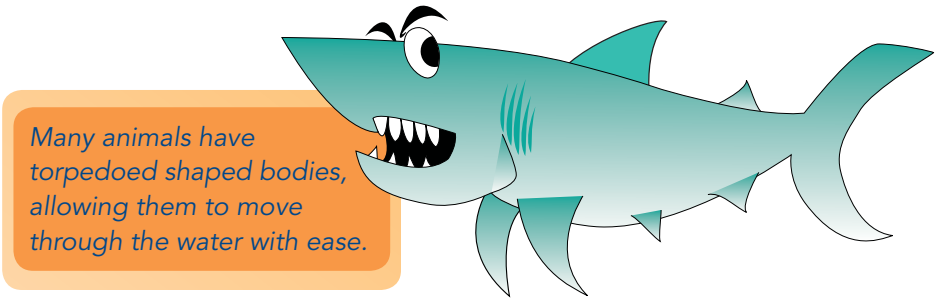
Materials: Tri-fold Fish Pairs, Scissors

Talking Points

- Some animals build special relationships with other ocean animals in order to help each other survive better in the ocean.
- Cooperation may have to do with receiving a service like when one animal cleans another; or with building a place to hide; or it might be to help an animal find food.
- Explain to students there are many reasons why animals would want to form partnerships in the ocean, and ask if they can think of more reasons to add.

Lesson Procedure

1. Copy and cut a set of the tri-folds into strips, and fold them into thirds according to the manual diagram.
2. Instruct students to unfold each card to see a miniature story about how animals survive together through symbiosis.



CLASSROOM ACTIVITY STATION B5 (Continued)

WHO'S MY BUDDY?

Extension Ideas

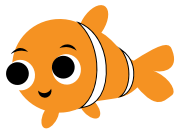
» See if students can design their own fold-out story about a way they work together with a family member or friend.

» Have students create a picture illustrating them playing with a friend. See if they have words they can include in the picture to describe the interaction with their friends.

» Ask students if they can guess how other animals have adapted to life in the sea such as marine mammals like dolphins, sea lions, or whales.

Notes

CLASSROOM ACTIVITY STATION B6
BOOK STALL



Overview

Providing a reading or computer area where students can look through books about the subject being discussed will help to build early literacy. Even if children are not reading yet, looking at pictures and building dialogue around the images or cartoon characters is helpful to *developing vocabulary, language and early literacy skills.*

Materials: *Sea Anemones* by Martha Rustad

Lesson Procedure: Character Education ADAPT

1. As a class, read *Sea Anemones* by Martha E.H. Rustad. Observe and discuss the physical characteristics about sea anemones that make them special and unique compared to other animals in the ocean or any other land environment. Ask students to think of reasons why these qualities about sea anemone biology help them adapt to and survive life in the ocean.
2. Have students draw a picture of themselves as a sea creature and write descriptive words about how the creature they created needs to adapt to live in the ocean.
3. Alternatively, ask students to illustrate and write descriptive words about a time when they had to adapt to something in their life such as the arrival of a new sibling, a travel experience, or a new pet.

Oxygen sustains our life and we get it from water, you get it from air!

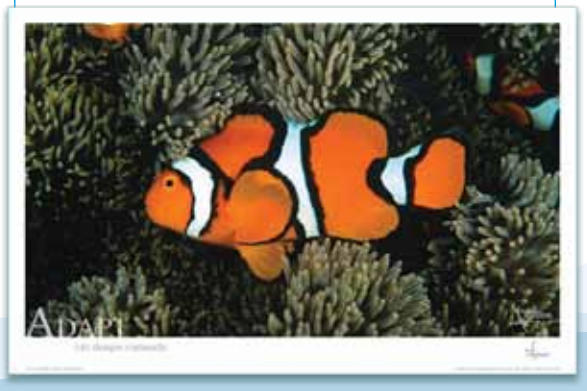
Character Education: ADAPT

"Life changes continually."

Fine Art Prints, posters, greeting cards and other products are available to decorate your classroom or school while inspiring your students with real ocean animals and environmental scenes. Contact us to learn more.

Clownfish are only found in the coral triangle. They never crossed the Marianas Trench, the deepest part of our ocean. Help students find this area on the map and research why it is important.

True Clownfish, Papua New Guinea



Book Suggestions

» Berkes, Marianne Collins. *Over in the Ocean in a Coral Reef*. Illus. Jeanette Canyon. Nevada City, California: Dawn Publications, 2004. Pre-K–K.

» Burnard, Damon. *I Spy in the Ocean*. Illus. Julia Cairns. San Francisco: Chronicle Books, 2001. Pre-K.

» Gambrell, Linda B. *Fishy Tales*. New York, New York: DK Readers, 2009. Pre-K.

» Rustad, Martha. *Sea Anemones*. Minneapolis, Minnesota: Capstone Press, 2003. Grades K-2.

» Schaefer, Lola. *Sea Anemones*. Chicago, Illinois: Heinemann, 2002. Grades K-2.

» Smith, Rodger. *Coral Reef: Hide-and-Seek*. Illus. Chris Lensch. Inglewood, California: Piggy Toes Press, 2005. Pre-K–K.

Closure and Follow Up

✧ Once students have had a chance to experience the learning stations, ask students what new facts they learned from participating in the activities and reflect with the class on how much knowledge has been gathered about "Sea Anemones and Their Friends."

✧ Ask students to think of ways that humans can be symbiotic in a helpful way toward the ocean or your local environment. Remind students to never pollute. Reduce, reuse, and recycle can always be mentioned, remembering we want to reduce first!

✧ To reinforce learning, you can review the ideas and vocabulary on your "*Sea Anemone is the Place for Me*" board and as a class count how many fish there are on the board.

✧ Discuss the importance of friendships in our lives and reflect on how we build mutually beneficial relationships with our friends.

✧ Have students explain what it feels like to be a good friend. Ask them how they have to adapt or change when playing with different friends.

Plan for Independent Practice

» Students can be given specific tasks to perform in their assigned buddy teams rather than as individuals to reinforce cooperation and team-building skills.

» Students can be asked to return to class the following day with a list of all the things they did at home requiring two people or "symbiosis."

» Select stories from the suggested reading list to read as a class or for self-study.

» Students can take turns being fish and being anemones and play a modified version of tag where the sea anemone tags the fish out, STUNG!

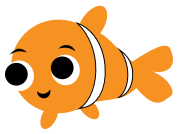
» Students can partner up sitting on the floor holding hands and find ways to help each other to standing position. Try it from different positions such as back to back, sideways, arm to arm, etc.

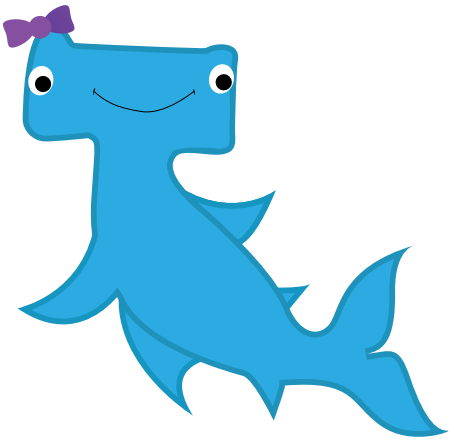
» Review the word "ADAPT" with students and discuss how it relates to their character. Encourage them to use their imagination and discuss how they need to ADAPT when they work with different buddy teams in class. How do they act differently, change and ADAPT to work with one another?

» Create a mantra for your students: "I am great because I can adapt to all change. Today I had to adapt to _____."

DVD TRANSCRIPT

Anemones And Their Friends





A-Nem-O-NEE…Go on try and say it…A-Nem-O-NEE…Anemone. Anemone. Anemone. Sea anemones and anemonefish. They live together. There are many types of anemonefish, but the one you may know the best are the clownfish!

The sea anemone is the home of the fish and the fish may hover above the sea anemone but they do not leave their home. The sea anemone is the territory of these fish, and it's their home. When the clownfish feel scared they will retreat into the tentacles of the sea anemone.

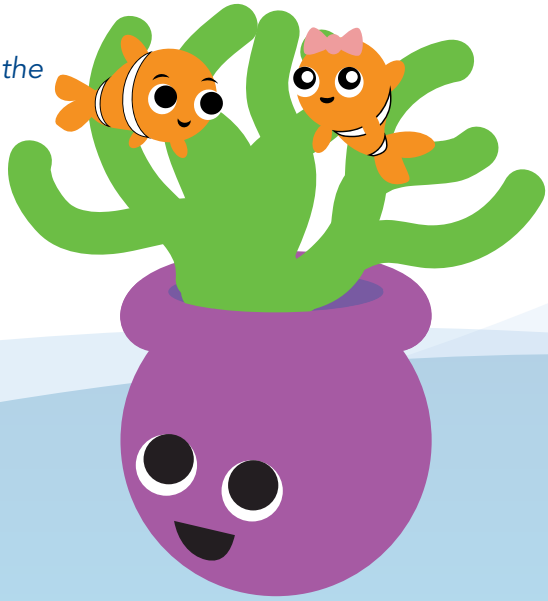
Sea anemones may look like plants, but they are animals without a backbone. In their center, that small round hole is their mouth into which all food and water passes. They attach themselves to the sea floor. Most animals leave them alone because they have the ability to sting. But there are some animals not affected by their sting!

What animals can you see living in the sea anemone?

Crabs. Shrimp. And yes, clownfish too.

Clownfish lay their eggs in an algae nest on the rocks often right next to the sea anemone. Here are newly laid eggs. All the clownfish work together to protect the eggs. As the eggs grow they change into baby fish and all of the gold you see are the baby fishes eyes! Once they hatch they leave their home anemone and float in the sea until they can find their own anemone.

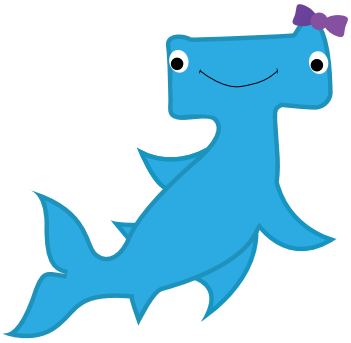
There are many different kinds of anemonefish. If you were one, which would you be? I would be the clownfish living in the magnificent sea anemone.



Go Blue! Ocean Annie's Tips to Help Our Environment

Anemonefishes and clownfish are very popular in home aquariums. As a result, they are starting to appear in parts of the ocean where they don't belong due to accidental escape or deliberate dumping when pets become unwanted. When animals from another ecosystem are introduced to a new one in this way, we call them invasive species.

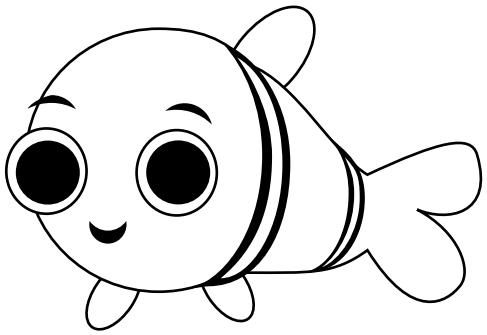
Invasive species are a problem because they start to compete with animals that are native (endemic) to the area for their food, hiding places, nesting sites, and they may not have any predators at all to keep their numbers in balance.



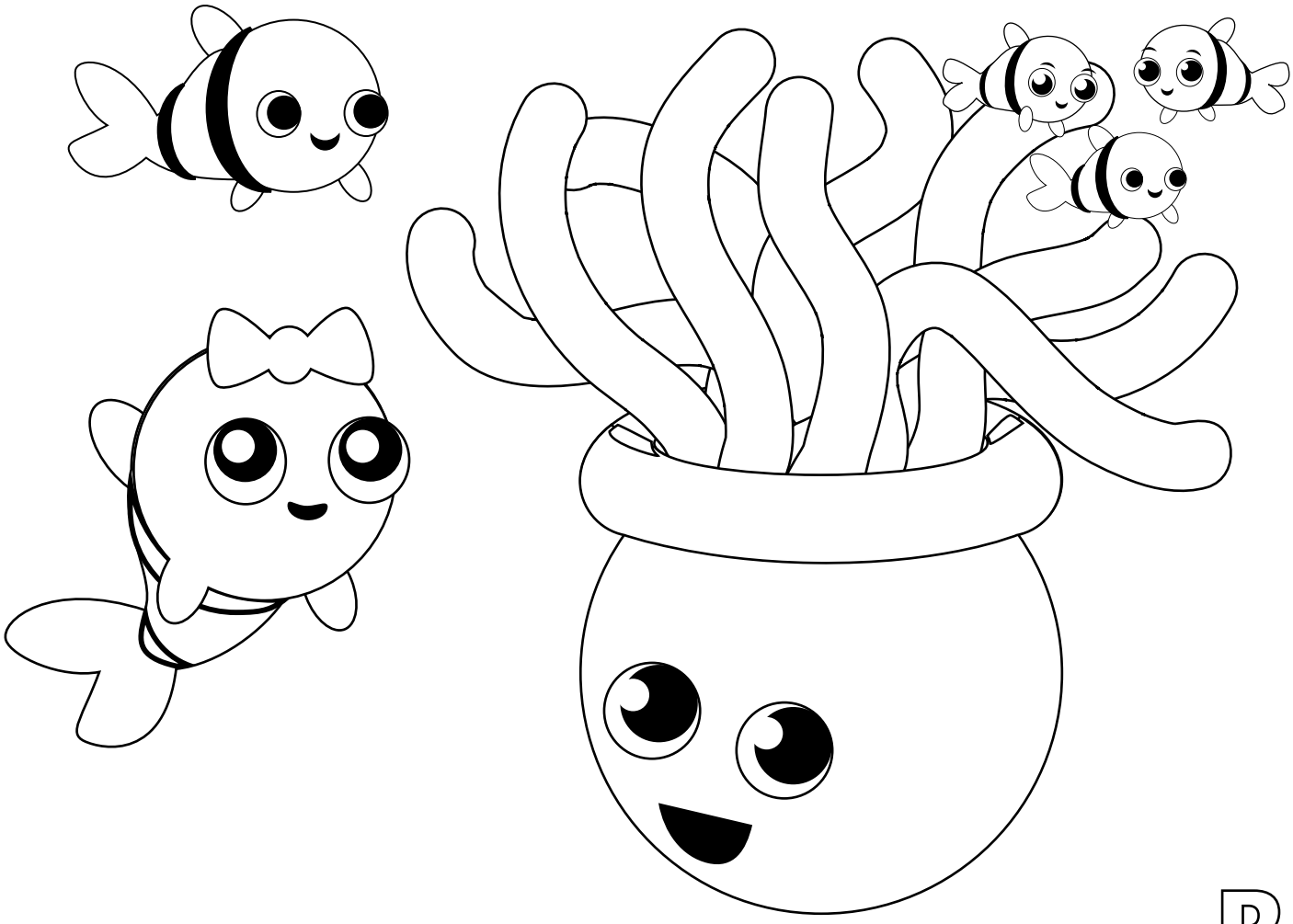
Discover with your students invasive species in your local environment or choose a location to explore. The Great Lakes have experienced a zebra mussel invasion, the Caribbean Sea has a problem with lionfish, and the Mississippi has been invaded by Asian Carp.

WHAT YOU CAN DO – Make sure that if you have a pet, you never purposely release it into a wild environment without consulting wildlife authorities. It might seem like you are doing a favor in giving your pet freedom, but it may be causing terrible damage to the delicate balance in an ecosystem where your pet does not belong. As good citizens of the world, we want to live at one with nature and always support the health of our Ocean. By doing this, we GO BLUE and LIVE BLUE!

Sea Anemones and Their Friends



ACTIVITIES

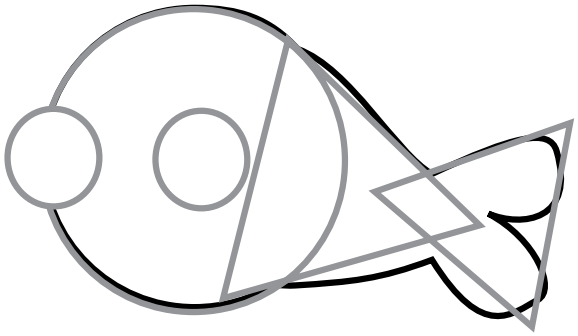


B

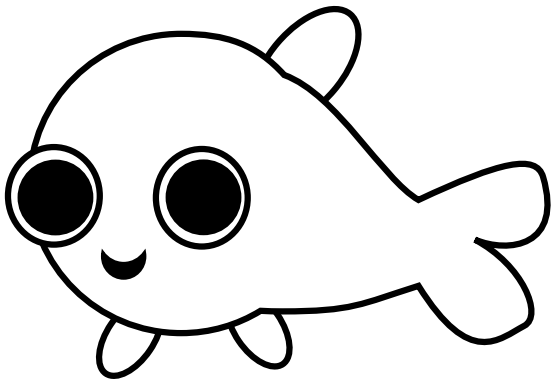
Name _____ **Date** _____

Learn To Draw A Clownfish!

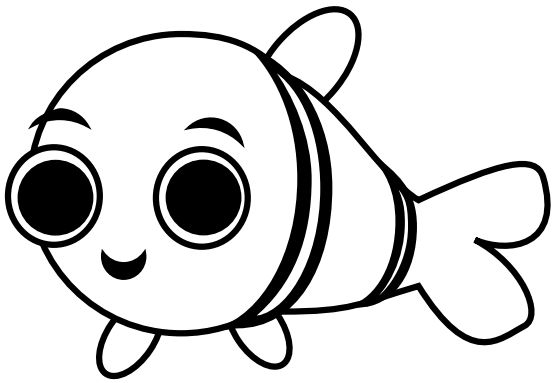
A Clownfish is very easy to draw. His body is made of 3 basic shapes.



You can trace The body shape here. See how the circle and triangles are guidelines?



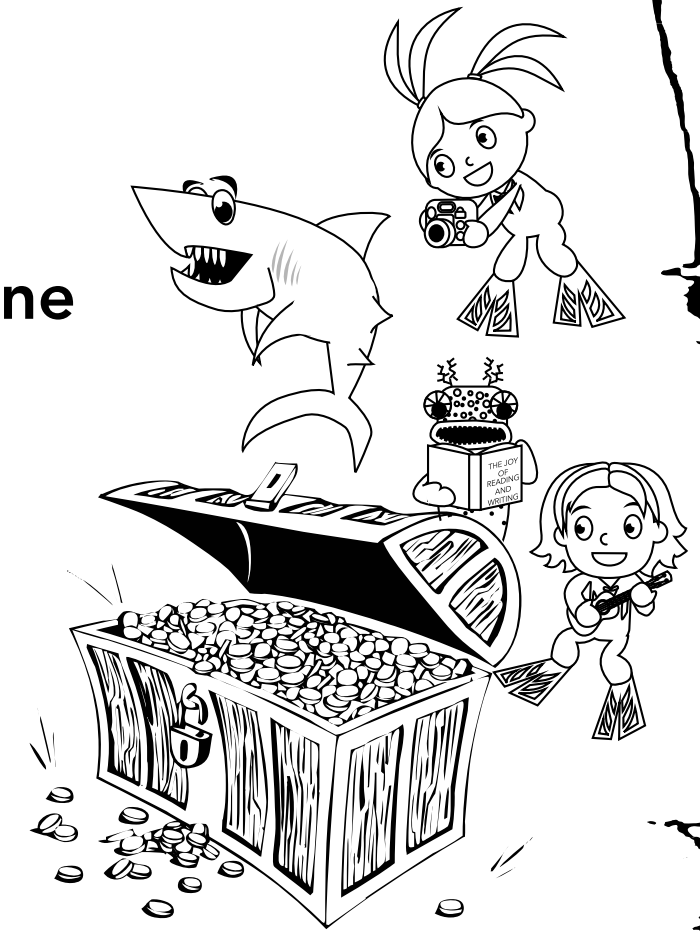
Next add eyes, mouth and fins. He's almost done!

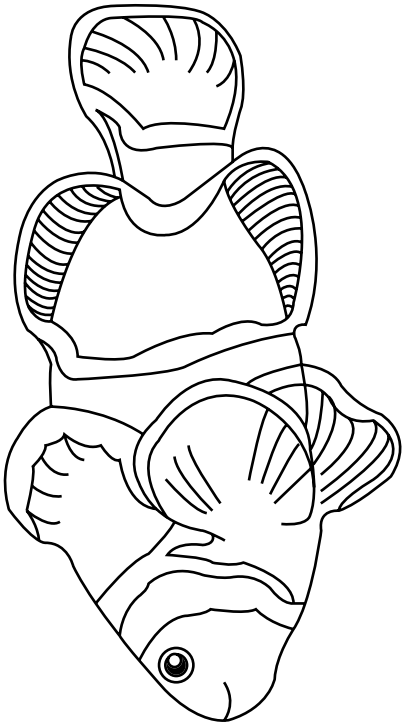


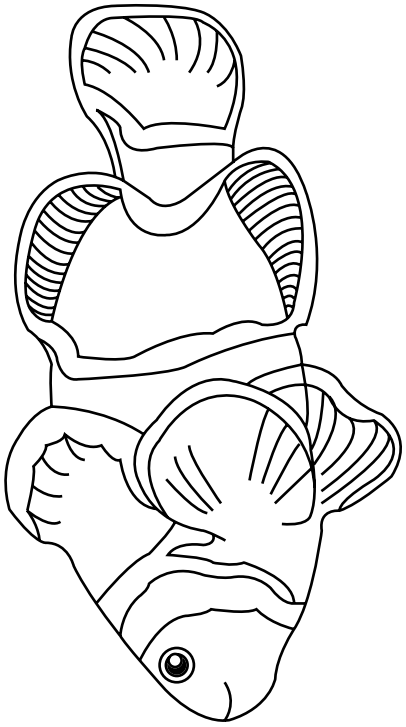
Just add the stripes and eyebrows!

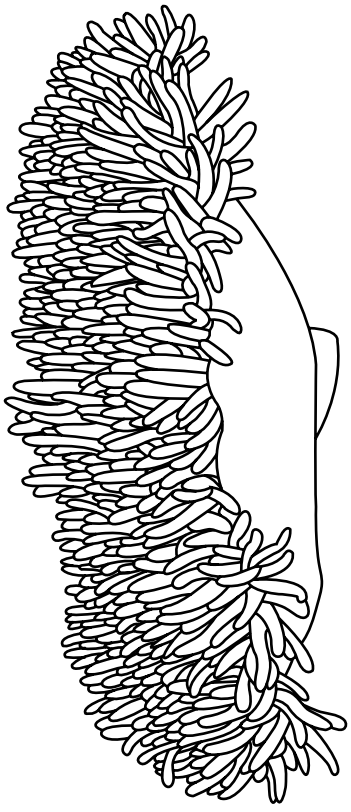
Treasure Chest of Words

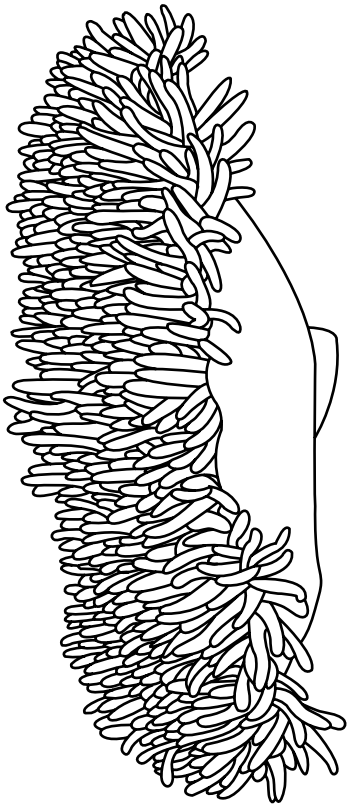
algae
clownfish
endemic
invasive species
invertebrate
naturalist
scientist
sea anemone
skeleton
symbiosis
tentacles
vertebrate

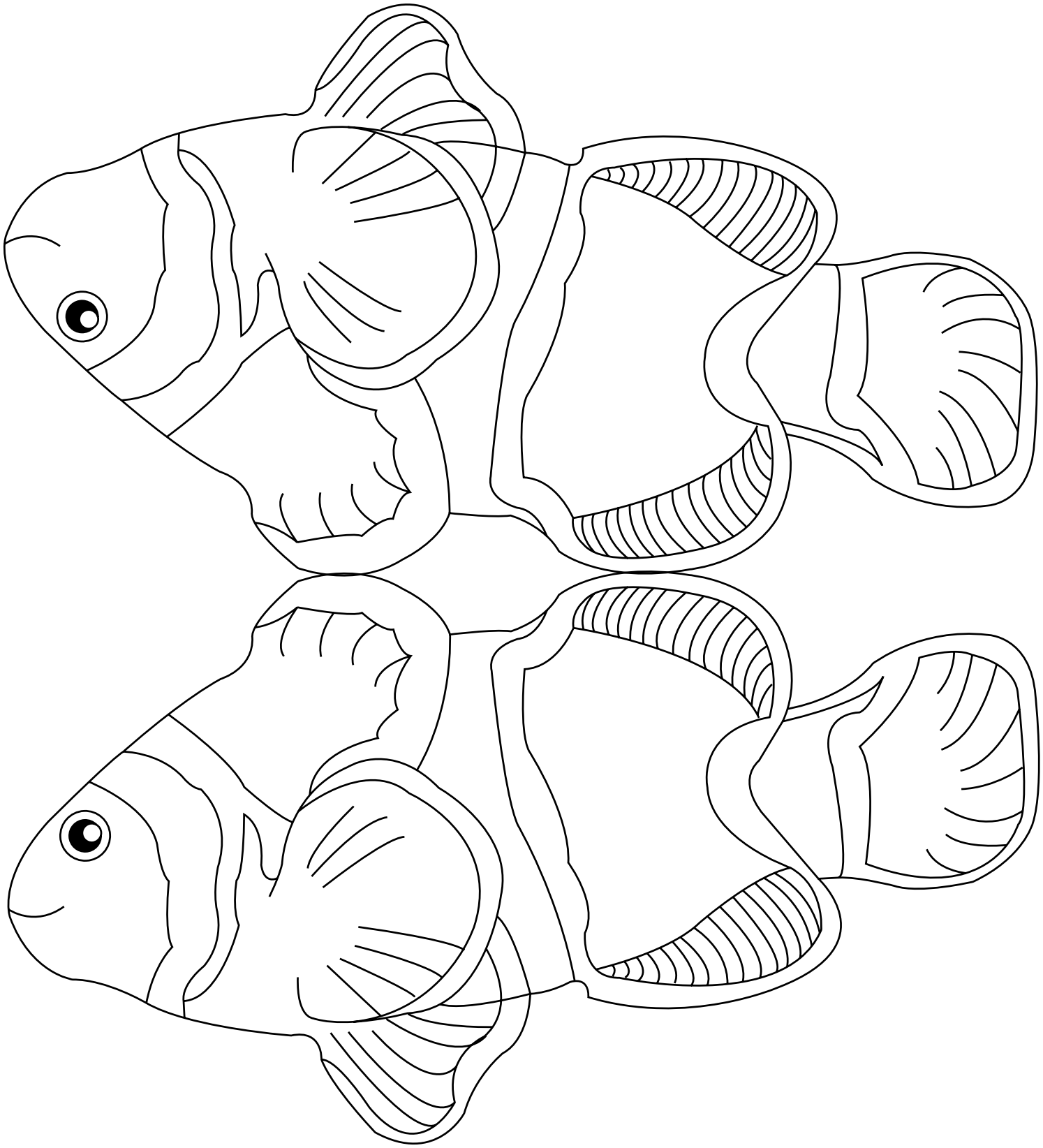


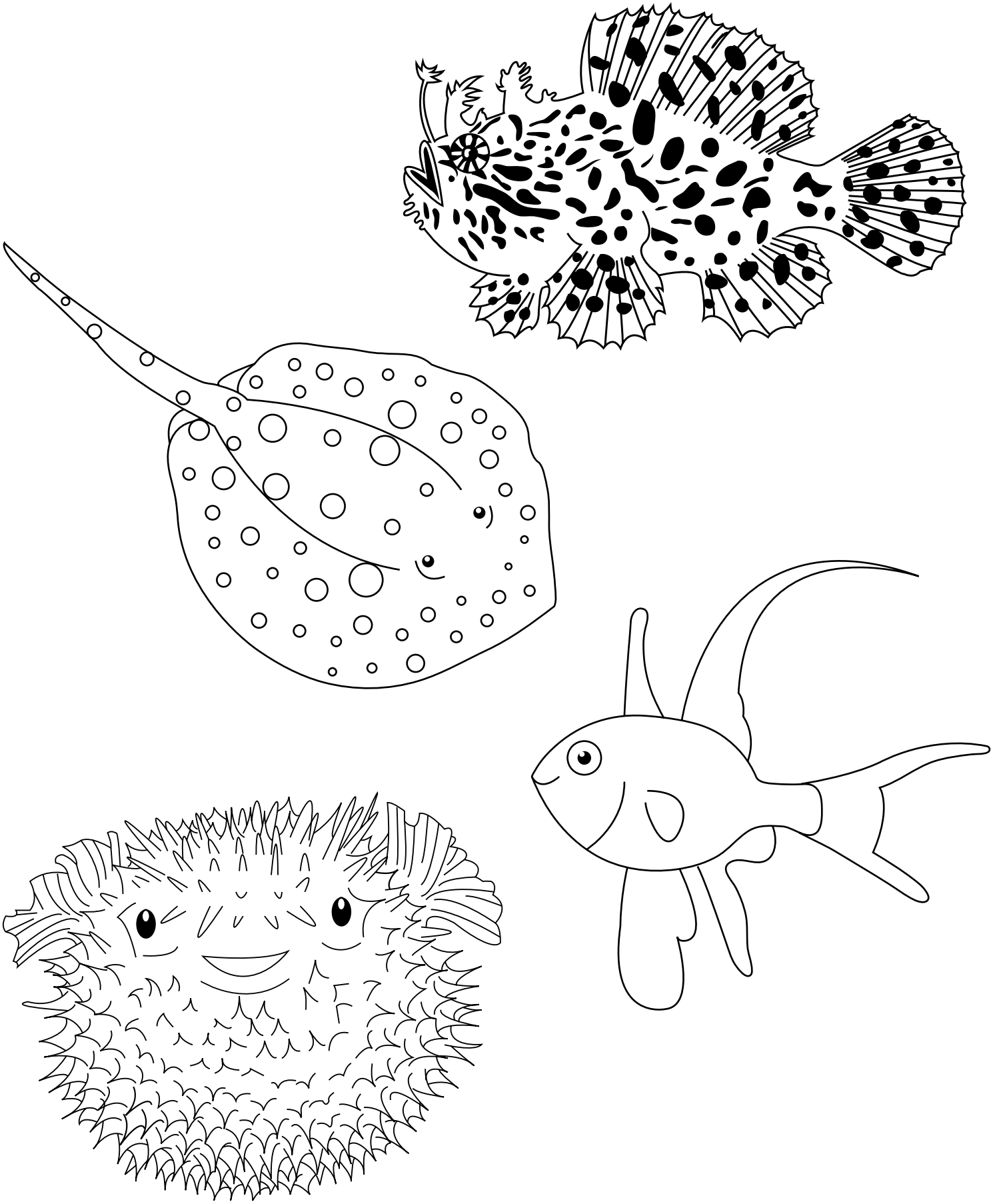


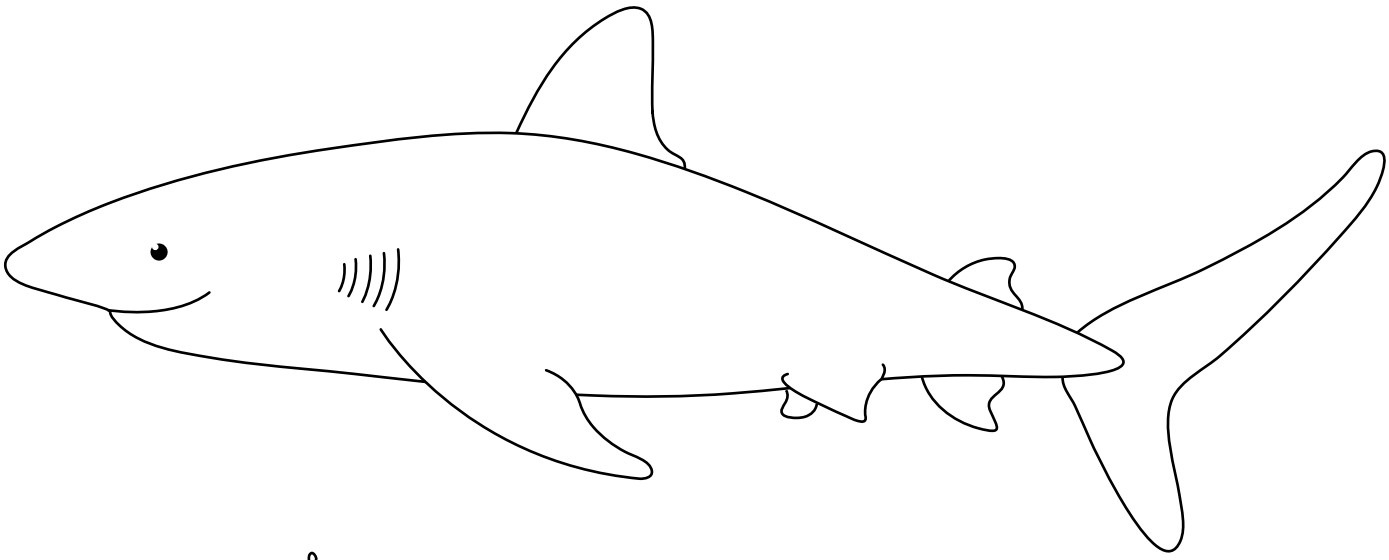


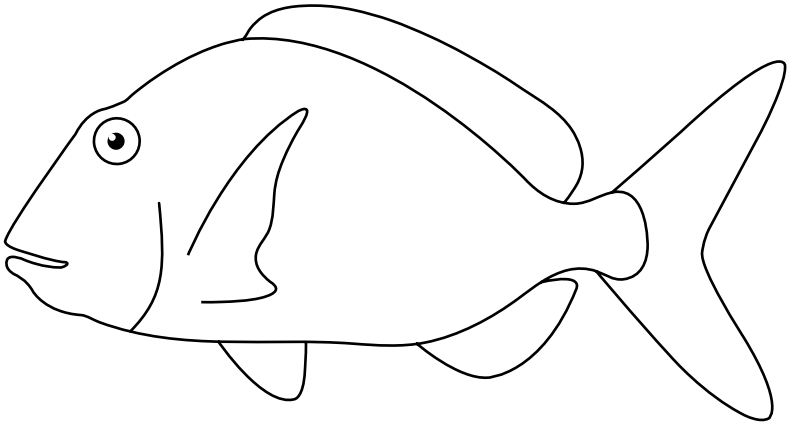


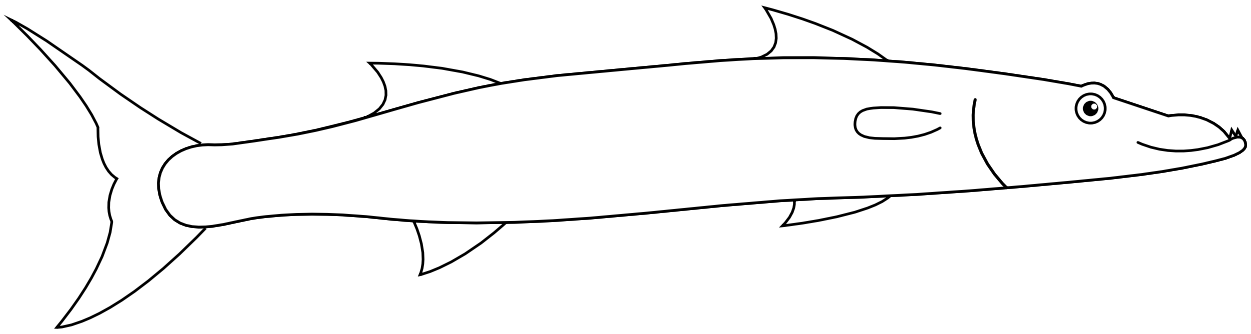


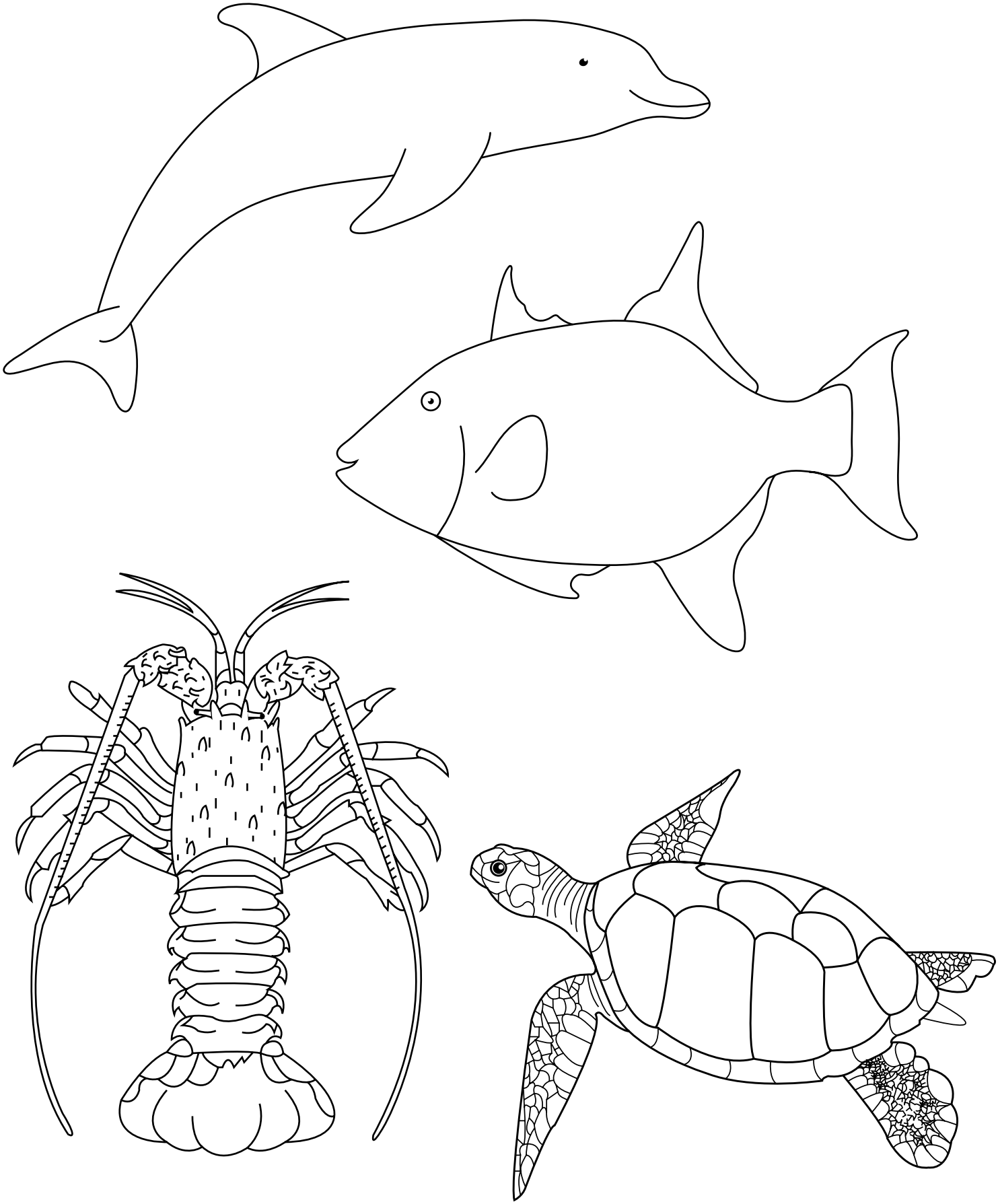


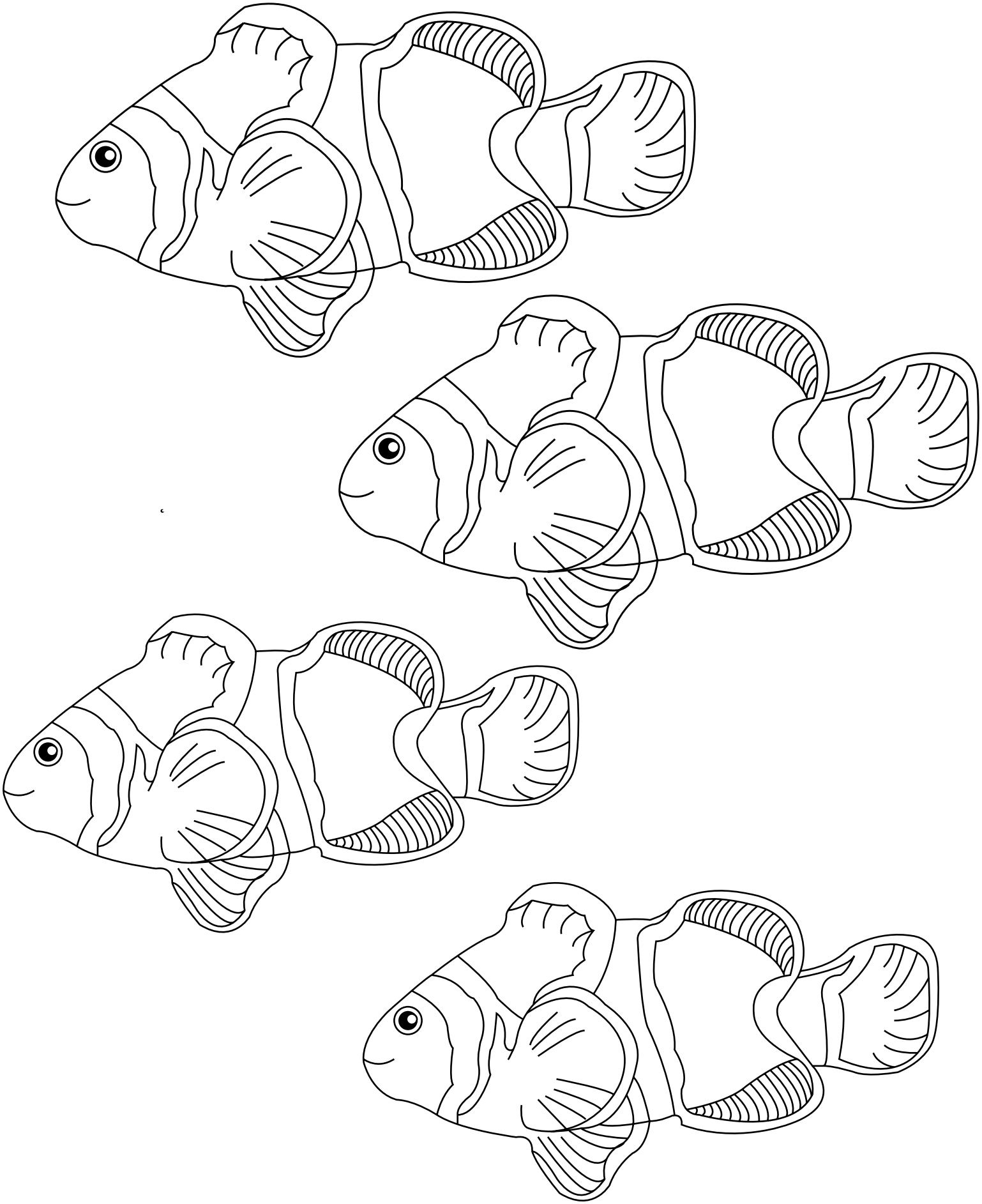


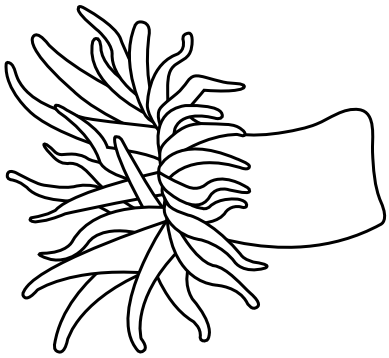


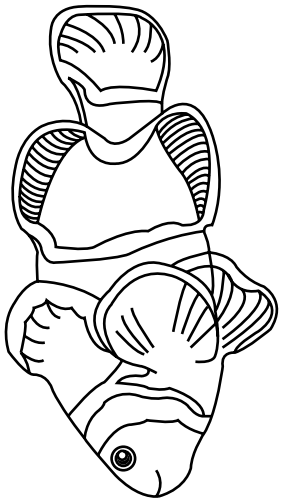


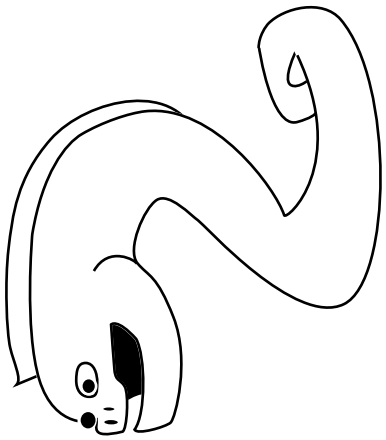


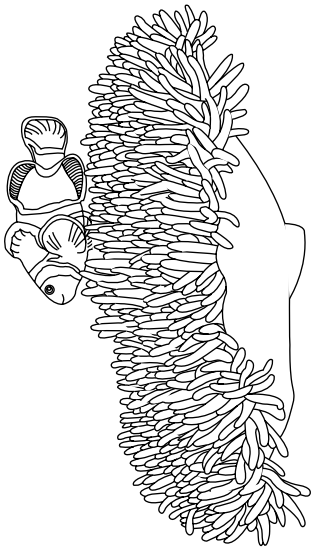


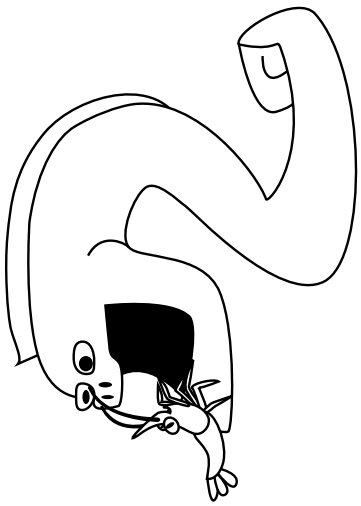


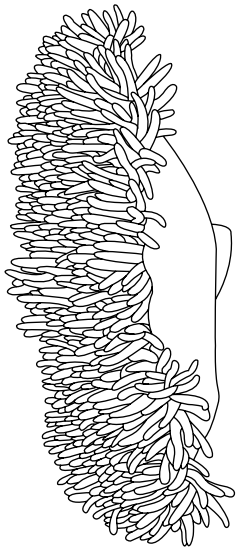


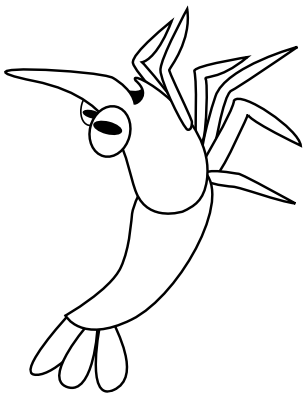












Today I learned...

Today I learned...

Hide and Seek on the Reef

Hide and Seek on the Reef

CONCEPT / TOPICS TO TEACH

Animals living in diverse ocean habitats develop unique ways of blending in to their environment, known as "*camouflage*." In particular, color is important to fish and many can *change* the color of their skin completely in order to blend in and hide from predators, warn other animals they are poisonous, or communicate in a variety of ways to other members of their group using color changing techniques. Fish use specialized cells in the skin called chromatophores to perform these dramatic color changes.

Objectives:

- Students will develop fine motor skills and creative abilities as they each design their own seahorse using a variety of materials.
- Students will build observation skills and analytical thought as they look for seahorses hiding on a coral reef.
- Students will use the scientific method of inquiry and build their observation skills in an activity requiring them to match animals with their respective environments.
- Students will use the scientific method of inquiry and observation skills to create their own camouflage smock they can wear to practice camouflaging as ocean animals do.
- Students will build fine motor skills and creative abilities by designing a school of fish that can change color as real fish do.

Character Education: UNIQUE

Have your students look around the room at one another. Ask them to think about what makes them all the same and what makes them different or UNIQUE. A few examples of similarities may include: they are all children; they have two arms, eyes, a nose and mouth; they have hair and like to play. Now explain that even though they are similar in many ways, they are all UNIQUE too. This is an ideal time to discuss issues of diversity. Being UNIQUE means you are special and different, even though we are all similar. Perhaps some students have red curly hair or like to play a certain kind of game. Skin color or physical challenges are some of the first differences children notice. Encourage celebration of whatever it is that makes a child UNIQUE! Children should be proud of what makes them different or UNIQUE!

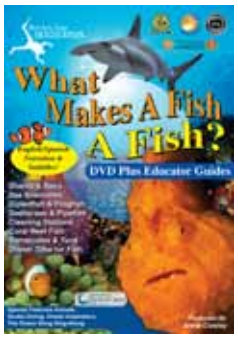
Ocean Annie and Scuba Divers are UNIQUE!

Scuba divers all need the same equipment, but they can choose different colors to make them UNIQUE. Ocean Annie wears a blue wetsuit, you might wear a black wetsuit. Scuba divers are all people who enjoy exploring the ocean and may look similar, but scuba divers have qualities that make them UNIQUE. People get to express themselves through what we wear, how we look, where we come from and what we want to do. Ask your students where they want to go scuba diving! Some may want to go ice diving and others might want to visit coral reefs in Australia or Hawaii. Some students may want to go cave diving or night diving. Encourage students to think of other ways scuba divers are UNIQUE! Encourage students to think of ways they are UNIQUE. Even though scuba divers are UNIQUE, they still must practice scuba diving rules and communication skills for safety. Practice UNIQUE hand signals or communications for your classroom or school. Use this great exercise in character development to address bullying or any other issue that might be UNIQUE to your school. Many times behavior changes when children are different or UNIQUE. We have to learn how to adapt and celebrate differences. If you have UNIQUE children or kids challenged with disabilities such as being blind, deaf, use a chair or are physically challenged in other ways, they can still learn how to scuba dive! Scuba diving is for everyone!

Getting Started

Required Materials

- ❍ DVD "What Makes A Fish, A Fish?" by Dive Into Your Imagination
- ❍ Large Dry Erase Board/Easel and Markers



Treasure Chest

- Camouflage
- Cell
- Chromatophore
- Disguise
- Estuary
- Mating
- Naturalist
- Population
- Predator
- Scales
- Species

Anticipatory Set Lead-In

- ✧ Watch and become familiar with chapter 3 about "Hide and Seek on the Reef" from the DVD "What Makes A Fish, A Fish?"
- ✧ Ask students by a show of hands how many of them have ever played hide and seek?
- ✧ Ask students what kinds of places they might like to hide?
- ✧ Ask students if any of them can imagine where fish might like to hide in the ocean.
- ✧ Ask students to use their imagination and become naturalists, meaning they are scientists who study animals in their natural surroundings, and work with their team to collect information during the run of the video clip. Play the clip and review what they learned before moving on to activities.

Here are some questions and answers you can use to build a brainstorming session:

KWL LGL AG WP

Questions for Students	Answers for Educators
What kinds of places do fish like to hide?	In sea grass, kelp forests, on coral reefs, rocky outcroppings, and in the sand.
How do fish use their bodies to help them hide?	They may change colors, or have body texture like bumps or hairy projections to help them blend in to their environment.
How many different colored seahorses can you find?	Many colors some of which include: orange, pink, white and yellow.
How many different kinds of pipefish do you see?	There are many – the white pipefish called an ornate ghost pipefish, a hairy pipefish, and a halimeda pipefish. Keep in mind pipefish and seahorses are in the same family of fish!

Video Review

- ✧ After watching the clip "Hide and Seek on the Reef" once or even a few times, discuss and write down additional facts, questions, and information students gained from the video for further research and discussion.
- ✧ Ask students to write a reflection in their journal about hide and seek on the reef.
- ✧ During the video, there were many different, interesting, and UNIQUE fish. What made the fish UNIQUE? They are all real ocean animals, yet they are more fun than cartoons. Nature is wonderful to explore and offers many opportunities. Ask students what they think of all these UNIQUE fish. Encourage them to become underwater explorers learning and uncovering mysteries from the sea!

Imagination Values

Children love to play the game hide and seek. Traditional hide and seek has students literally hide while the other person tries to find them. Discuss this with your students and ask them to imagine what it would be like if they could hide without taking cover, but using their surroundings to blend in and become invisible. In science, this is known as camouflage. Use this exercise as a movement activity and have them act out what you are saying, or have them be silent using only their minds. Ask children to imagine they are scuba divers or ichthyologists. By having them focus and gain a connection to the animals, they will attain critical elements of imagination play. You can read this script or use your imagination and create your own! On the count of three, say the magic word: 1, 2, 3…IMAGINATION!

"Many of you like to play hide and seek, but what if you could hide by blending into your surroundings? Look around the room and try to imagine what you would wear to blend into the classroom! Soldiers wear tan camouflage uniforms when they are in the desert and green uniforms in the jungle. Some of you wear camouflage pants, shirts or you might even have a backpack that is covered in a camouflage design. You wear these clothes because you like them but soldiers wear them for protection.

In nature, animals need camouflage for protection. In order to survive, animals on the coral reef need to camouflage themselves by blending into their surroundings. On the count of three let's say the magic word, imagination. 1, 2, 3…IMAGINATION! Now using your imagination, think about what you would look like as a fish on a coral reef. Would you look different as a flat fish on a sand flat? Now imagine you are in a kelp forest. What colors would you be? What do your fish lips look like? What shape is your body? Does it have bumps or is your skin smooth? How would you adapt in every environment? What color and pattern would make you UNIQUE? Can you imagine what you would look like in order to camouflage and blend into your surroundings? Would you use camouflage for protection or would you use it to your advantage? We can tell a lot about fish by observing them. As we continue with our activities, let's keep our imagination alive by playing hide and seek on the reef as we learn more about the fish in the sea!"

CLASSROOM ACTIVITY STATION C1
SEAHORSE FOREST

Overview

Each student will design a seahorse and label their seahorse with a new vocabulary word or fun fact of his/her choosing. When all the seahorses are complete arrange them to hang from the ceiling amid streamer "kelp." This project will help students build *vocabulary, creativity, artistic ability, fine motor coordination,* and *practice counting* skills.

Materials: Seahorse template, Heavy Paper, Crayons, Markers, or Colored Pencils, Glue, Glitter, Colored bits of tissue, Different Colored Streamers, String, Tape, Scissors

Talking Points

- Ask students if they can remember what colors they saw on the seahorses. You may opt to review the film clip as needed to help them remember.
- Explain to students that seahorses come in many colors to help them blend into their environment and hide. Using color to match one's surroundings is a survival tool called camouflage.
- Ask students where they think seahorses can be found, and affirm they are found only in the ocean and tend to live around colorful coral reefs, sponge gardens, in eel grass beds and in the sand.

Lesson Procedure

1. Hang green or colored streamers from the ceiling of the room to create a kelp forest or coral reef effect. You may hang streamers from ceiling all the way to the floor and tape them down or let them float above students.
2. Photocopy, cut out, and provide a seahorse shape for each student to decorate.
3. Once each child has finished designing their seahorse, help them choose and write a vocabulary word or fun fact from the lesson on it.
4. Arrange the seahorses to hang from the ceiling by suspending them with string and use them for counting and vocabulary practice.

CLASSROOM ACTIVITY STATION C1 (Continued)

SEAHORSE FOREST

Extension Ideas

» Cover a bulletin board with butcher paper. Let students make a colorful coral reef by dabbing paint onto the board with textured objects. Try using faux natural sponge, bunched up rags, or the bottoms of pop bottles from the recycle bin to give a variety of shapes and textures. Photocopy the seahorse template from this lesson plan onto copier safe acetate and let the kids move the clear seahorses around the reef to see them blend in.

» Ask students to pair up in their buddy teams and share information about where they might like to hide in the ocean. Enhance the exercise by asking them to collaborate on a drawing or write a story.

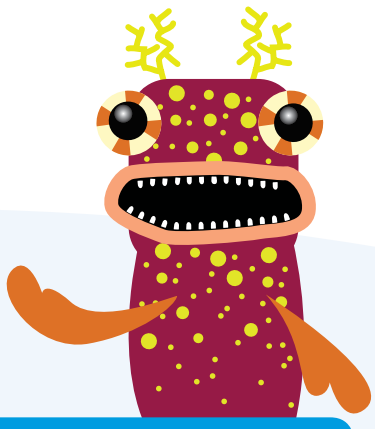
» Incorporate as many seahorse facts as you can into a short story or play for the students to perform using their seahorse bulletin board as scenery.

» As a movement exercise you can have students move slowly around the room imagining they are seahorses. Seahorses move very slowly and often will stay in one place on the reef.

» Count the seahorses hanging from the ceiling to practice numbers.

» Ask students what letter the seahorse looks like from their A, B, C's. If they guess the letter "S" challenge students to see how many Ocean words they can think of that begin with the letter "S".

Notes



Scuba divers plan their dives and dive their plan. They also keep a journal!

CLASSROOM ACTIVITY STATION C2

1 One, 2 Two, 3 Three…WHAT DO I SEA?

Overview

Students will be challenged to find seahorses embedded in an image of their environment. This will help enforce student awareness that ocean organisms exhibit an amazing variety of different shapes and sizes that help them to blend in or camouflage to survive in the ocean. Participation in this exercise will provide practice with visual perceptual skills, shape recognition, visual discrimination, fine motor coordination, and counting.

Materials: "Find the Seahorse", Crayons or Colored Pencils

Talking Points

Q: Ask students if they can remember any of the different colors seahorses were in the film clip. You may show it to students again as needed to refresh their memory in the music only setting so they focus on the images.

A: Affirm some were yellow, white, orange, and even pink.

Q: Ask students if they can remember why seahorses come in different colors.

A: Affirm they use color to blend into their environment to hide from other animals that might want to munch them as a snack!

✧ Explain to students using color to blend in to the environment is a way of surviving in the ocean. Scientists call this technique camouflage.

Lesson Procedure

1. Provide each student with a photocopy of the "Find the Seahorse" page.
2. Have students use their imagination to become scuba diving scientists looking for seahorses camouflaging on a reef during the activity.
3. Instruct students to find and color as many seahorses as they can.
4. Help students write words that describe the environment their seahorses are hiding in.

Scuba divers carry computers underwater to monitor their air supply.

CLASSROOM ACTIVITY STATION C2 (Continued)

1 One, 2 Two, 3 Three…WHAT DO I SEA?

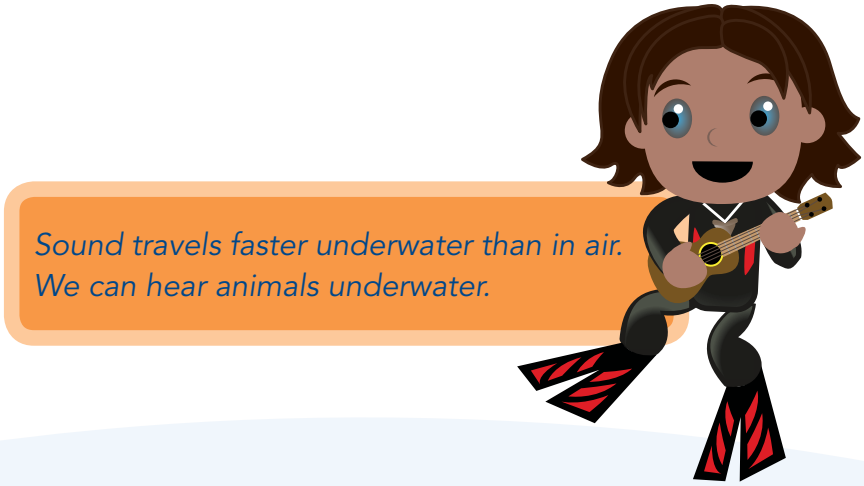
Extension Ideas

» Help students write down their favorite "fun fact" learned from the DVD across the bottom of their color page. During circle time ask each student to share his/her fact and be prepared to help prompt them if they have trouble remembering.

» Post the pages on a bulletin board and talk about what makes each student's page unique, special, and diverse just as animals in the sea are unique individuals.

» Have students draw a self-portrait highlighting what makes them unique, special and diverse. Celebrate diversity in your class and make students feel their UNIQUE differences are great!

Notes



CLASSROOM ACTIVITY STATION C3

PEEK A BOO!

Overview

Students will be challenged to see if they can "hide the fish" by placing environments printed on copier safe transparency over fish illustrations. This activity will help students understand how specific animals use particular environments to become "nearly invisible" as a means of camouflage. This exercise will help students use *shape recognition, logic, and deductive reasoning* to better understand the characteristics of organisms and their relationship to the environment.

Materials: Fish Illustrations, Environment Illustrations, Copier safe transparency, 8x10 Heavy weight copy paper

Talking Points

- Seahorses and pipefish have different shapes. Seahorses look like an "S" and pipefish are straight like a line.
- Point out to students that sometimes animals use their body shape to blend in and hide in their environment.
- Explain they will have an opportunity to see a variety of ocean animals, hypothesize, make predictions, and test whether they can match them to their homes by examining their body shapes.

Lesson Procedure

1. On a table or similarly open workspace, lay out the five animal illustrations printed on paper and five environment illustrations printed on transparency.
2. Ask students to study the environments and the animal images. Have them make hypotheses and predictions about which environments will best suit each fish.
3. Instruct students to practice placing the different transparency environments over the animals to see which ones help them hide the best.

CLASSROOM ACTIVITY STATION C3 (Continued)

PEEK A BOO!

Extension Ideas

» Have students pick one of the transparencies and visually study it. Now have them draw their own ocean animals that would be camouflaged by that surrounding. When illustrations are completed, have them test the different transparencies over their animals.

» Order posters from the Dive Into Your Imagination series and post them up around the room. Ask students what kinds of animals might best use camouflage in each environment.

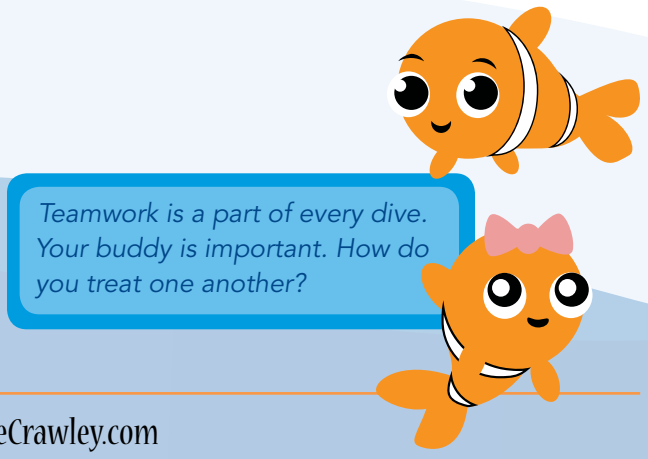
» Ask students to think of what color they would want to be to provide the best camouflage in the ocean. Read aloud one of the books from the suggested reading list, and instruct students to see if they can find their chosen color during the story. Each student can be given a card in their chosen color to hold up each time they see it during the story or have them count the number of times they see it.

» Ask students to think of what color provides the best camouflage in the open ocean. Have students think about sharks, tuna fish, barracuda and other fish living in the open sea. Most of these animals are silver, blue or gray tones on top with lighter under bellies known as counter-shading.

» Ask students what land animals camouflage themselves to their surroundings. You can get them started with lions and tigers.

» Ask students to try and position their bodies as seahorses or pipefish then move slowly around the room. Switch it up by having them be scientists, scuba divers, boat captains or submarine pilots. If they get too excited have them return to be slowly swimming seahorses in the sea!

Notes



Teamwork is a part of every dive. Your buddy is important. How do you treat one another?

CLASSROOM ACTIVITY STATION C4
NOW YOU SEA ME!

Overview

Students will observe the environment(s) they see in the DVDs, and paint one or both sides of their pillowcase in a way they think would help them camouflage into the picture(s). This activity will help students use *artistic skills, fine motor coordination*, and communicate scientific ideas.

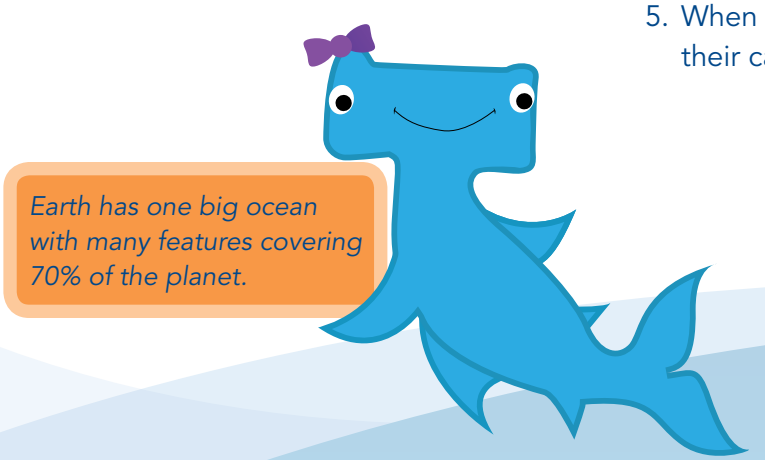
Materials: 1 Pillowcase per child, Paints, Brushes, Sponges, Scissors, 1-2 Images of an environment such as a coral reef, Kelp forest or desert for students to look at and mimic.

Talking Points

- Spend a moment with students reviewing that in the film they saw that pipefish and seahorses use coloring, texture and even body shape to blend in with their environment. Ocean animals use camouflage to hide and survive in the ocean.
- Point out to students that the ocean contains materials from all parts of the planet, and that weathered rock, minerals, and other materials living and non-living are carried into the ocean by rivers, rain and such. All of these materials help make up the ocean floor.

Lesson Procedure

1. Find a clear space on the wall to hang up one or two Dive Into Your Imagination posters or murals of natural scenery like a kelp forest or coral reef.
2. Cut out arm and head holes into student's pillowcases before painting begins.
3. In an open work space, set out the paints, brushes and sponges.
4. Instruct students to paint their pillowcase in a way they think would help them blend in to one of the pictures. Students could use each side of the pillowcase to represent a different environment.
5. When the paint is dry let students try out their camouflage strategy.



CLASSROOM ACTIVITY STATION C4 (Continued)

NOW YOU SEA ME!

Extension Ideas

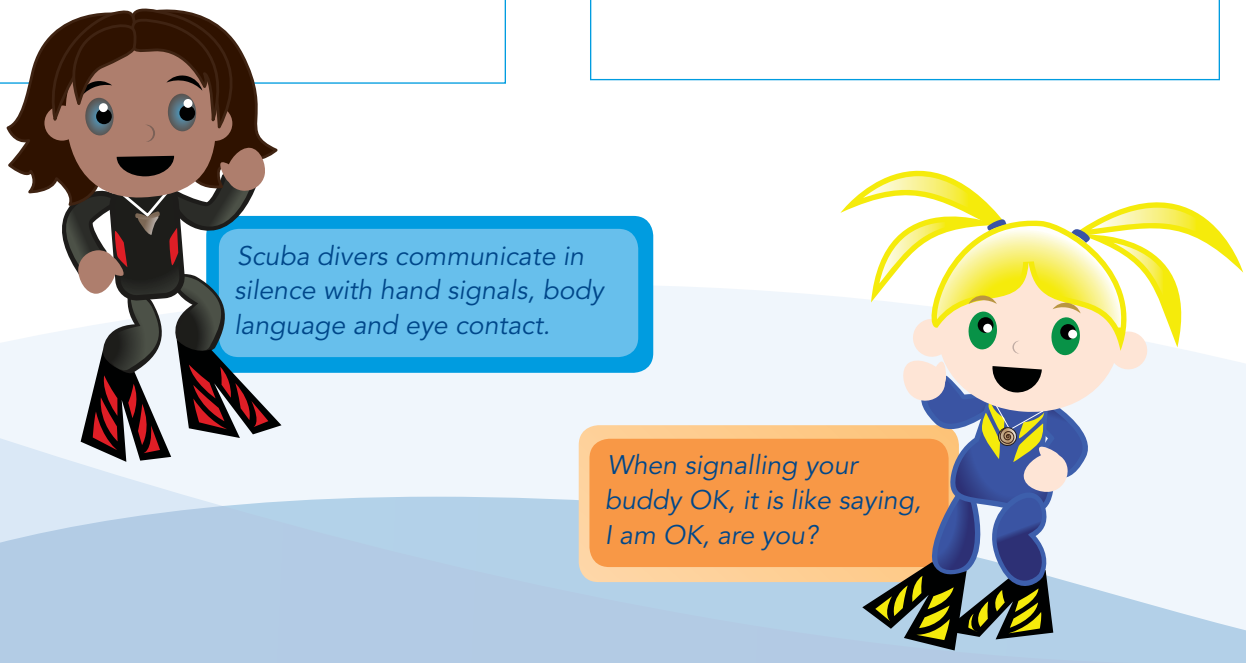
» Ask students to pick out clothes to wear to class that they think would help them camouflage well in the ocean. Discuss what they chose and why.

» Talk with students about what kinds of pets they have at home, and what kinds of environments might allow their pets to camouflage. If their pets do not use camouflage for protection or survival, how do they survive.

» Discuss with students what human beings need in order to survive. Healthy food to eat, a home or shelter, clothing and love! Discuss why we need these things in order to survive.

» Have students watch and observe to see if they can locate animals that camouflage in the schoolyard or at home in the backyard and report on what they find. Remind students insects are animals too. How is each unique?

Notes



CLASSROOM ACTIVITY STATION C5

KALEIDO-FISH

KALEIDO-FISH: Fish use special structures or cells in their skin called chromatophores (kr*uh*-**mat**-*uh*-fawrs) to change colors. Because of the chromatophores fish can hide or camouflage with their surroundings, send signals to other fish, and even imitate the appearance or mimic other fish. Turn the wheel behind my "colorful school" to see how these fish change color!

Overview

Students will use their artistic skills to create a school of fish that examines the very unique ability some fish have to change the color of their skin. By using small holes to open the areas that will change color, students are simulating the idea of the pigment cells in fish skin that allow this color change to take place. This activity will help students use *artistic skills, fine motor coordination*, and to communicate scientific ideas.

Materials: 2 Paper plates per child, Brads, Hole Puncher, Shape Styluses, Crayons or Colored Pencils, Fish Templates, Heavy paper or tag board

Talking Points

Q: What are chromatophores?

A: Chromatophores are pigment containing or light reflecting cells in fish. Chromatophores generate skin color in fish.

Most of the oxygen in our atmosphere comes from the phytoplankton in the ocean.

Lesson Procedure

1. Provide each student two paper plates and face them downward.
2. Instruct students to trace 3 to 4 fish shapes using provided templates you create on cardboard on to one of the plates.
3. Help students use hole punches and styluses to create patterning within the fish shapes. When this step is complete, set that plate aside.
4. On the bottom of the second paper plate, instruct students to use crayons to color the surface of the paper plate completely and randomly, creating a kaleidoscope effect.
5. Place the color plate behind the fish plate and insert a brad through the middle of the two plates to hold them loosely together so that they will turn readily when the brad is turned from the front.
6. Help each child affix a "cool school" explanation card to the bottom of the front plate. Finally, spin the wheel and watch the fish change colors!

CLASSROOM ACTIVITY STATION C5 (Continued)

KALEIDO-FISH

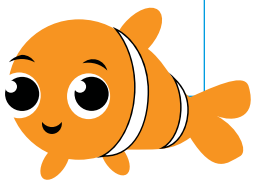
Extension Ideas

» Ask students to research other animals that use chromatophores to change color such as octopuses, chameleons, etc. and report back.

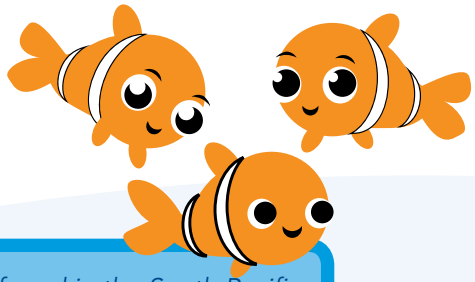
» Help students write a story about the fish in their Kaleido-fish School.

» Have students bring a small stuffed animal to class. The students will design and color a habitat for that animal that camouflages it well within their play area. You can also bring in several animals or figures and hide them in your play area. Then have students take turns hiding them and finding them during free time.

Notes



Take only photos and leave only bubbles. We do not want to touch others underwater.



Clownfish are only found in the South Pacific. Although we have one ocean, some animals live only in certain regions of the ocean.

CLASSROOM ACTIVITY STATION C6

BOOK STALL

Overview

Providing a reading or computer area where students can look through books about the subject being discussed will help build early literacy. Even if the children are not reading yet, looking at pictures and building dialogue around the images is helpful to developing *vocabulary and language skills.*

Materials: The Book *Mister Seahorse* by Eric Carle

Lesson Procedure: Character Education UNIQUE

1. As a class, read *Mister Seahorse* by Eric Carle. Observe and discuss the ways the animals that Mister Seahorse came across in the ocean were able to blend in and adapt to their unique environments.
2. Use one of the seahorse cutouts and have students decorate it like the collage patterning Eric Carle uses in his book.
3. Discuss the kinds of equipment that humans need to adapt in order to spend time under the ocean.
4. Ask students what kinds of clothes and accessories they wear to blend in and adapt with different environments or seasons.
5. Build the concept and have students cut out articles of clothing and arrange them on a wall according to what they would wear in a swimming pool, lake, or the ocean.

Everything you do on land affects my home. Help keep me clean!

Character Education: UNIQUE

"Camouflage is nature's protection. You are one of a kind!"

Fine Art Prints, posters, greeting cards and other products are available to decorate your classroom or school while inspiring your students with real ocean animals and environmental scenes. Contact us to learn more.

These are pygmy seahorses demonstrating camouflage. Look at the color, shape, and texture of the animal and it's environment. What do you notice?

Pygmy Sea Horses on Sea Fan, Indonesia

Book Suggestions

» Berkes, Marianne Collins. *Over in the Ocean in a Coral Reef*. Illus. Jeanette Canyon. Nevada City, California: Dawn Publications, 2004. Pre-K–K.

» Blackstone, Stella. *Secret Seahorse*. Illus. Clare Beaton. Cambridge, Massachussetts: Barefoot Books, 2007. Ages 4-8.

» Burnard, Damon. *I Spy in the Ocean*. Illus. Julia Cairns. San Francisco, California: Chronicle Books, 2001. Pre-K.

» Gambrell, Linda B. *Fishy Tales*. New York, New York: DK Readers, 2009. Pre-K–K.

» James, Sylvia M. *Seahorses*. New York, New York: Mondo Publishing, 2002. Ages 4-8.

» Otfinoski, Steven. *Seahorses (Animals, Animals)*. Salt Lake City, Utah: Benchmark Books, 2007. Ages 4-8

» Smith, Rodger. *Coral Reef: Hide-and-Seek*. Illus. Chris Lensch. Inglewood, California: Piggy Toes Press, 2005. Pre-K–K.

Closure and Follow Up

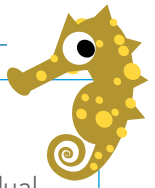
✧ Once students have had a chance to experience learning stations, gather them back together and spend time reviewing facts students knew and wanted to know.

✧ Ask students what new facts they learned and take time to correct any misinformation from earlier conversations.

✧ Reflect with the class on how much knowledge has been gathered about "Hide and Seek on the Reef." Review what it means to use camouflage.

✧ Spend a moment talking with students about why it is important to respect all things living in the ocean whether they are a seahorse or an eel, and how each plays an important role in keeping the ocean balanced and healthy. How can your students help animals in any environment? How do people affect an animal's environment? How can we live in harmony with nature?

✧ Reinforce learning by reviewing the vocabulary in your "seahorse forest" and count how many seahorses there are together as a class.



Plan for Independent Practice

» Students can use facts to develop stories about the individual fish they designed within their cool school and where each might hide in the sea.

» Encourage your students to think of examples of other animals that use camouflage in nature and the benefits associated with camouflage. Have them practice saying the word camouflage. Have them make up sentences with it.

» Select stories from the suggested reading list to read as a class or for self-study.

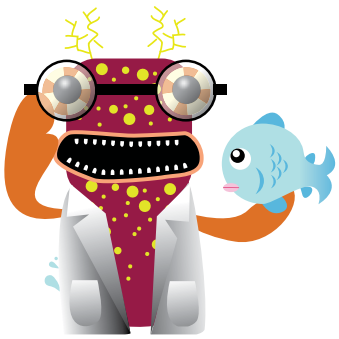
» Students can select one of the fish and illustrate the aquatic environment the animal uses and its unique coloration to hide. When appropriate children can include narration and new vocabulary words.

» Review the word UNIQUE with students and discuss how it relates to their character and their lives. Encourage them to use their imagination and think of all the ways they are UNIQUE. Help them celebrate the ways they are UNIQUE as individuals and as a class. We want students to like their UNIQUE characteristics. As children grow we want them to recognize these qualities in a positive way because this will hopefully promote acceptance of one another instead of isolation. We want to encourage acceptance as children get older due to differences not isolation. Teaching children while they are young to celebrate differences and accept those who are UNIQUE can help prevent issues in the future.

» Most classrooms have a diversity of cultures. Celebrate all the UNIQUE nationalities and differences in your classroom by discussing the similarities and differences. Then choose a topic, perhaps a meal like dinner, and discuss how different cultures eat different foods or practice different customs.

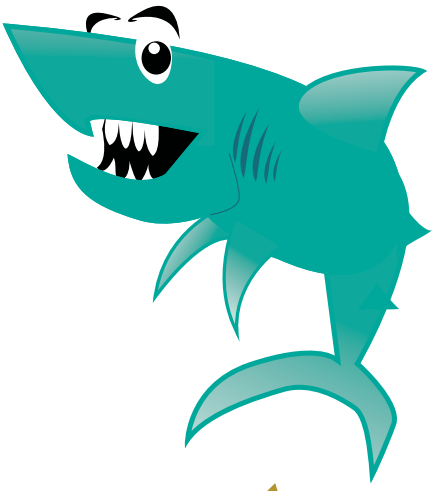
DVD TRANSCRIPT

Hide And Seek On The Reef



Swimming along the reef there are a family of fish that like to hide. Let's play hide and seek on the reef.

These fish disguise themselves to look like the coral reef and estuaries that they live in. This helps them stay alive by hiding from their predators. They may change their colors or grow hair-like strands on their body to blend in. These extraordinary fishes are in the pipefish family and cousins include pipefish and seahorses.



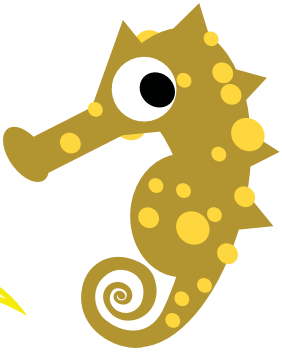
When you look at them, you may think their heads look like horses… that is how they got their names! But they are nothing like a horse! For one thing, they are much too small to ride. They also live in the sea. Instead of hooves for walking, pipefish use their fins to swim.

Let's play hide and seek on the reef.

Here is a white pipefish. Can you find it now?

Can you find the hairy pipefish hiding in the algae? How many do you see?

What about now? Can you see the green halimeda pipefish?



These fish move very slow and have bony plates and rings instead of scales. They have a long tube snout with a small mouth at the tip. Their jaws lack teeth because they suck up their food like a vacuum!

Seahorses are amazing! Unlike most creatures of the sea, they can only protect themselves by blending into the ocean environment. Their survival depends on their ability to hide.

Pygmy seahorses live on sea fans.

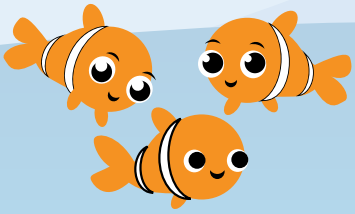
Here is a pink pygmy sea horse…can you find two?

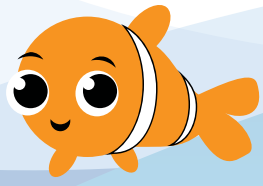
Here is a white sea horse. Can you find it now?

Where is the yellow one? Can you find it here?

How about the orange one?

Can you spot any more?



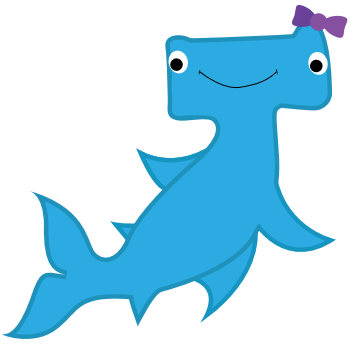


Go Blue! Ocean Annie's Tips to Help Our Environment

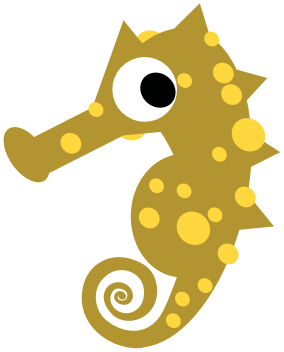
In some parts of the world, people fish with poisonous cyanide to capture fish for home aquariums. Fishermen dive into the sea and spray poison into cracks and pockets on the reef to stun the fish and make them still so they are easy to collect.

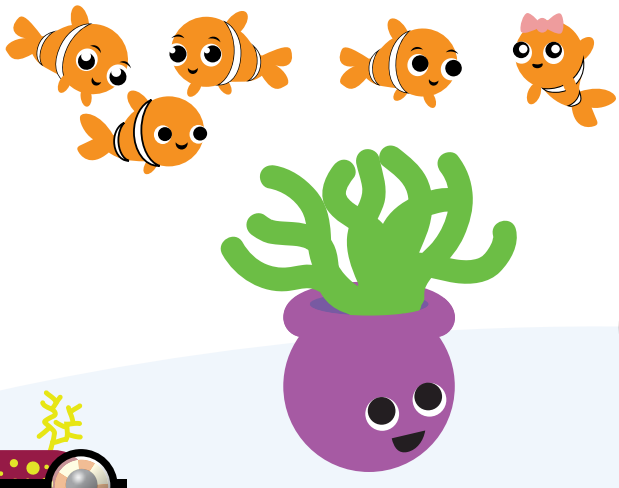
Many fish caught this way die before they reach market or suffer shortened lives. Many more creatures such as coral that cannot easily move out of the way also die from repeated contact with poison.

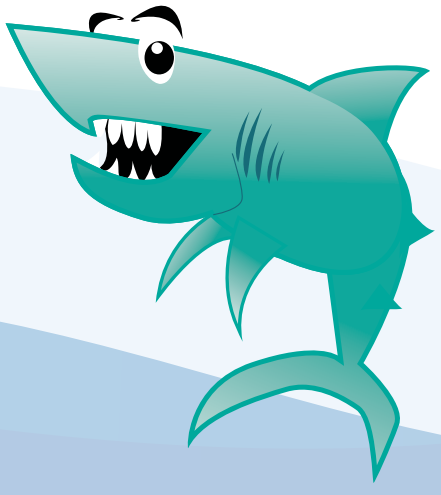
In order to help, we need to stop this practice. If you, your friends, your school, or your family keep saltwater fish at home, inquire about what parts of the world the fish come from. You need to know how the fish in your tank are caught. Many fish and aquarium shops are beginning to provide access to captive bred animals in order to promote the sustainability and health of our world ocean rather than capturing them from the reef by using poison.

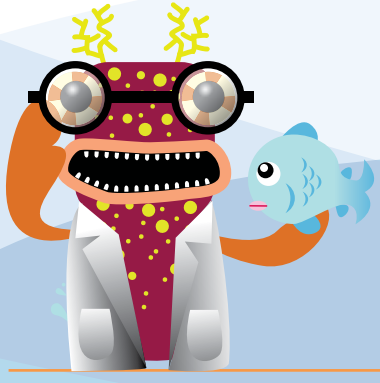


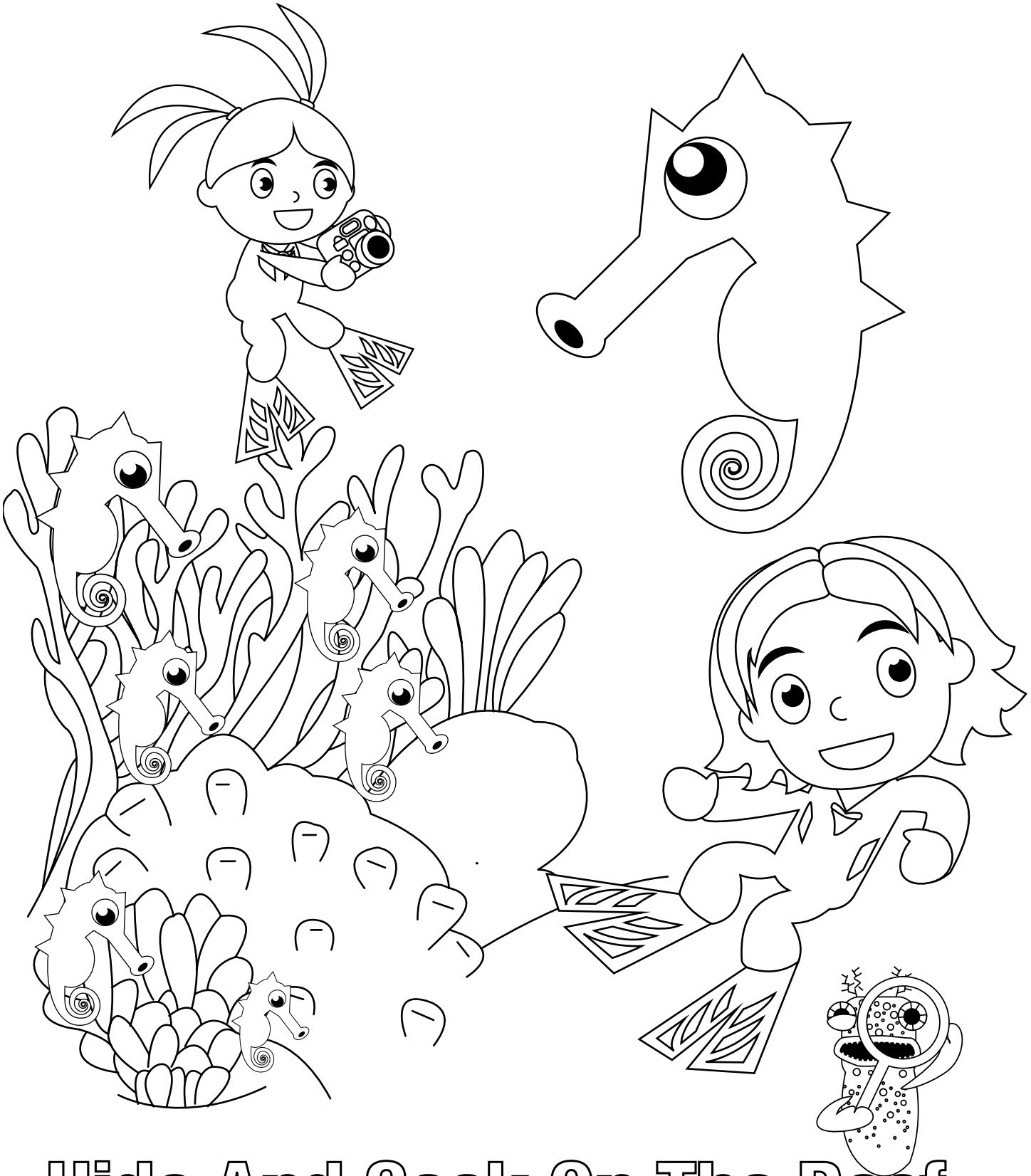
Avoid buying souvenirs that are made from once living sea life such as shells, seahorses, sea stars, coral jewelry, or other ocean animals. Many times they are taken from the sea to sell to tourists changing the balance in the Ocean. As scuba divers, we take only photos and leave only bubbles. As good citizens of the world, we want to live at one with nature and always support the health of our Ocean. By doing this, we GO BLUE and LIVE BLUE!











Hide And Seek On The Reef

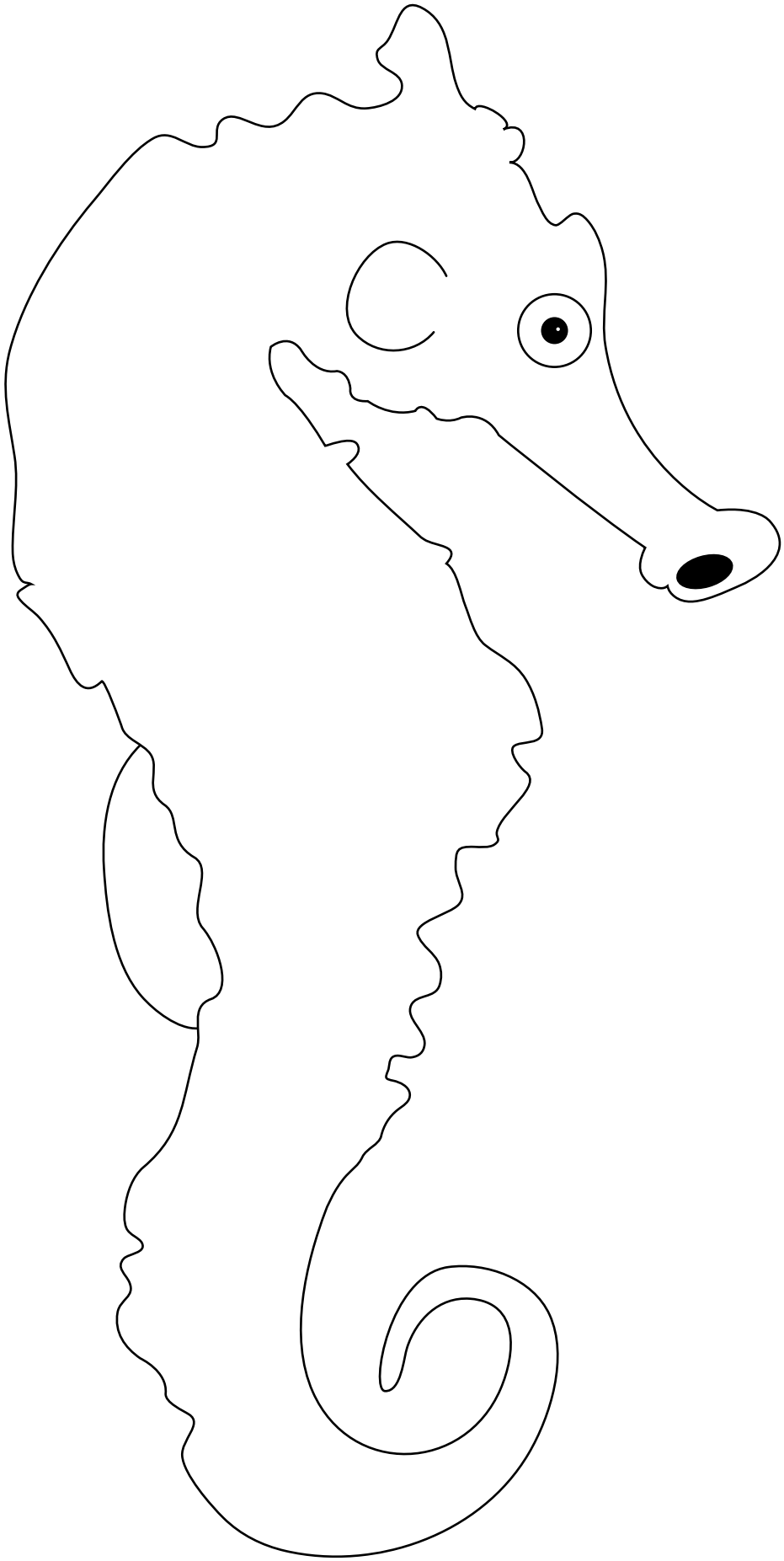
ACTIVITIES

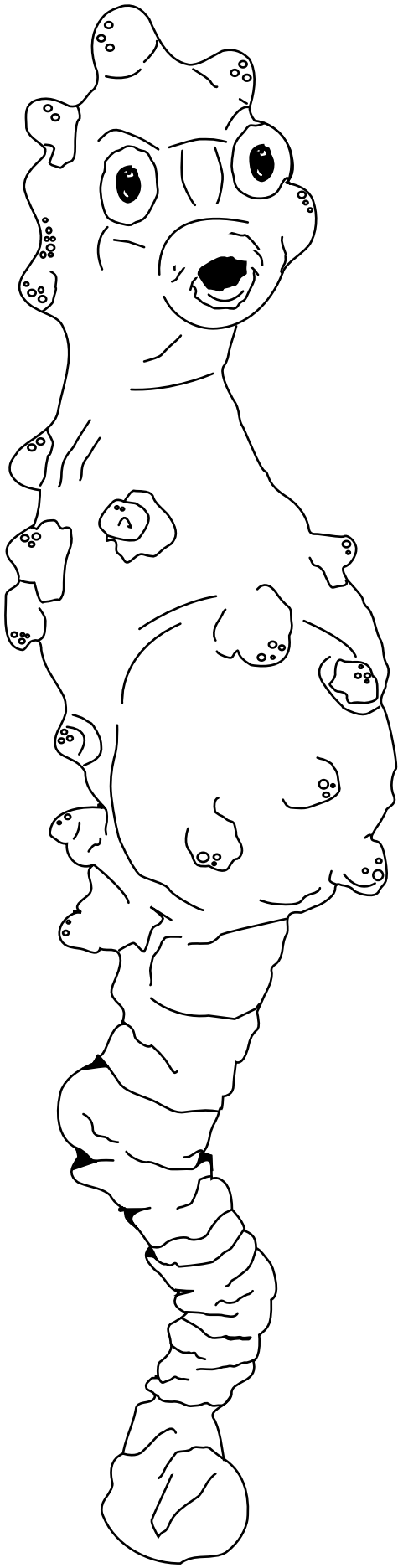
C

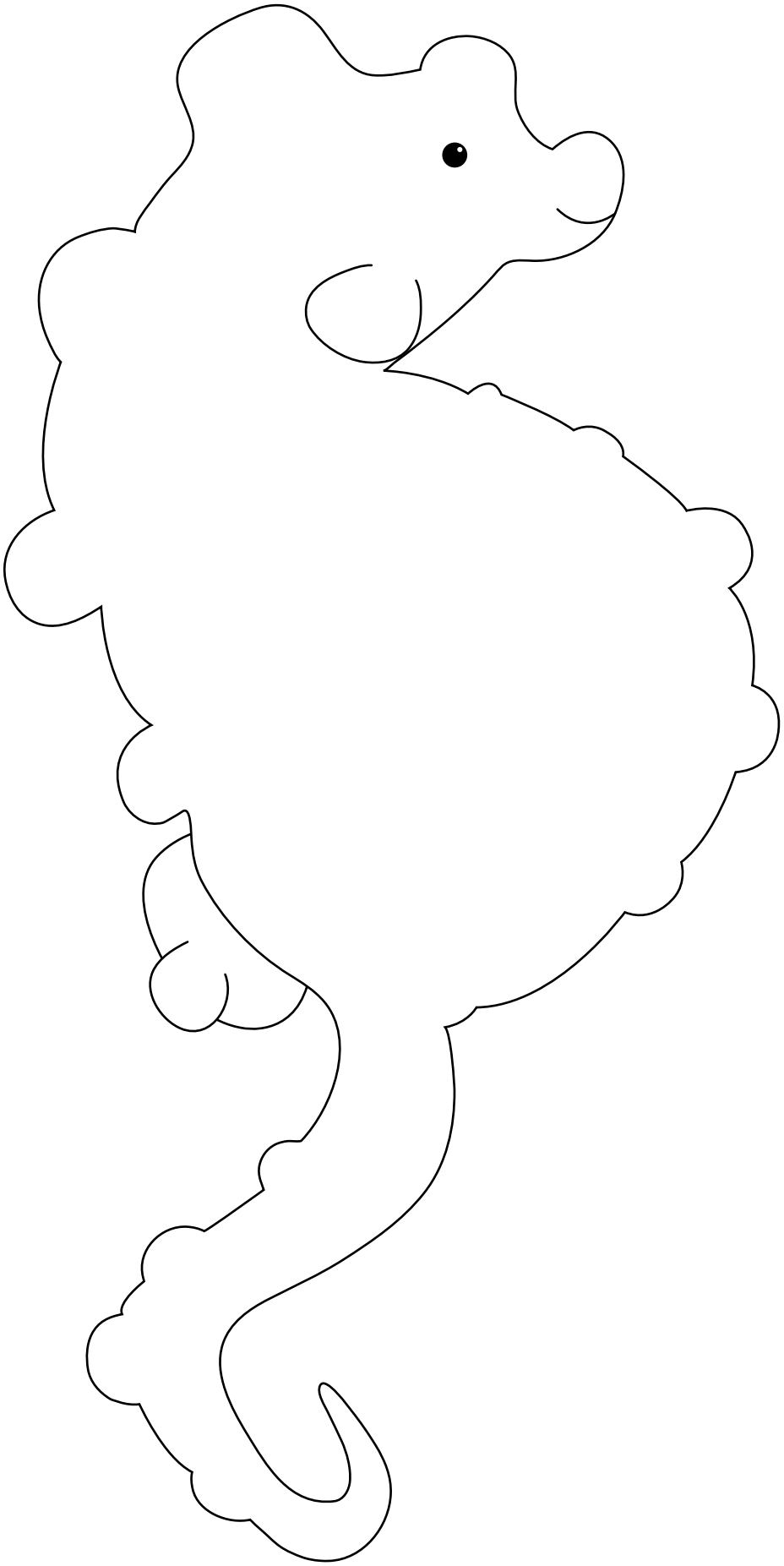
Name _____ **Date** _____

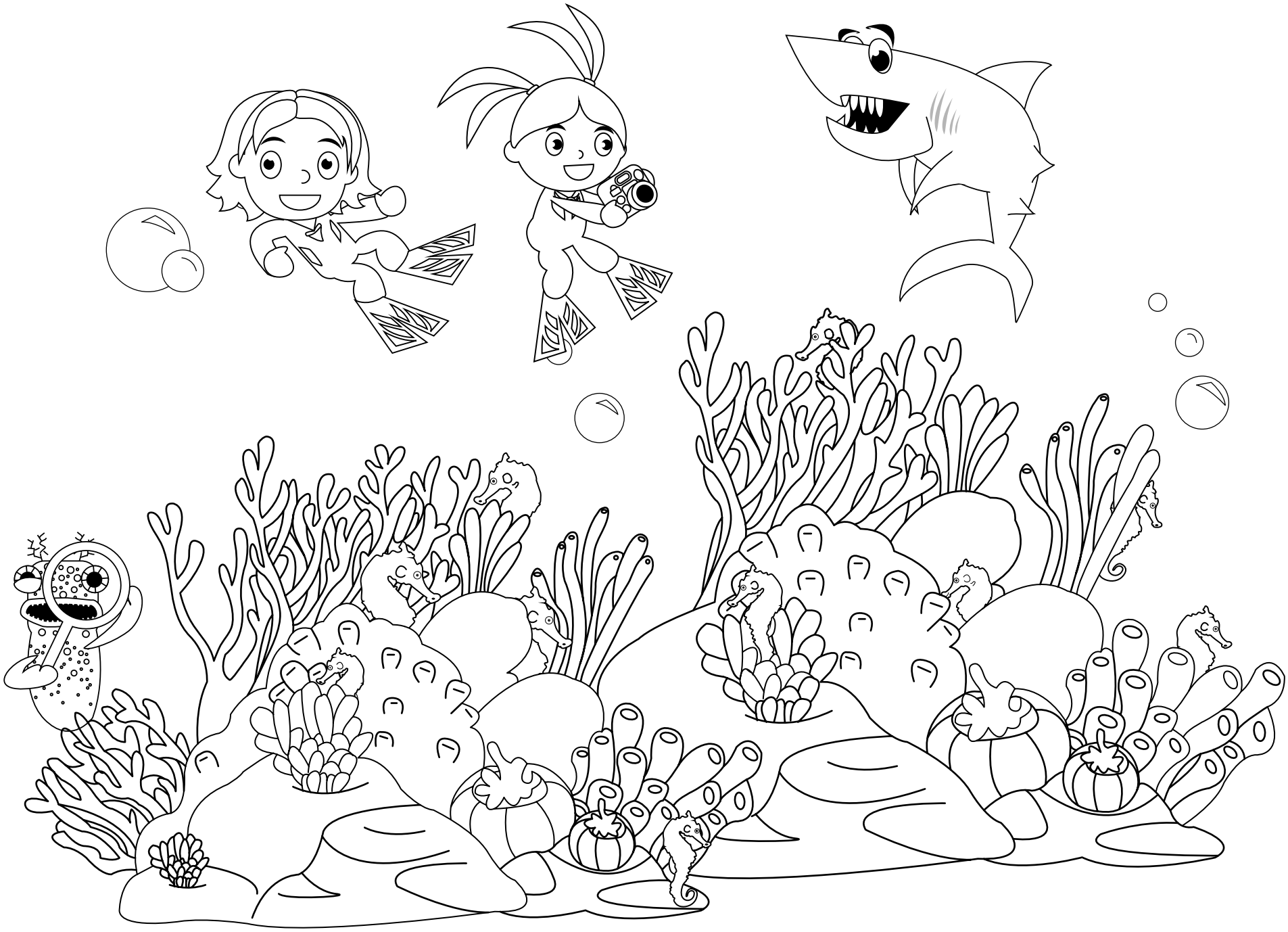
Treasure Chest of Words

camouflage
cell
chromatophore
disguise
estuary
mating
naturalist
population
predator
scales
species



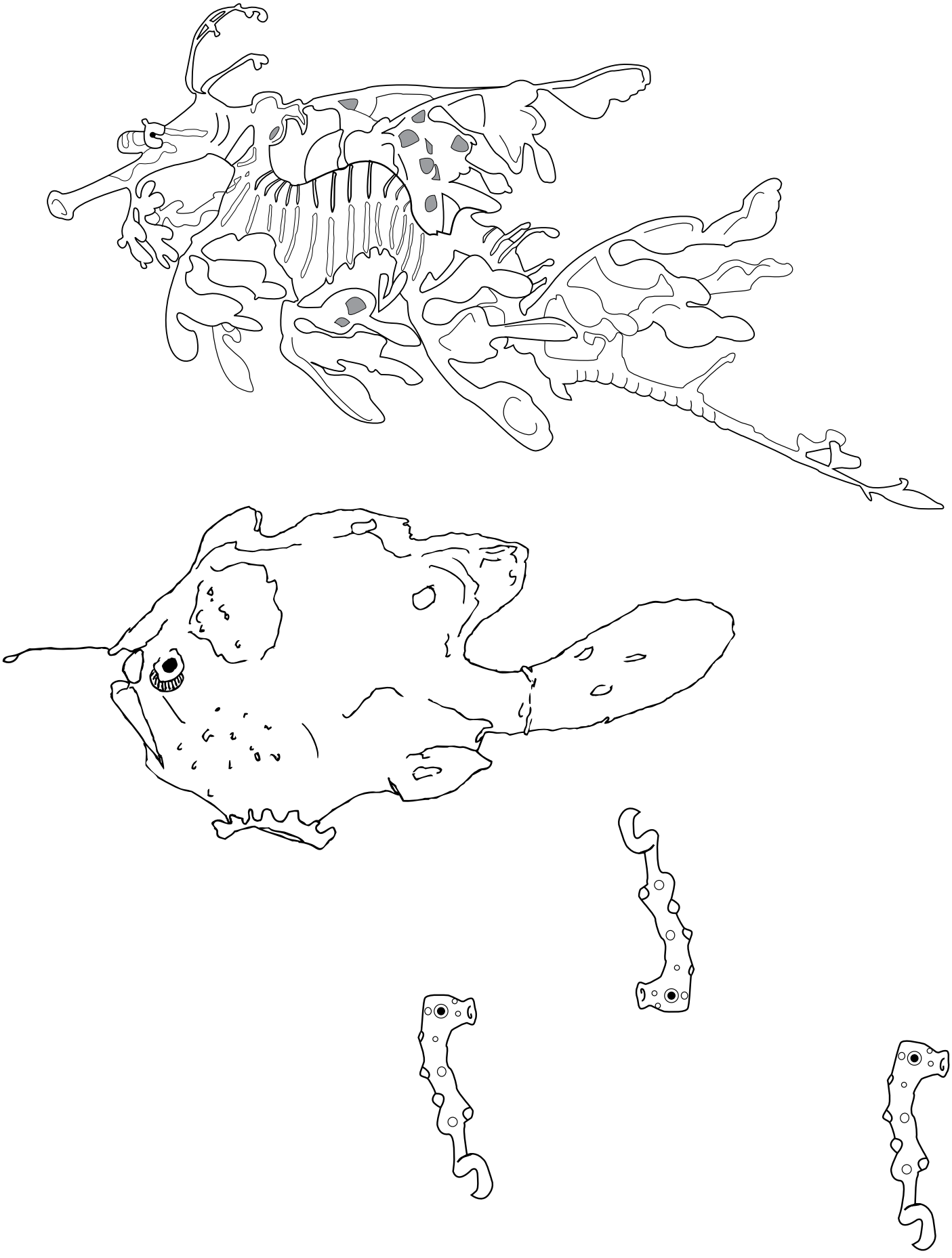


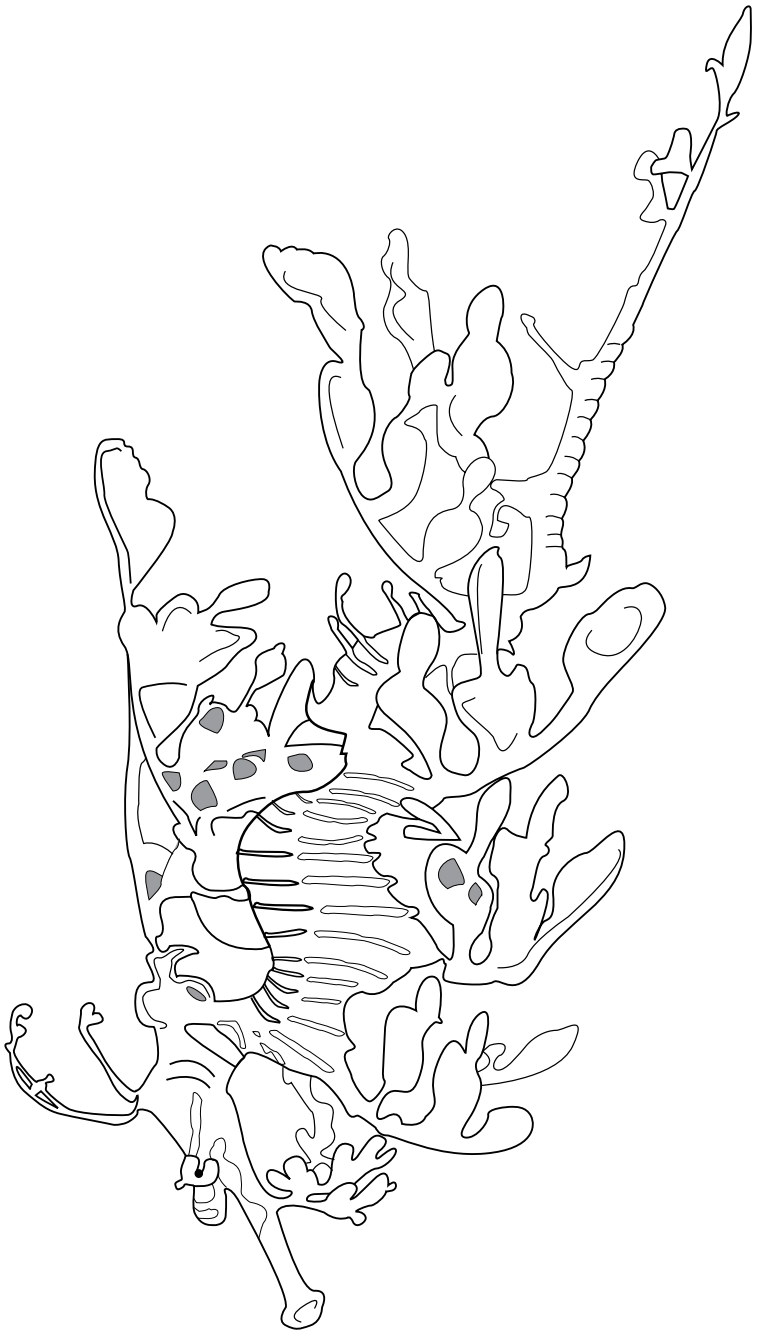


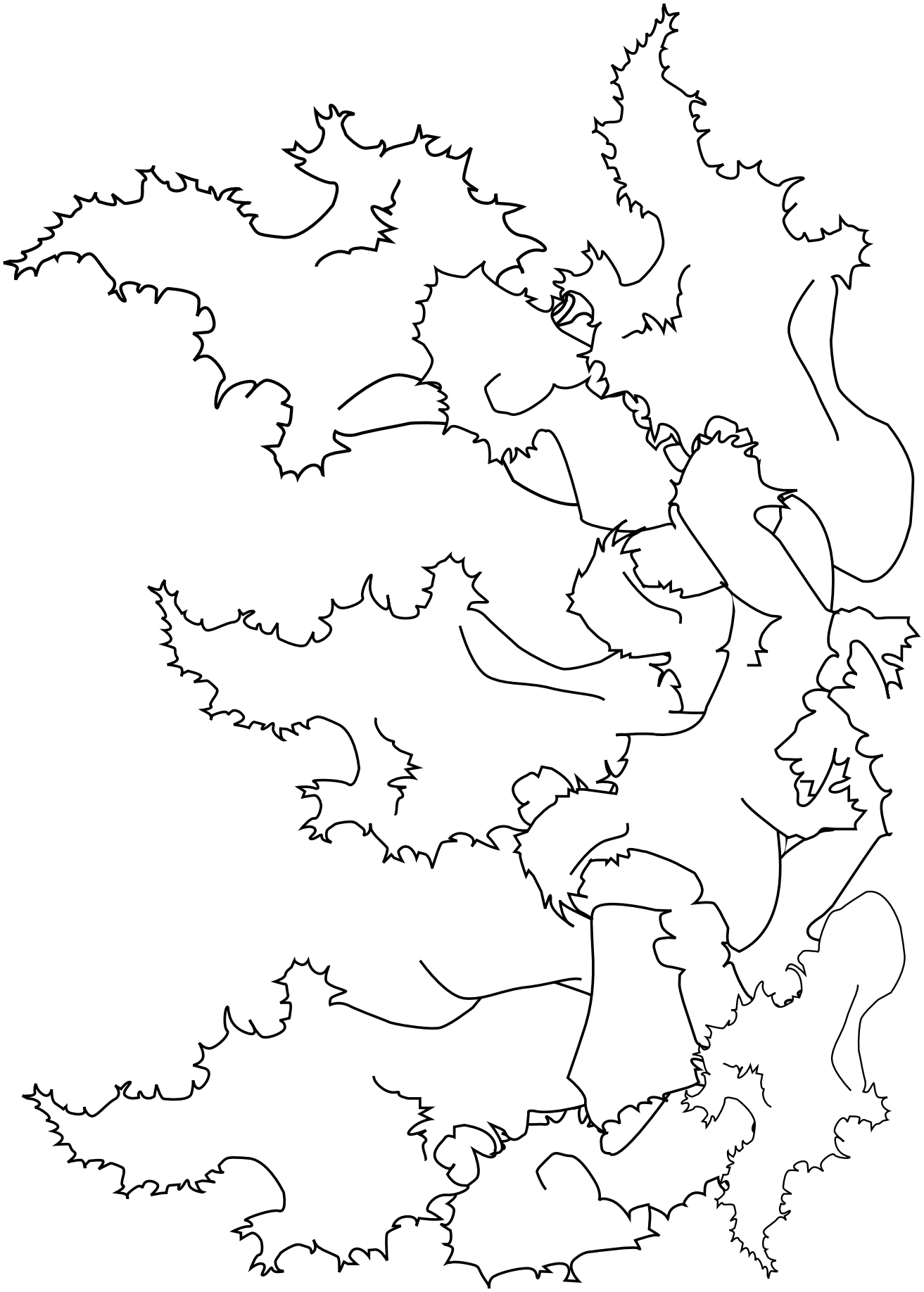


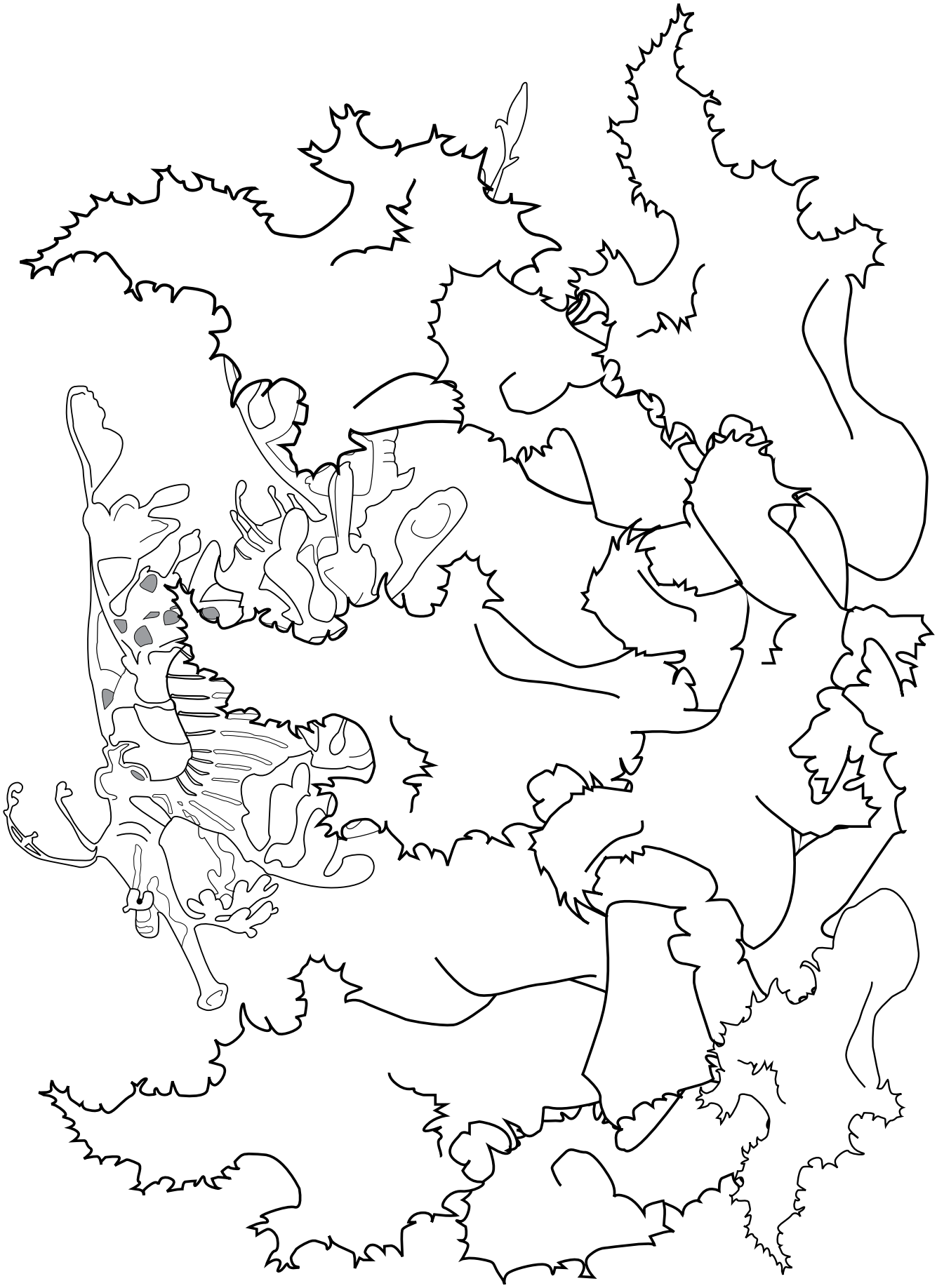
Name _____ Date _____

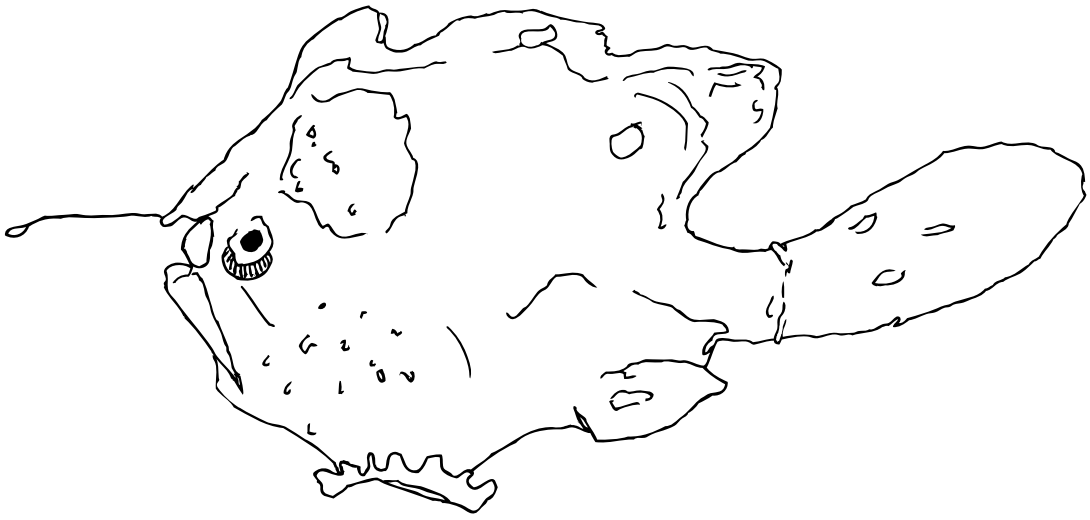
Directions: There are many seahorses hiding in this picture. See if you can find them all.

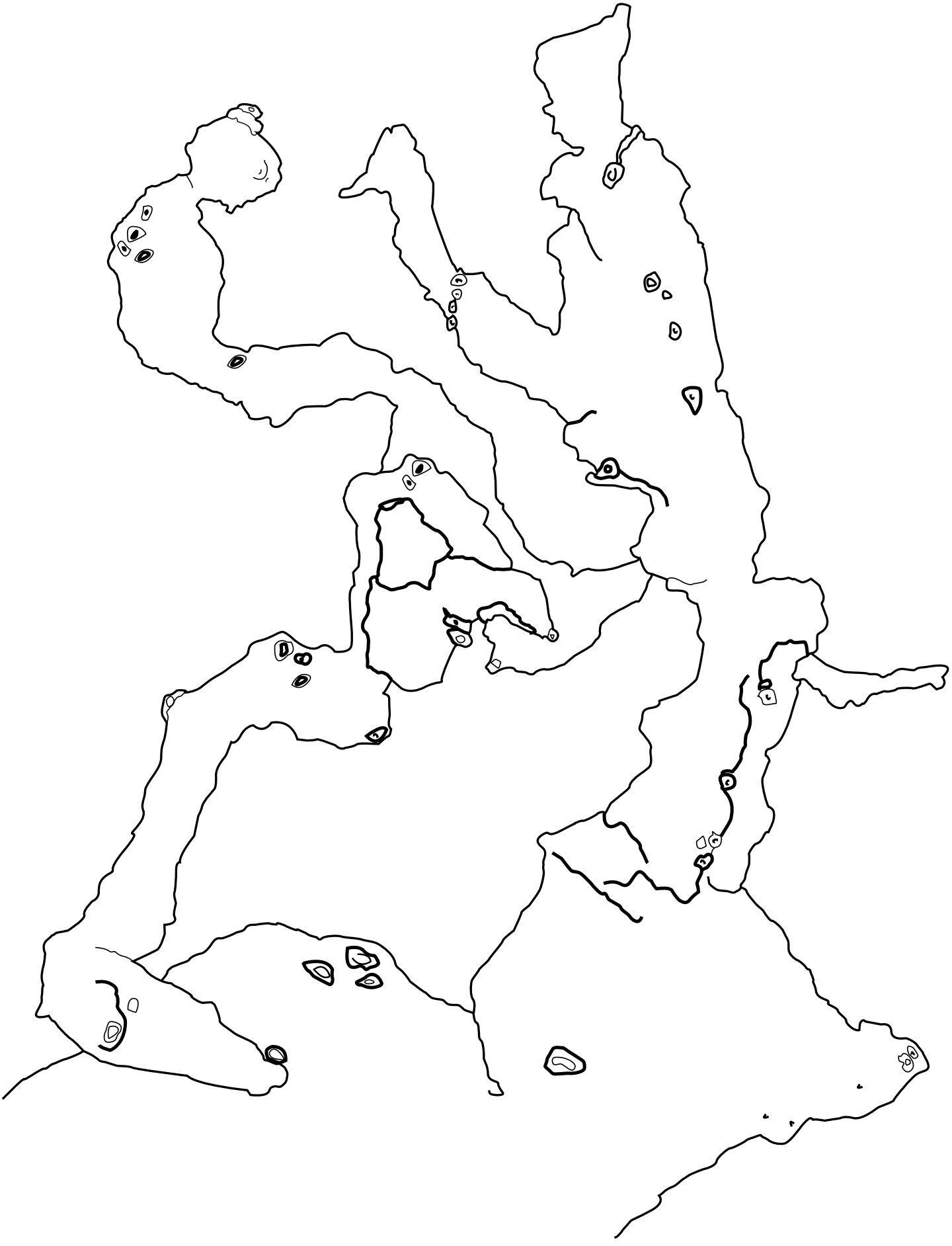


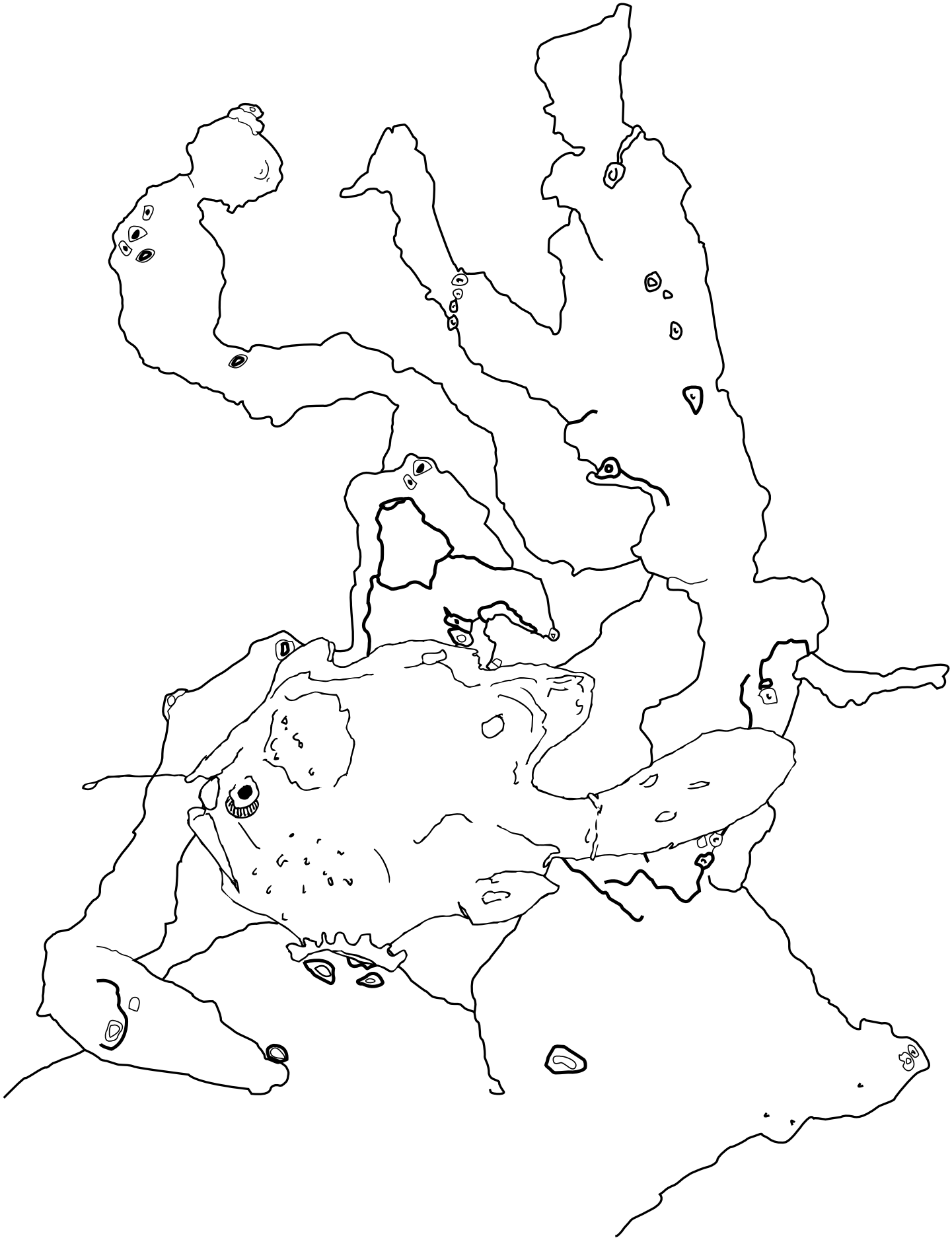


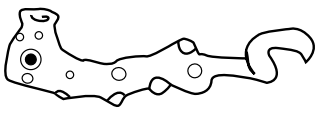


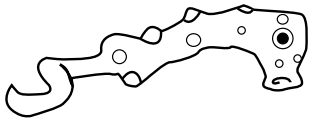


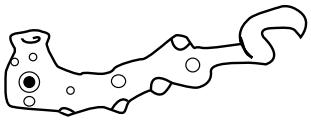


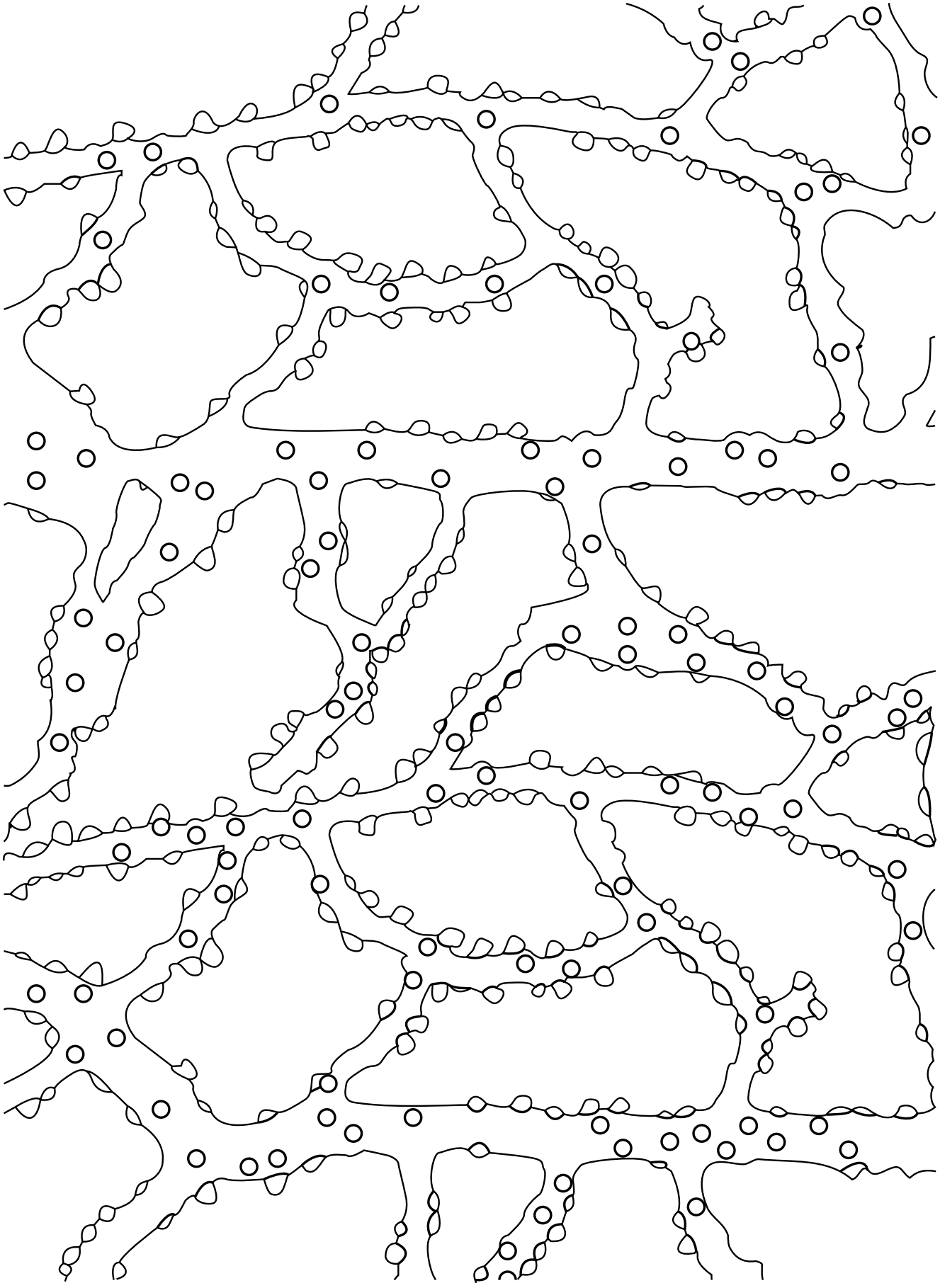


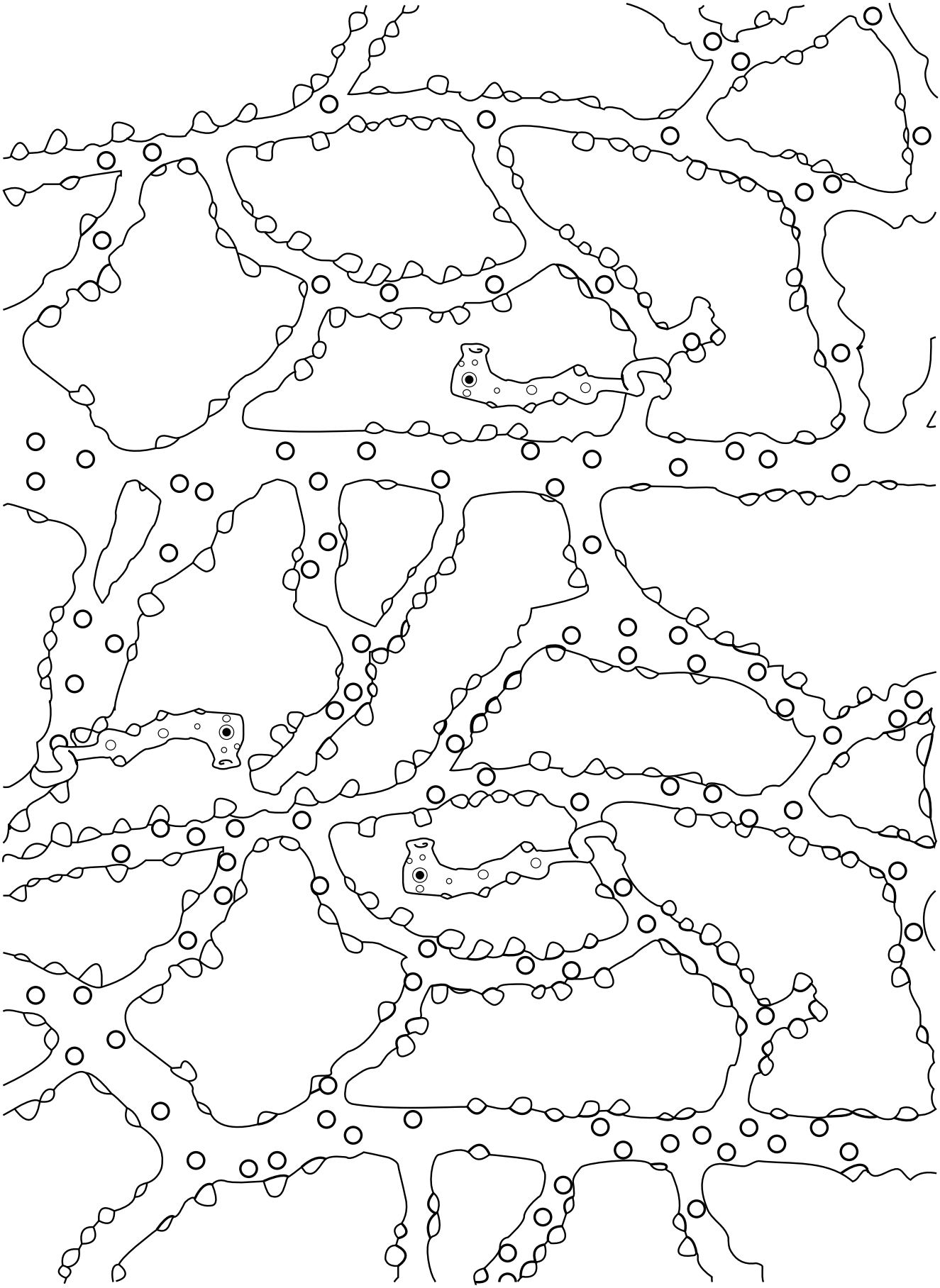


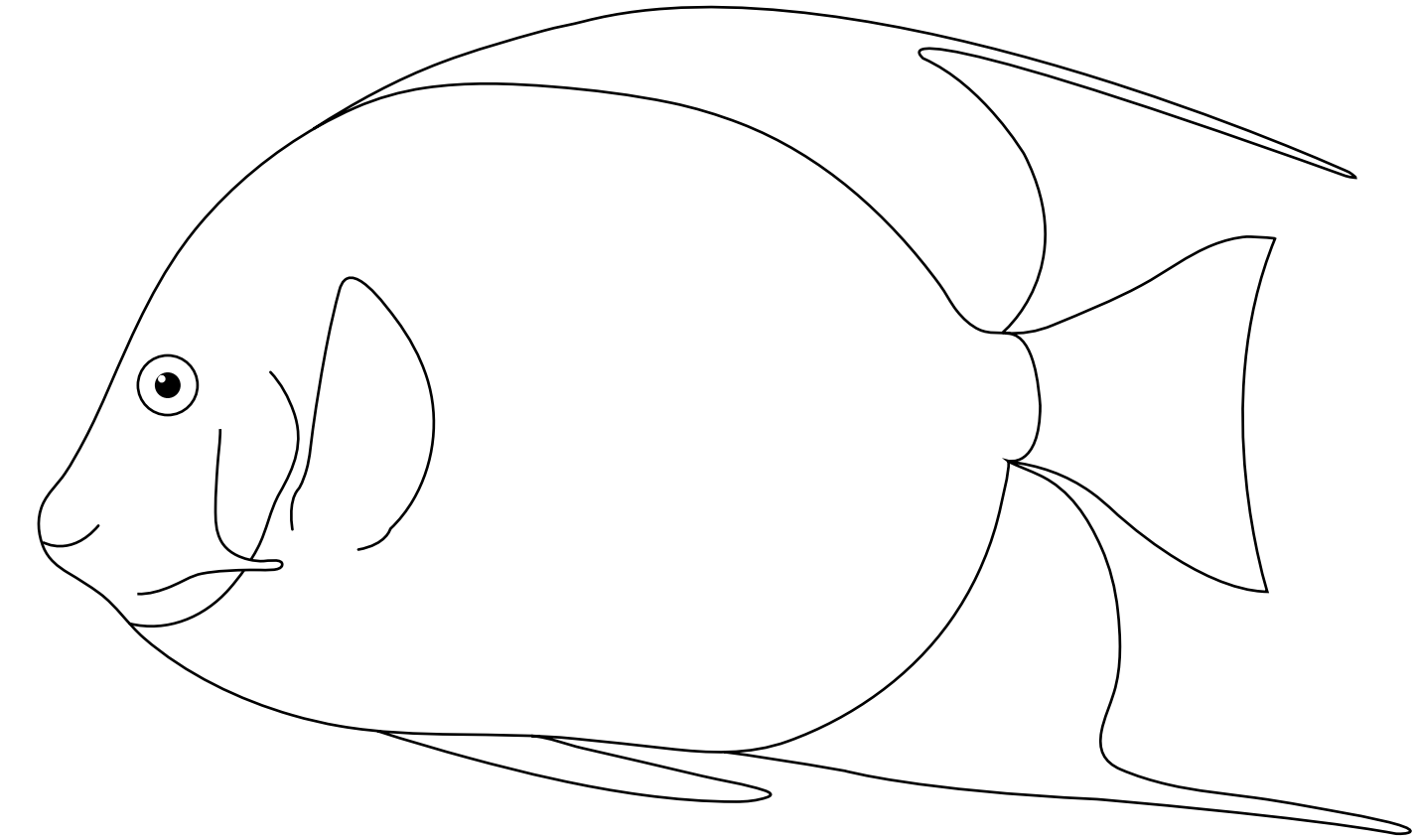


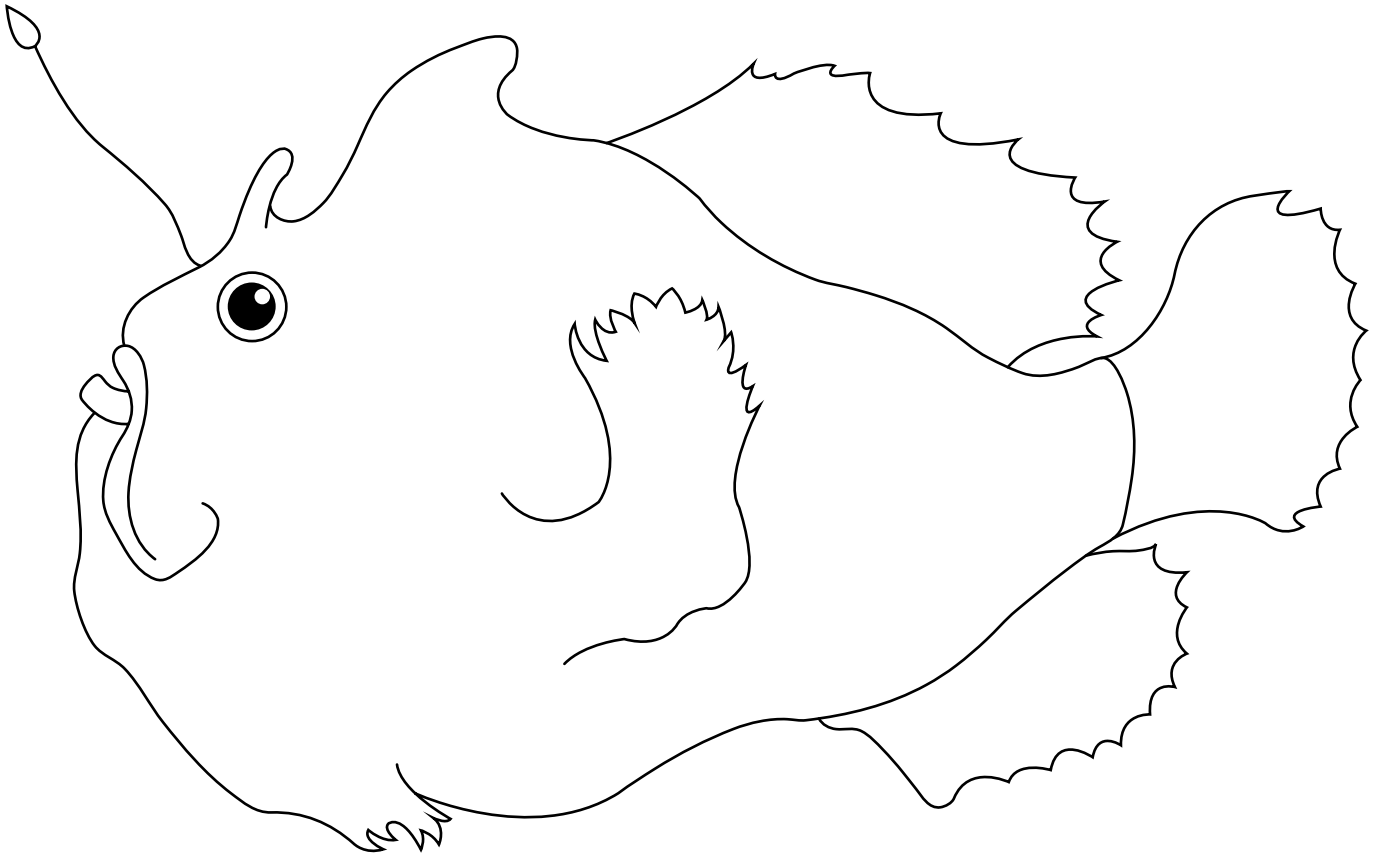


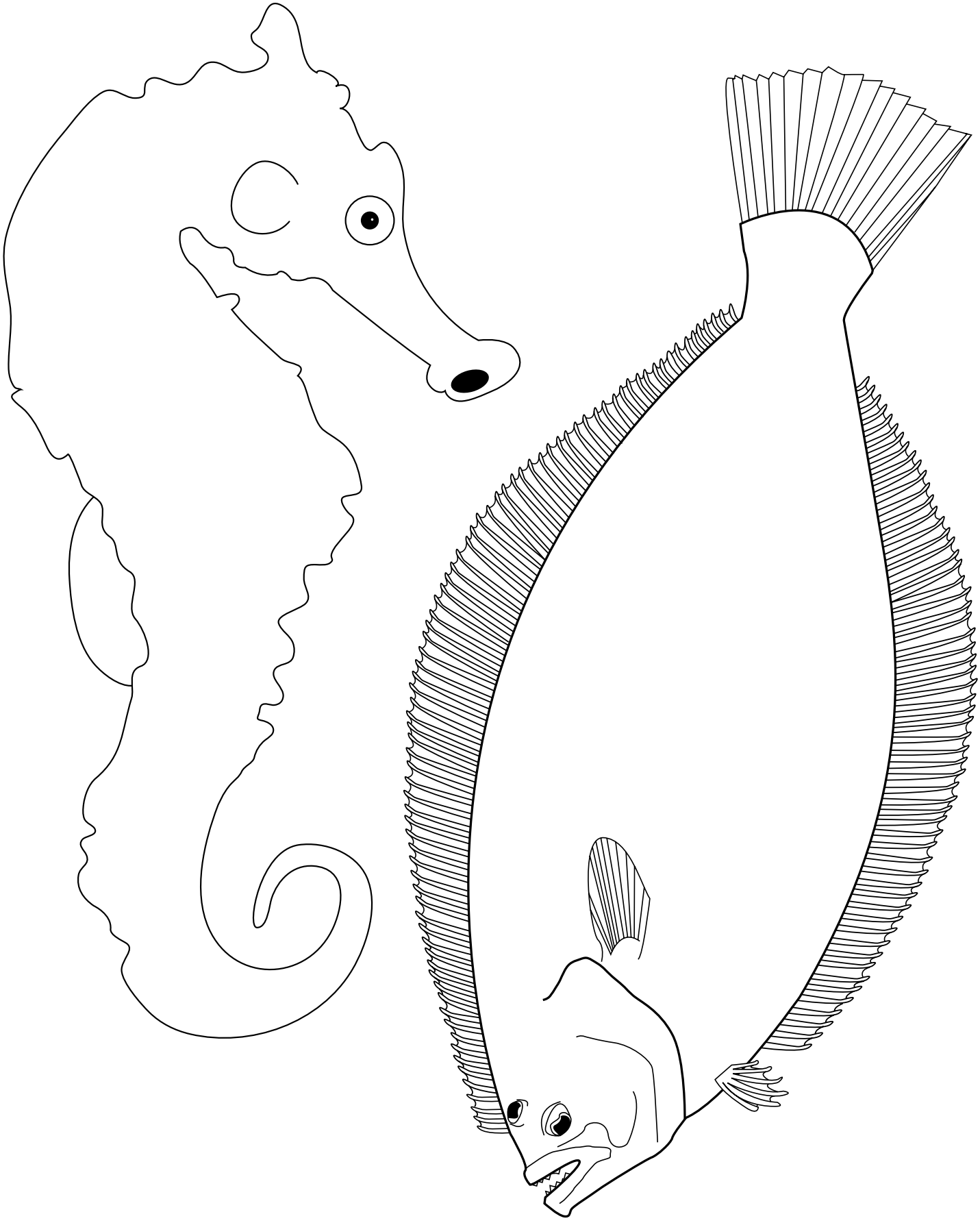


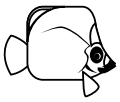


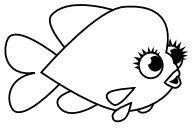


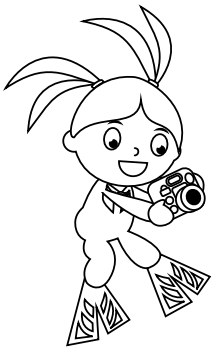


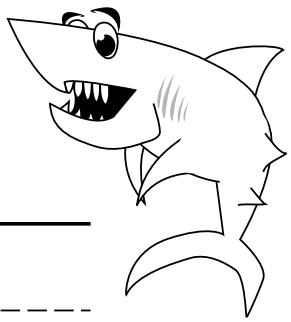












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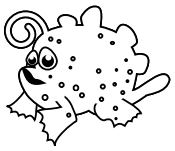
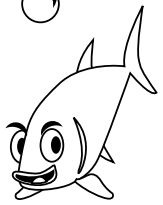
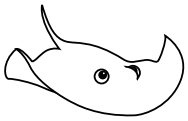
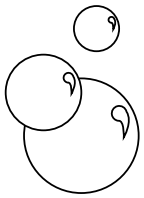
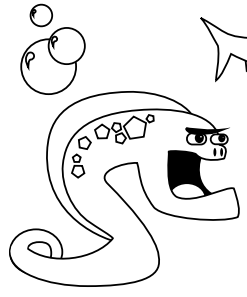
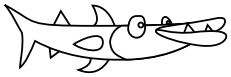


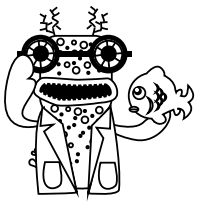


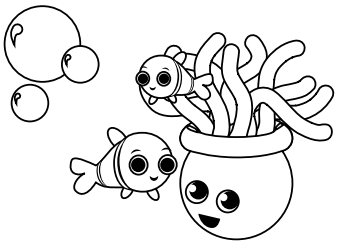


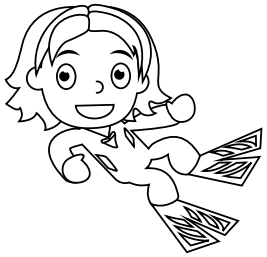






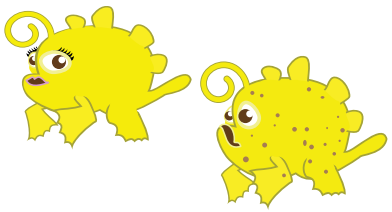






Frogfish are Funny Looking Fish

Frogfish are Funny Looking Fish



CONCEPT / TOPICS TO TEACH

Frogfish are just one of many kinds of fish living in the ocean and they belong to the anglerfish family. Frogfish are *diverse* because they come in many shapes, colors, textures, and sizes. There are more than forty different species of frogfish within the anglerfish family.

Objectives:

- Students will build coordination, locomotor, and axial skills, in an activity requiring them to hear and respond to words by creating body movements relating to frogfish.
- Students will build fine motor skills and creative ability through an exercise in which they will design and create their own frogfish.
- Students will build hand eye and eye head control and coordination through an activity in which they fish with gear mimicking the way a frogfish hunts.
- Students will develop visual discrimination and visual perceptual skills through an activity requiring them to find matching pairs of frogfish and to distinguish frogfish from other types of ocean animals.

Character Education: PATIENCE

In order to succeed in life, Dive Into Your Imagination encourages everyone to follow the 4 P's in life: PATIENCE, Persistence, Perseverance and Passion. Growing up children often hear, "You must be patient." In reality we need to encourage students to PRACTICE PATIENCE. PATIENCE is the ability to wait without becoming upset. By encouraging your students to PRACTICE PATIENCE, they can start to recognize this within one another and help their buddy teams and friends practice PATIENCE too! In a society where everything is available at the touch of a button, technology causes a decrease in attention spans. Having students understand and practice PATIENCE is a great exercise to use in your classroom.

Ocean Annie and Scuba Divers practice PATIENCE and maintain breath control

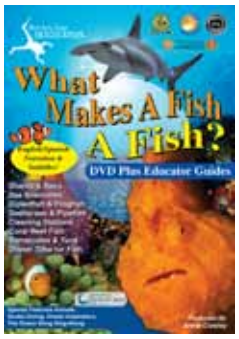
When scuba divers move, they focus on moving slowly and breathing slowly. If scuba divers move fast, they breathe fast. The same things happen between breath and movement on land. When students move fast, they breathe fast. When students experience anxiety they either stop breathing or do rapid, shallow breaths. When playing sports, taking tests, or even participating in an activity station, a child might feel judged, which can bring on anxiety or excitement, triggering a decreased mental reasoning because of their breathing. Teach your students the golden rule of scuba diving to enable them to control breathing, helping them focus.

When students become scuba divers in your classroom, you can remind them to move slow and breathe slow with hand signals. Sharing the hand signals to indicate there is something wrong, you are breathing really fast is a fun way to get your students focused and take control of their actions while helping one another learn how breath control supports focused learning. Remember the golden rule of scuba diving: Stop, Think, Breathe Slowly, and then Act will give students tools they can use in their daily lives. Teaching students in their early years to always return to a slow, centered breath will help them throughout their entire lives. This skill will help you too! Encouraging students to remember to stop, think and breathe slowly will help them practice PATIENCE too.

Getting Started

Required Materials

- ❍ DVD "What Makes A Fish, A Fish?" by Dive Into Your Imagination
- ❍ Large Dry Erase Board/Easel and Markers



TREASURE CHEST

- Diversity
- Esca
- Ichthyologist
- Illicium
- Patience
- Scientist
- Species

Anticipatory Set Lead-In

- ✧ Watch and become familiar with chapter four "Frogfish are Funny Looking Fish" from the DVD "*What Makes A Fish, A Fish.*"
- ✧ Ask students what kinds of things make them different from one another. Have them look around the room at one another and list them in a column marked "different". Examples students may notice include: skin color, hair, eyes, sizes, clothes, etc.
- ✧ Ask students what kinds of things make them the same and list them in a column marked "same". Examples of similarities may include: they are all kids, they all go to the same school, they all live near one another, etc.
- ✧ Explain things that make students the "same" make them all part of a same "type" and the things that make them "different" make them "*diverse.*" Note that many of the things that make us the same also make us different.
- ✧ Explain that in the film segment about frogfish, students will see many *diverse* kinds of frogfish. Frogfish come in different colors, shapes, and sizes.
- ✧ During the run of the film clip have students imagine they are ichthyologists, meaning they are scientists who specialize in the study of fish and will work independently or with buddies to collect information about frogfish.

Here are some questions and answers you can use to build a brainstorming session:

Questions for Students	Answers for Educators
How many different colors can you find on the frogfish?	*Almost any color imaginable can be seen on frogfish including: yellow, orange, red, white, green, brown, purple, and more.*
Are all frogfish the same size?	*No. Some are quite small, and some are larger than a softball.*
Are all frogfish the same shape?	*They are all similar in shape, but may have different skin textures, patterns or fins to set different kinds of frogfish apart from one another.*
Do frogfish swim like other fish?	*No. They have specially designed pectoral fins they use to sort of crawl on the bottom. They can also gulp water and shoot it out their gills in order to move and propel themselves in the water column.*

Video Review

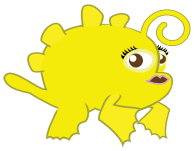
- ✧ After watching the clip about frogfish once or even a few times, discuss and write down additional facts, questions, and information students gained from the video for further research and discussion.
- ✧ Ask students to write a reflection in their journal about frogfish.
- ✧ Ask students what else they want to know about frogfish that wasn't included in the film clip, and write down those questions for later research.
- ✧ Compare what students learned about the diversity of frogfish to what makes them diverse from their classmates such as color, shape, size, etc.

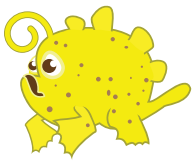
Imagination Values

Before the activities begin, use this as an imagination exercise with your students. You can use this as a movement activity and have them act out what you are saying, or have them be silent and use their minds only. Have students imagine they are fish. Here is a script you can read, or use your imagination and create your own. By having them focus and gain a connection to the animals, they will attain critical elements of imagination play. On the count of three, become a fish when we say the magic word: 1, 2, 3…IMAGINATION!

"On the count of three let's say the magic word, IMAGINATION. 1, 2, 3…IMAGINATION! Now, imagine you are a fish! What would your body look like? Where are your fins? What kind of mouth do you have? Where would you live? You would be very independent and like to do things all by yourself. Do you know that you would have to do everything on your own from the moment you hatched out of your egg? After fish hatch, as a baby fish, you become plankton and float in the water for between 7 and 60 days until you settle on the reef. Once you find a home on the reef, as a fish, your parents would not make you breakfast or lunch. You would have to hunt for every meal!

Now, imagine you are a frogfish. Frogfish are in the anglerfish family and are fishes who fish for fish! You have an illicium that works like a fishing pole and an esca like bait on top of your head. You would throw it out; hoping another fish swimming by would try to bite your lure! Frogfish come in many different styles. Some frogfish are smooth while others have hair! That's right, imagine being a hairy frogfish. Frogfish are experts at camouflage and blending into their surroundings. Sometimes frogfish stay in the same place on the reef for more than a month! How long can you remain absolutely still without talking or moving. As a frogfish, you would not swim with your fins, but you would walk along the bottom very, very slowly! Can you practice patience? How long can you stand still? As we do our activities today, let's keep imagining how it feels to be a frogfish with an illicium and esca on our heads!"





CLASSROOM ACTIVITY STATION D1

MOVE LIKE A FROGFISH

Overview

Students will hear and respond with body movements to a poem describing how frogfish live. As students move freely around the room, they can interact with one another like frogfish. This activity will give students an opportunity to explore *locomotor and axial movements, moving to a beat, body spatial awareness, timing/rhythm, gross motor coordination*, and foster early *literacy skills*.

Materials: Frogfish Poem

Talking Points

- Review the meaning of the word diversity.
- Talk about the different kinds of frogfish viewed in the video in terms of colors, texture, size, shape, etc.
- Ask students if they can remember how frogfish hunt for food using their special fishing lure called an esca.
- Camouflage plus the fishing behavior are "adaptations" and important ways that slow moving frogfish are able to increase their chance of catching a meal.

I may be a funny looking fish, but I am a master of disguise. I have more patience than any fish because I can stay in one place for a really long time!

Lesson Procedure

1. Ensure students have space to move freely during activity.
2. Inform students they will hear a poem describing how frogfish live, move, hunt, and hide.
3. Discuss with students how frogfish move very slowly, and many stay almost perfectly still all the time to catch their food. By staying perfectly still, frogfish can blend into their surroundings and be nearly "invisible" to unsuspecting fish they catch to eat. Frogfish are great at hide and seek using camouflage.
4. Instruct students to use body movements to simulate words they hear as best they can, and to act out how the words "feel" to them.
5. Read the poem 2-3 times so they can really get the "feel" of the movement.
6. For the second part of activity, instruct them to spend five minutes moving and interacting like frogfish without the poem.
7. Ask students if there was any difference in their movements from part 1 to part 2? If so why?
8. Have students pretend to be scuba divers and scientists while you read the poems. How do they act in different ways when role-playing as the scuba divers and scientists versus when they are the fish?

CLASSROOM ACTIVITY STATION D1 (Continued)

MOVE LIKE A FROGFISH

FROGFISH

Sit, still, posed in wait.
Look, here comes the bait.
Don't move a bit…
Stone still you sit…
Wiggle your esca and…
SNAP!

Slooooowly you sprawl
Along the sponge wall
Use your front fins to creep
Find a good spot for sleep
Settle in tight and…
Rest for the night!

Notes

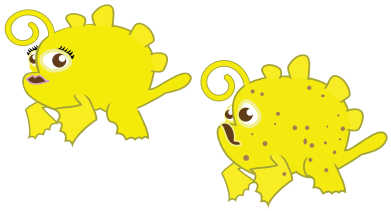
Extension Ideas

» Ask students to come up with their own words to describe frogfish and how they move. Make a list. Have each student take a turn teaching his/her classmates one of their frogfish moves.

» Ask students to share why frogfish need to practice patience. Then ask them ways they need to practice patience too.

» Read the script of the DVD and have students act out the script the way they acted out the poem.

Frogfish use their illicium and esca like a fishing pole. They fish for fish! Make sure if you go fishing for us fish, you only eat sustainable fish!



CLASSROOM ACTIVITY STATION D2

FROGFISH ARE DIVERSE

Overview

Children will independently design a frogfish using various materials. Arrange completed frogfish on a bulletin board and help students write words to describe the frogfish. Participating in this activity is intended to stimulate understanding about *diversity* both generally and for one type of fish specifically and afford students an opportunity to engage in *art*, and *fine motor coordination*.

Materials: Butcher Paper, Frogfish Template, Heavy paper to cut out frog fish shapes for each student, Glitter, Pipe cleaners, Small pompoms, Glue sticks, Scissors, Crayons Markers, or Colored Pencils

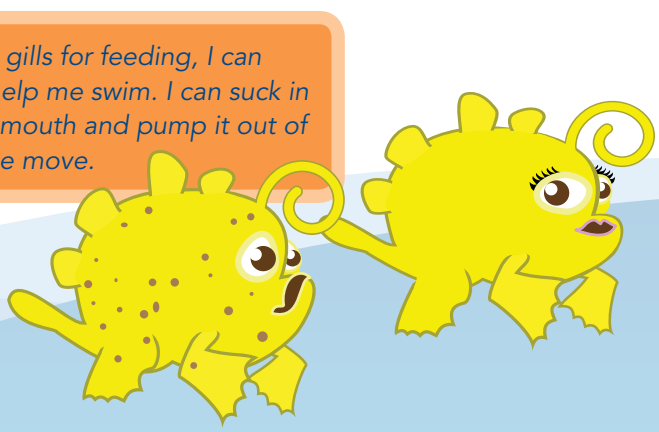
Talking Points

- ✧ There are many species of frogfish.
- ✧ Some frogfish are smooth, others bumpy, and some are even hairy.
- ✧ Frogfish are different from many other fish because they slowly crawl on the tips of their fins.
- ✧ By blending in and moving slowly, frogfish wait very still for a fish to swim by so they can swallow them in one bite.
- ✧ Because frogfish come in many shapes, sizes, colors, and textures we say frogfish are diverse.

Lesson Procedure

1. Cover a bulletin board in your room with butcher paper and title it "Frogfish Are Diverse".
2. Provide each student with a frogfish shape to decorate.
3. Set up a station with glitter, pipe cleaners, pompoms, glue sticks, paint, crayons or colored pencils.
4. Instruct students to decorate their frogfish any way they choose.
5. As students complete their fish, hang them on the board and help them write a word or two describing their frogfish.

Although I use my gills for feeding, I can also use them to help me swim. I can suck in water through my mouth and pump it out of my gills helping me move.



CLASSROOM ACTIVITY STATION D2 (Continued)

FROGFISH ARE DIVERSE

Extension Ideas

» Use the bulletin board to help students review all of the body parts of the frogfish.

» See if students can come up with words to describe the frogfish using each letter of the word "frogfish".

» Have students practice counting to see how many frogfish are on the wall.

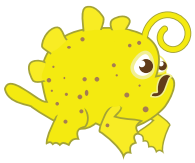
» Break class into buddy teams and ask each team to come up with a list of ways that the frogfish they designed are alike, and ways that they are different or unique.

» Discuss the fact that people are diverse, and use the "Celebrate Diversity" graph provided at the end of this lesson to chart the diversity of your class.

Notes

CLASSROOM ACTIVITY STATION D3

FISH LIKE A FROGFISH



Overview

Students will use headband "fishing gear" to fish like a frogfish! Participating in this activity will provide students an opportunity to practice building *dexterity, hand eye coordination, eye head control, body spatial relations, and counting skills.*

Materials: Headbands, String, Pipe cleaners, Pompoms, Masking Tape, Bar Magnets, Metal Washers, Bucket, Scissors, Glue

Talking Points

- ✧ Animals living in the ocean have different ways of finding food.
- ✧ Frogfish have a special way of catching fish. They have a fishing pole built right into their head!
- ✧ By waving their fishing pole and bait, called an illicium and esca, they attract fish and catch a meal.
- ✧ Frogfish are very mysterious because they can blend in well and are hard to find. A new kind of frogfish called the psychedelic frogfish was recently discovered.
- ✧ Frogfish are important predators on the reef. Predator means they eat other fish.

Shapes can be found all over nature. What kind of shapes can you find in ocean animals?

Lesson Procedure

1. Cut strings into 14" lengths and tie them securely to the center of the headbands.
2. Tie the loose end of the string to a small bar magnet using a small piece of masking tape to secure it.
3. Have students draw and decorate fish cut outs and attach washers or paperclips to them, so they are actually fishing for fish! Fill the bucket with the fish.
4. Have students wear the headbands and "catch" the washer "fish" only by dangling their magnet "esca" over the bucket.
5. As students catch the washer "fish," remove them by hand and place them in a pile for students to count when they finish fishing.
6. As an alternative to using headbands for fishing, students can make their own frogfish headband for themselves to wear. Cut paper head bands, attach pipe cleaners and a pompom with glue at the end to serve as an illicium and esca.

CLASSROOM ACTIVITY STATION D3 (Continued)

FISH LIKE A FROGFISH

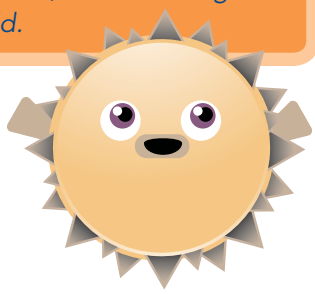
Extension Ideas

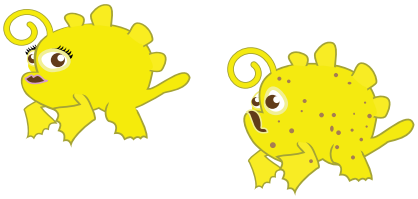
» To make the activity more challenging, have students race to see who can catch the most "fish" in a minute.

» Frogfish can often stay in one place on a reef for up to a month. You can have students practice patience and have a contest to see who can stay still the longest. Split the class into frogfish and scuba diving scientists studying the frogfish. How do they interact? What do the frogfish do? What do the scuba diving scientists do?

Notes

If you have a home or school aquarium, know where your fish come from! Use aquarium raised fish, never endangered fish from the wild.





CLASSROOM ACTIVITY STATION D4

WHERE'S MY FROGFISH

Overview

Children will look at a series of fish shape cut outs and sort the ones that are frogfish from animals that are not frogfish. Participating in this activity is intended to draw out the *background knowledge* your class has about life in the sea and the *shapes* they can recognize while building *visual perceptual skills*, and *visual discrimination*.

Materials: "Where's My Frogfish?" shape templates, Scissors.

Talking Points

- The ocean provides much of the food we eat and our water. The ocean is a major source of the water cycle, which provides precipitation for plants and animals on land.
- The ocean provides recreation, imagination and fun too. There are many kinds of animals living in the ocean. Frogfish are funny looking fish and come in different shapes and sizes.
- Animals in the ocean are grouped together by scientists based on physical and behavioral similarities.
- Sometimes even within a group, there is great variety also known as diversity. Frogfish are a good example of diversity.

Lesson Procedure

1. Photocopy and cut out the "Where's My Frogfish" shapes provided in this lesson. You may want to create a few sets of fish so there are many shapes to work with.
2. Ask students to work independently or in buddy teams to sort out the shapes that are frogfish and those that are other kinds of animals.

CLASSROOM ACTIVITY STATION D4 (Continued)

WHERE'S MY FROGFISH

Extension Ideas

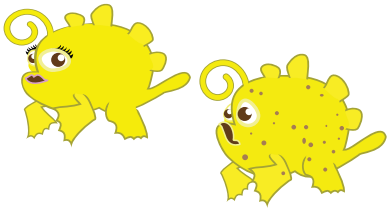
» To make the activity more challenging, ask students to see if they can name the other animals that appear in each row. Help them label as needed.

» Help students come up with words describing the characteristic and body types of the animals they sorted. Help and encourage them to look for geometric vs. organic shapes.

» Have students draw their own version of a frogfish starting with an oval or circle. Encourage them to add details. Help guide them with questions such as: how many body parts can you add, do frogfish have fins, do frogfish have a tail, and where are the frogfish gills, where is the esca?

» Turn a game of leap frog into Frogfish Leap! Ask students why frogfish can leap underwater to see if they can remember how frogfish can use their gills to swim. You may want to play the video again or read the script out-loud to reinforce learning.

Notes



CLASSROOM ACTIVITY STATION D5

A FINE PAIR

Overview

Students will sort through a pile of frogfish shapes to find matching pairs. Participating in this activity will provide students with an opportunity to practice *recognizing organic shapes, visual perceptual skills, visual discrimination, visual attention and visual memory*, and understanding the *biological diversity* existing within one particular group of fish.

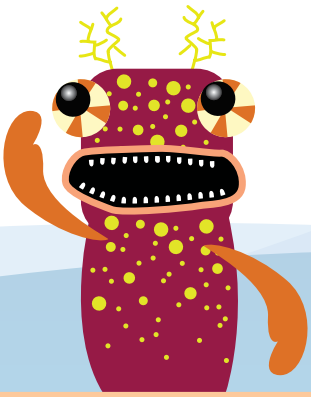
Materials: Frogfish Pairs, Heavy card stock paper, Copier safe transparency, Pocketed folders to hang on the wall or a bulletin board

Talking Points

- The ocean and humans are inextricably interconnected. Everything we do on land affects the ocean. Animals need a healthy and clean ocean. We need a clean ocean too. In order for people to be healthy, the ocean needs to be healthy. Humans benefit from the ocean.
- There are many kinds of animals living in the ocean. Animals in the ocean are grouped together by scientists based on physical and behavioral similarities.
- Sometimes even within a group, there is great variety also known as diversity and frogfish are a good example of this.
- Sometimes the differences between frogfish are very subtle. Telling some frogfish apart requires very close attention to details.
- Challenge students to be ichthyologists and see if they can sort through a pile of animals to determine which animals are frogfish and which are other kinds of animals.

Lesson Procedure

1. Photocopy the "Frogfish Pairs" set twice. One set on paper and the other set on transparency.
2. Affix one each of the paper frogfish to the front of the pocketed folders and hang them in an easily accessible place in the room.
3. Instruct students to see if they can match the transparent fish to its partner of the same shape on the wall.
4. Students can hold the transparency directly to the fish on the wall to find the match and place the transparent fish into the correct folder pocket.



Symbiosis is an important relationship between organisms in the Ocean.

CLASSROOM ACTIVITY STATION D5 (Continued)

A FINE PAIR

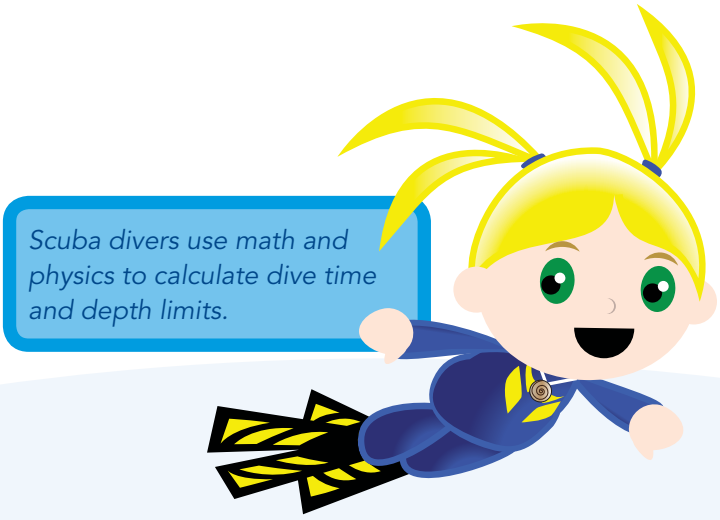
Extension Ideas

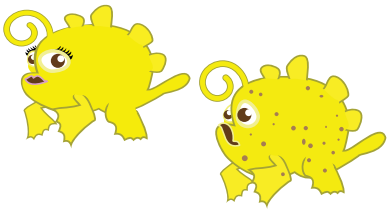
» Make a double set of frogfish on white card stock, shuffle them together and have students perform a side-by-side match-up as opposed to the overlap method incorporating transparency.

» To turn this into a memory game, lay card-stock frogfish facing down. Allow each player the chance to turn two cards over on a turn. If the two cards turned over are a match, then the player collects them. The player with the most matches wins.

» Frogs are frogs and frogfish are fish. See if students can explain the difference between frogs and frogfish.

Notes





CLASSROOM ACTIVITY STATION D6
BOOK STALL

Overview

Providing a reading and or computer area where students can look through books about the subject being discussed will help to build early literacy. Even if the children are not reading yet, looking at pictures and building dialogue around the images is helpful to developing *vocabulary and language skills.*

Materials: The book *The Frogfish* by Jody Sullivan Rake

Lesson Procedure: Character Education
PATIENCE

1. As a class read the book *The Frogfish* by Jody Sullivan Rake, and spend time discussing how frogfish must use patience to wait as they fish for their food. Ask students to give examples and build a class list of times when they had to be patient.
2. In order to help students practice patience, you can have them work the frogfish connect the dots, decorate their completed frogfish, and write down a word or activity that requires patience.
3. Alternatively, Have students read the frogfish page from Ocean Life Book & DVD by Annie Crawley and Cynthia Stierle. Challenge them to create a story about one of the frogfish incorporating patience into their story.

Conserve water! Turn the faucet off when you brush your teeth. Only do the dishes or laundry when you have a full load. What else can you think of to save water?

Character Education: PATIENCE

"Focus on nothing and everything will appear"

Fine Art Prints, posters, greeting cards and other products are available to decorate your classroom or school while inspiring your students with real ocean animals and environmental scenes. Contact us to learn more.

Have students define the word patience. List all the animals they believe use patience and why they practice patience.

Blood sea star and brittle stars, Channel Islands, California

Book Suggestions

» Berger, Mel. Dive! *A Book of Deep Sea Creatures.* New York, New York: Cartwheel, 2000. Ages 4-8

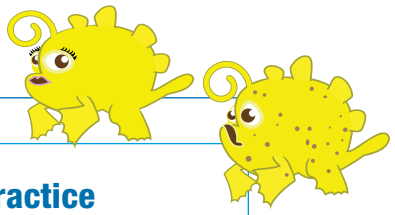
» Coldiron, Deborah. *Anglerfish: Underwater World Series.* Edina, Massachusetts: Buddy Books, 2007. Ages 4-8

» Collard III, Sneed B. *The Deep Sea Floor.* Illus. Carl Wenzel. Watertown, Massachusetts: Charlesbridge, 2003. Ages 4-8

» Jenkins, Steve. *Down, Down, Down: A Journey to the Bottom of…* Boston Massachusetts: Houghton Mifflin Books, 2009. Ages 4-8

» Rake, Jody Sullivan. *The Frogfish.* Mankato, Minnesota: Capstone Press, 2009. Ages 4-8

» Smith, Rodger. *Coral Reef: Hide-and-Seek.* Illus. Chris Lensch. Inglewood, California: Piggy Toes Press, 2005. Pre-K–K.



Closure and Follow Up

✧ Once students experience the learning stations, gather them back together to spend time reviewing new information students learned about frogfish.

✧ Reflect with class on how much knowledge has been gathered about diversity in general and then frogfish specifically.

✧ Spend a moment talking about why having so many kinds of animals is important to a healthy ecosystem.

✧ To reinforce learning, review the ideas and vocabulary on your "Frogfish Are Diverse" board and talk about the similarities and differences between the designs of the individual frogfish on the board.

Observations are a great way to study animals. Look at the shape of our mouths, teeth, bodies and fins to see what you can learn!

Plan for Independent Practice

» These exercises can be used as preparation for a field trip to a zoo, aquarium, or farm where students can make observations about what similarities and differences there are between animals they see.

» Students can report to class about similarities and differences they observe with members of their families.

» During an outdoor break ask students to see how many diverse forms of leaves or other plants they can gather, and then compare them as a class. Have students group and sort the similar and different objects.

» Select stories from the suggested reading list to read as a class or for self-study.

» Review the word PATIENCE with students and discuss how it relates to their lives. Encourage students to use their imagination and think of all the ways they can PRACTICE PATIENCE every day. Have students think of all the reasons PATIENCE is helpful. Now have them write or illustrate a story about patience and practicing patience.

» Read the transcript aloud to your students and have them pick a sentence they want to illustrate.

DVD TRANSCRIPT

Frog Fish

Frogfish are very funny looking fish!

Yellow, red, orange, brown and green.

Spotty ones and even hairy ones.

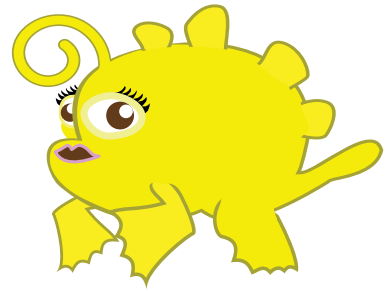
Big Frogfish. Teeny tiny frogfish.

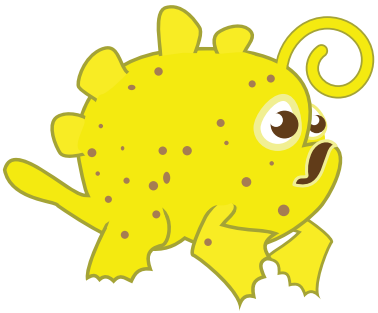
What makes these fish unique?

They have an "ESCA" attached to their head that acts just like a fishing pole with a worm already attached. They throw it out and sit and wait. Hoping for some bait.

They fish for fish!

Frogfish are very funny looking fish!

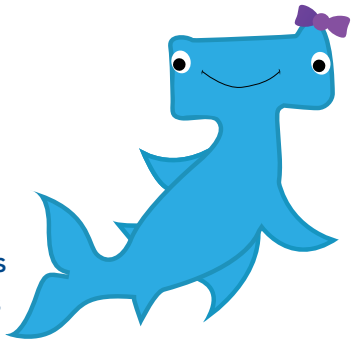




Go Blue! Ocean Annie's Tips to Help Our Environment

Do you know that every day products that you use around the house affects the health of all water on our planet? It is important to know what is in the products we use, the food we eat, and also where they come from so we can ensure our choices protect our personal health and the health of our environment.

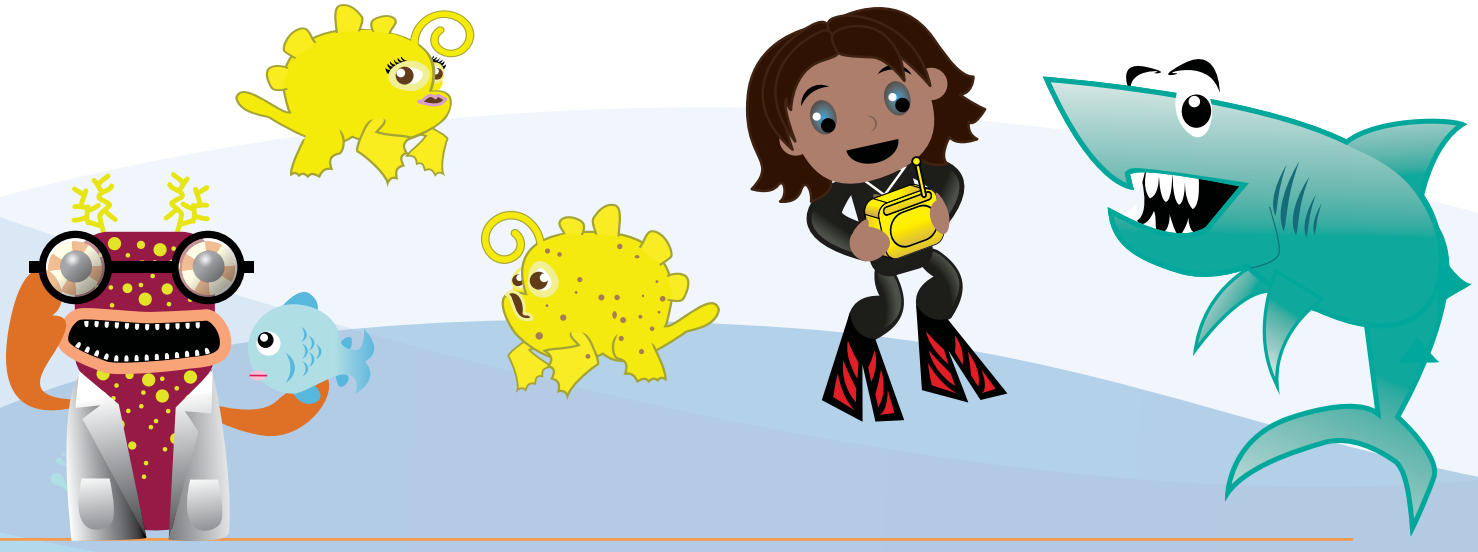
It is easy to become overwhelmed by decoding product labels because it is not always clear what words mean or which words are the important ones to pay attention to. For example the word "natural" is vague, and can be misleading, but the word "organic" is something specific with set standards to be met in order for that word to appear on a label.



There is good news because there are more reliable sources than ever to turn to for good, user friendly information about what is healthful for you and your environment. When choosing cleaning products or soaps, make sure you choose environmentally friendly products.

As a class project, pick an essential food group and do research on the differences between non-labeled, natural, and organic food. Try this with milk and eggs, fruits and vegetables, or meat and fish. If your school is serviing fish at school lunches, you may want to do an investigation if it is sustainable fish or if the school can offer a healthy alternative to fish, cutting it off the menu completely! There are too many fish being taken out of the ocean without their ability to reproduce and sustain healthy populations. Scientists are predicting within the next 50 years there may be no fish left in the sea.

Email us to receive a Sustainable Seafood Card or to find out more about these important issues. As good citizens of the world, we want to live at one with nature and always support the health of our Ocean. By doing this, we GO BLUE and LIVE BLUE!



D

Name _____ Date _____

Treasure Chest of Words

patience

scientist

species

diversity

esca

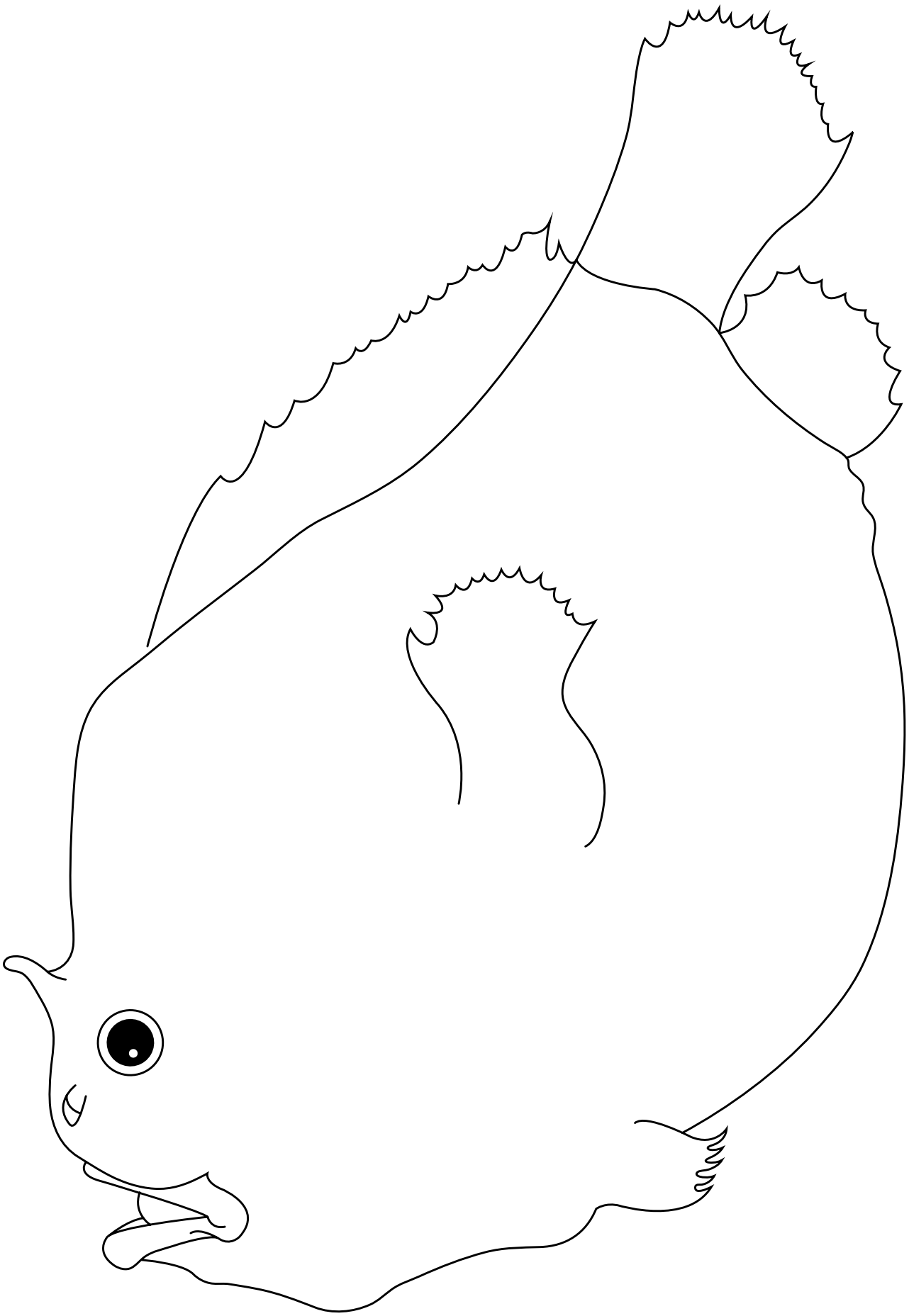
illicium

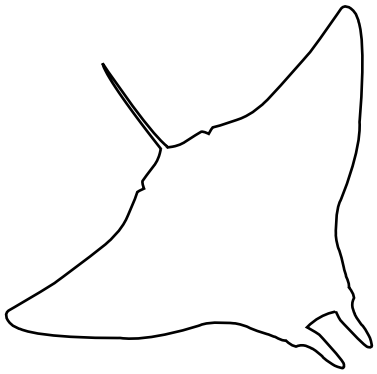
ichthyologist

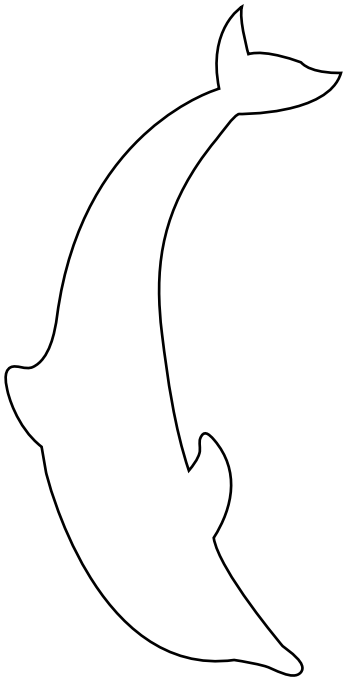
FROGFISH

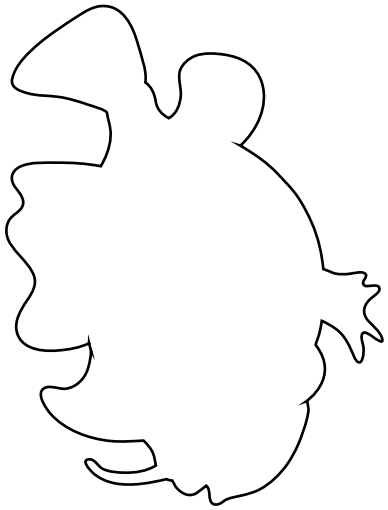
Sit, still, posed in wait.
Look, here comes the bait.
Don't move a bit…
Stone still you sit…
Wiggle your esca and…
SNAP!

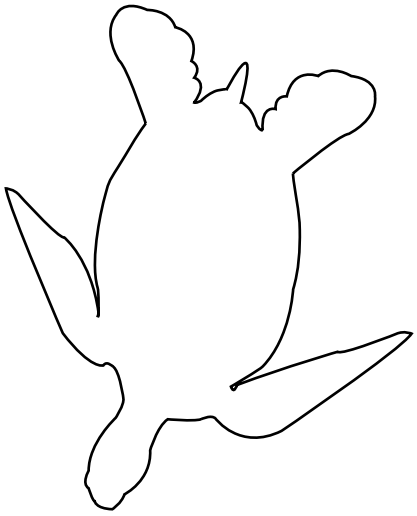
Slooooowly you sprawl
Along the sponge wall
Use your front fins to creep
Find a good spot for sleep
Settle in tight and…
Rest for the night!

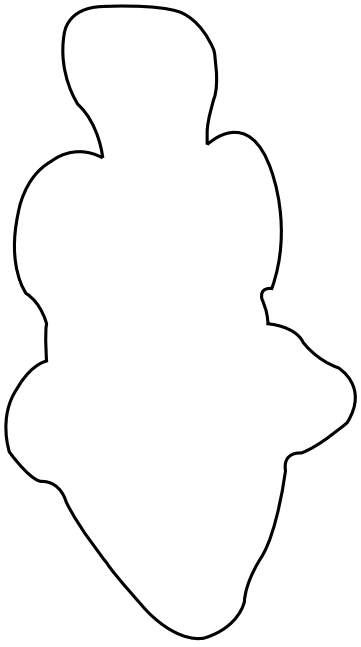


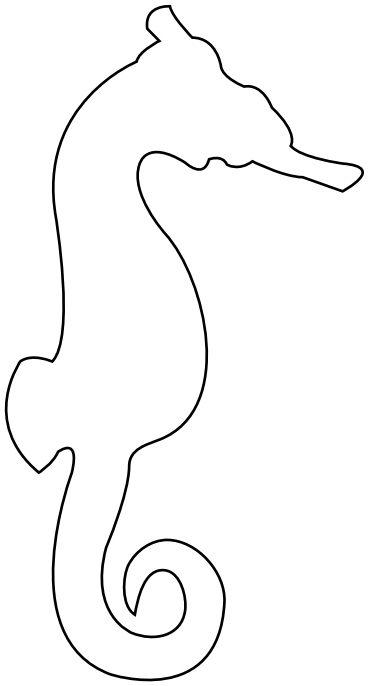


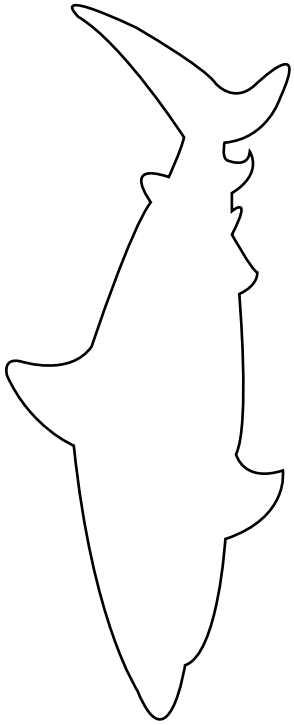


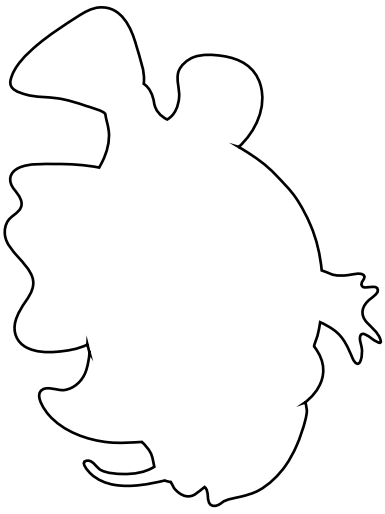


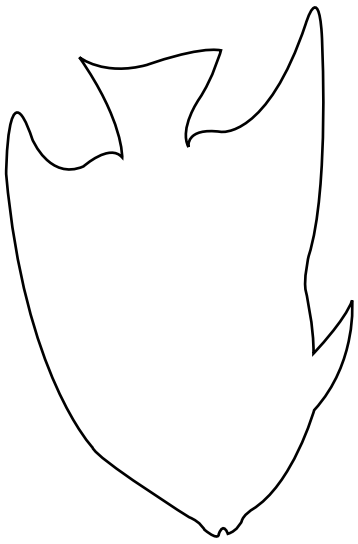


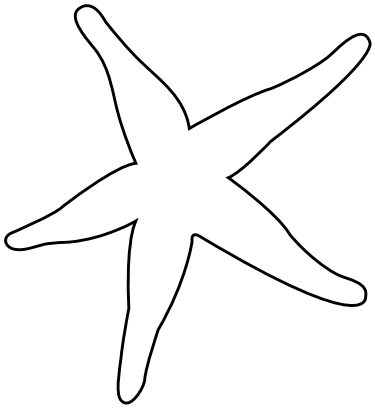


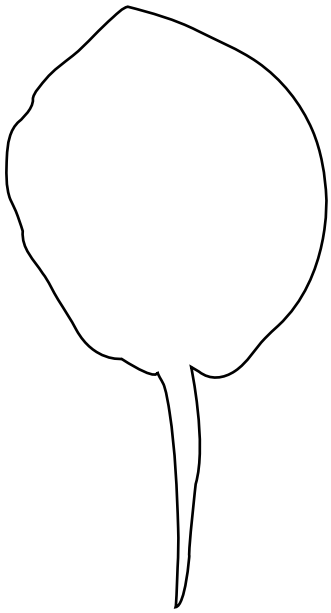


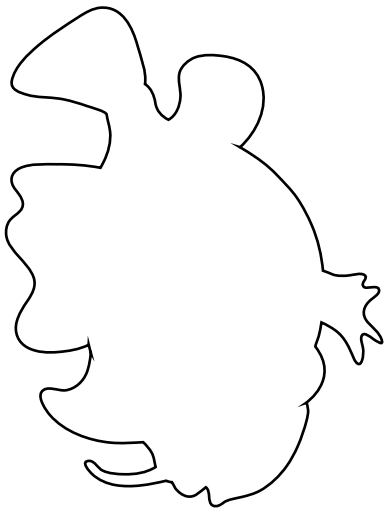


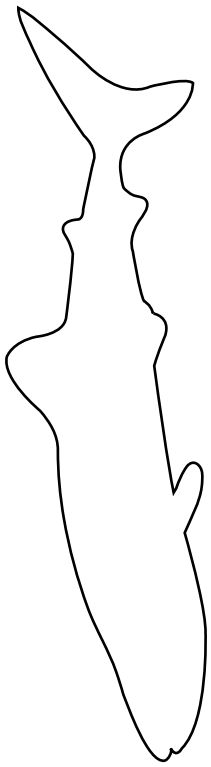


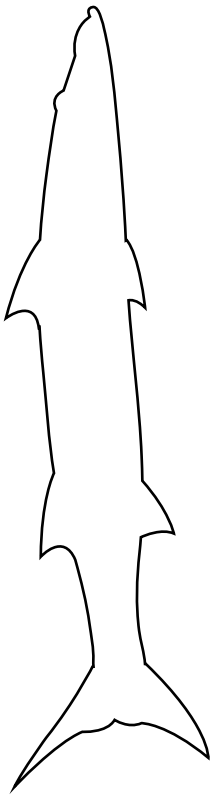


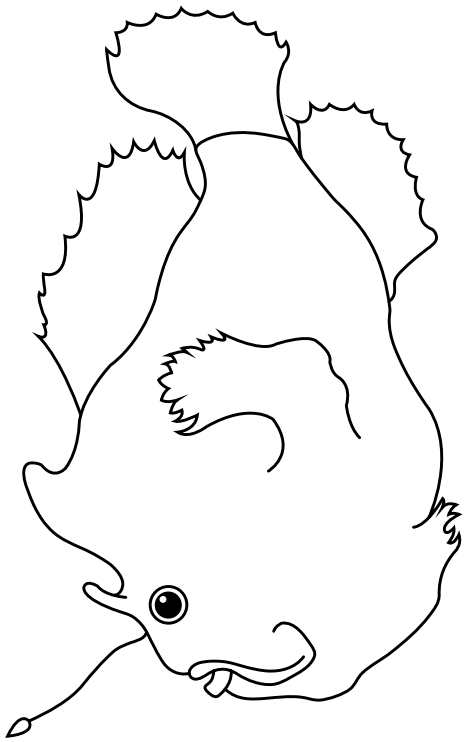


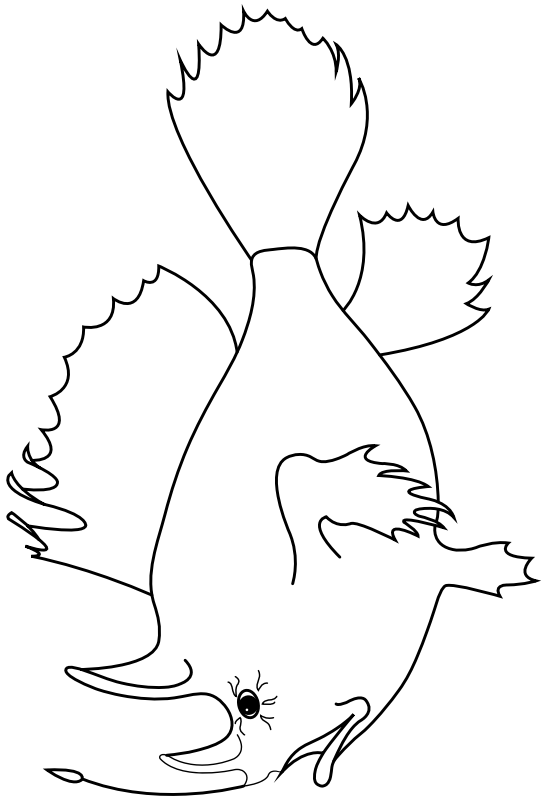


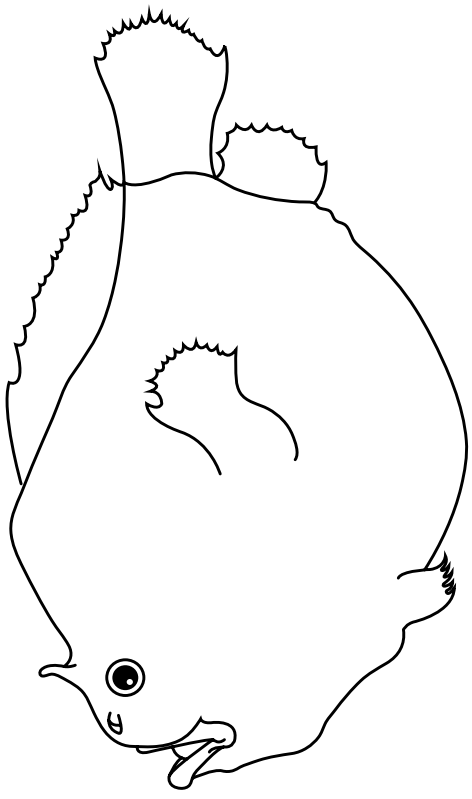


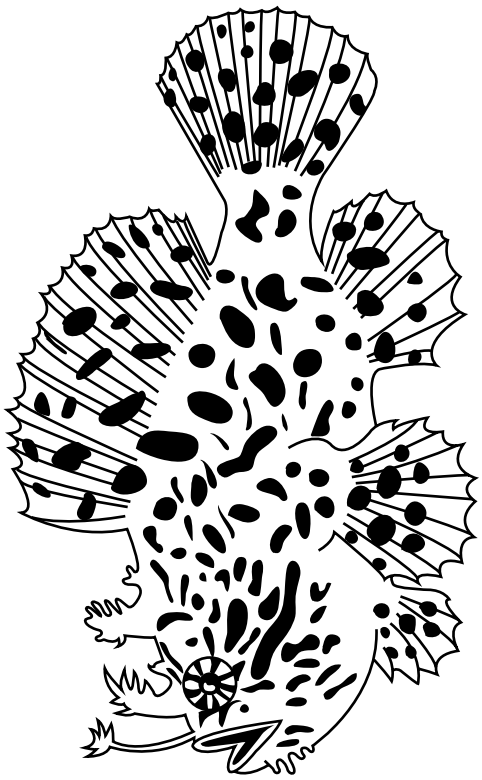


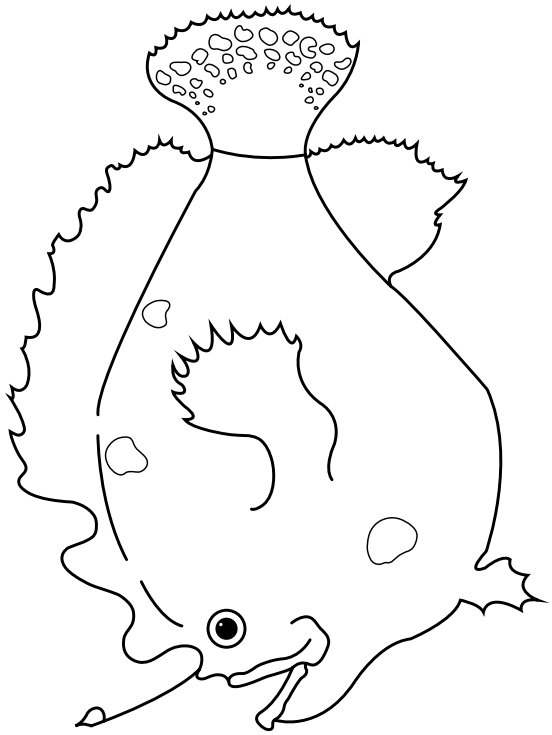


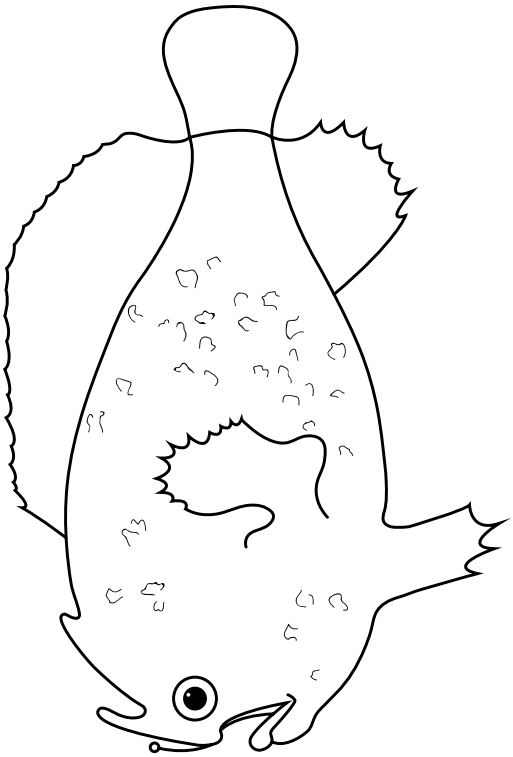












Today I learned...

Bath Time for Fishes

Bath Time for Fishes

CONCEPT / TOPICS TO TEACH

Animals stay healthy in the ocean through cleaning stations, which are cooperative relationships between animals also known as symbiotic relationships. Just as humans brush their teeth and perform other cleaning rituals to stay healthy, animals in the ocean perform similar cleaning rituals to promote health, remove parasites, and even repair injuries.

Objectives:

- Students will build their awareness of personal hygiene and its correlation to good health through practicing hygiene techniques on sea animals in a simulated cleaning station.
- Students will practice imagination play skills as they simulate roles and responsibilities in a sea hospital mimicking the activities in ocean cleaning stations.
- Students build fine motor and counting skills as they simulate the act of being a cleaner fish.
- Students will develop their creative ability and literacy skills through an activity requiring them to create an image of what it would be like to take a bath in the ocean and think of words to describe the process.
- Students will build their shape recognition skills in an activity requiring them to find and color geometric shapes contained within a coral reef cleaning station scene.

Character Education: CLEAN and HEALTHY

All animals in the world need to stay CLEAN in order to be HEALTHY including human beings. There are germs and bacteria all around. In order to stay HEALTHY, we need to stay CLEAN. Have your students think of "*cleaning stations*" they visit at home and at school. These "*cleaning stations*" might include bathrooms, sinks, showers and bathtubs. Include tasks such as brushing and flossing teeth; visiting the doctor or dentist; washing our clothes and toys. Discuss with students different ways we can stay CLEAN, such as how we need to wash our hands before we eat or how we brush and floss our teeth a few times a day. Discuss how we prevent getting sick by washing our hands throughout the day or covering our mouths when coughing. Have students brainstorm about their unique cleaning rituals including showers or baths; cleaning and cutting nails; brushing or combing hair; cleaning clothes or play areas. Our bodies are wonderful and we need to take care of them by staying CLEAN, HEALTHY and taking care of our environment too.

Ocean Annie and Scuba Divers are CLEAN and HEALTHY!

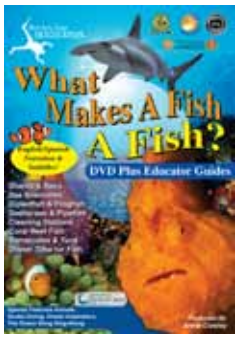
Scuba Divers need to be HEALTHY and our equipment needs to be CLEAN. We cannot go scuba diving if we are sick or if we do not care for our equipment. When we go scuba diving underwater we explore coral reefs and dive with sharks, dolphins, manta rays and many other fantastic animals. Scuba divers like to find fish cleaning stations on the reef because at these stations you can get really close to the animals. When we find a cleaning station, we have to practice patience, breathing really slowly so we can observe the fish getting cleaned. If we breathe fast and loud, we might scare the animals away. Fish like us, need to stay CLEAN and HEALTHY.

After we finish scuba diving, we have to CLEAN and rinse our equipment in order to maintain it. This includes our mask, snorkel, fins, wetsuit, regulator, BCD and tank. Underwater photographers need to maintain all of their camera equipment too. As scientists using instruments when scuba diving, these need to be CLEANED and maintained too. Discuss with students what equipment they use during the week that needs to be cleaned in order to maintain it for use. Use imagination techniques and have students become scuba divers when caring for and cleaning their environment.

Getting Started

Required Materials

- ❍ DVD "What Makes A Fish, A Fish?" by Dive Into Your Imagination
- ❍ Large Dry Erase Board/Easel and Markers



TREASURE CHEST

- Algae
- Bacteria
- Clean
- Cleaning Station
- Healthy
- Hygiene
- Naturalist
- Parasite
- Scientist
- Symbiosis

Anticipatory Set Lead-In

- ✧ Watch and become familiar with chapter five "Bath Time for Fishes" from the DVD "*What Makes A Fish, A Fish?*"
- ✧ Discuss with students things they do every day requiring help from another person such as tying shoes, taking a bath, or getting dressed.
- ✧ Explain to students in nature, when two organisms work as a team, it is called *symbiosis*. Animals in the ocean form partnerships requiring *symbiosis and form symbiotic relationships*.
- ✧ Ask students to imagine they are naturalists, meaning they are scientists who make observations and study animals in their natural surroundings. Have them work with their team to collect information while viewing the chapter "Bath Time for Fishes" about cleaning stations on the reef.

Here are some questions and answers you can use to build a brainstorming session:

KWL LGL AG WP

Questions for Students	Answers for Educators
Why do fish visit cleaning stations?	*Fish visit cleaning stations in order to get cleaned. They need wounds cleaned out, dead skin or parasites removed, and these stations also promote the health of the fish.*
What kinds of fish visit cleaning stations?	*All kinds of fish including big sharks living in the open sea, to regular reef fish such as groupers, cod, clownfish and parrotfish.*
How do cleaning stations help fish stay healthy?	*Cleaner fish and shrimp pick off dead skin, parasites and other irritants, and clean wounds for the fish visiting cleaning stations. This is like a bath and hospital all in one.*
How do fish benefit by visiting cleaning stations?	*If they are sick, visiting a cleaning station helps wounds heal faster. When healthy, a cleaning station is a way to get rid of bad skin and irritants that over time can make a fish sick.*

Video Review

- After watching the clip about cleaning stations once or even a few times, discuss and write down additional facts, questions, and information students gained from the video for further research and discussion.
- Ask students to write a reflection in their journal about cleaning stations.
- Ask students what symbiotic relationships they have with people in their lives. How do they work as a team with friends and family? What is the importance of being clean and healthy and how do they do it?
- Ask students what else they want to know about cleaning stations and write down those questions for later research.

Imagination Values

Before the activities begin, use this as an imagination exercise with your students. You can use this as a movement activity and have them act out what you are saying, or have them be silent and use only their minds. By having them focus and gain a connection to the animals, they will attain critical elements of imagination play. You can read this script or use your imagination and create your own! Imagine you are a fish on a coral reef needing to visit a cleaning station. What kind of fish are you? You have to find a cleaning station to be clean and healthy. On the count of three, say the magic word: 1, 2, 3…IMAGINATION!

"What do you do to stay clean and healthy? You wash your hands, take a bath, brush your teeth, and wear clean clothes. You go to the doctor for a check-up and the dentist to clean your teeth. Fish need to stay clean too by visiting cleaning stations. On the count of three let's say the magic word and pretend we are fish. 1, 2, 3…IMAGINATION! What color fish are you? Where do you live? Do you have big eyes? What does your mouth look like? Where are your fins? Do you swim or crawl? If you were a fish, how would you brush your teeth? Would you let a shrimp crawl in or have other small fish scrub and clean your teeth. The cleaner fish and shrimp remove dry skin, germs, parasites and dead scales off other fishes' bodies. Imagine you have shrimp and cleaner fish crawling on your skin and in your mouth! Imagine what this might feel like. It feels really good! It kind of feels like a tickle, gently run your fingers up and down your arm.

If you were a scuba diver and scientist exploring the reef studying the cleaning stations, you would look for fish being still and staying in one place on the reef. Scuba divers also look for cleaner shrimp. Cleaner shrimp use their white antennae by waving them back and forth to attract other fish on the reef to be cleaned. Imagine your arms are antennae and wave them to attract other fish into your cleaning station! As we do our activities, let's continue to use our imagination as scuba divers exploring the reef!"

CLASSROOM ACTIVITY STATION E1

FISH WASH

Overview

Students will use the hygiene tools at this station to perform cleaning tasks for the stuffed/rubber sea creatures. Participating in this activity will help students engage in *imagination play, review important personal hygiene rituals* and practice *bilateral coordination*.

Materials: 5-6 Large Stuffed or Rubber Sea Animals, Combs, Brushes, Dental Floss, Nail Brushes, Wash Cloths, Mirrors

Talking Points

- Our planet, Earth has one big ocean with many features. Different parts of the ocean have different names associated with basins, South Pacific, Atlantic, Arctic, Indian, etc. All the different parts are connected to each other because water in the ocean moves from place to place. The ocean covers about 70% of the surface of our planet. Challenge students to think of this model mathematically, fractionally what does 70% ocean represent?
- Ocean water has unique properties and is salty, making it more dense than freshwater and allows for different animals and ecosystems to flourish.
- One important way animals survive in their ocean environment is to help one another stay clean.
- Cleaning stations are where fish go to get clean and to have wounds cared for, these behaviors are important to people too.

Lesson Procedure

1. Set up an area designated "fish wash" with sea animals and cleaning utensils.
2. Instruct students to be "cleaners" and use the cleaning instruments to practice cleaning the sea creatures in the cleaning station.

I can stay in a cleaning station all day long. Cleaning stations are like spas in the sea!

CLASSROOM ACTIVITY STATION E1 (Continued)

FISH WASH

Extension Ideas

» Students can illustrate or write a short story about the tasks they performed as a cleaner in the cleaning station.

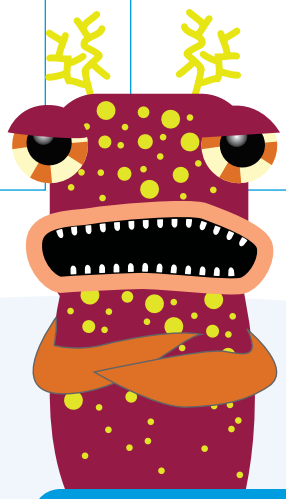
» As a class discuss what kinds of grooming tools students use at home and how often they need to do cleaning activities. Work together to make a class list.

» Discuss how important it is to wash our hands to prevent the spread of germs. We keep clean to prevent getting sick!

» Talk about the rules your class or school has for when students might be sick and how we can prevent spreading germs to one another.

» Have students look in the mirror after they pretend to clean and wash themselves. Have them say to themselves, I love me! Children are raised saying I love you to other people and in order to develop self-esteem, children also need to be taught to love themselves. Encouraging students to take care of themselves is a way we practice loving ourselves. When we eat right, take care of our bodies and our environment, we can be proud of who we are.

Notes



You might not like taking a bath, but it is good for you! I have to take a bath because Ocean Annie and Makaio think I stink. HA! It is good to get the parasites off of me.

CLASSROOM ACTIVITY STATION E2

SEA HOSPITAL

Overview

Students will take turns being "injured fish" and "doctor fish" at the cleaning station. Participating in this activity will give students a chance to engage in *imagination play* and practice *fine motor coordination, bilateral coordination, and problem solving skills.*

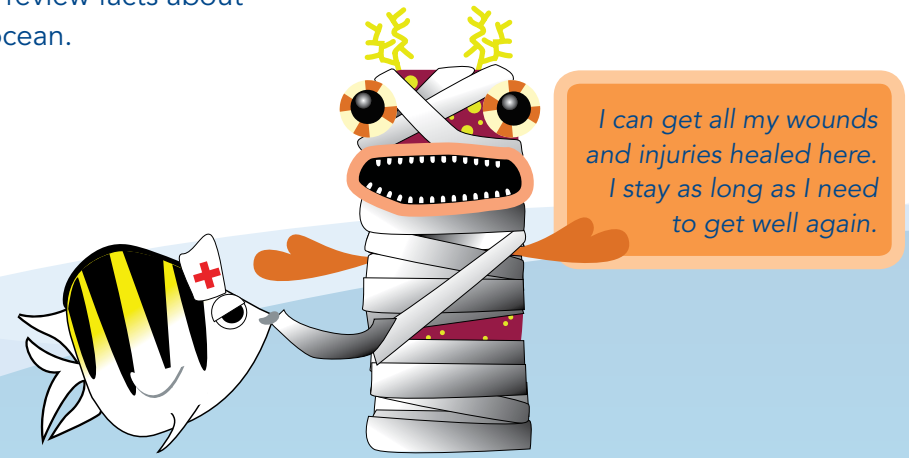
Materials: Gauze Pads, Ace Wraps or long strips of fabric, Slings or fabric fashioned as such, Bean Bags to represent heat or ice packs, Blankets, Pillows, Pretend Thermometers, Stethoscopes, and Pressure Cuffs

Talking Points

- Ask students what kinds of things they do to take care of themselves when they get hurt or sick.
- Affirm their answers, which may include: taking medicine, using bandages to care for wounds, or visiting the doctor. Let them know positive thoughts matter in their healing too. Have them visualize themselves healthy.
- Discuss in the ocean environment there are no doctors or hospitals, so fish rely on one another for medical care and health. This is a specialized or symbiotic relationship called a cleaning station. Review the film clip as needed to help students review facts about cleaning stations in the ocean.

Lesson Procedure

1. Set up an area of the room designated "sea hospital" with the items listed in the set up.
2. Divide your class in half and instruct students to take turns coming to the hospital with injuries to be treated and doctors and nurses treating the injuries.
3. After completing a people's hospital, encourage imagination play. Have students be sea animals with injuries to body parts that belong on fish such as a broken fin, or itchy scales. What would happen to them?



CLASSROOM ACTIVITY STATION E2 (Continued)

SEA HOSPITAL

Extension Ideas

» Ask students if they can think of other tools doctors and nurses use to help people get healthy.

» Have students draw a picture of what a fish hospital or cleaning station looks like.

» Have students take turns telling stories about what they had to do when they got sick or injured. They can compare and contrast their stories to how the ocean animals get clean.

Notes

A leaky faucet can leak hundreds of gallons a year with only one drip a minute! Get all your leaky faucets fixed to save water. Check out the water calculator here! http://ga.water.usgs.gov/edu/sc4.html

CLASSROOM ACTIVITY STATION E3

PICK ME CLEAN!

Overview

Students will take turns acting as cleaners and fish being cleaned. Participating in this activity will give students practice at *imagination play, counting* and *fine motor coordination*.

Materials: 2-4 Double-sided "fish suit" smocks or Aprons, 10-20 Sticky-backed Velcro Squares per suit, Felt, Parasite Cutouts, Scissors

Talking Points

- List everything you use water for every day. Where does the water you use comes from?
- No matter where the water in the tap came from (well, lake,watershed, etc.) it is part of a cycle that begins in the ocean. Most rain that falls on land comes from the ocean.
- Water travels between the ocean, sky, and land. Most rivers flow into the ocean.
- Our ocean holds 97% of the water on our planet, and without a healthy ocean, life as we know it could not exist.
- Tides move water higher and lower covering and uncovering the shoreline. Tides change about every 6 hours from high to low and low to high. The gravitational pull between the earth, moon and sun affects the tides.
- Wind moves huge amounts of surface water from one place to another on the ocean. Moving ocean water transports living things and non-living things (pollution) around the world.
- Within every environment there are parasites that attach themselves to living things. Animals need to get the parasites removed by visiting cleaning stations.

Lesson Procedure

1. Trace and cut out parasite templates on felt. Place Velcro squares on each parasite.
2. Adhere the other side of Velcro squares all over the fish suit and mate them together with the parasites.
3. Students will take turns wearing the fish suit going to the cleaning station you set up at a certain place in the room. Have them reenact what it is like to get cleaned. If students are in small groups, you can encourage different role playing including underwater photographers taking pictures, ichthyologists studying fish, etc.
4. Students will alternate acting as "cleaners" picking off the "parasites" and counting them and other role plays from observations of cleaning stations.

The ocean and life in the ocean shapes the features of the planet.

CLASSROOM ACTIVITY STATION E3 (Continued)

PICK ME CLEAN!

Extension Ideas

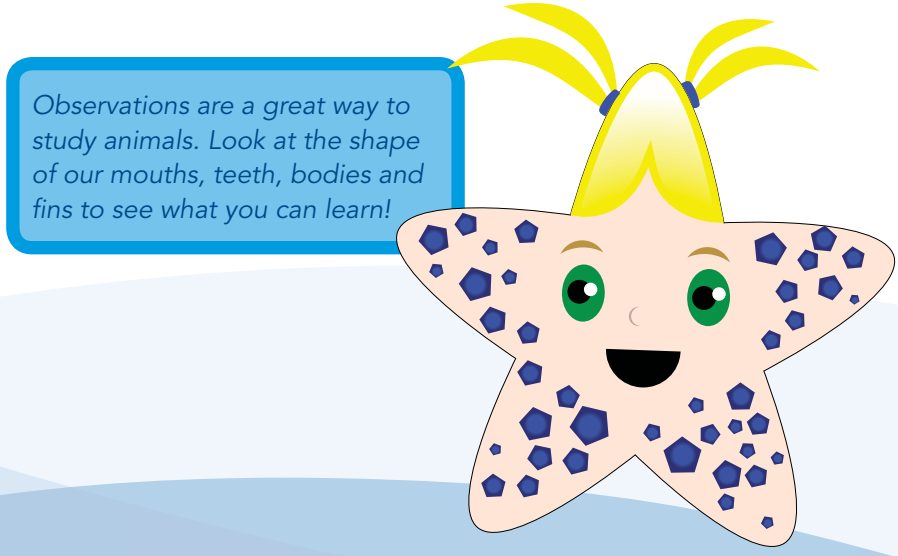
» Cut out different shapes from the felt and have children only collect certain shapes. This will help with shape recognition.

» Cut out different color parasites or shapes from felt and have children collect only certain colors.

» Take extra class time to explain that a parasite is an animal that gains something from its host, and the host is negatively impacted. Ask students if they know of any parasites that they have heard of before, like ticks, fleas, or lice. Many schools have lice outbreaks and this is a great tool to discuss how these animals are a part of nature and how to treat ourselves if it happens.

» Photocopy the parasite cutout onto paper and have students create an illustrated story with parasites and their host fish.

Notes



CLASSROOM ACTIVITY STATION E4

SEA BATH!

Overview

Students will illustrate a picture of what their personal bath time might be like if they were to take a bath in the sea! Help students write in narrative words to tell their story. Participating in this activity will help students develop *artistic skills, fine motor coordination, creativity, early literacy, and vocabulary.*

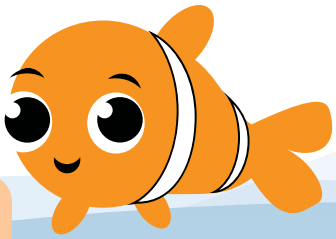
Materials: Paper, Crayons, Markers, or Colored Pencils, Head-shot or photograph of students, Scuba Diver and other fish templates

Talking Points

- Ask students what kinds of things they do to stay healthy? Wash their hands, brush their teeth, etc. Animals living in the ocean have similar needs to animals living on land like people in relation to staying CLEAN and HEALTHY. Animals in the sea meet these needs through interactions called cleaning stations.
- What about when people get hurt or sick? Affirm their answers, which may include: taking medicine, using bandages to care for wounds, or visiting the doctor. Let them know positive thoughts matter in their healing too. Have them visualize themselves healthy.
- Discuss in the ocean environment there are no doctors or hospitals, so fish rely on one another for medical care and health. They need to stay clean and healthy by visiting cleaning stations, a specialized or symbiotic relationship between animals. Review the film clip as needed to help students review facts about cleaning stations in the ocean.

Lesson Procedure

1. Create a workstation with paper and drawing tools.
2. Challenge students to illustrate a picture of what their bath time might be like if it happened in the ocean. Using their imagination, they can be a fish, shark or scuba diver getting cleaned. Help students cut out a photograph of their faces and put it on an animal of their choice or the scuba diver template. Illustrate their "Bath Time in the Sea" story.
3. Assist students as needed with writing in words or sentences.
4. Compile the pages into a class book or add to student journals.



Everything you do on land affects my home. Please help keep the ocean healthy and clean!

CLASSROOM ACTIVITY STATION E4 (Continued)

SEA BATH!

Extension Ideas

» Have students illustrate how they go to the dentist or doctor and discuss the importance of being healthy. Students only get one set of teeth to replace their baby teeth unlike sharks that can grow thousands of teeth in their lifetime. We really need to take care of our teeth in order to live. Create a mantra for your students, I love to brush and floss my teeth because it makes me feel so CLEAN!

» Students can bring in their favorite bath time toy for show and tell. Have students describe why toys make bath time better, and why it is important to take a bath or shower to stay HEALTHY!

Notes

CLASSROOM ACTIVITY STATION E5

NOW YOU SEA ME

Overview

Students will look for the cleaning animals and geometric shapes as they color in a coral reef coloring page. Participating in this activity will help students practice *shape recognition, visual perceptual skills, fine motor coordination, and counting.*

Materials: Cleaning Station Activity Sheet, Crayons, Markers, Colored Pencils, Shape/Color key

Talking Points

- Life as we know it on this planet could not exist without the ocean! The Ocean helps regulate our weather and keeps the earth temperature regulated for living.
- The ocean holds 98% of the water on our planet.
- Brainstorm with students about all the reasons why liquid water is important to all living things. We drink water. Our bodies are made of mostly water.
- The ocean has a wide variety of life forms, and many of them only live in the ocean. Geometric shapes can be found in all living things. Look at animals and see what kind of geomtric shapes you can find.
- All animals in the ocean need to stay clean. There are parasites in the water that attach themselves to fish and other animals. Fish need to visit cleaning stations to get parasites off their body.

Lesson Procedure

1. Photocopy and provide each student with a cleaning station activity sheet.
2. Instruct students to find and color in all the cleaner animals on their reef first, and then use the shape/color key to color in all of the geometric shapes that they can find.
3. Check back with students to help them "catch" all the important animals and shapes.

CLASSROOM ACTIVITY STATION E5 (Continued)

NOW YOU SEA ME

Extension Ideas

» Ask students to write words, sentences or a story about the activities they see happening in the coloring page. This can be done as a group activity or individually depending upon level of students.

» Work with students to create a short play about the activities they colored or illustrated.

» Have a discussion with students about other people who help us. Students often know policemen and women, firemen and women, teachers, armed forces, etc. Have them use imagination play and create stories focusing on one of these groups of people.

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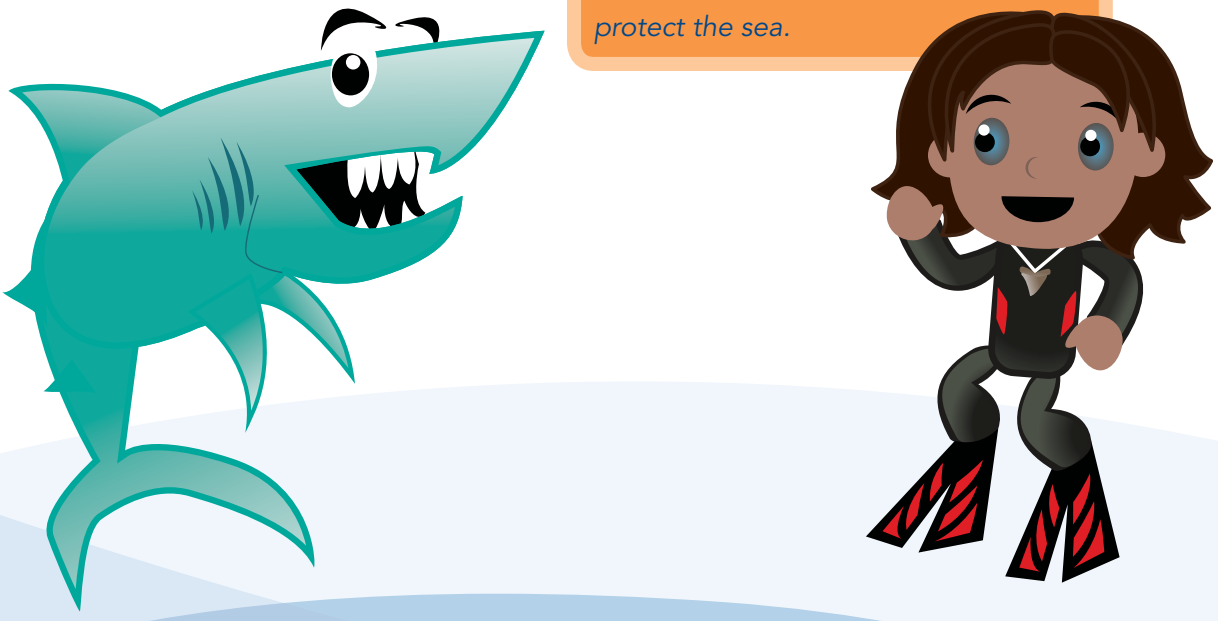


CLASSROOM ACTIVITY STATION E6
BOOK STALL

Overview

Providing a reading and or computer area where students can look through books about the subject being discussed will help to build early literacy. Even if the children are not reading yet, looking at pictures and building dialogue around the images is helpful to developing *vocabulary* and *language skills*.

Materials: Selected poems from *The Fish is Me!: Bathtime Rhymes* by Neil Philip.

Lesson Procedure: Character Education, CLEAN and HEALTHY

1. As a class, read selected poems from *The Fish is Me!: Bathtime Rhymes*. Make a checklist of things students like and don't like about their bath times.
2. Have students illustrate in their journals what their bath time might look like if they took it in the ocean at a cleaning station, and write in words or narratives to describe the experience.

Scuba divers continue their education with extra classes. It is fun to learn new things!

Poster: PERFECTION

"You are complete exactly how you are."

Fine Art Prints, posters, greeting cards and other products are available to decorate your classroom or school while inspiring your students with real ocean animals and environmental scenes. Contact us to learn more.

One way to classify angelfish is by the hook near their gills. Have students find images of these animals and find the hook. How else do we classify fish?

Grey Angelfish, Belize

Book Suggestions

» Barrett, Judi. *Never Take a Shark to the Dentist: and Other Things Not to Do.* Illus. John Nickle. New York, New York: Simon and Schuster, 2008. Ages 4-8.

» Berkes, Marianne Collins. *Over in the Ocean in a Coral Reef.* Illus. Jeanette Canyon. Nevada City, California: Dawn Publications, 2004. Pre-K–K.

» Burnard, Damon. *I Spy in the Ocean.* Illus. Julia Cairns. San Francisco: Chronicle Books, 2001. Pre-K.

» Cole, Joanna. *The Magic School Bus on the Ocean Floor.* Illus. Bruce Degen. Ney York, New York: Scholastic Paperbacks, 1994. Ages 4-8.

» Philip, Neil. *The Fish Is Me!: Bathtime Rhymes.* Illus. Claire Henley. New York, New York: Clarion Books, 2002. Ages 4-8.

Closure and Follow Up

✧ Once students experienced the learning stations, ask them what new facts they learned from participating in the activities and reflect with the class on how much knowledge has been gathered about "Bath Time for Fishes."

✧ Spend time reviewing how fish depend on one another to stay healthy; review how we stay healthy.

✧ Ask students if they can think of reasons people need the ocean to be healthy? Brainstorm with students about ways people can help keep the ocean healthy.

✧ Ask students why they need to be clean and healthy? Can they help others be clean and healthy?

Plan for Independent Practice

» Students can use what they learned to extend the activity and simulate a cleaning station through creative movement and interpretive dance either outside or inside. Use recorded ocean sounds to help create a sea bath atmosphere.

» Select stories from the suggested reading list to read as a class or for self-study.

» Review the words CLEAN and HEALTHY with students and discuss how it relates to their character and their lives. Encourage students to use their imagination and think of different ways they can be cleaner and healthier both with their bodies and their environment, like making sure they always clean their room or help you clean the classroom.

» Read the DVD script and have students create a drawing about what they hear.

DVD TRANSCRIPT

Cleaning Stations On The Reef

Splash and Splish. Splish and splash. It is time to take a bath! Scrub a dub, dub, lets have fun in the tub while we make ourselves squeaky clean.

We clean our teeth with toothpaste and a brush…but what would you do if you lived in the sea???

Would you open your mouth and let a shrimp crawl in???

That is what the fish do! Animals in the ocean stay healthy when they are clean, just like you! But instead of jumping into a bathtub or brushing their teeth, they visit a cleaning station on the reef. Some small fish and shrimp are known as "cleaners on the reef."

Other fish swim up to a cleaning station and have to remain absolutely still. Then the "cleaner fish" come and do their work. They pick at parasites and dead skin…cleaning as they go!

Other fish have to wait their turn. They line up like kids at school waiting to go to recess.

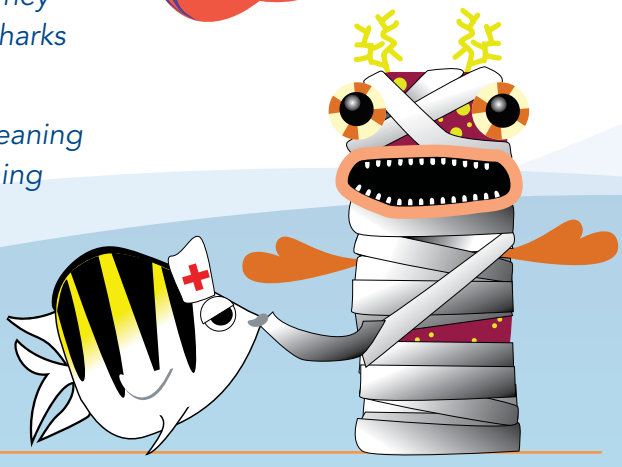
There are many, many cleaners on the reef!

Here, butterflyfish are cleaning parasites off the creole wrasse.

This fish is not hurting the turtle. The damsel fish cleans the turtle as it swims along by eating the algae that grows on it's shell!

Even sharks need to get cleaned!!!

Look at these sharks…Can you see something attached to the shark's skin? These are remoras. Remoras are sucker fish. They stick themselves to the sharks and get a free meal as the sharks swim around.



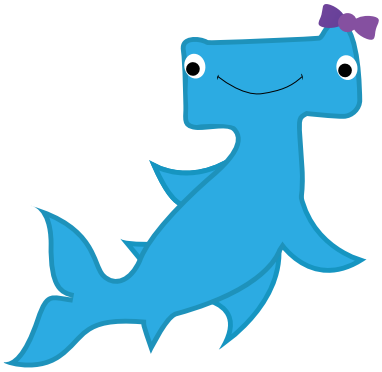
Sometimes when fish are wounded or sick, they go to a cleaning station and stay for periods of up to 23 hours a day! Cleaning stations are like hospitals for fish!

Could you imagine taking a bath all day long?

In order to stay healthy we need to stay clean. In order for fishes to stay healthy they need to stay clean too!

Go Blue! Ocean Annie's Tips to Help Our Environment

Do you think about the container or cup you use before you drink? Are you using single use paper, plastic, or styrofoam when you could be using a reuseable cup or drink container? We need you to be the leader to stop single use waste. Decades ago these materials were created for convenience, yet now we need to think more environmentally friendly and act in ways we reduce the amount of waste we create. We often talk about the three "R's": reduce, reuse, and recycle. Introduce a fourth "R" and recreate the mantra as refuse, reduce, reuse and recycle.

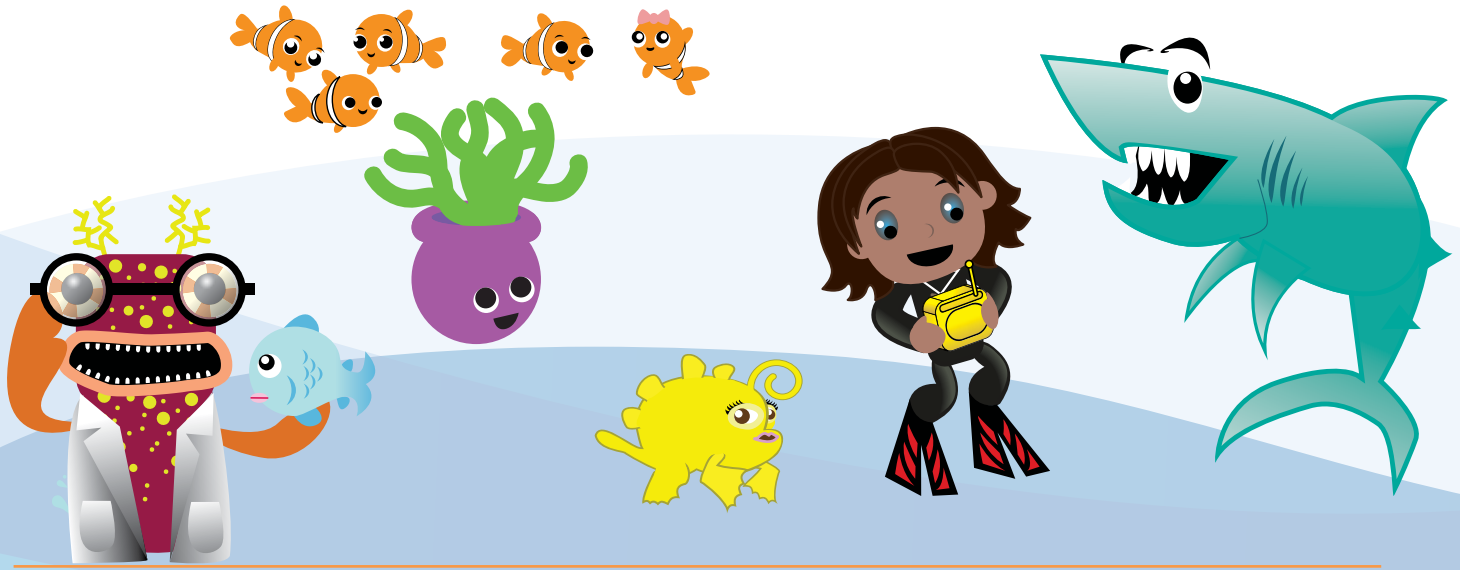


Did you know that at this very moment there are five massive garbage patches made mostly of plastic debris and pollution drifting in the ocean? The largest known as the Great Pacific Garbage Patch covers a mass of our ocean greater than twice the size of Texas floating in the Pacific Ocean between Californa and Japan. More than 80% of pollution in the ocean comes from run off from rivers and land.

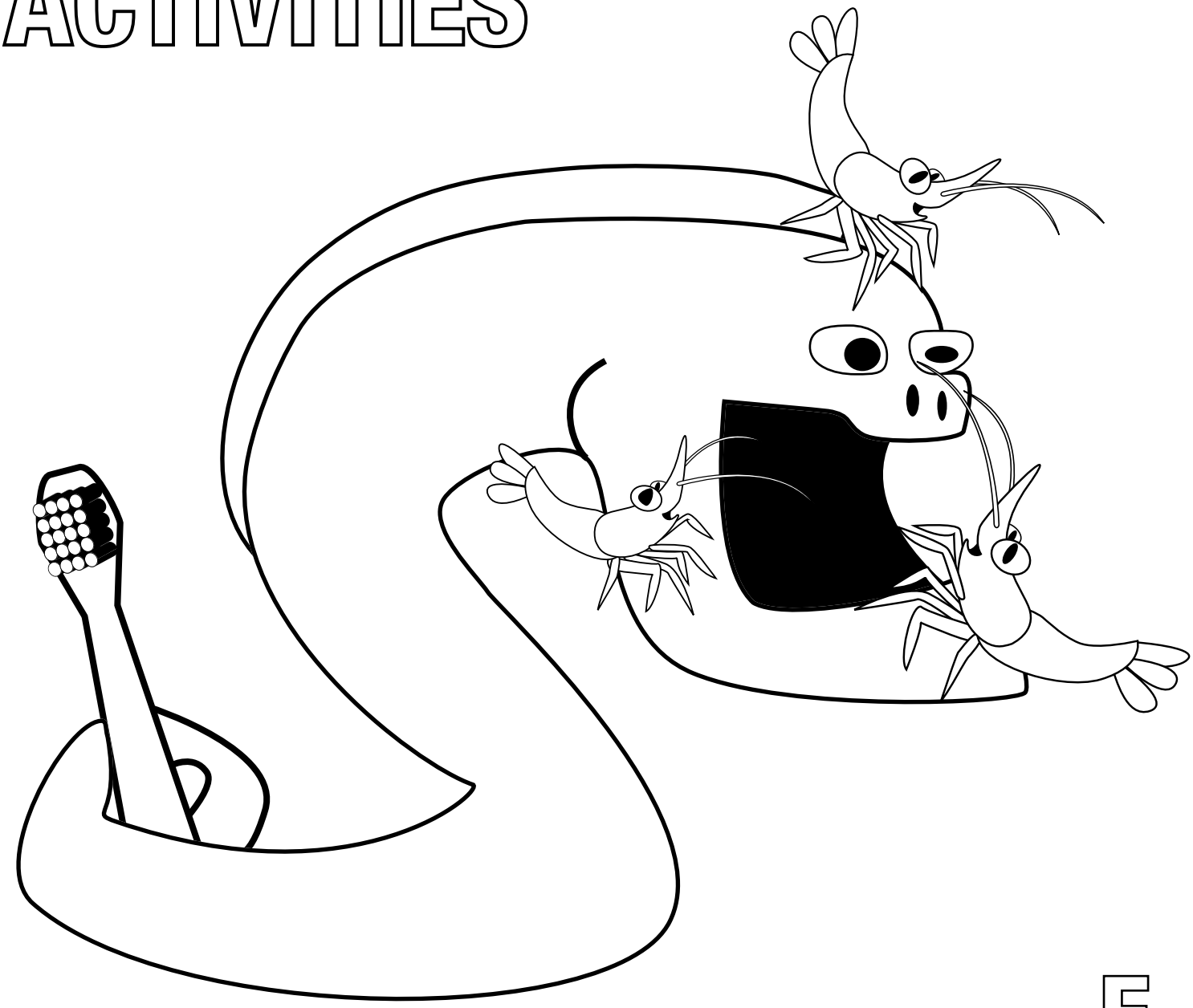
Annie Crawley spent a month documenting the SEAPLEX cruise with graduate students from Scripps Institute of Oceanography for Project Kaisei. Arrange a "movie night" to find out what the team learned and watch the playlist on Annie Crawley's youtube channel. Annie Crawley gives dynamic presentation on this and other ocean related topics. Contact her to find out how you can bring her to your school for an assembly!

http://www.youtube.com/anniecrawley#p/c/93615C0CBE9D7ACA

Meet Ocean Annie's challenge and make your school and homes a no single use zone. What are ways you can reduce the amount of waste you create? As good citizens of the world, we want to live at one with nature and always support the health of our Ocean. By doing this, we GO BLUE and LIVE BLUE!



Bath Time For Fishes ACTIVITIES

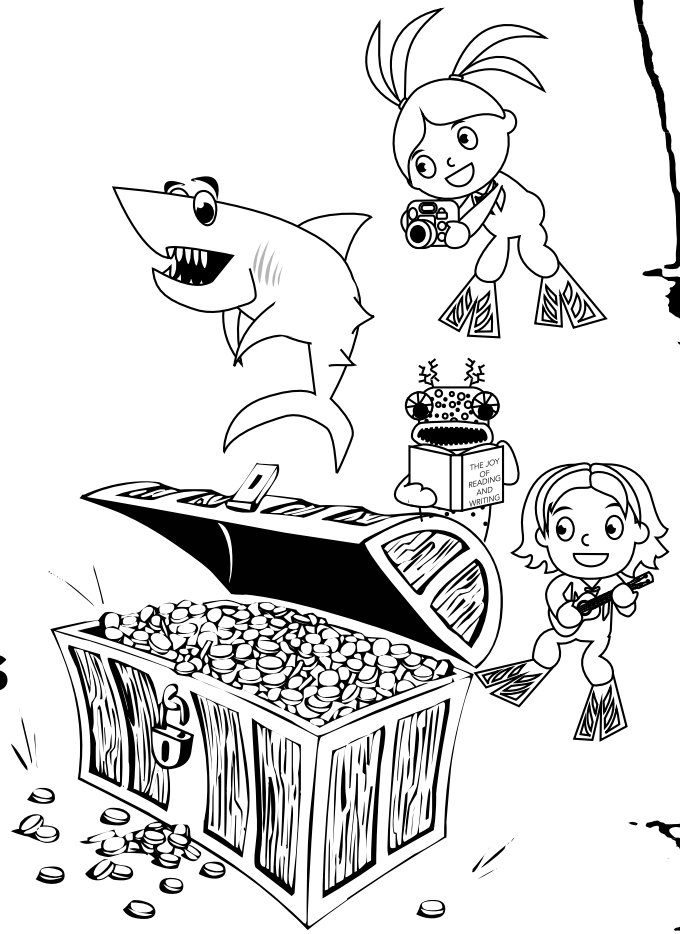


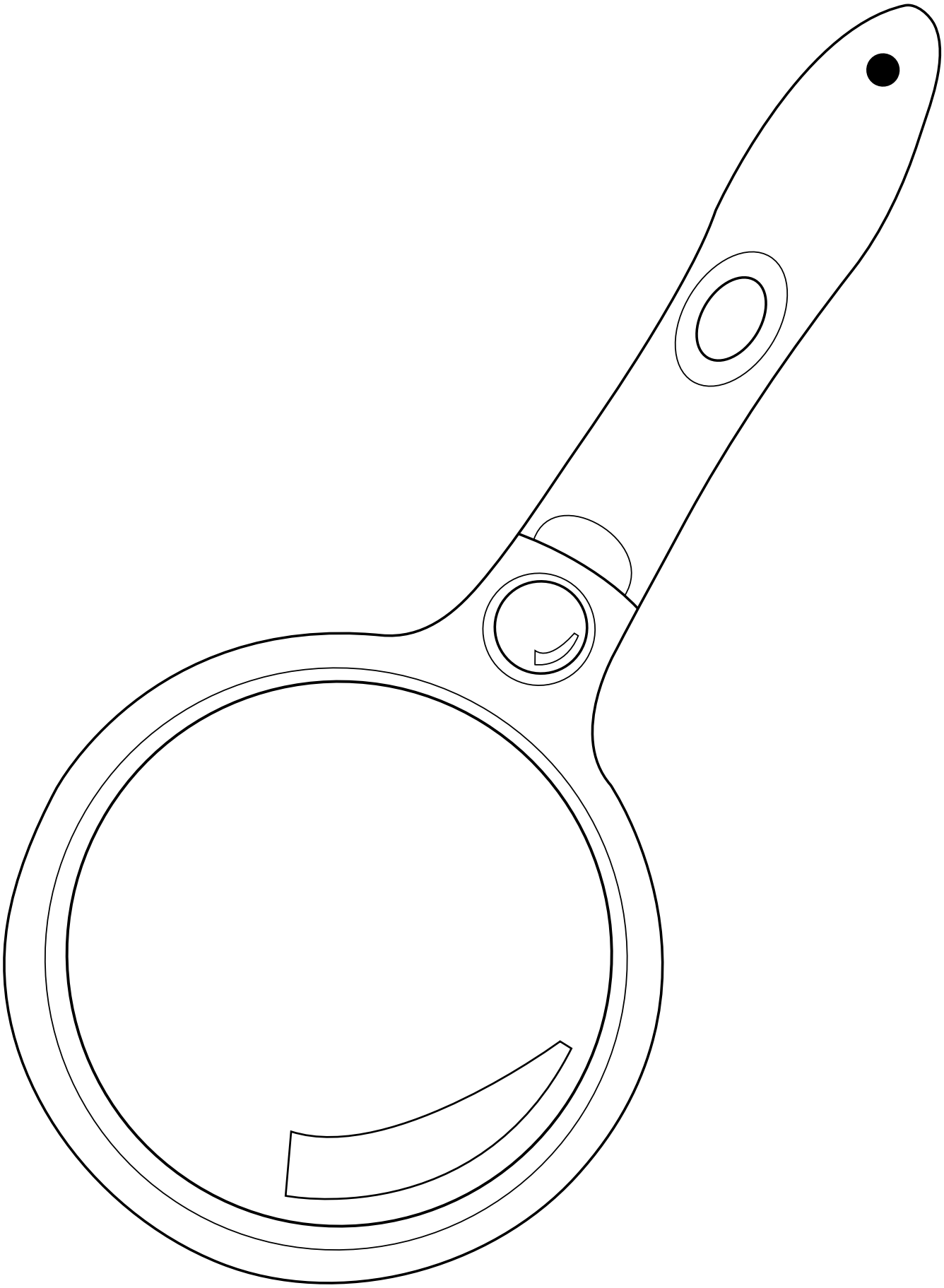
E

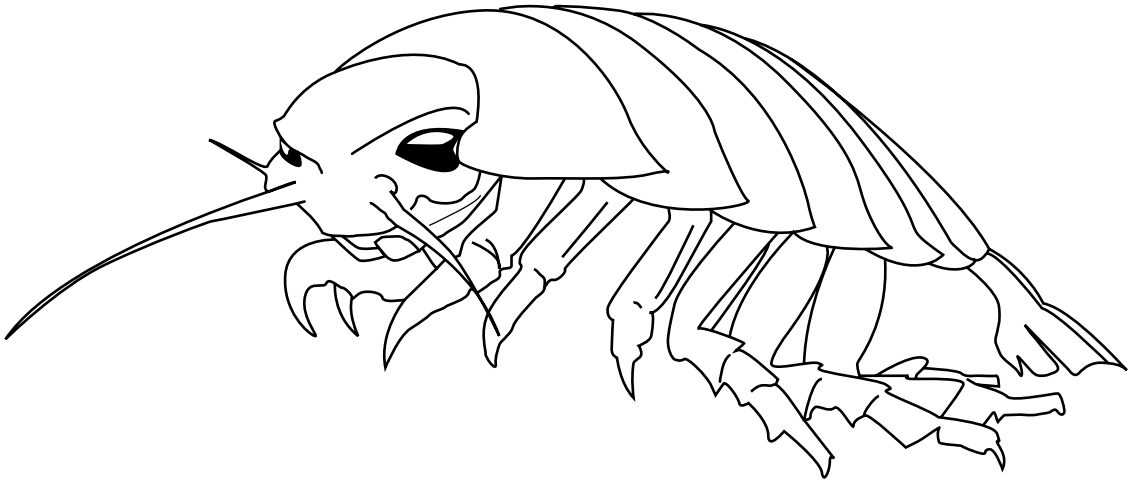
Name _____ Date _____

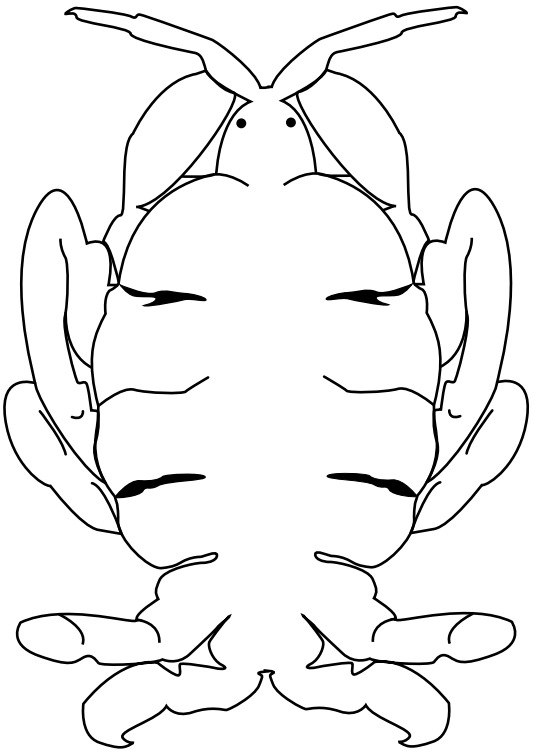
Treasure Chest of Words

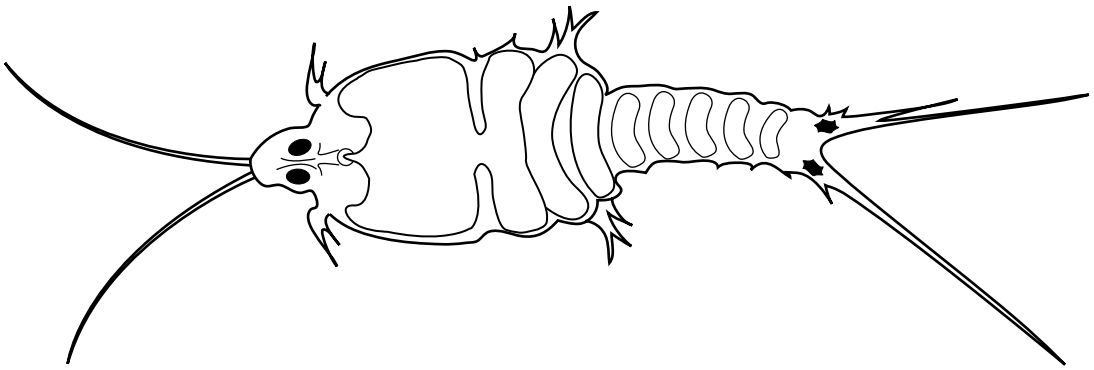
algae
bacteria
clean
cleaning station
healthy
hygiene
naturalist
parasite
scientist
symbiosis

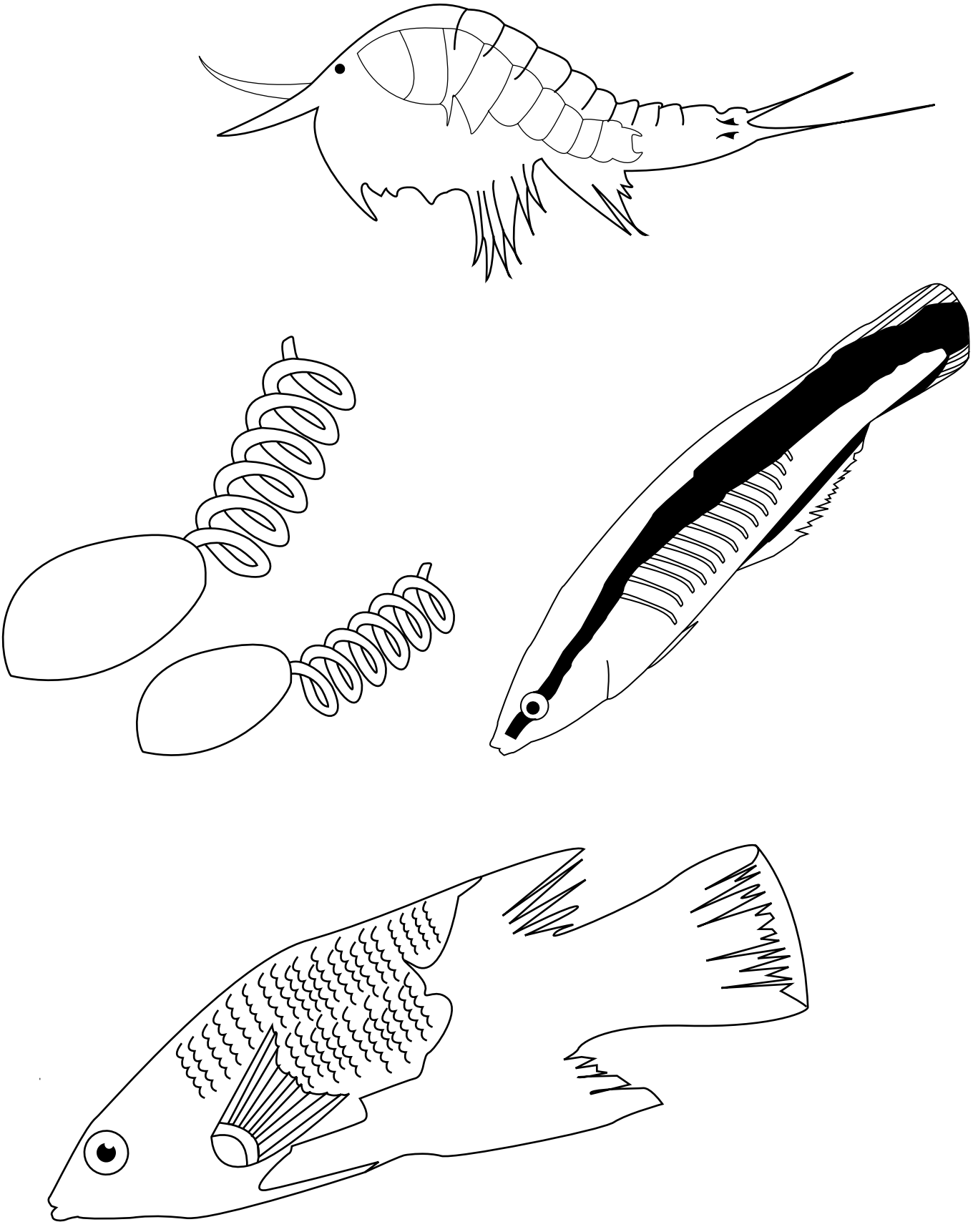


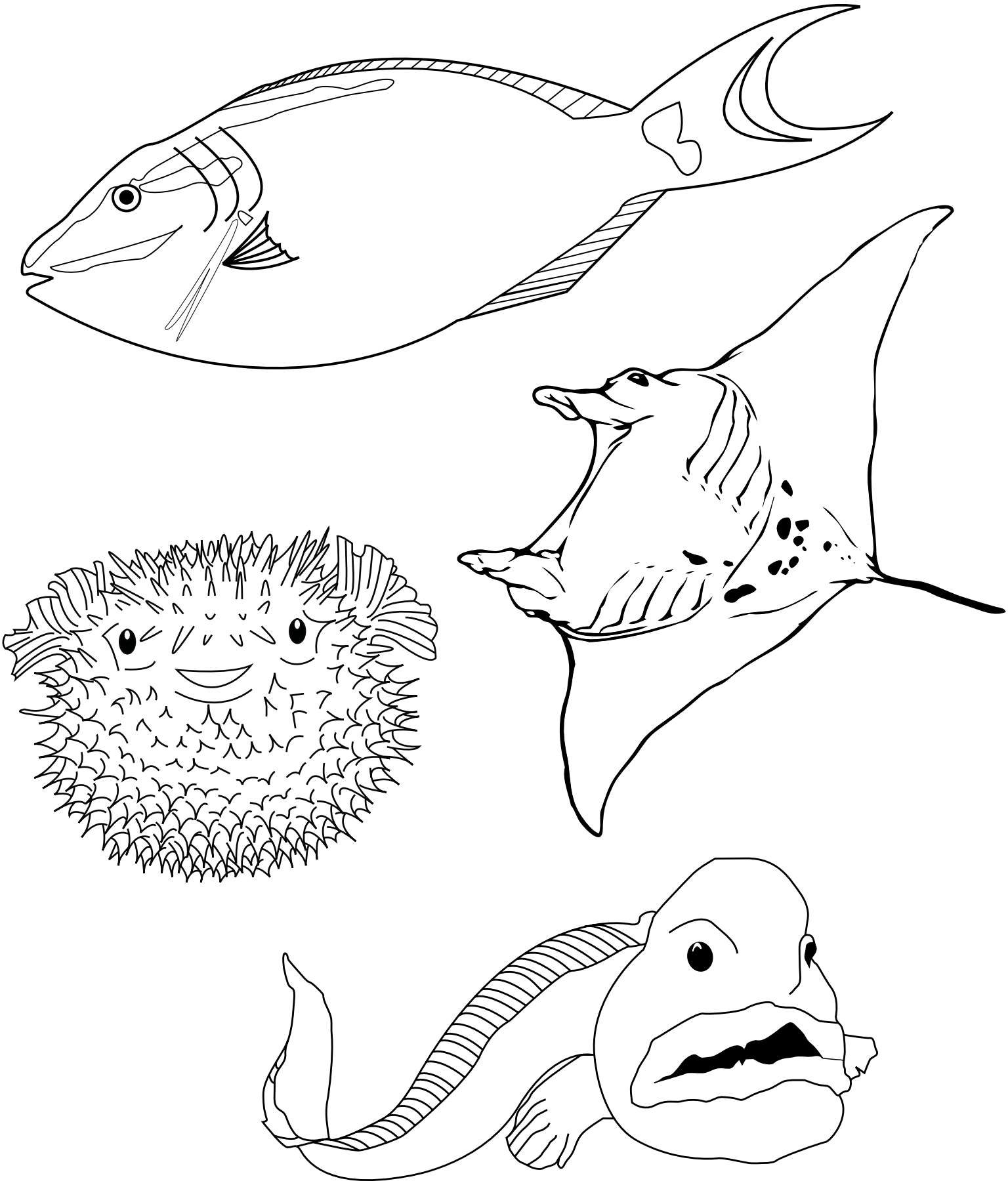


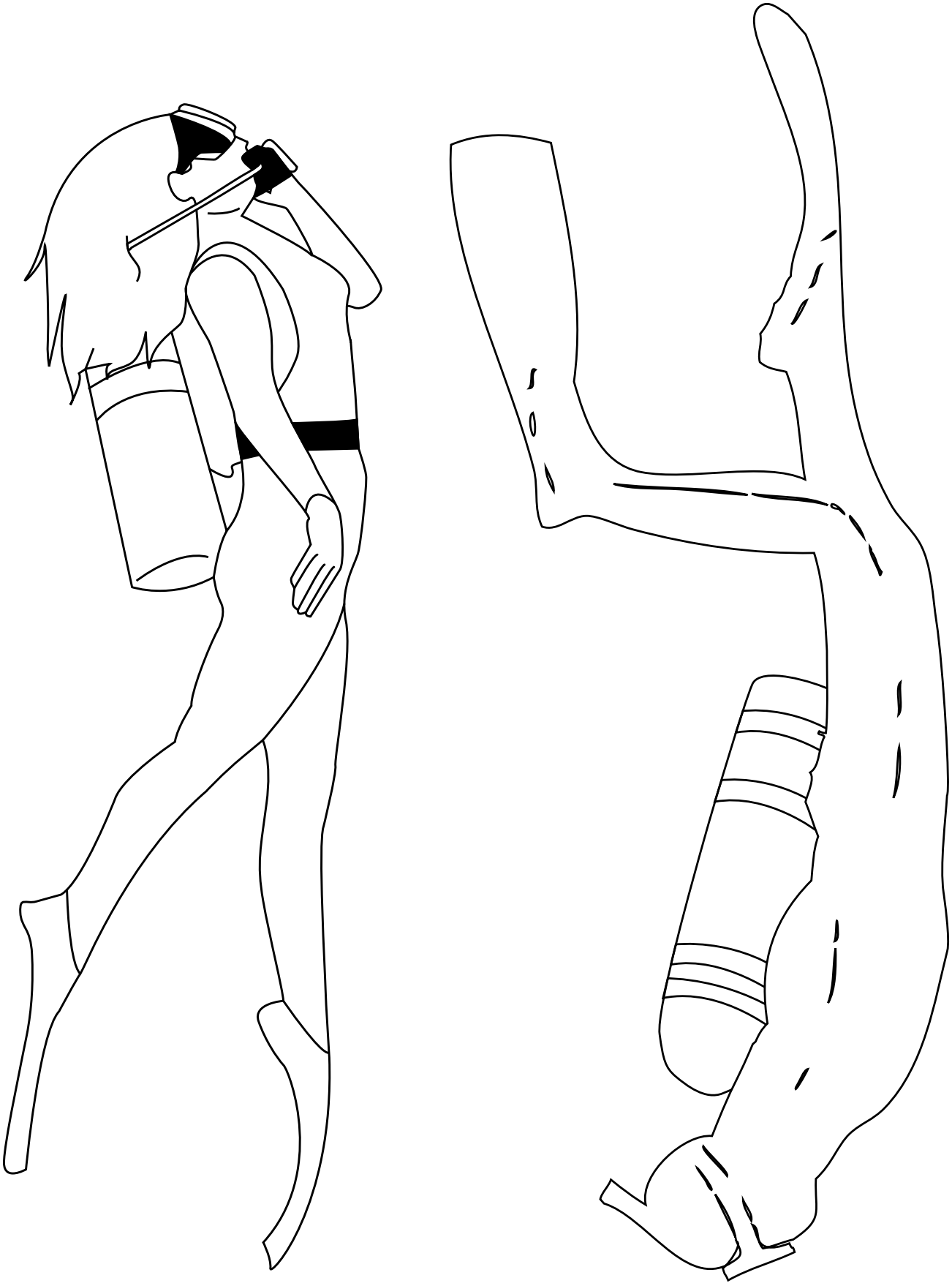


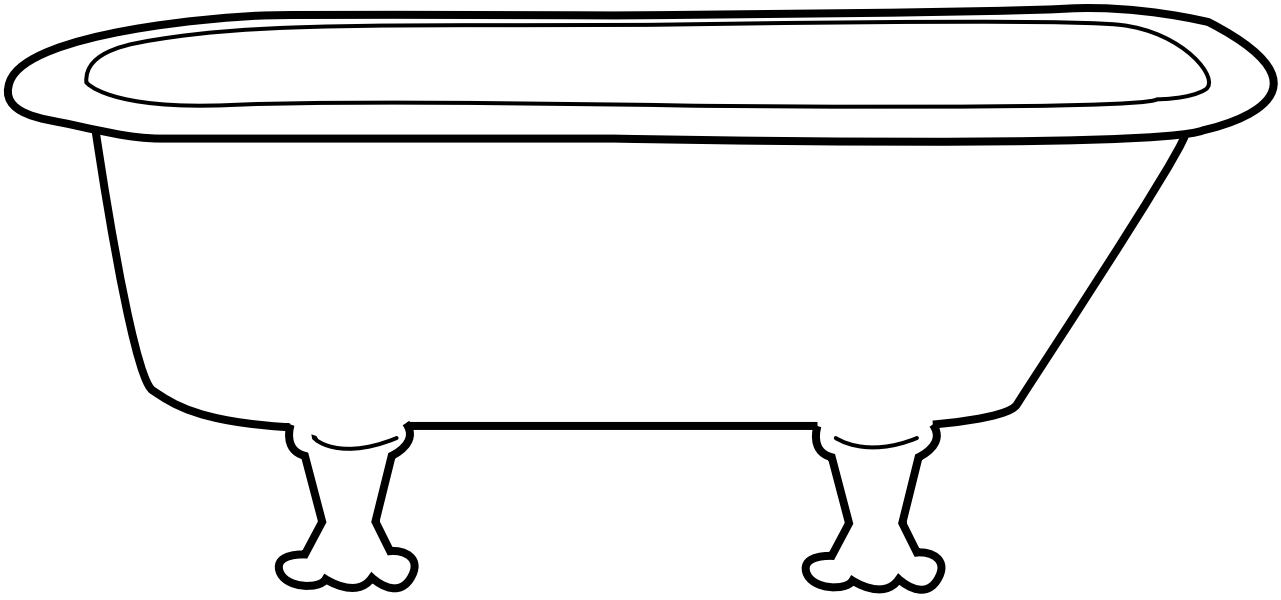










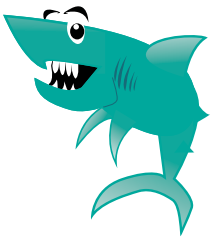


Name _____ Date _____

Today I learned...

Don't Be Afraid of Sharks

Don't Be Afraid of Sharks



CONCEPT / TOPICS TO TEACH

Sharks are fish living throughout every ecosystem in the ocean. More than 450 unique shark species live in the Ocean, varying in shapes, sizes, and colors. Shark populations around the globe are in decline due to overfishing including the destructive practice of shark finning; sharks need protection from human beings.

Objectives:

- Students will develop deductive reasoning and logic skills through an activity requiring them to sort out food sharks might eat from other kinds of food sharks may not eat.
- Students will develop fine motor skills, creative skills, and early literacy through an activity requiring them to think of a favorite fact about sharks, and create an illustration demonstrating their knowledge.
- Students will develop visual perceptual skills and deductive reasoning through an activity requiring them to match the front and back halves of an assortment of shark shapes.
- Students will develop problem-solving skills through an activity requiring them to arrange teeth into a shark jaw, and assess why different kinds of sharks have different kinds of teeth.
- Students will expand their knowledge base and logic skills through a trivia activity.

Character Education: COURAGE

Every day, each of us faces challenges and uncertainty. We learn how to adapt to change. Life is forever changing and it takes COURAGE to adapt to change. By introducing COURAGE to your students you will positively help them recognize how courageous they are every day while building their self-esteem. COURAGE can be defined as the ability to face uncertainty without being overcome with fear. For some, fear might be physical such as being afraid when learning a new sport, yet fear can also be mental fear or anxiety, like trying to write when we have a hard time with letters. Each of us have unique fears and we need COURAGE to face our own challenges. Facing any fear or anxiety takes COURAGE. Helping students to recall times in their own lives when they exhibited COURAGE, such as the first day of school, will help them identify with the meaning of COURAGE. Letting students know it is ok to have fears helps them recognize their fears and allows them to face them with knowledge, education, and COURAGE.

Ocean Annie and Scuba Divers face fear with COURAGE!

Many people are afraid of sharks because they do not know a lot about them but they have watched television and movies that portray them as dangerous animals. The more we learn and educate ourselves, the more we are able to fight our fears with knowledge. It takes COURAGE to to continue to learn new ideas and changing our old ideas. Many people think scuba divers are courageous to dive into the deep ocean, but scuba diving is a very safe sport, as long as you follow the rules of scuba diving.

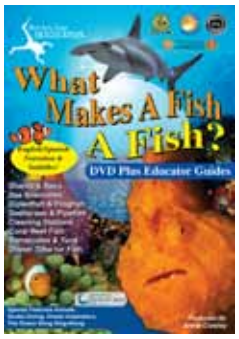
It takes COURAGE to go to school. Recognize different ways your students are COURAGEOUS in the classroom and bring COURAGE into their lives on a daily basis.

Students may experience so much fear around water that it may even take COURAGE to go scuba diving in your classroom! Help students fight their fears with knowledge and COURAGE. Education allows us to have freedom from our fears. The more we learn, the more we grow! Building a child's self-esteem is essential in order for them to continue to grow. You can even develop a mantra for your students: I am courageous and always do my best. I face changes in my life by adapting and education. Write mantras down, post them, and read them together everyday.

Getting Started

Required Materials

- ❍ DVD "What Makes A Fish, A Fish?" by Dive Into Your Imagination
- ❍ Large Dry Erase Board/Easel and Markers



Anticipatory Set Lead-In

- ✧ Watch and become familiar with chapter six "Don't Be Afraid of Sharks" from the DVD "*What Makes A Fish, A Fish?*"
- ✧ Before beginning the film, tell students they will have an opportunity to be an elasmobranchologist meaning they are scientists who specialize in the study of sharks. Have students work individually or in buddy teams to collect information about sharks.

TREASURE CHEST

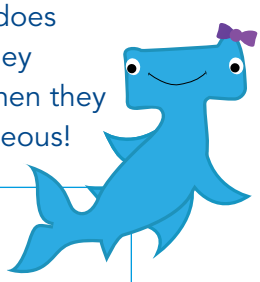
- Cartilage
- Courage
- Denticle
- Elasmobranch
- Elasmobranchologist
- Gills
- Plankton
- Population
- Scales
- Scientist
- Species
- Sustainable
- Swim Bladder

Here are some questions and answers you can use to build a brainstorming session:

Questions for Students	Answers for Educators
Are sharks fish?	*Yes. Like all fish sharks have gills, fins and live in water. Sharks and rays are special because their skeleton is made of cartilage. Most fish have bone skeletons.*
Do sharks have rough or smooth skin?	*Sharks have skin that is rough like sandpaper because their scales, called denticles, are like sharp little teeth.*
How many pairs of gills do sharks have for breathing?	*They have 5-7 pairs of gills depending on the shark species.*
What special material is a shark skeleton made from?	*Cartilage, like the material in our nose and ears.*
Why is it important to protect sharks?	*People are catching too many of them, and if we do not stop hunting sharks they will become extinct.*

Video Review

- ✧ After watching the clip about sharks once or even a few times, discuss and write down additional facts, questions, and information students gained from the video for further research and discussion.
- ✧ Ask students to write a reflection in their journal about sharks.
- ✧ Discuss courage with students. What does it mean to be courageous? How do they demonstrate it? How do they get it when they need it? Create a mantra, I am courageous!



Imagination Values

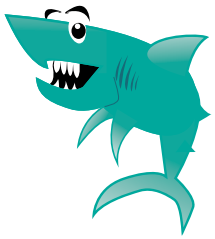
Before the activities begin, use this as an imagination exercise with your students. You can use this as a movement activity and have them act out what you are saying, or have them be silent and use their minds only. Your students will first imagine they are sharks and then they will become scuba diving ***elasmobranchologists***, scientists who study sharks and rays. You can read this script, or use your imagination and create your own.

"On the count of three let's say the magic word! 1, 2, 3…IMAGINATION! Now imagine you are a shark. What kind of shark would you be? Touch your nose and ears, this is what a shark's skeleton is made of, cartilage. Sharks and rays are elasmobranchs. Can you say that word? As a shark, your skin would be rough like sand paper because your denticles, are coarse and stiff, very different from other fishes scales. In order to breathe, you pump water over your gills all day long. Do you have 5, 6 or 7 pairs of gills? Whale sharks have five pairs, so do hammerheads and great whites. But there are also six and seven gill sharks.

Sharks and rays sometimes rest on the sea floor, in cracks, crevices and sea caves. Other sharks live in the open ocean. Where does your shark live? Sharks do not swim with their fins like other fish; they move their whole bodies when they swim and use their fins to glide or steer through the water. Sharks have excellent eyesight and a great sense of smell too. Where are your eyes? What kind of teeth does your shark have? We can learn a lot about fish from their mouths and teeth. Some sharks' eyes, like Great White, Tiger, and Hammerhead Sharks, are in front of their mouths. Other sharks like Whale Sharks and Nurse Sharks mouths are in front of their eyes. Sharks also have a very special sense that detects the electrical activity all living things give off. The organ that supports this special sense is called the ampullae of Lorenzini.

Now that you imagined you were a shark, let's now imagine you are a shark scientist. Many people who study animals need to use their imagination so they can guess about what sharks do. These scientific guesses are called hypotheses. Scientists make studies based on their hypothesis. They then do experiments and study animals to find answers known as conclusions to see if what they thought is correct or if it is not correct.

I know you love sharks, yet many people are scared of sharks because of fear based television shows and movies. The more we learn, the more we understand sharks. The more we understand sharks, the more we can help sharks survive. Sharks need your help! Learn all you can about sharks so you can help protect them."



CLASSROOM ACTIVITY STATION F1

SHARK FEED

Overview

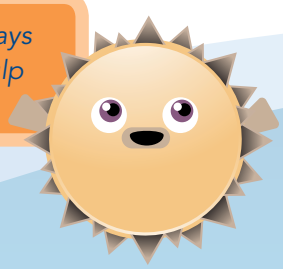
Students will sort through cards depicting food items and assign them to the buckets based on what they determine sharks eat or do not eat. This activity will help students develop *analytical skills and deductive logic*.

Materials: 2 Buckets, Finnagain the Shark, Finnagain the Shark with an "X" through its body, Tape, 2 Sets of Food Cards

Talking Points

- Humans rely on the ocean for many things like food, recreation, and transportation. See if your class can make a list.
- The ocean supports all life on the planet, and sharks are one form of life. There are more than 450 species of sharks.
- Sharks also depend on the ocean for food, and although different kinds of sharks depend on different types of animals for food, all sharks depend on the ocean for their food supply.
- Contrary to what some people think, sharks do not look to harm humans. Sharks are under threat because people are overfishing them and they are losing their habitat. Many shark species are endangered animals.
- Challenge students to see whether they can figure out what different sharks like to eat.

Don't eat like a shark! Always chew your food. Sharks gulp their food down!



Lesson Procedure

1. Tape Finnagain the shark to one bucket for the types of food sharks eat and Finnagain the shark to the other with an "X" through it for foods sharks do not eat.
2. Make cards featuring foods that sharks eat. Use cutouts from this guide, magazines or computers to find pictures and laminate the pictures or tape to index cards. Good choices would include; clams, fish of any kind, squid, shrimp, sea urchins, crabs, etc. Write the word of the food depicted on the card on the other side of the index card so students can associate image with word.
3. Make cards featuring foods that sharks don't eat. Good choices will be exaggerated examples such as; ice cream cones, pizza, cheeseburgers, cake, macaroni and cheese, etc. Write the word of the animal on the other side of the index card so students can associate image with word.
4. Have students separate the food cards into each bucket according to what sharks eat and what they do not eat.

CLASSROOM ACTIVITY STATION F1 (Continued)

SHARK FEED

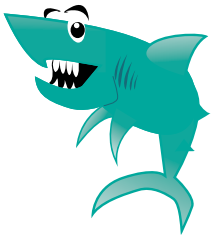
Extension Ideas

» Ask students to make a list of things they eat for dinner each night for a week, and see how many meals include seafood. Introduce your class to the Monterey Bay Aquarium or your local Aquarium's Sustainable Seafood Program encouraging students to only eat sustainable seafood. Sustainable seafood means we do not take more animals from an environment than can reproduce to maintain a healthy population. There are many types of fish and other animals at risk or endangered because of people.

» If your school has a healthy eating program, you can reinforce sustainable seafood. Discuss the importance of a well balanced diet including fruits and vegetables.

Notes

Watch only age appropriate multi-media. Many movies about sharks scare kids and make them afraid of the ocean. We need your help in protecting us!



CLASSROOM ACTIVITY STATION F2

SHARK TALK

Overview

Students will illustrate one fact they learned about sharks. Have students write down, or dictate to you, the fact their drawing represents. Through this activity students will develop *language skills* and *fine motor skills*. Add these to your student journals or assemble a bulletin board to help the class retain the knowledge they achieved about sharks.

Materials: Paper, Markers, Colored Pencils or Crayons

Talking Points

- There are many kinds of sharks living in the salty ocean, and the ocean covers most of the planet.
- Sharks have been part of the ocean environment since before the dinosaurs walked the Earth. The first shark fossils are from 400 million years ago. There are around 500 species of sharks and more than 700 species of rays.
- Ask students what else they know about sharks and rays.
- Are sharks fish? What makes a fish, a fish? Yes, sharks are fish, yet many times students do not understand this. Reinforce and have them figure it out by walking them through what makes a fish, a fish and compare with sharks.
- Sharks skeletons are made of cartilage.
- Lantern sharks grow only a few inches long/10 centimeters. The largest fish in the sea, the whale shark, grows up to 60 feet long/18 meters. Sharks demonstrate much diversity.

Lesson Procedure

1. Set out materials at an activity station.
2. Together with students list shark facts they learned. Have them illustrate one of these facts.
3. When students have completed their pages, add them to their journals or build them into a storyboard on a bulletin board.

Many people are afraid of sharks because of media, but scuba divers help protect sharks.

CLASSROOM ACTIVITY STATION F2 (Continued)

SHARK TALK

Extension Ideas

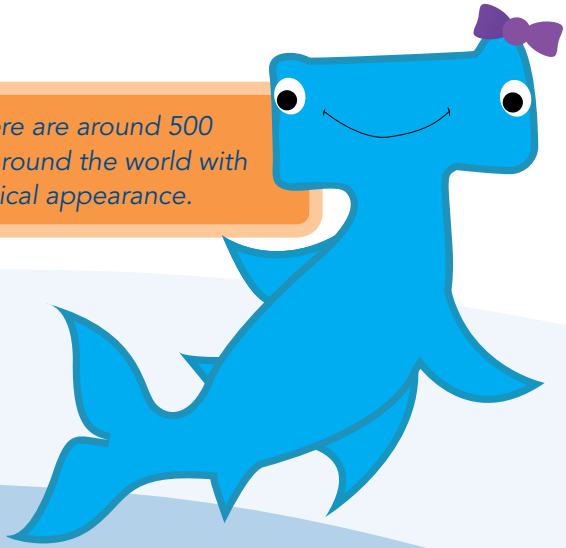
» Ask students to pair and share their facts with their buddy. Ask them to create a full sentence about their shark facts to share with class.

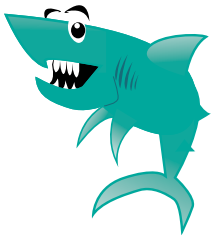
» Have students work together and put all of their facts together to make a story, play or a shark game.

» Play the video with the music only section and have students imagine they are scuba divers watching how sharks swim. See if they can discover how sharks swim with their entire bodies, using their fins for lift and gliding. Sharks cannot open and close their fins like bony fishes. See what else students can observe about the way sharks move. Then have students become the sharks and move around like different kinds of sharks.

Notes

Shark species are diverse. There are around 500 species of sharks distributed around the world with different diet, habits and physical appearance.





CLASSROOM ACTIVITY STATION F3
SHARK MATCH!

Overview

At this station students will have 2 piles of cards, one set with the front half of sharks on them, and the second set with the back half of sharks on them. Students will be asked to match the front to the correct back half. This exercise will help students *recognize shapes*, *build visual perceptual skill*, and help them to develop *deductive reasoning* skills.

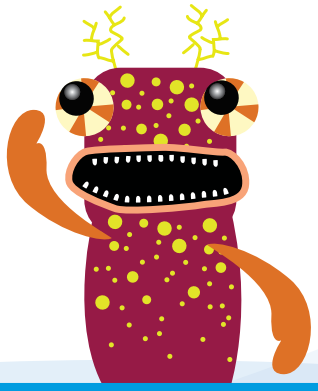
Materials: Shark Stencils, Heavy paper or tag board, Scissors

Talking Points

- Sharks are amazing animals in the sea. In order for them to survive, they need a clean and healthy ocean. How can we keep the ocean healthy and why do we need to do this?
- People need to keep the ocean healthy because all pollution comes from people.
- People can keep the shoreline clean by not littering. People can keep the ocean healthy by picking up litter and recycling.
- People can protect ocean animals and seaweeds by not collecting them and by keeping their habitats safe and healthy.
- Although sharks are sometimes portrayed as dangerous in the movies, we need to remember and understand that some movies are fictional, meaning they are not based on facts.
- Ask students to use their imagination: Can you imagine you are a scuba diving shark scientist wanting to tell true shark stories?
- Sharks occupy every part of the ocean while a few species swim up rivers to breed or search for food.
- Sharks adapted and evolved unique body shapes and sizes specialized to the area of the ocean in which they are found.

Lesson Procedure

1. Glue stencils, or trace the shark shapes, on to heavy paper.
2. Cut out the shapes, divide them in half, and set them into two piles. One pile will include all of the front halves and the other will include the back halves.
3. Challenge students to match the front and back halves of each highly specialized shark in their pile of cards.



Baby sharks are called pups. Sharks do not care for their babies after they are born.

CLASSROOM ACTIVITY STATION F3 (Continued)

SHARK MATCH!

Extension Ideas

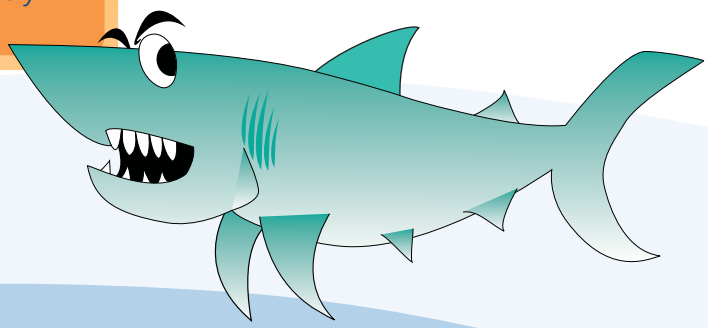
» Place the cards face down, and have students take turns picking up pairs. When students find a match, they will hang on to the cards. The player who can pick up the most pairs wins.

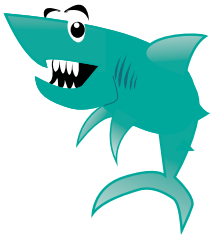
» Let students design their own shark inspired by the different styles and body shapes depicted on the cards. Have them explain why they created their sharks in relation to where they live and the food they eat.

» Print out the shark stencils without cutting them in half. Have students color them. Create your own "School of Sharks" board in class using new vocabulary terms for students. If you have students bring in a photograph of themselves they can cut out their faces and paste them on the front of their shark to create a special school of sharks.

Notes

Animals would never harm humans on purpose. They act defensively only to protect themselves.





CLASSROOM ACTIVITY STATION F4

HOW MANY TEETH?

Overview

Students will look at charts of shark jaws and a variety of teeth. Arrange teeth in each jaw, and observe the shapes of the teeth to try and guess why different kinds of sharks have uniquely shaped teeth. To help students understand this concept, ask them to look at their own teeth to see if they are all shaped the same way. Through this exercise students will get practice with *counting and numbers*, develop *deductive reasoning, and body awareness*.

Materials: Jaw Charts, Sharks Teeth, Mirror

Talking Points

- There are nearly 500 species of sharks in the ocean in a wide variety of shapes and sizes.
- Different kinds of sharks eat unique kinds of foods and have teeth that are specially designed to eat certain food.
- Ask students to feel the teeth in their own mouths, and whether their teeth are all shaped exactly the same. Affirm that there are different shaped teeth in their mouths because they are designed to do different jobs, just as sharks' teeth are shaped different because they are designed to different jobs too.
- Ask students to imagine that they are scientists learning about sharks and what sharks eat.
- Human beings can only move their bottom jaws. Sharks can move their entire jaw because it is not attached to their skull the way a human jaw is.

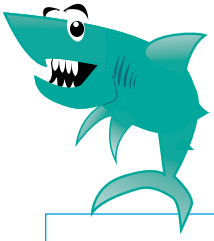
Lesson Procedure

1. Photocopy and provide each student with one "jaw chart" and set of teeth.
2. Ask students to begin arranging the teeth cutouts into the jaw.
3. Set up a mirror so students can look at the teeth in their own mouths.
4. Ask students whether all of their teeth are shaped the same, and if not why do they think they are different.
5. Help students understand teeth are shaped differently in order to perform different tasks. For example molars are flat in order to crush and grind, while front teeth are sharper and made for pulling foods apart.
6. Ask students to observe how the teeth are shaped in each of the shark jaws and talk about how they are similar or different. Ask students to make predictions about what each jaw might be designed to do.
7. Create bulletin board for the shark jaws or hang them from the ceiling creating a fossil museum.

CLASSROOM ACTIVITY STATION F4 (Continued)

HOW MANY TEETH?

Questions for Students	Answers for Educators
How Many Shark Teeth MAKO?	*A mako mouth is a semi-circle filled with large, triangular, narrow hooked teeth that are razor-sharp with smooth edges. The teeth in the upper and lower jaw are similar size and shape and are designed to catch fast moving open water fish and squid.*
How Many Shark Teeth HORN SHARK?	*Horn sharks have more than one type of tooth made for clutching and grinding. The front teeth are small pointed hooks designed for holding. The back teeth are like molars and made for crushing the small fish, crabs, and sea urchins they like to eat.*
How Many Shark Teeth SAND TIGER?	*Sand tiger sharks have long, skinny teeth that curve back into the mouth like hooks. The teeth at the corners of the mouth are smaller and greater in number than they are in the front. The ragged looking teeth of the sand tiger are well suited to small bony fish, squid, and even crustaceans like crab and lobster.*
How Many Shark Teeth BULL SHARK?	*The upper teeth of bull sharks are wide triangles with sharp, serrated edges like a knife. The teeth in the lower jaw have a broad base, and are narrow, serrated and triangles ideal for catching large bony fish and other large animals that sometimes include sharks, turtles, and stingrays.*



CLASSROOM ACTIVITY STATION F4 (Continued)
HOW MANY TEETH?

Extension Ideas

» Take one of the shark teeth cut outs and copy it so each student can have their own shark tooth necklace. Have students design their shark tooth. Take twine and either wrap it around the top or punch a hole in it so students can wear it around their necks.

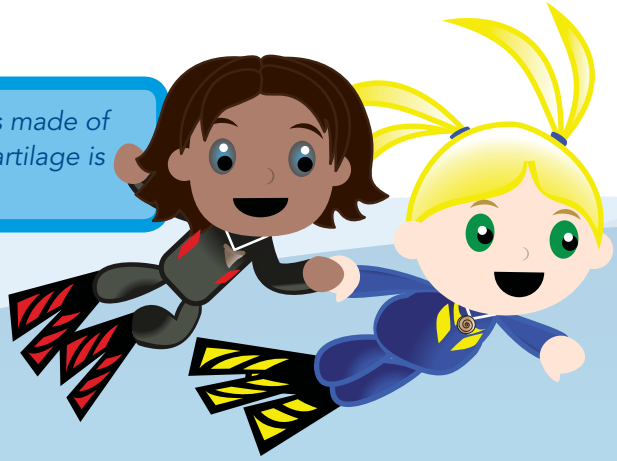
» Ask students to clip magazine pictures of different animal mouths so that they can examine the different sizes and shapes of teeth. Hypothesize with students about how these animals use their mouths and what food they think they eat.

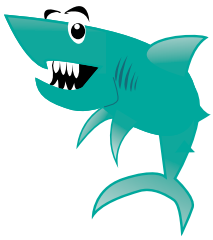
» Assign each student a type of seafood such as: clam, sea urchin, octopus, tuna, etc. Ask students to draw a picture of teeth that are best suited to eat the food.

» On land students are familiar with cows eating grass and lions eating meat. In the ocean whale sharks filter feed on plankton and Great White Sharks are carnivores like lions. There are more than 450 species of sharks. Ask students how many sharks they know and what kind of food they eat. You can make a class list of all the sharks your students know. Challenge your students to learn what kind of food the sharks they know eat.

Notes

Sharks have streamlined bodies with bones made of cartilage giving them extreme flexibility. Cartilage is lighter than bone, increasing their speed.





CLASSROOM ACTIVITY STATION F5

SHARK TRIVIA!

Overview

Students will be asked a series of fact-based questions about sharks. They will then need to decide whether the statements are true or false. This game will help reinforce the facts learned about sharks and aid students in developing *deductive reasoning and logic skills.*

Materials: Trivia Questions, Popsicle sticks, One Red and Blue cup per student

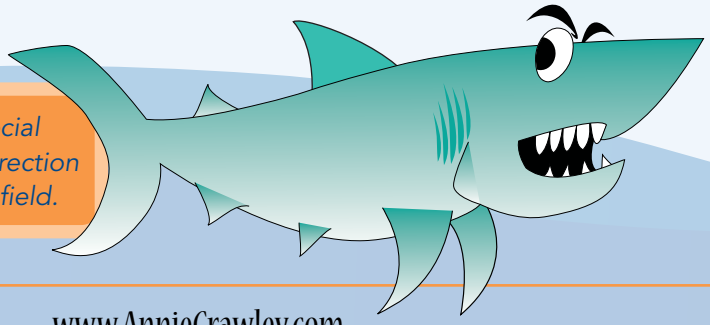
Talking Points

- The ocean makes our planet habitable. Life as we know it does not exist without water.
- Most of the oxygen in the atmosphere originally came from the activities of photosynthetic organisms in the ocean.
- Some organisms on land and in the ocean use carbon dioxide, water and sunlight to make their own food. This process is called photosynthesis and it releases oxygen. Phytoplankton, together with zooplankton, makes up the bottom of the food web in the ocean.
- Plankton is the bottom of the food web. Sharks are considered to be at the top of the ocean food web and would not exist without plankton.
- Explain to students they will hear a series of fun shark facts and will be working together as a group to decide what is true or false.

Lesson Procedure

1. Gather students and provide each with ten Popsicle sticks and two different colored cups.
2. Explain to students they will hear a series of fun shark facts and will be working together as a group to decide what is true or false.
3. Instruct students to drop their Popsicle stick into the cup colored blue if the statement they are hearing is true or into the red cup if they think it is false.
4. As you ask each question, pause to take a tally of how many students thought the question was true or false before you provide the answer.
5. Depending upon the attention span of your class, you may choose not to use all of the questions on the list, or select as needed for your level. Also you can have everyone do this individually if they are not able to use teamwork to cooperate on answers.

Scientists believe sharks use their special electromagnetic field to assist with direction connecting them to Earth's magnetic field.



SHARK TRIVIA! DON'T BE AFRAID OF SHARKS

Questions for Students	Answers for Teachers
Sharks are fish.	*TRUE, although they are different from most fish because their skeletons are made of cartilage instead of bone, sharks are still fish. Discuss what makes a fish, a fish and compare this to sharks.*
The largest fish in the ocean is a shark.	*TRUE, the largest fish in the ocean is the whale shark, which can reach lengths of up to 60ft/18 meters long. The largest animal that ever lived on earth is the blue whale, a marine mammal, but* the largest fish is a whale shark.
Sharks are always really big.	*FALSE, one of the smallest sharks is the dwarf lantern shark that becomes an adult when it is about six inches long! Another shark called the cookie-cutter shark averages about twenty inches long. Most sharks are only a few feet long!*
All sharks have sharp, pointy teeth.	*FALSE, some sharks, like horn sharks, have teeth similar to your molars designed to crush shells and other animals. Other sharks, like whale sharks, basking sharks, and megamouth sharks, have tiny teeth they do not use for feeding. They use their specially designed mouths like giant nets to scoop microscopic plankton and other small animals from the water that are then caught in gill rakers in front of their gills. These filter feeding sharks' gill rakers are similar to the baleen in baleen whales.*
Some kinds of sharks are endangered, meaning if people don't stop fishing them, there may soon be none of that particular shark left on the planet.	*TRUE, according to the International Union for Conservation of Nature and Natural Resources, IUCN, many sharks are currently listed as endangered.*
Sharks are mean animals and eat absolutely anything and everything they come across.	*FALSE, sharks and other animals in nature do only what is necessary to protect their food, their home, or their young and do not understand what it is to be deliberately "mean." Sharks have a very specific diet that is unique to each species. Some sharks prefer squid, and others prefer shellfish. There is the odd report from time to time of a license plate or some other strange item being found inside of a shark, but that is more of a mistake than a "way of life" for a shark. Sharks never intentionally hurt a human being.*
You are more likely to be hurt, though it is unlikely, by lightning, a boat, a dog, a toaster, a chair, a hippopotamus or a tornado than you are a shark.	*TRUE, according to the International Shark Attack File, injury to a human is more likely to occur from many things, including ordinary household items, than it is from a shark. There is no such thing as a shark "attack." If a shark accidentally bites a person because they mistake it for food like seals or sea lions, they immediately let go because people are NOT shark food or bait.*
Sharks cannot swim backwards.	*TRUE, shark fins are not very flexible so sharks are not capable of making the movement necessary for backward motion or even to make quick stops. Instead, they sort of glide to a stop.*
Sharks have smooth, silky skin.	*FALSE, instead of smooth scales to cover the body like most fish have, sharks are covered with skin made of tooth-like bumps rough to the touch called denticles.*
Sharks were swimming in the ocean even before dinosaurs walked the earth.	*TRUE, the oldest shark fossils go back about 420 million years while the oldest dinosaur fossils only date back about 240 million years!*
Sharks were swimming in the ocean even before dinosaurs walked the earth.	*TRUE, the oldest shark fossils go back about 420 million years while the oldest dinosaur fossils only date back about 240 million years!*
Ocean Annie's Super Scuba Challenge!	
What part of the sharks' bodies do we find as fossils?	*TEETH! Sharks bodies usually do not fossilize because they are made of cartilage. Have students look at a skeleton of a human body and skull. You never see a person's nose or ears because these are made of cartilage. Teeth are the only part of a shark that easily fossilize.*

CLASSROOM ACTIVITY STATION F5 (Continued)

SHARK TRIVIA!

Extension Ideas

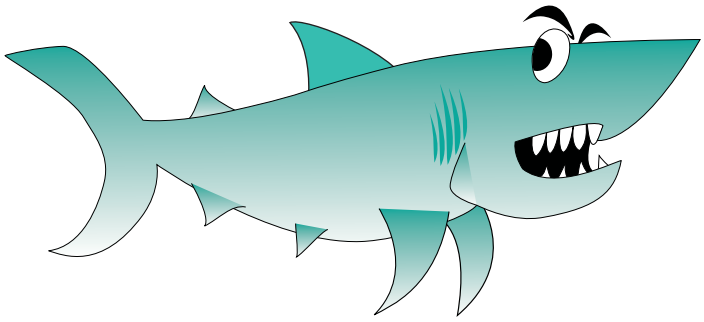
» Challenge students to find out additional shark facts on their own and share them with the class.

» Ask students to quiz their family and friends about their shark knowledge. Have students share with their family many sharks are endangered and need protection.

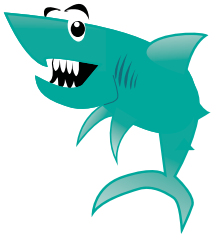
» Reinforce the fact all sharks need to be protected because they have been overfished and many are endangered.

» Photocopy the shark templates and denticle template for students. Have students add denticles 10 at a time to their sharks until they reach 100. How many other ways can they count to 100?

Notes



Some sharks migrate thousands of miles to hunting or pupping grounds, yet other sharks spend their entire lives in one area. Sharks are very diverse.



CLASSROOM ACTIVITY STATION F6
BOOK STALL

Overview

Providing a reading and or computer area where students can look through books about the subject being discussed will help to build early literacy. Even if the children are not reading yet, looking at pictures and building dialogue around the pictures is helpful to developing *vocabulary and language skills.*

Materials: The book *"The Shark Who Learned a Lesson"* by Gill McBarnet

Lesson Procedure: Character Education COURAGE

1. As a class, read the book "The Shark Who Learned a Lesson" by Gill McBarnet. Discuss how the fish on the reef demonstrated courage by standing up to a bullying shark. Ask students to remember their first day of school and how it required COURAGE.
2. Ask students to share memories about stories of COURAGE from their own lives. Can they think of any other stories of COURAGE? What does it mean to be courageous? How do they use COURAGE?
3. Define COURAGE. Have students create a personal mantra, "I am courageous!" Have them say it to themselves and together as a class.

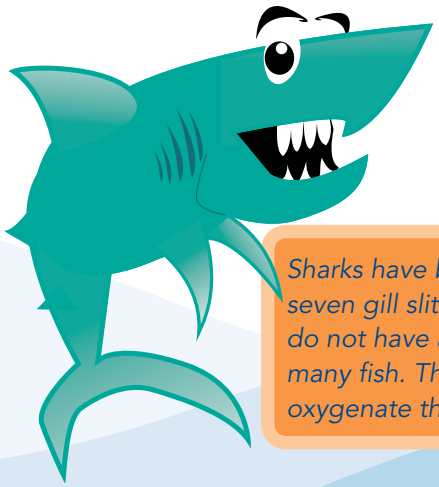
Character Education: COURAGE

"Face your fears with knowledge and live with love and understanding."

Fine Art Prints, posters, greeting cards and other products are available to decorate your space while inspiring your students with real ocean and environmental scenes.

The village of Kontu in Papua New Guinea are famous for their traditional Shark Callers. Find Papua New Guinea on a map, research and explore this ancient culture.

Cowrie shell on soft coral, Papua New Guinea



Sharks have between five and seven gill slits to breathe. They do not have an operculum like many fish. They use their gills to oxygenate their blood.

Book Suggestions

» Clarke, Catriona. *Sharks.* Illus. Adam Relf. Saffron Hill, London: Usborne, 2007. Ages 4-8

» Coldiron, Deborah. *Sharks: Underwater World Series.* Pinehurst North Carolina: Buddy Books, 2008. Ages 9-12

» McBarnet, Gill. *The Shark Who Learned a Lesson.* Puunene, Hawaii: Ruwanga Trading, 1990. Grades K-2.

» Rustad, Martha E.H. Rays *Ocean Life*. Mankato, Minnesota: Capstone Press, 2006. Ages 4-8

» Simon, Seymour. *Sharks.* New York: Collins, 2006. Grades 2-3.

» Wilson, Lynne. *Sharks!* Illus. Courtney. New York, New York: Grosset and Dunlap, 1992. Ages 4-8.

» Zoehfeld, Kathleen Weidner. *Great White Shark.* Soundprints Corp Audio; Paperback book and Cassette tape edition, 2005. Ages 4-8

Closure and Follow Up

✧ Once students experienced have had a chance to experience the learning stations, gather them back together and ask students what new facts they learned from participating in the activities, and reflect with the class on how much knowledge has been gathered about sharks. Take time to review and correct any incorrect statements from earlier in the lesson.

✧ Share and discuss how sharks are endangered. There are places in the ocean experiencing habitat destruction which affects sharks and other animals. Also, fishermen are catching too many sharks and sharks are starting to disappear from certain parts of the ocean. Fishermen catch sharks for people to eat. Ask students what they think can be done to change the behavior of people emphasizing the need to protect sharks.

✧ To reinforce learning, review facts from the "Shark Trivia" game, or the treasure chest of words.

✧ Discuss with students character education pertaining to COURAGE. How have students used courage today, this week or how will they use it in the future. Just having a student raise their hand and share takes COURAGE for some students!

Plan for Independent Practice

» Ask students to choose three facts they found most interesting about sharks and illustrate them into a cartoon comic strip or storybook.

» Challenge the children during playtime to see if they can "move like a shark" based on what they saw in the video.

» Students can each paint their favorite kind of shark and create a class wall mural of sharks.

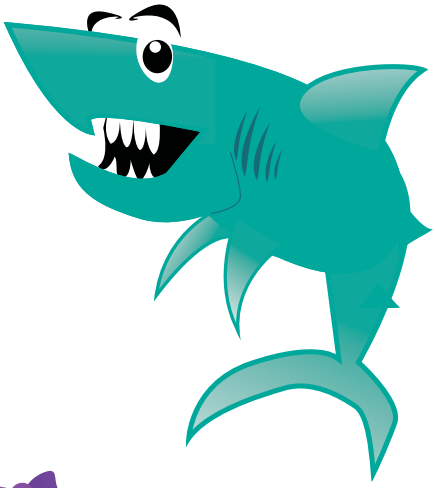
» Select stories from the suggested reading list to read as a class or for self-study.

» Only a couple of states have banned the importation of shark products and fins. As a class write letters to local restaurants, your mayor, senators and representatives asking them to ban all shark trade in your state. Kid's letters and pictures make a difference and their campaigns can change corporate and political policy.

» Review the word COURAGE with students and discuss how it relates to their character and their lives. Encourage them to use their imagination and think of all the ways they are courageous. Ask students about their fears and help them think of themselves full of COURAGE and able to face their fears with knowledge! Have them journal their thoughts or illustrate them in pictures.

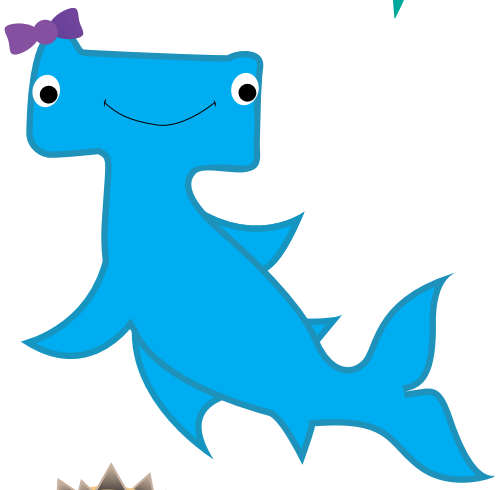
DVD TRANSCRIPT

Don't Be Afraid Of Sharks

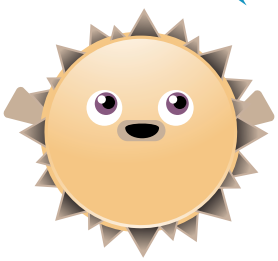


Do you know what makes a shark, a shark? Sharks have been swimming in our oceans since before Dinosaurs walked on earth.

Sharks are a type of fish. They are probably most famous for their teeth. Some sharks can replace their teeth in eight days and have more than 30,000 teeth during the course of their life! Their skin is special and feels like sand paper because they have thousands of tiny tooth-like scales. Just like we like to get our backs scratched, fish will trail behind sharks and rub their bodies against the shark's rough skin! Fish have one set of gills but sharks have between five and seven gills. Can you find the slits on their body? The gills are what the sharks use to breathe!



Sharks don't have hard bones like fish, their bones are much softer, and they are made out of cartilage. Other animals that belong in this family are rays. They are made of cartilage too. There are marbled rays, eagle rays, sting rays and manta rays. And they are all fish!

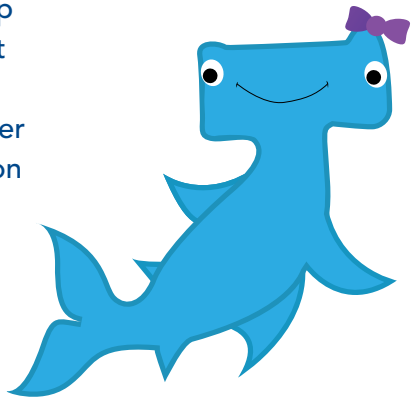


Sharks and rays are some of my favorite animals to swim with in the ocean. There are many, many different kinds…and every time I get into the ocean I hope to see a shark. There are fewer sharks in the ocean now. We must learn to understand sharks and protect them. Sharks need our help because too many of them have been fished from the sea. It is up to you and me to help these animals survive!

If you use your imagination…where can you go and swim with a shark? I know where I wanna go…

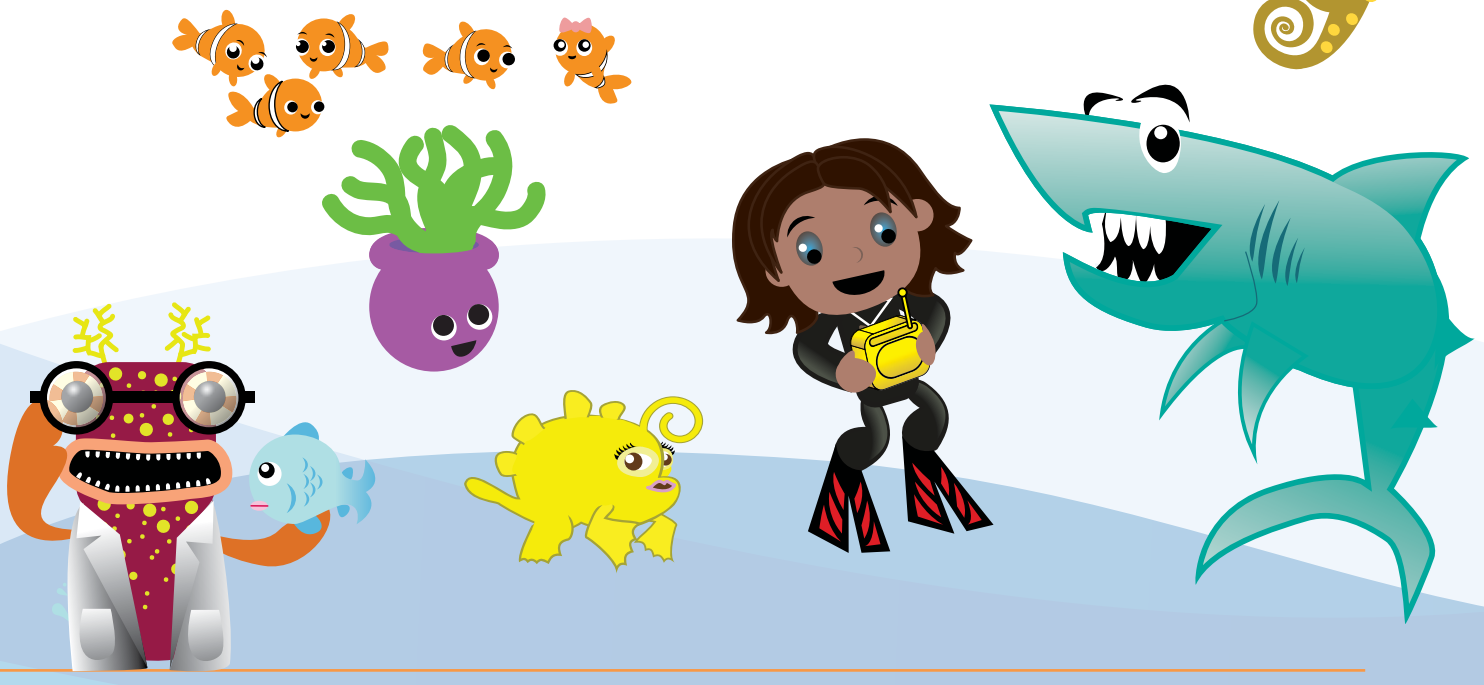
Go Blue! Ocean Annie's Tips to Help Our Environment

When the Disney theme park opened its doors in Hong Kong, management made a very difficult decision to depart from serving shark fin soup at their banquet halls. Although serving shark fin soup is a cultural tradition in some Asian societies, Disney made the determination that because sharks are becoming imperiled in the world ocean it was more important to promote environmental consciousness in keeping with their corporate values. This decision was made in part because thousands of children wrote letters to Disney asking how the company that made such wonderful movies about the ocean could advocate harming sharks!

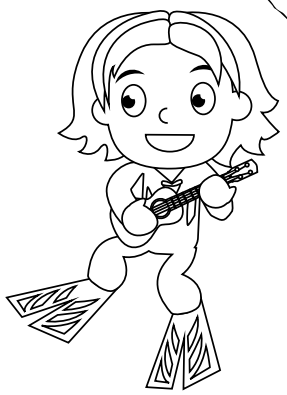


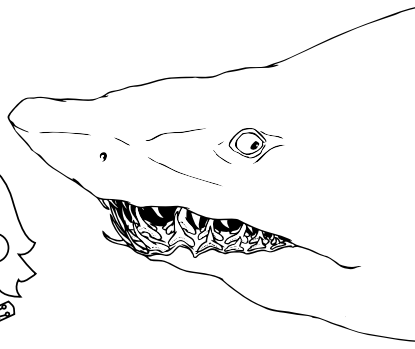
All voices big and small count! Knowing what is on your plate is an important step toward conservation. There are many organizations that provide wallet cards that help consumers choose what seafood is considered sustainable. In order to be sustainable, a population must be harvested in a way that ensures that the number caught does not exceed the number of animals being added within the population from year to year, and that harm being done to other populations of animals and to the environment is minimized. You may have a local restaurant in your area serving shark fin soup or other non-sustainable resources from the sea. Do some investigation and create your own letter writing campaign to create change in your local community.

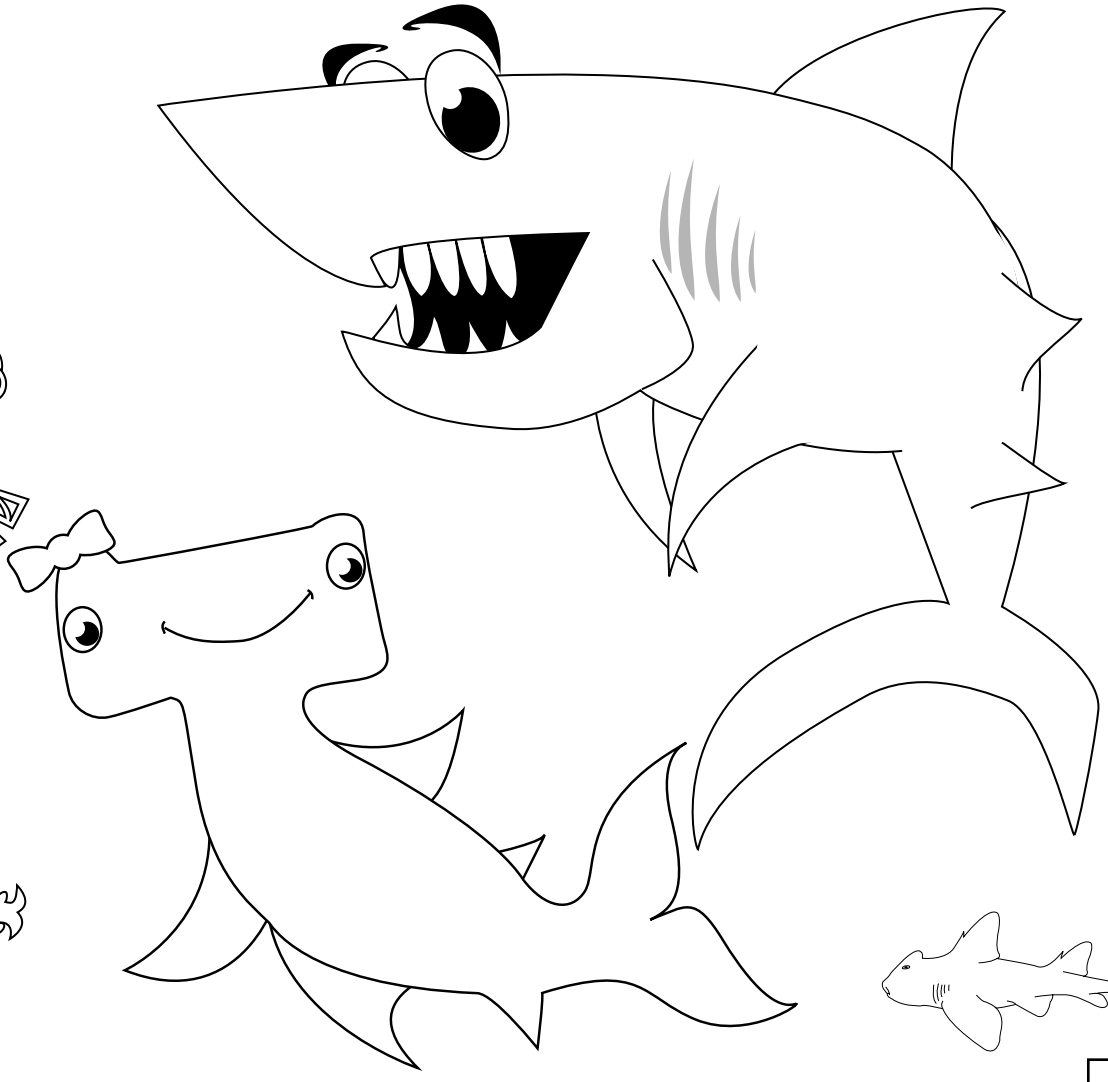
Many zoos and aquariums now have Sustainable Seafood Cards that you can either pick up or download from their website. Remember, you are what you eat! Email us to find out more about these important issues. As good citizens of the world, we want to live at one with nature and always support the health of our Ocean. By doing this, we GO BLUE and LIVE BLUE!

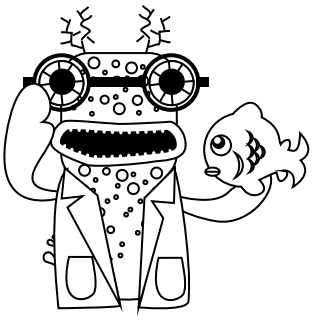


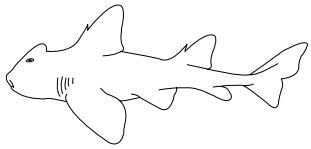
Don't Be Afraid Of Sharks ACTIVITIES











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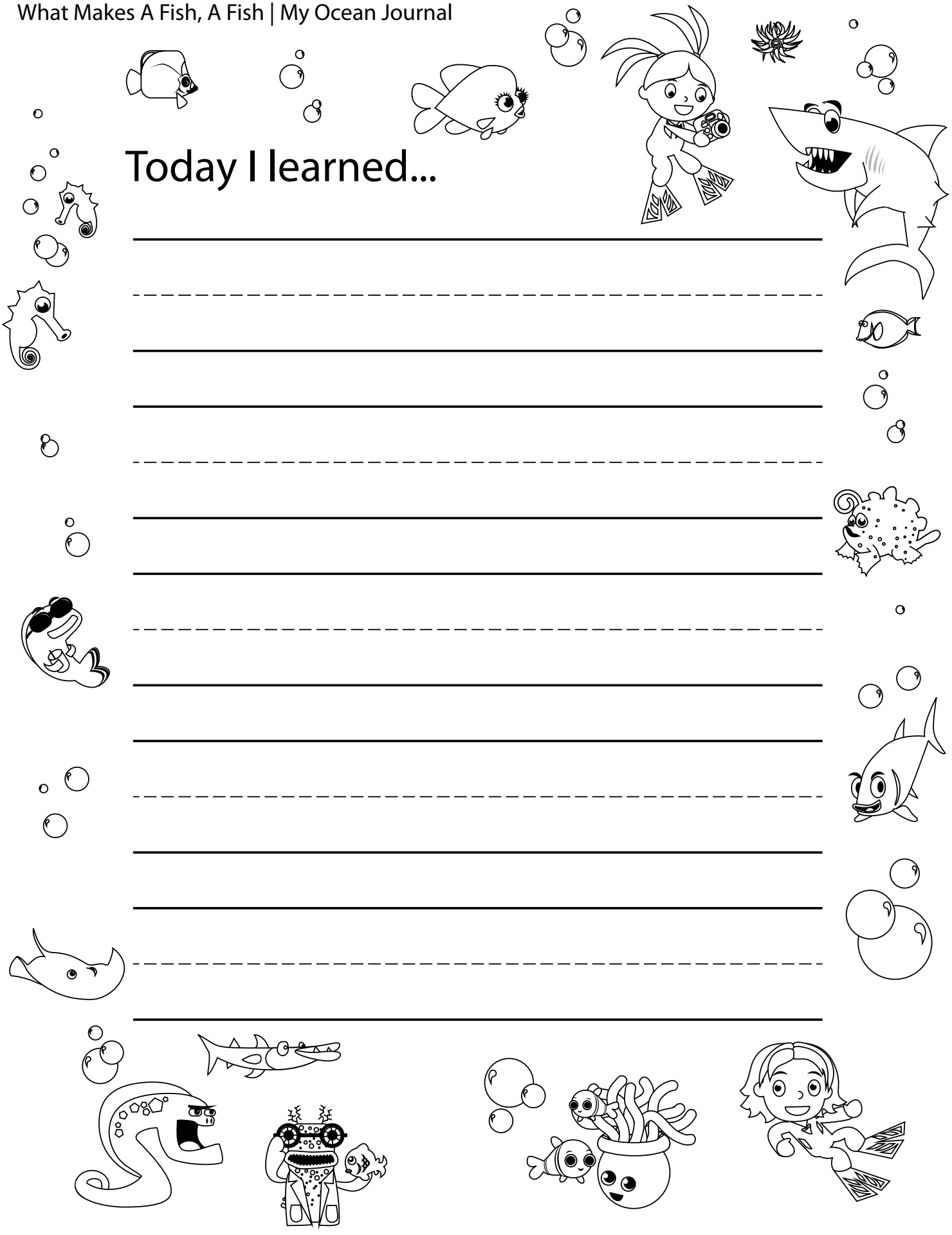
Name _____ **Date** _____

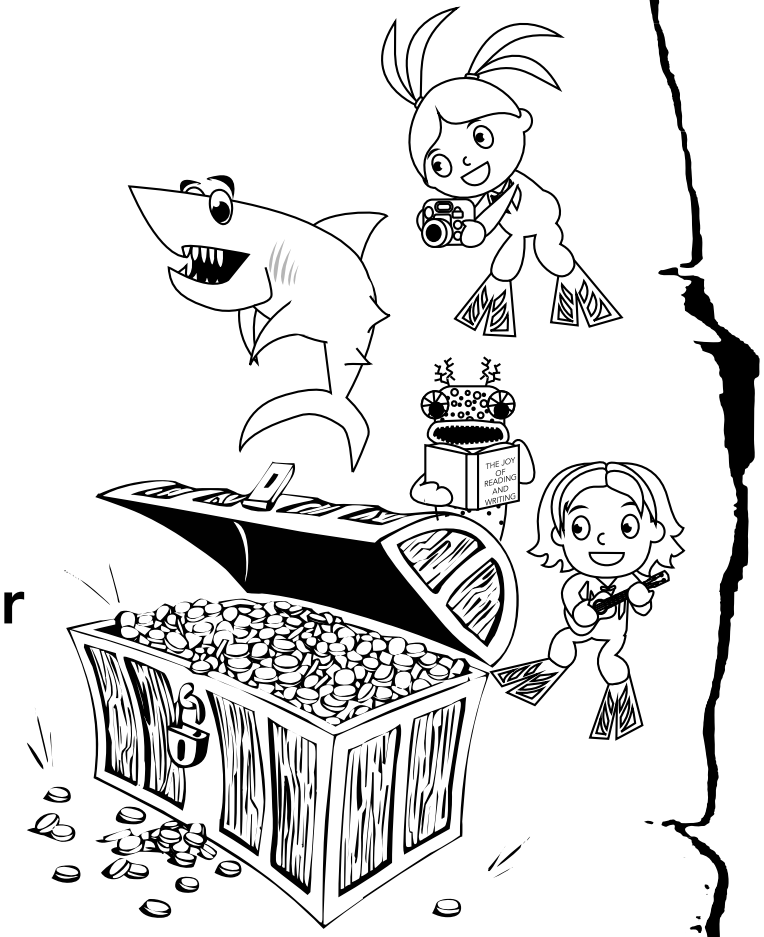


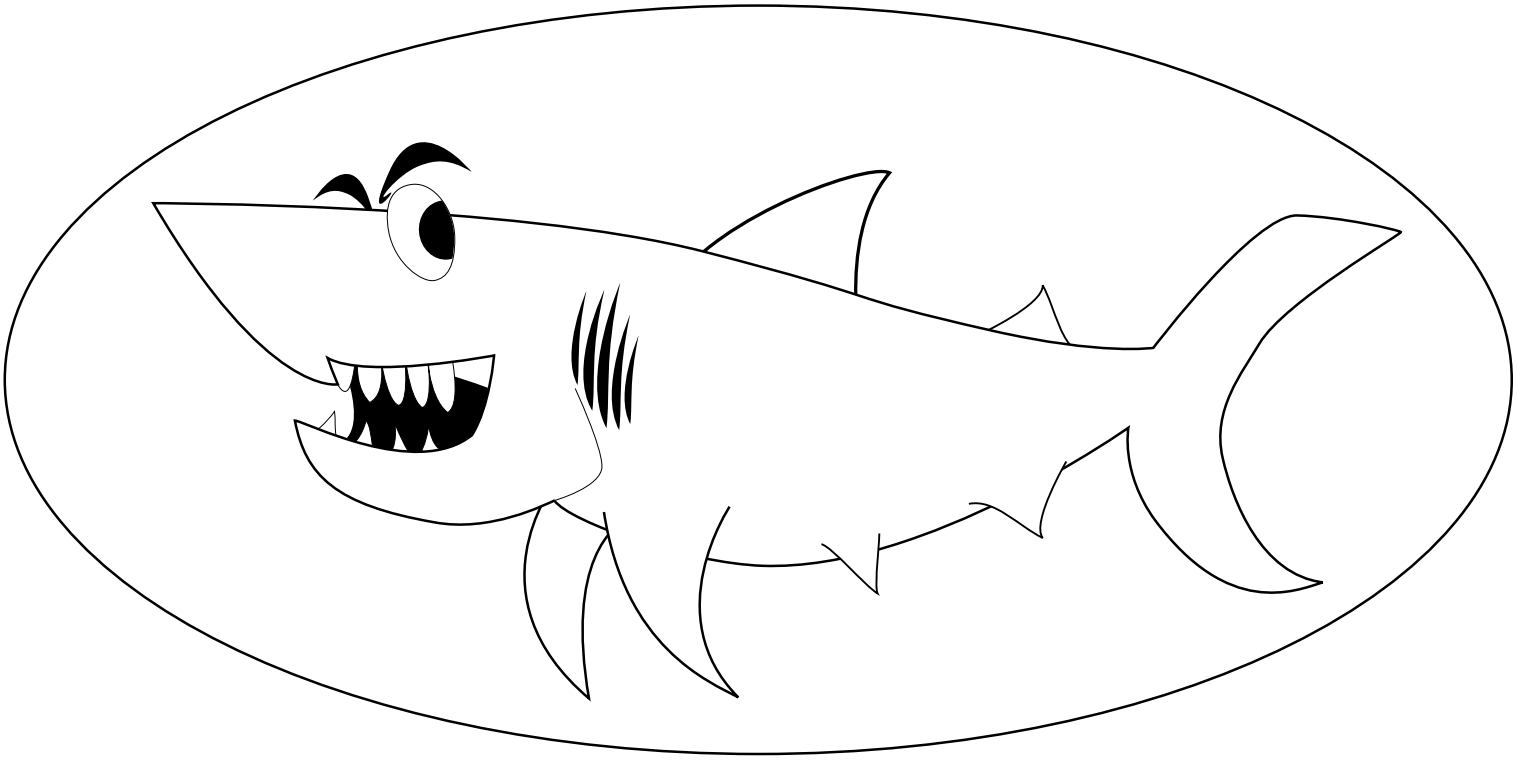
Today I learned...

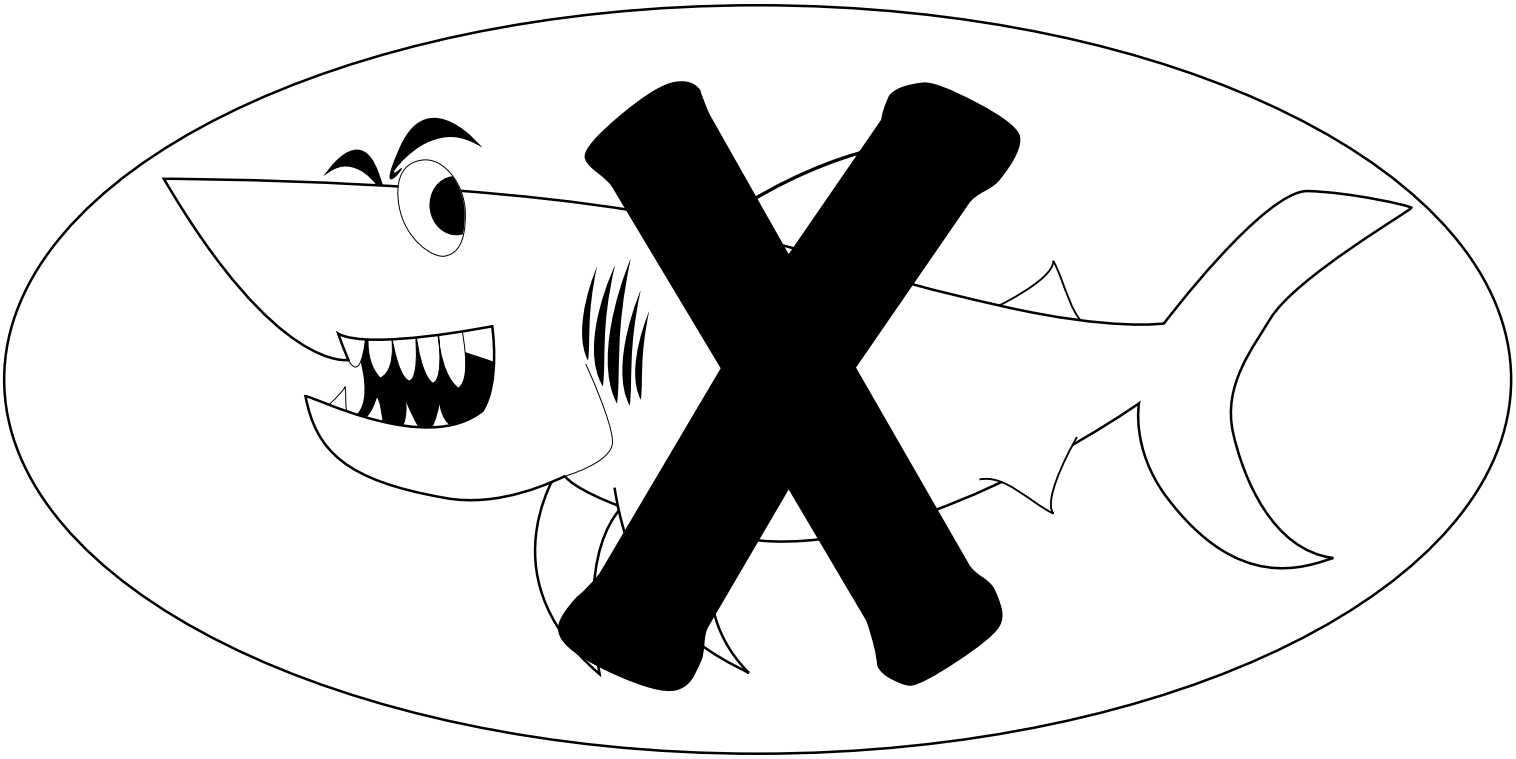
Treasure Chest of Words

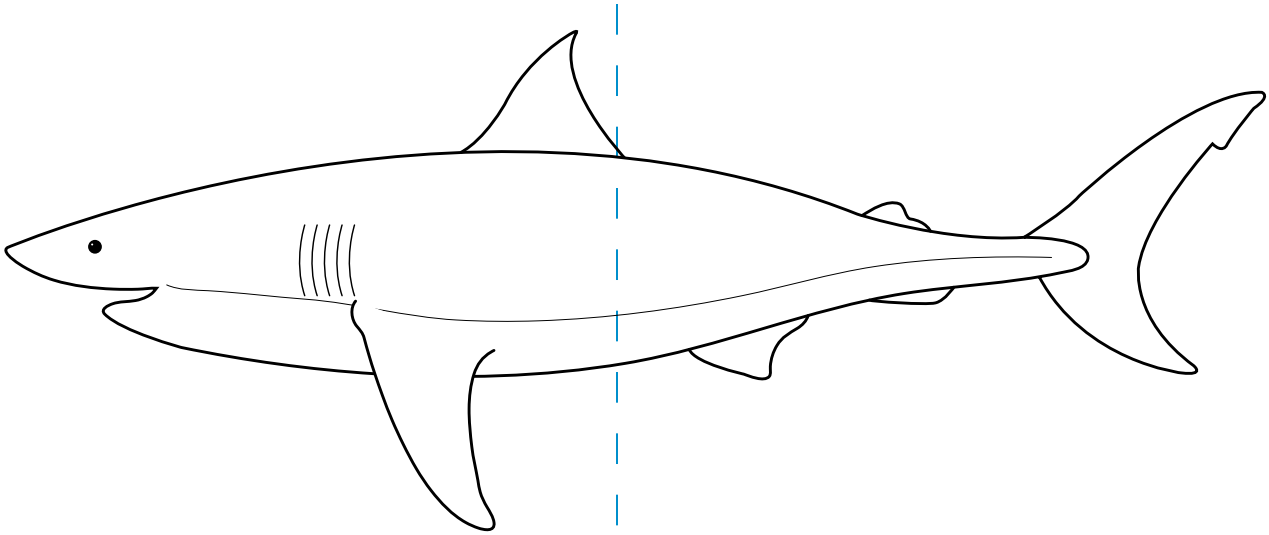
cartilage
courage
denticle
gills
plankton
elasmobranch
population
scales
scientist
species
sustainable
swim bladder

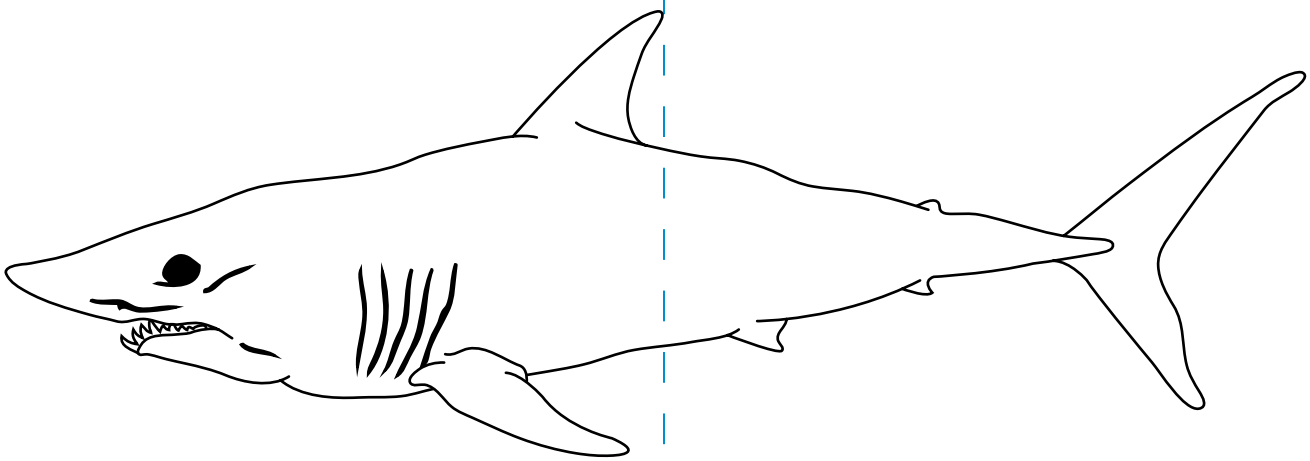
elasmobranchologist

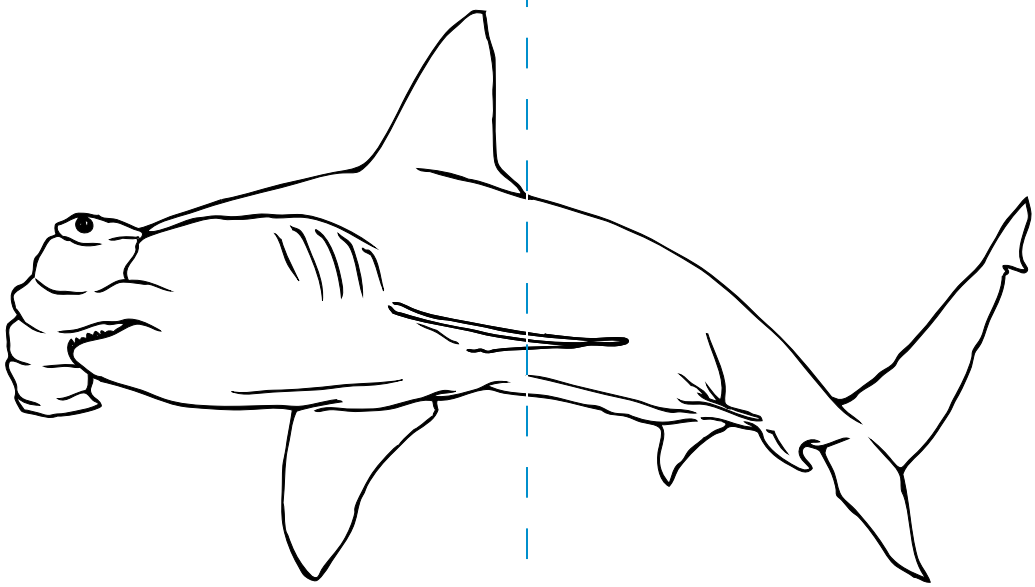


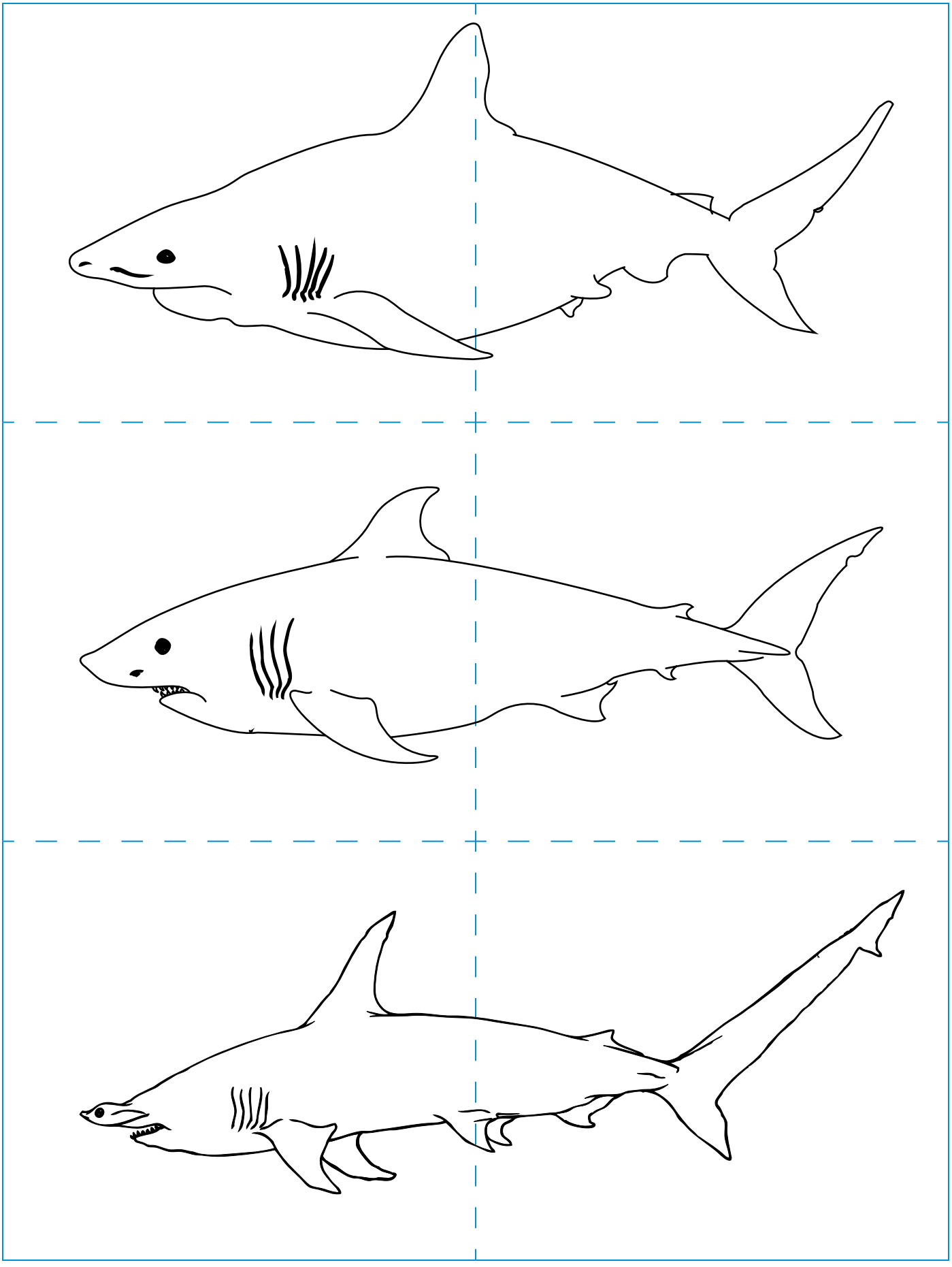


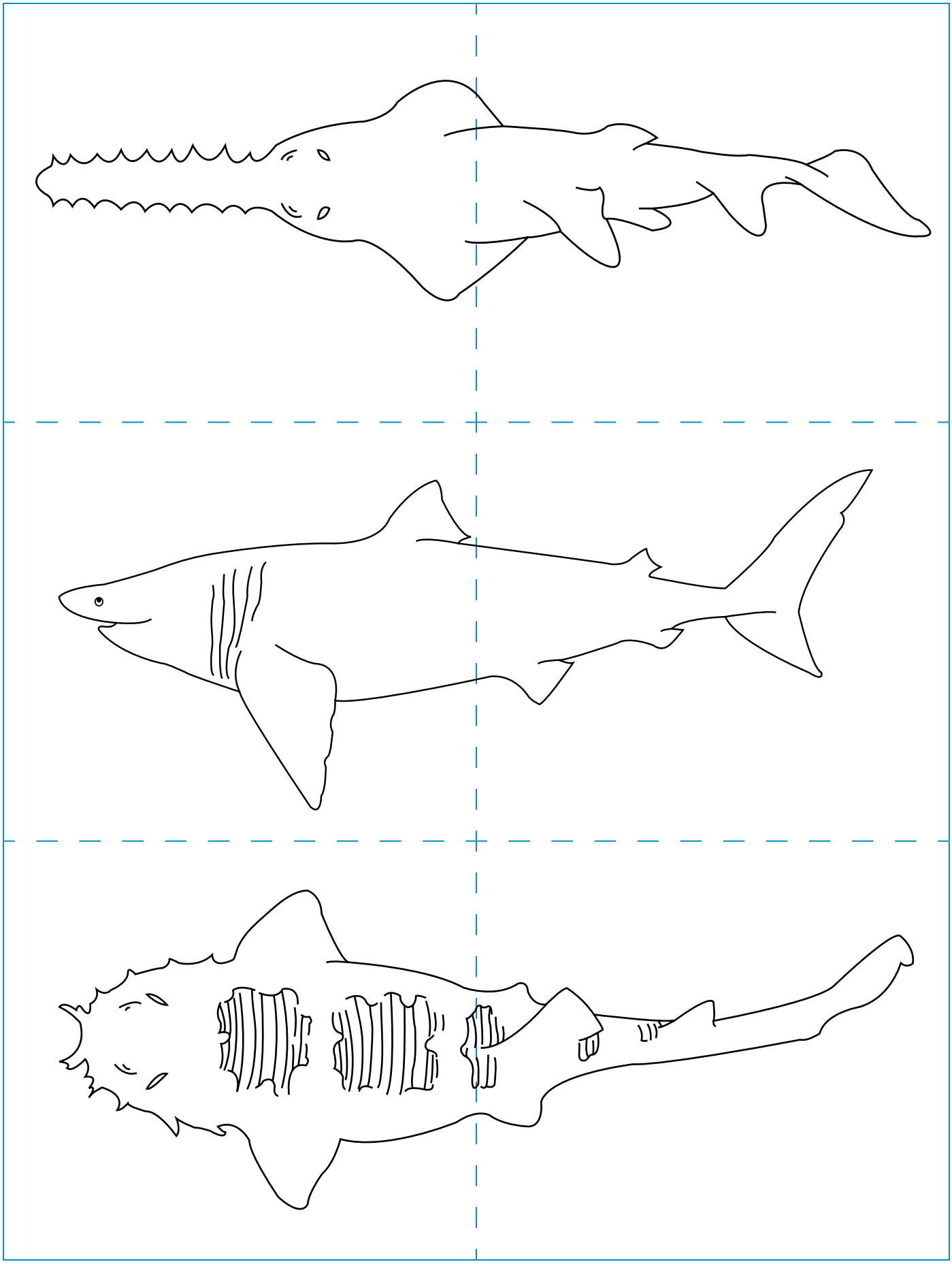


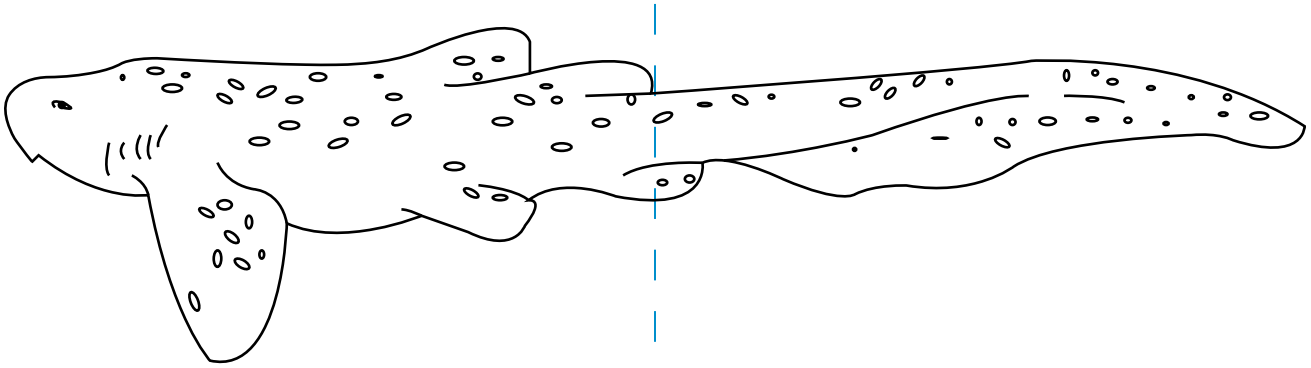


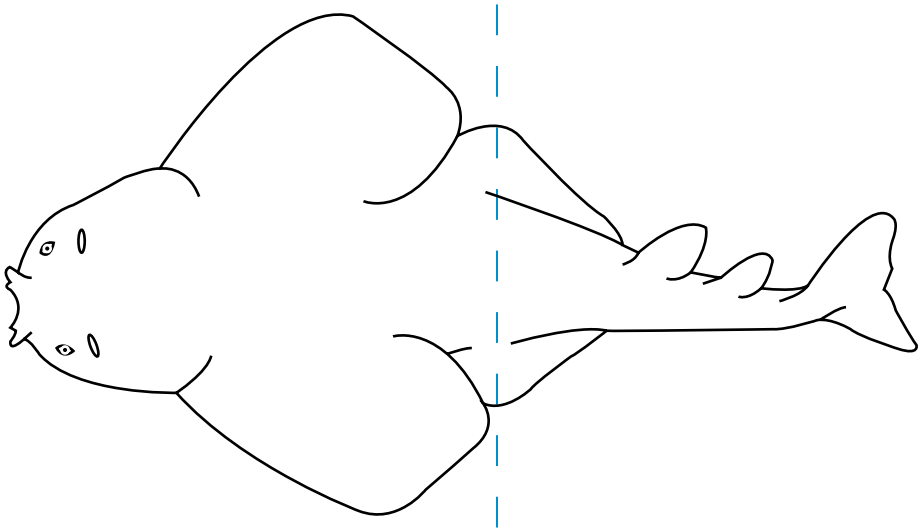


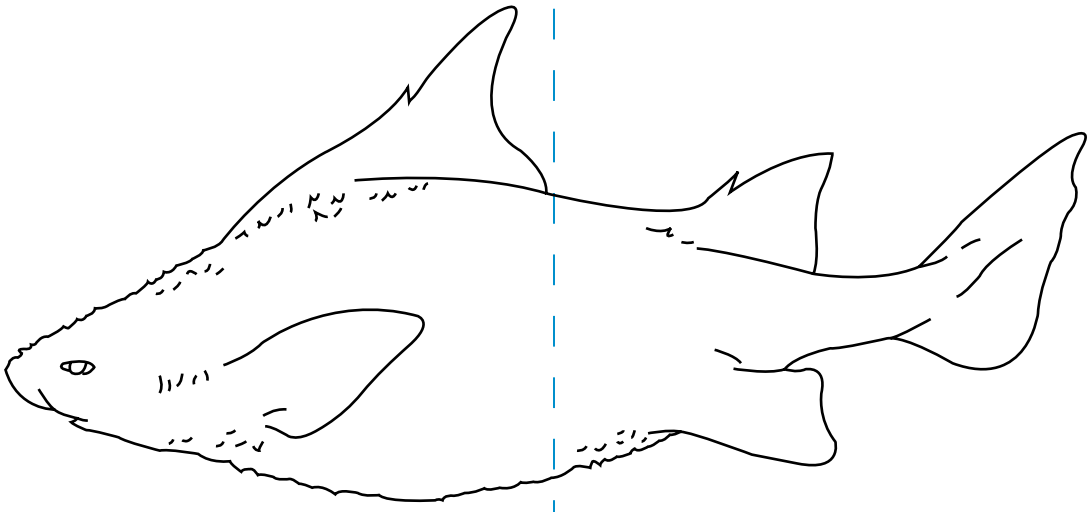


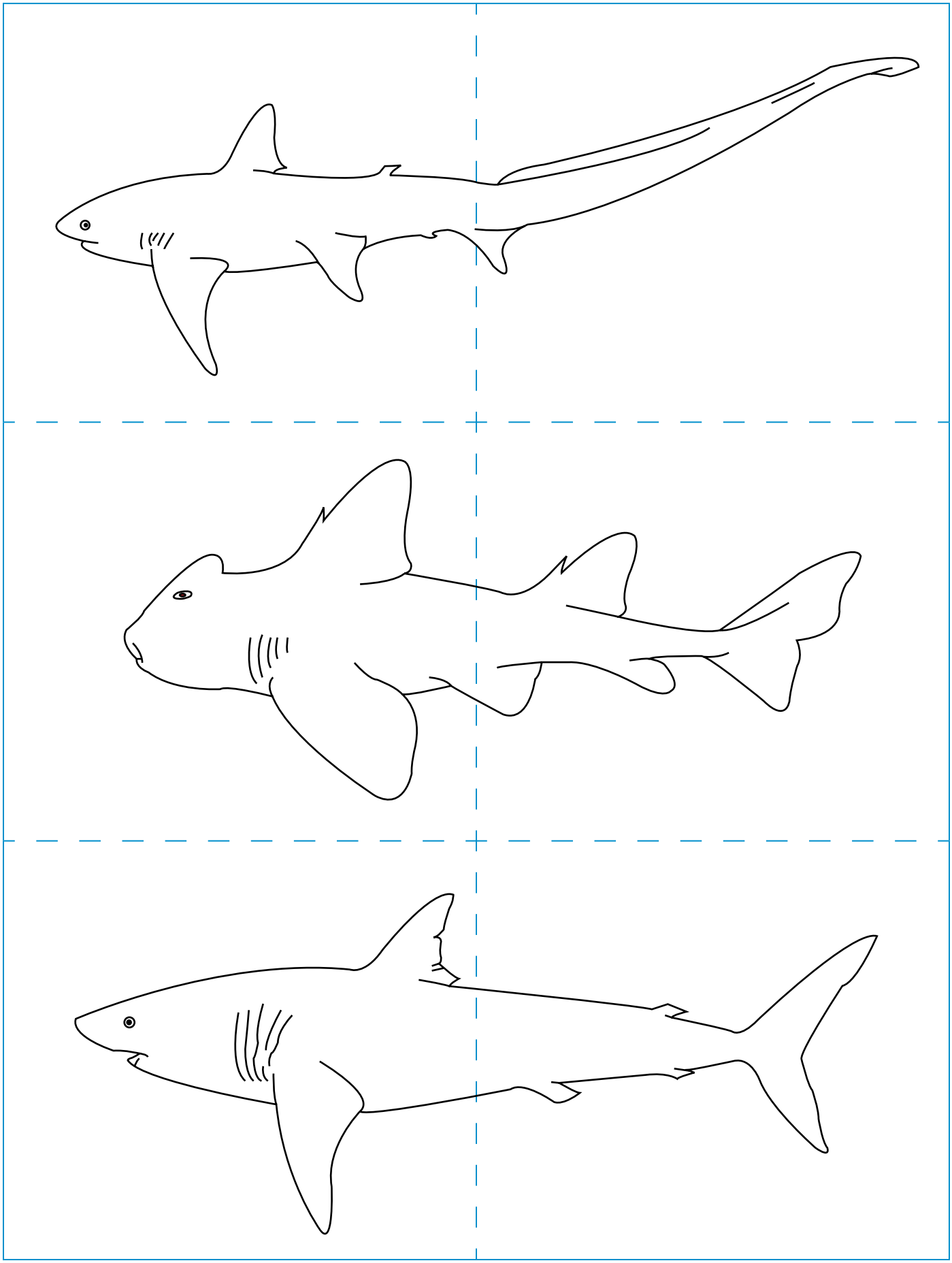


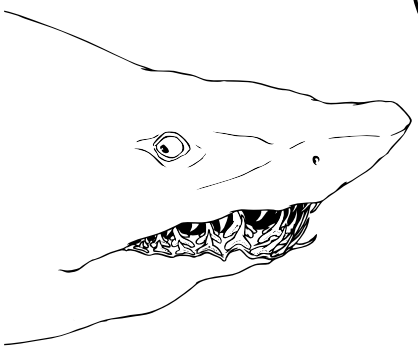


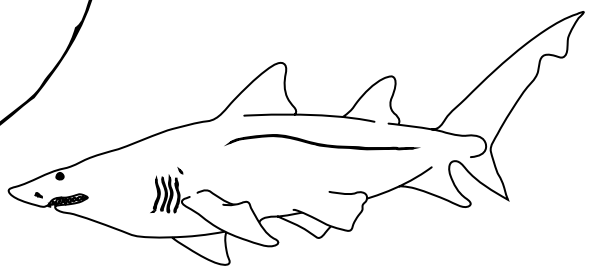


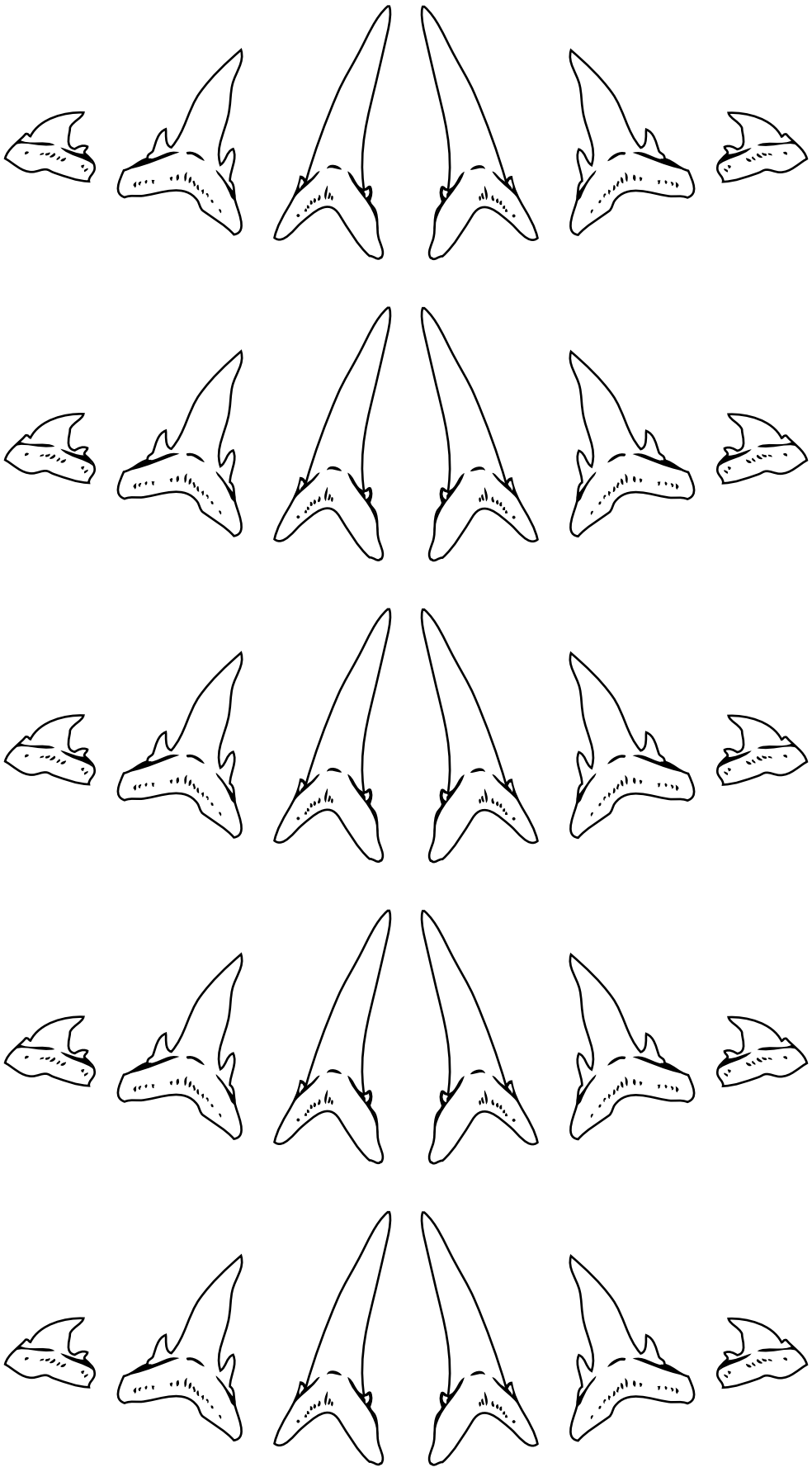


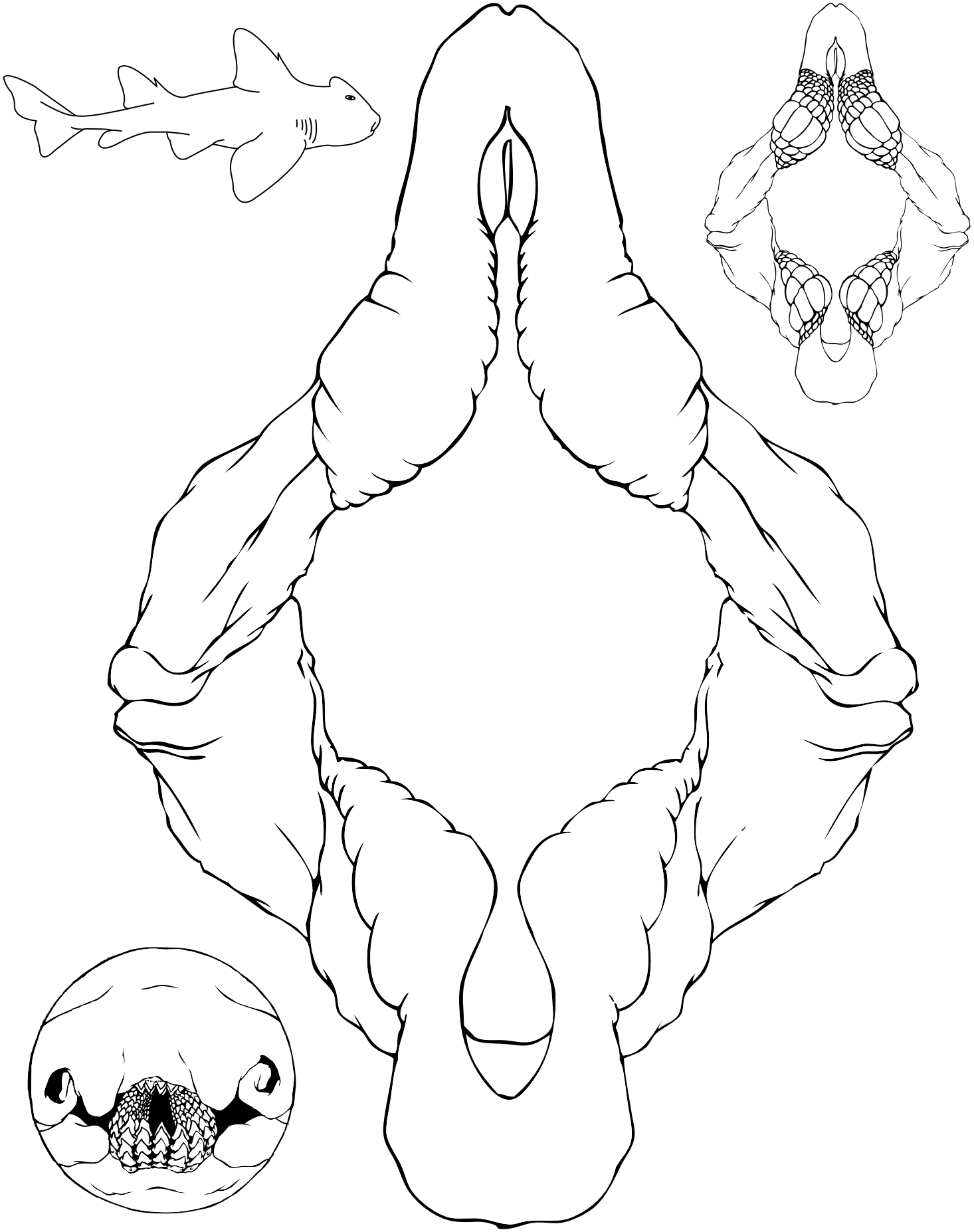


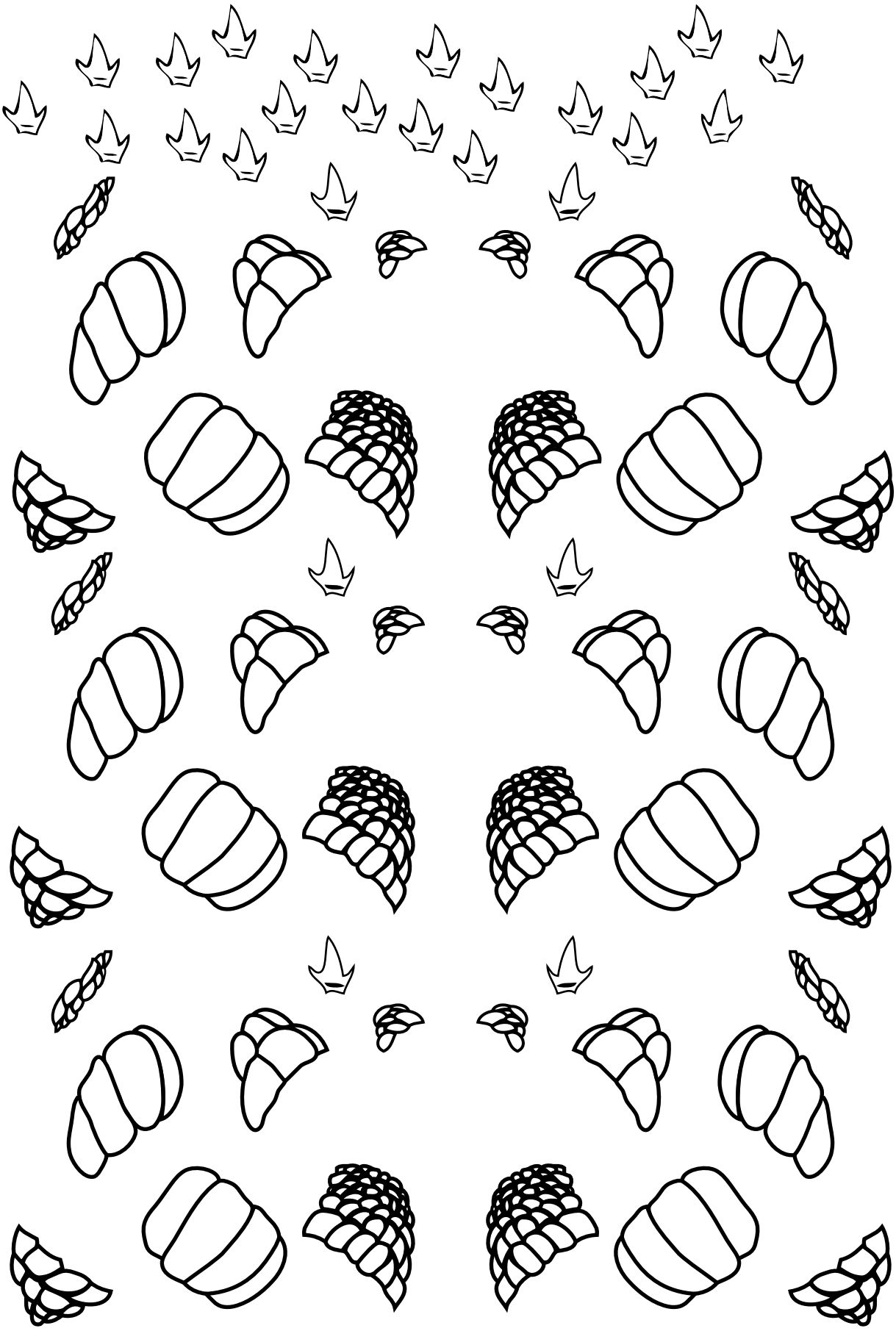


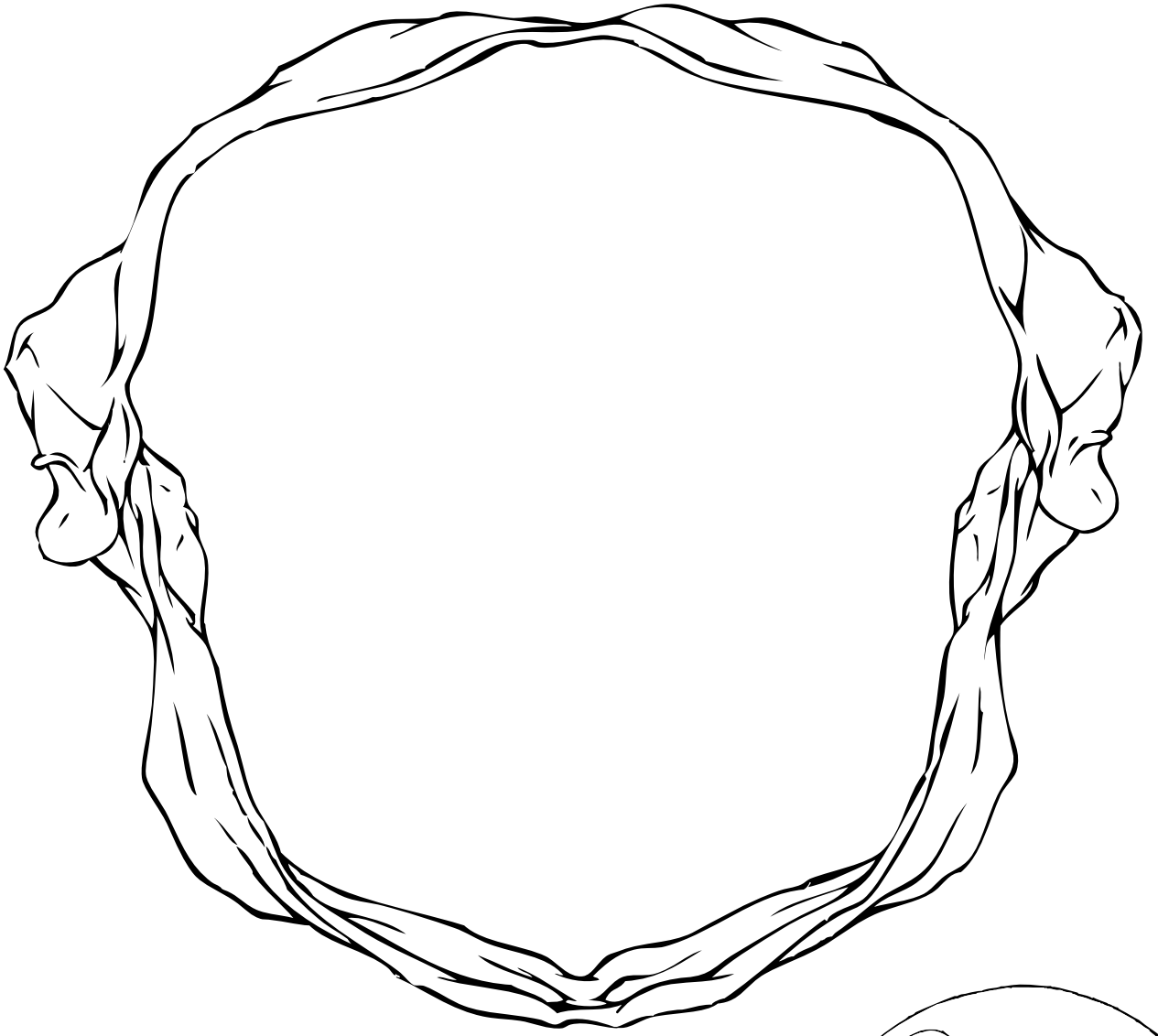


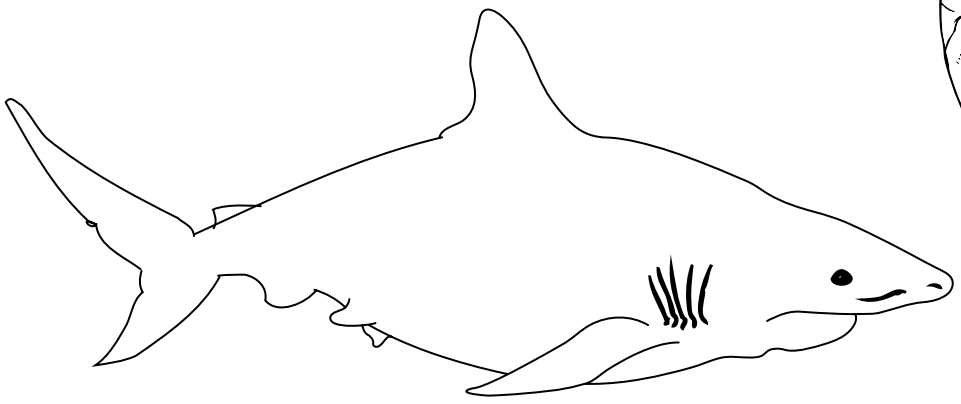


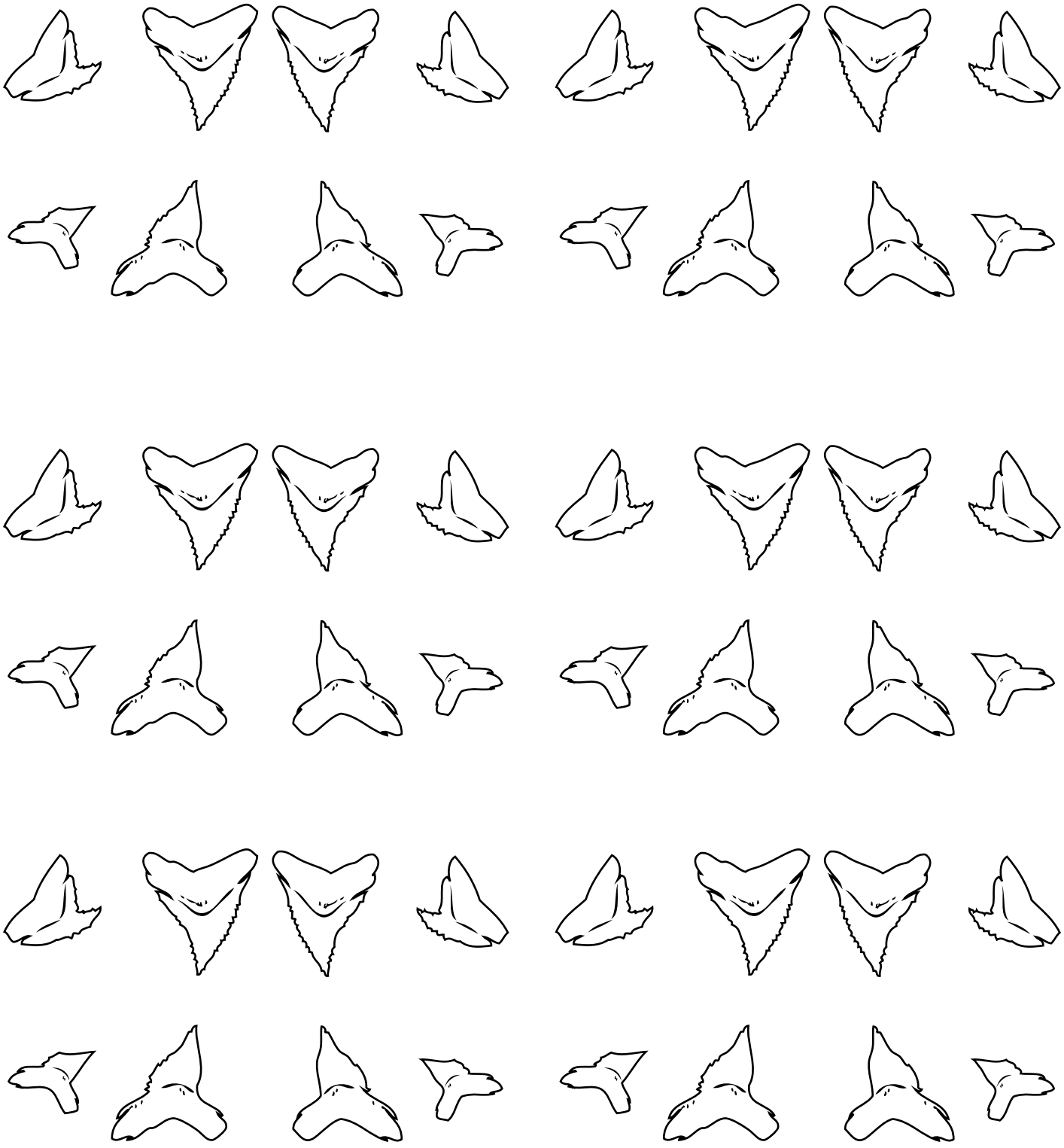


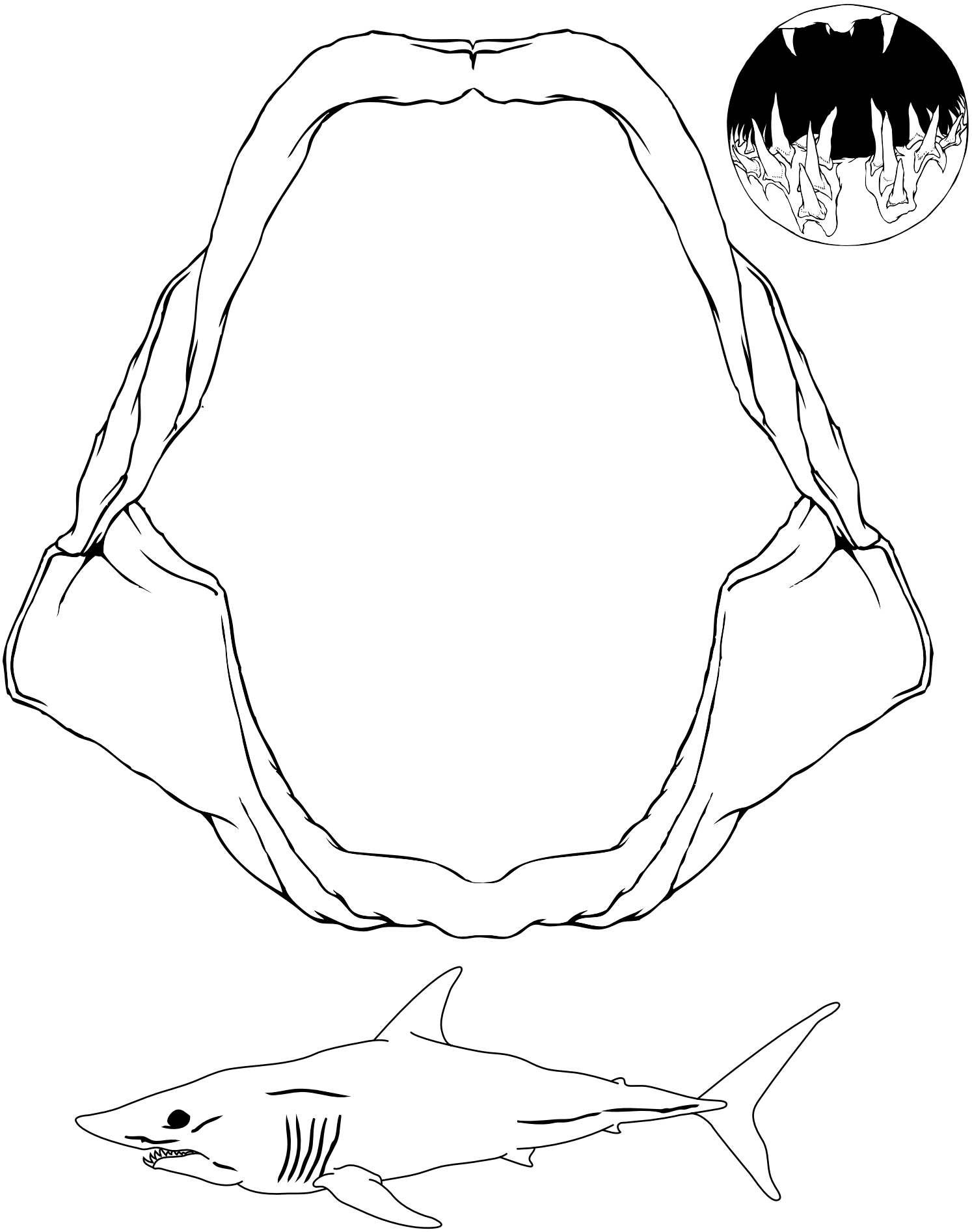


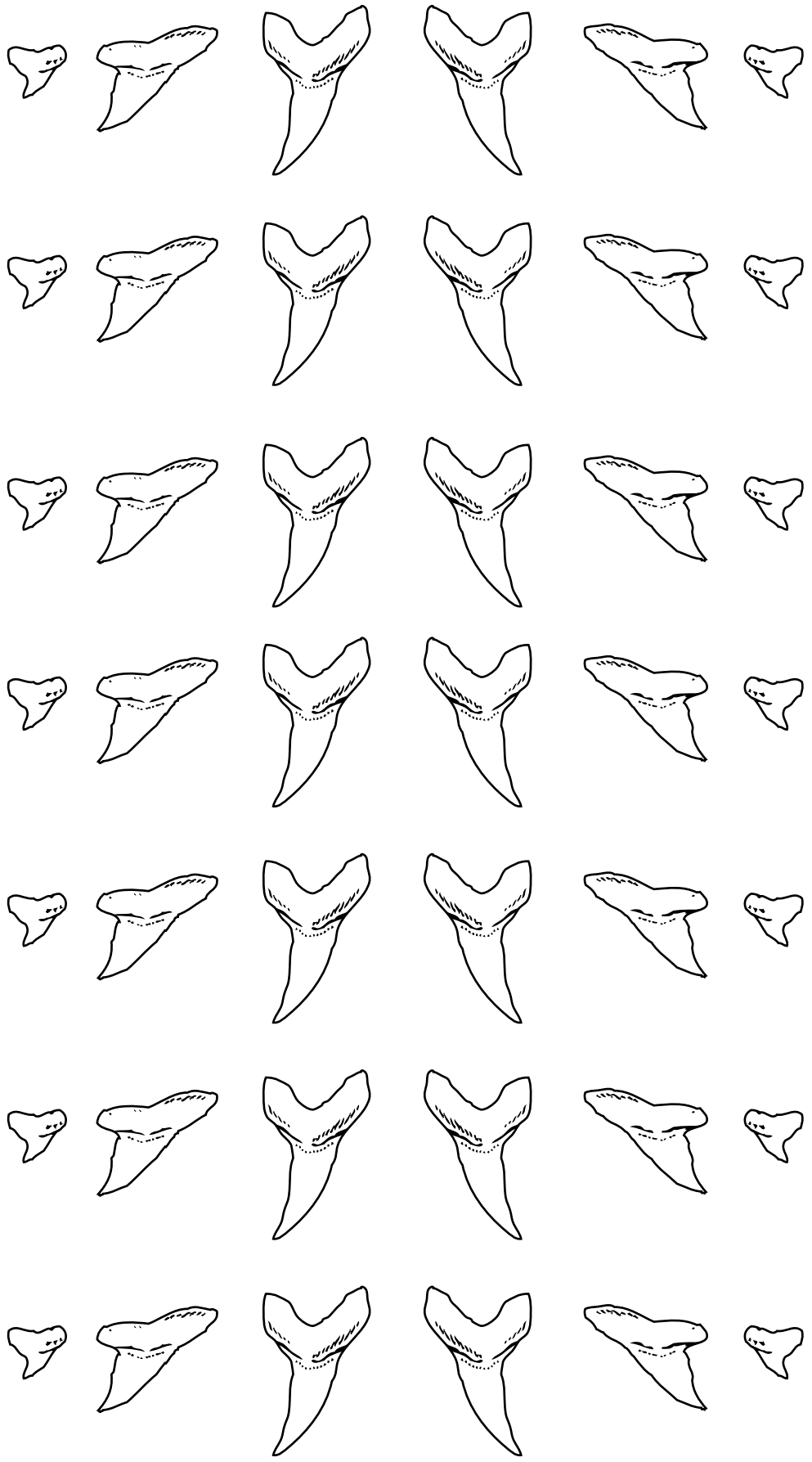


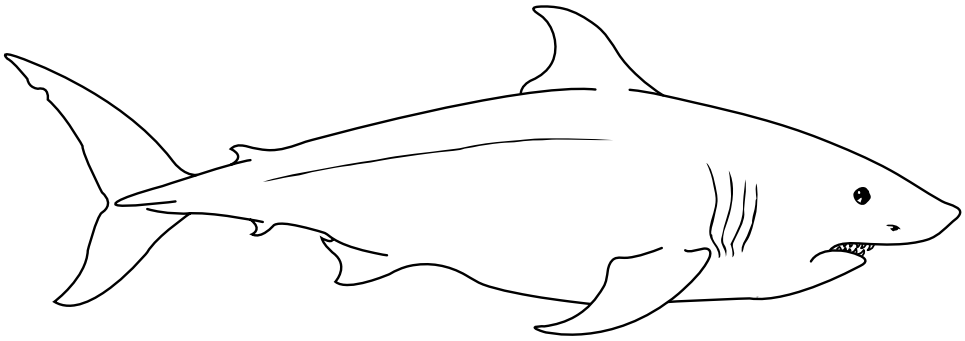


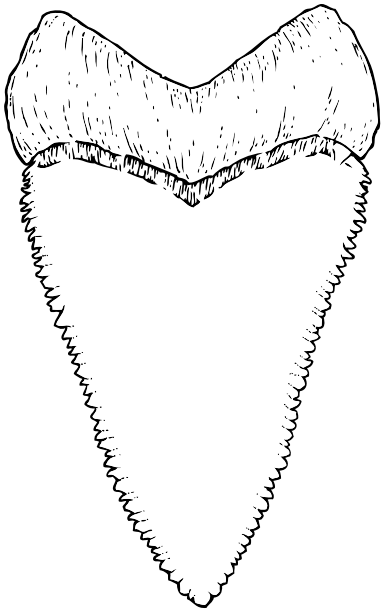


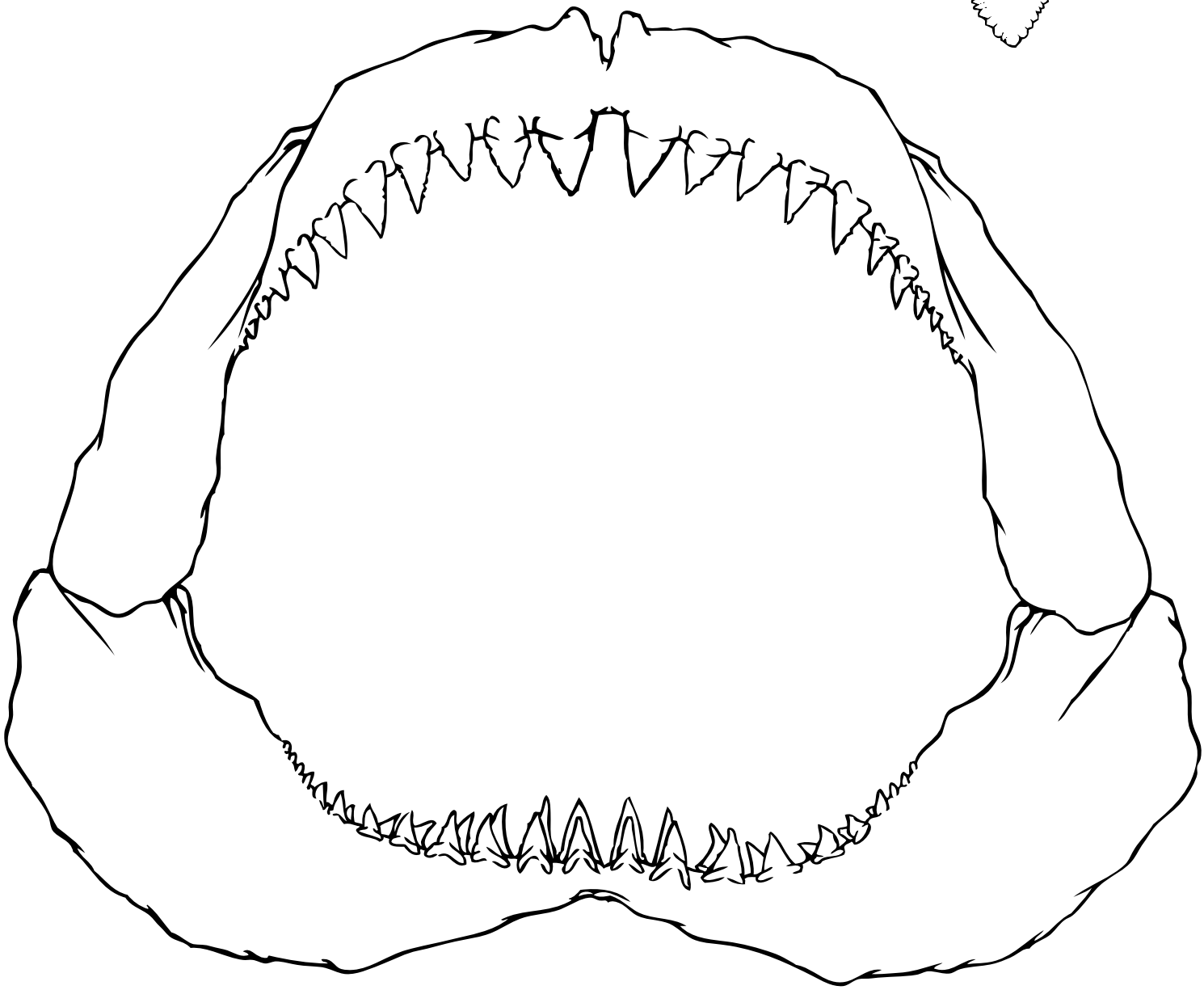


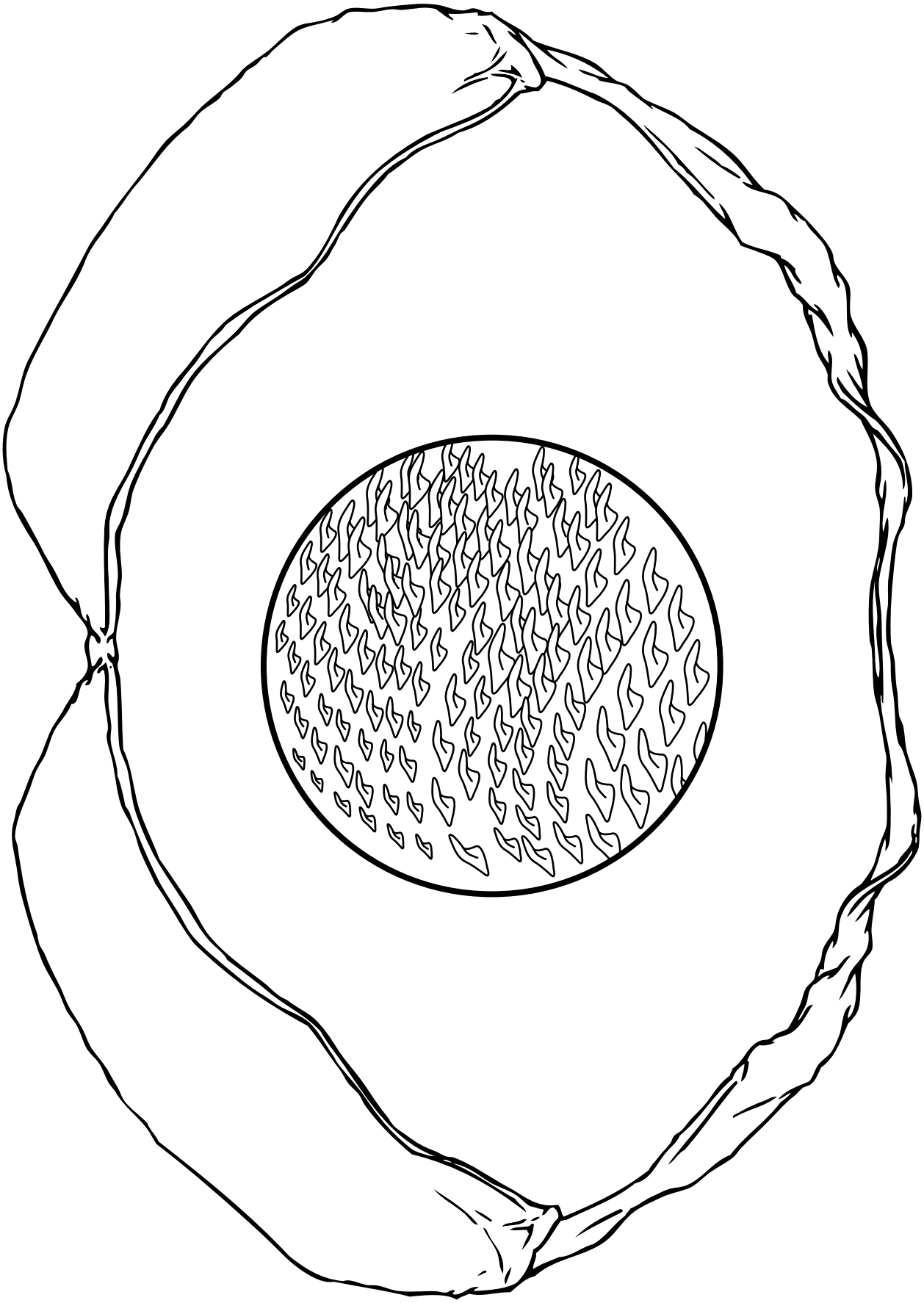


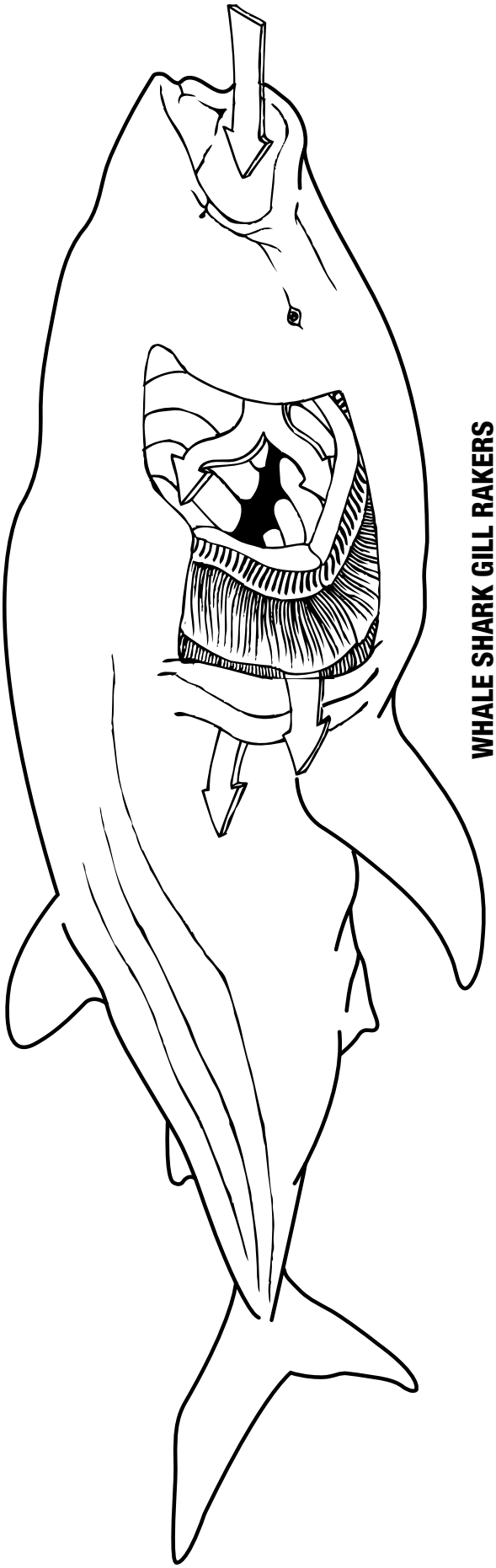




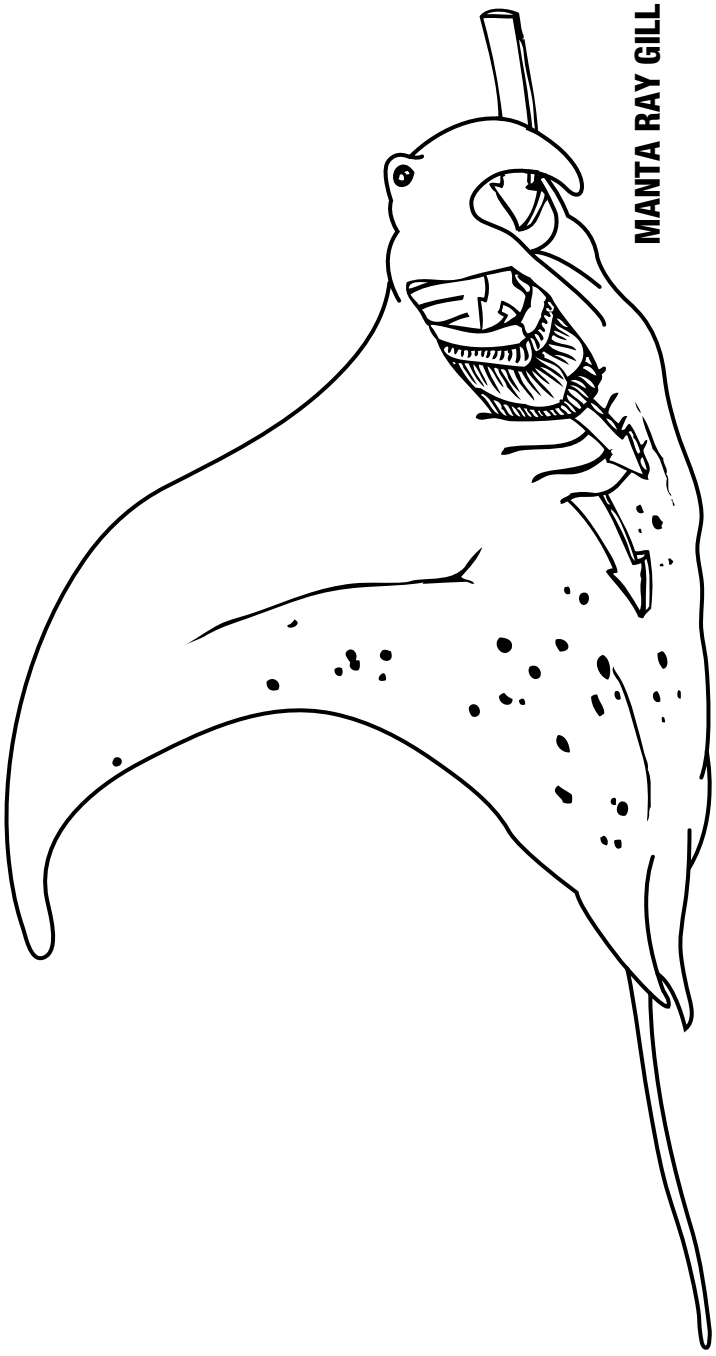




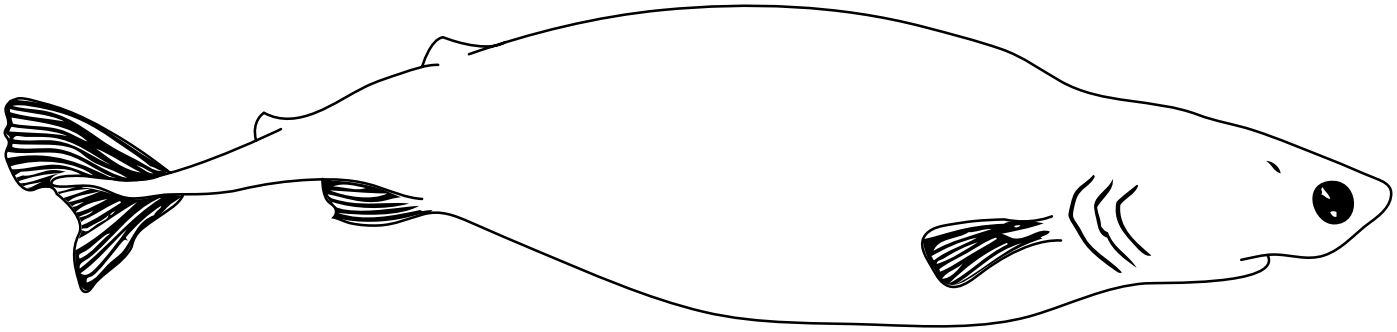




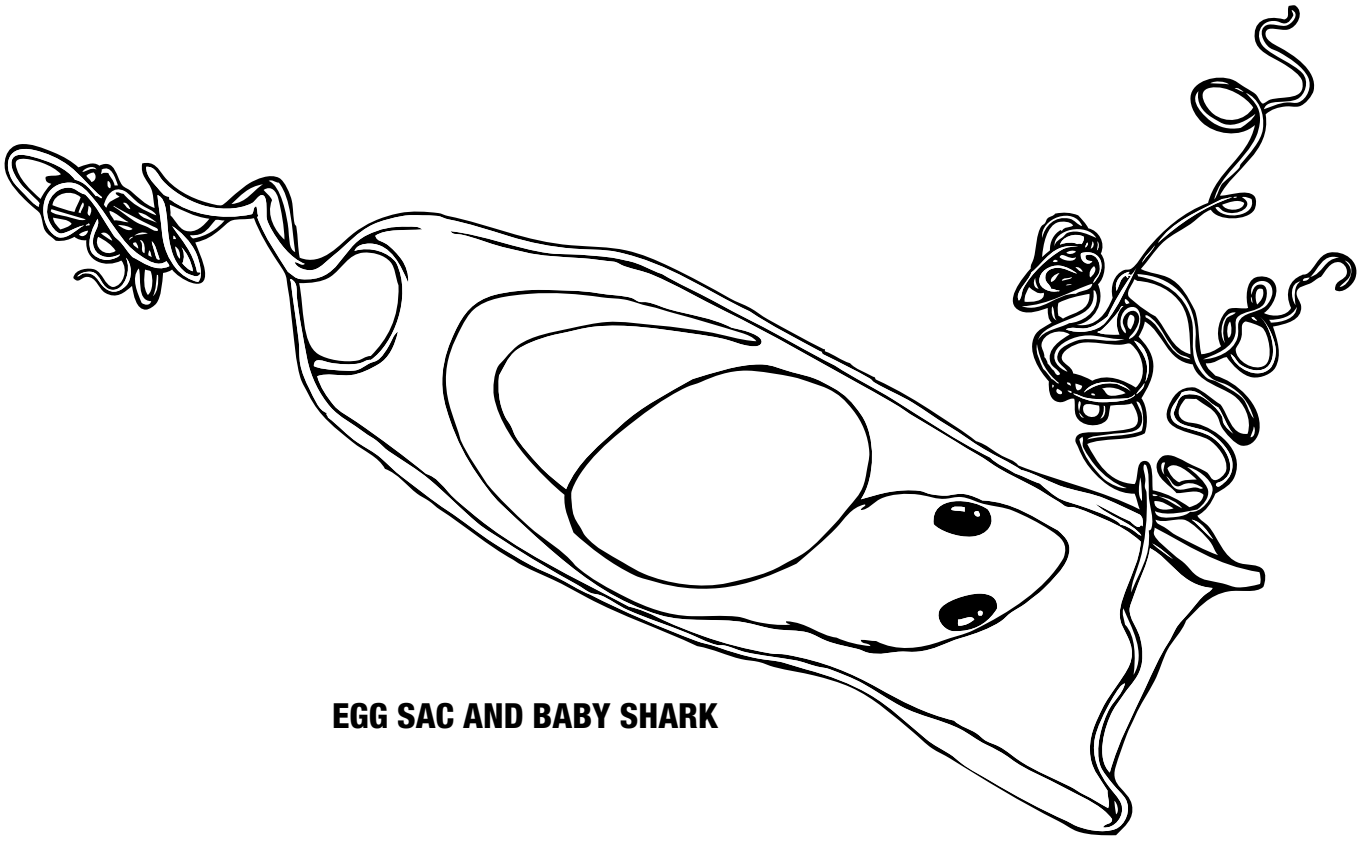
WHALE SHARK GILL RAKERS



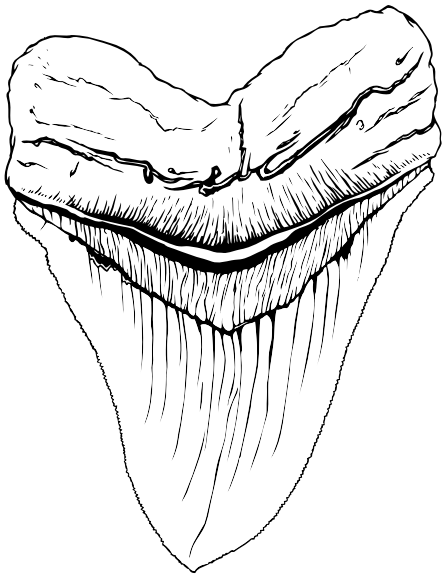
MANTA RAY GILL RAKERS

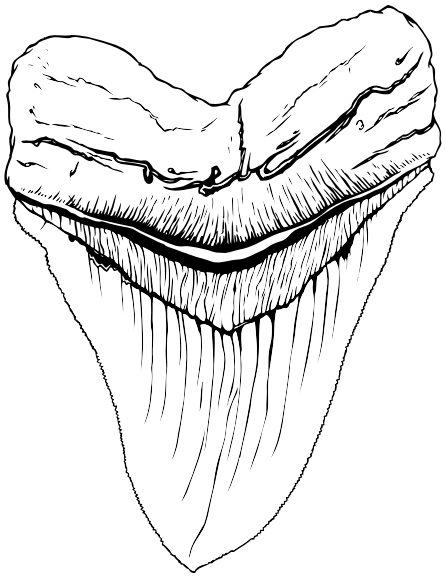


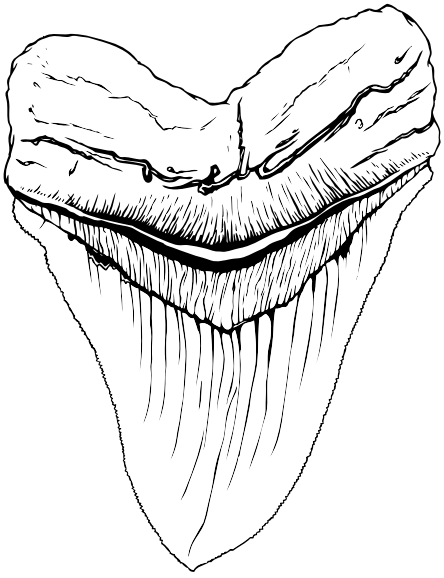
COOKIE CUTTER SHARK

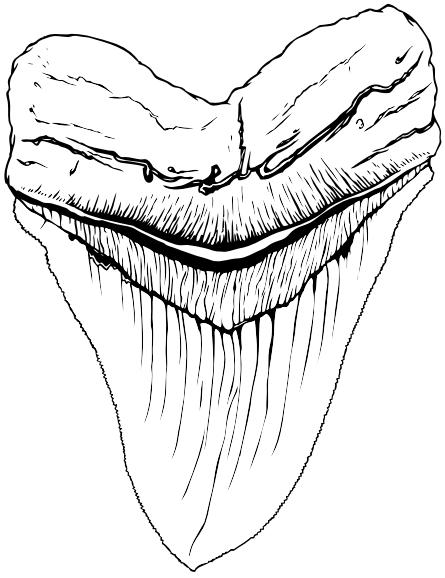


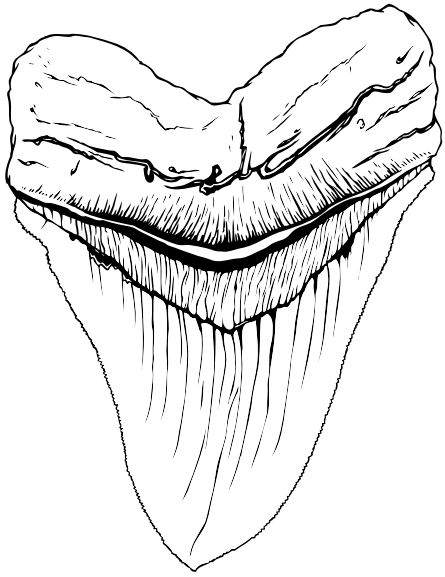
EGG SAC AND BABY SHARK

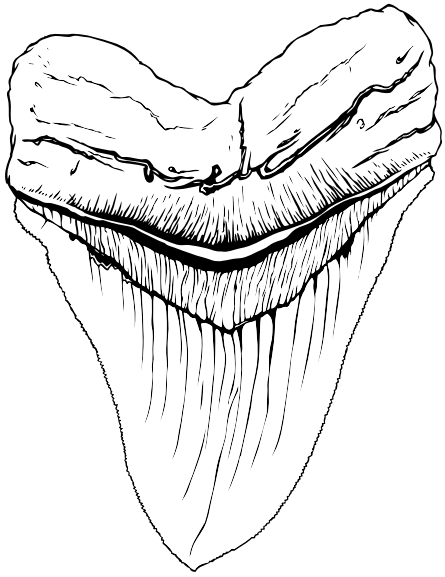










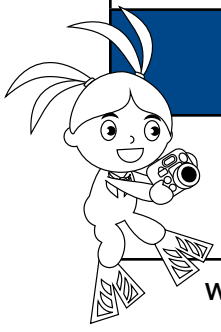


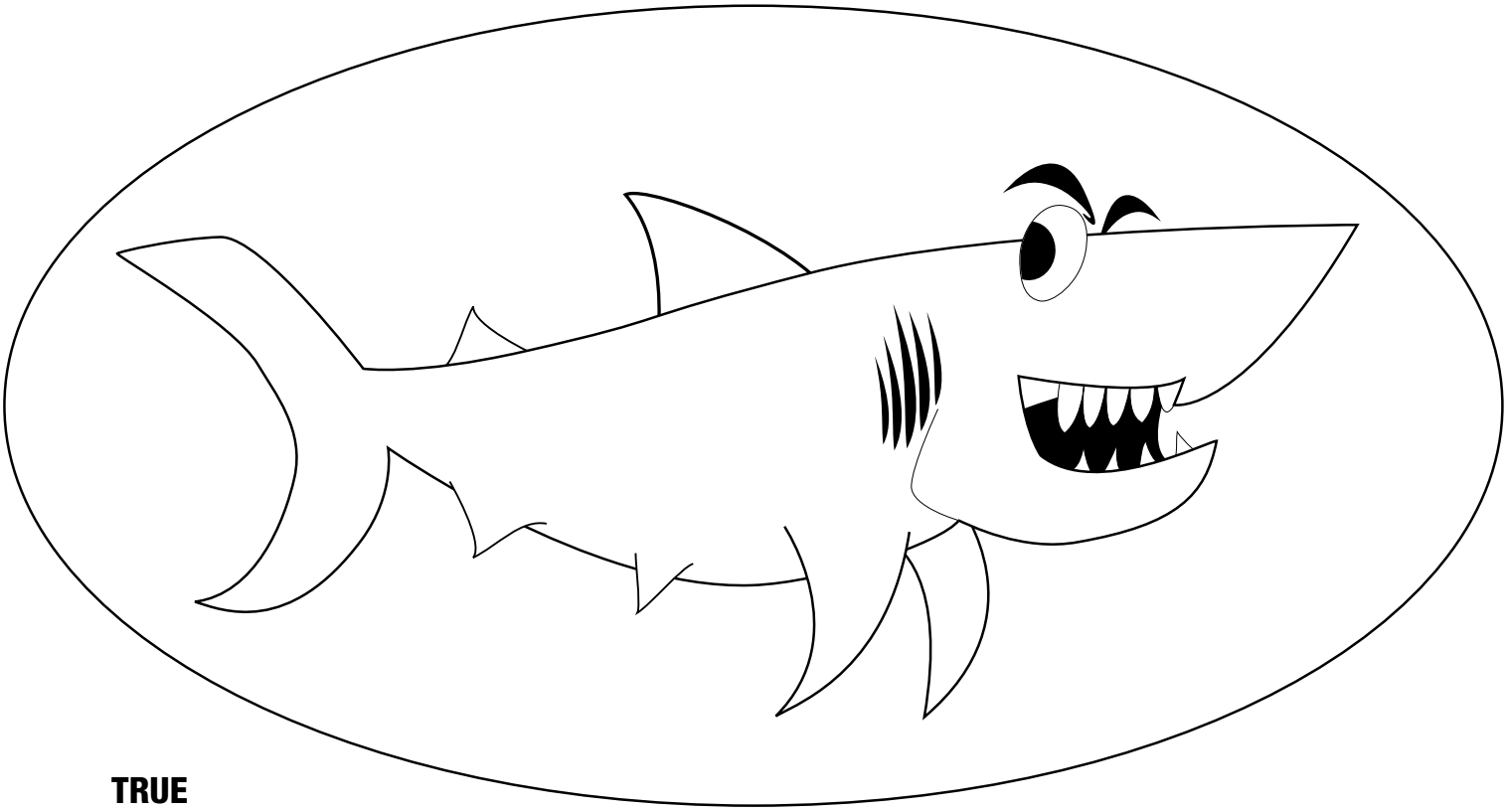
Shark Trivia!

Name _____ **Date** _____

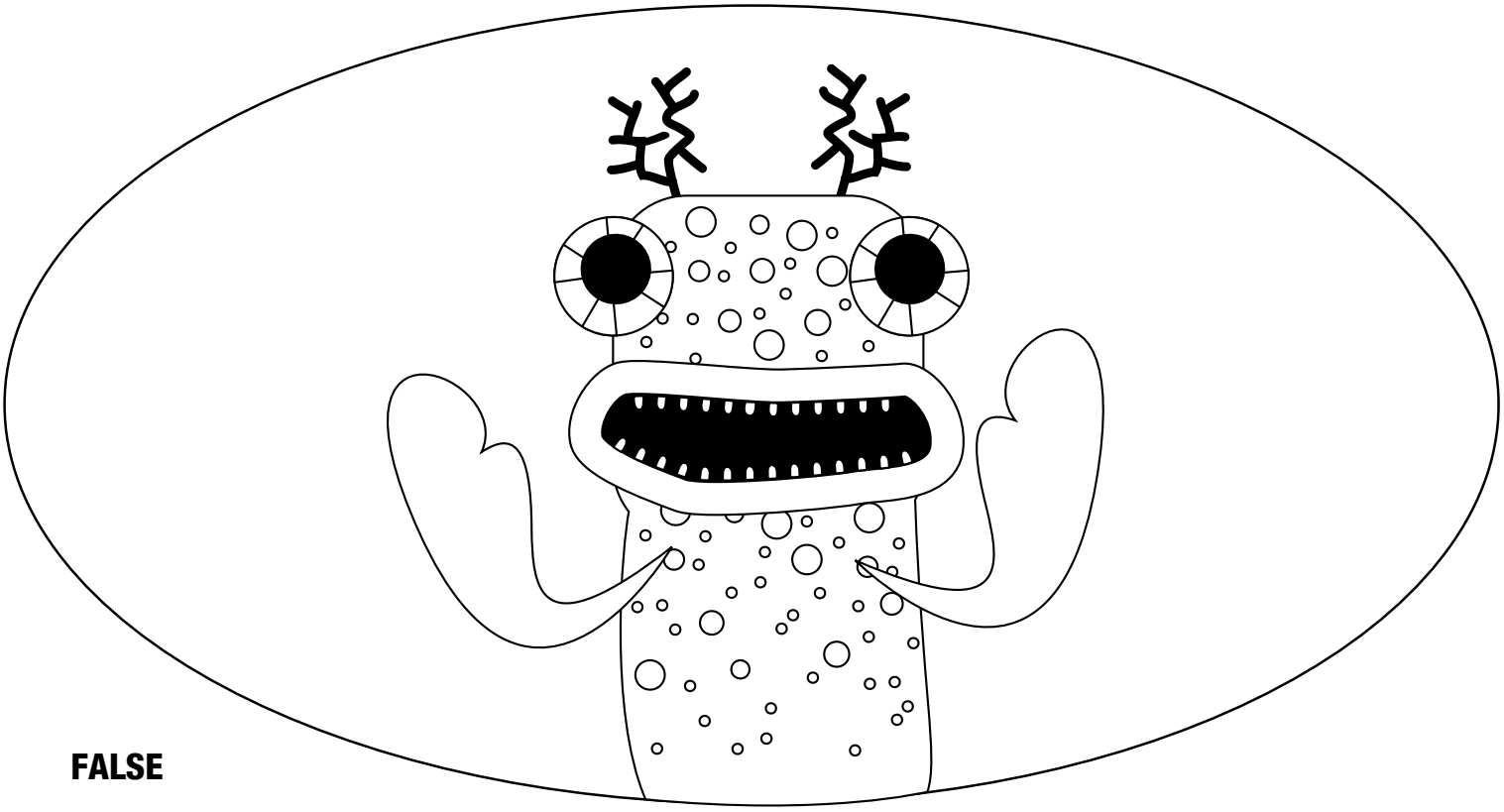
Directions: Answer each question TRUE or FALSE. Answers will be revealed during the lesson.

Questions for Students	Circle One: TRUE or FALSE
Sharks are fish.	**TRUE or FALSE**
The largest fish in the ocean is a shark.	**TRUE or FALSE**
Sharks are always really big.	**TRUE or FALSE**
All sharks have sharp, pointy teeth.	**TRUE or FALSE**
Some kinds of sharks are endangered, meaning if people don't stop fishing them, there may soon be none of that particular shark left on the planet.	**TRUE or FALSE**
Sharks are mean animals and eat absolutely anything and everything they come across.	**TRUE or FALSE**
You are more likely to be hurt, though it is unlikely, by lightning, a boat, a dog, a toaster, a chair, a hippopotamus or a tornado than you are a shark.	**TRUE or FALSE**
Sharks cannot swim backwards.	**TRUE or FALSE**
Sharks have smooth, silky skin.	**TRUE or FALSE**
Sharks were swimming in the ocean even before dinosaurs walked the earth.	**TRUE or FALSE**
Sharks were swimming in the ocean even before dinosaurs walked the earth.	**TRUE or FALSE**
Ocean Annie's Super Scuba Challenge!	
What part of the sharks' bodies do we find as fossils?	**TEETH**





TRUE

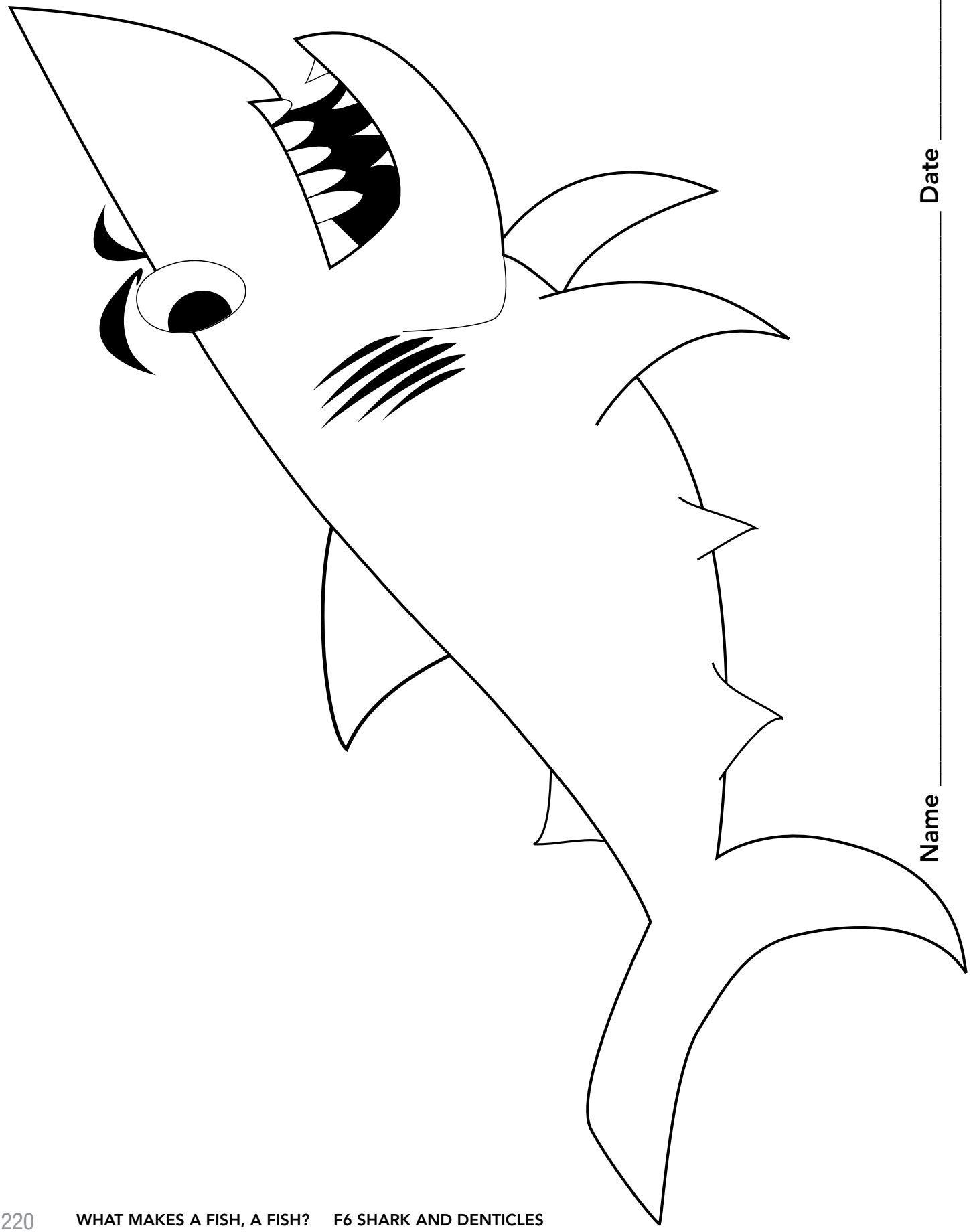


FALSE

Hammerhead Sharks!

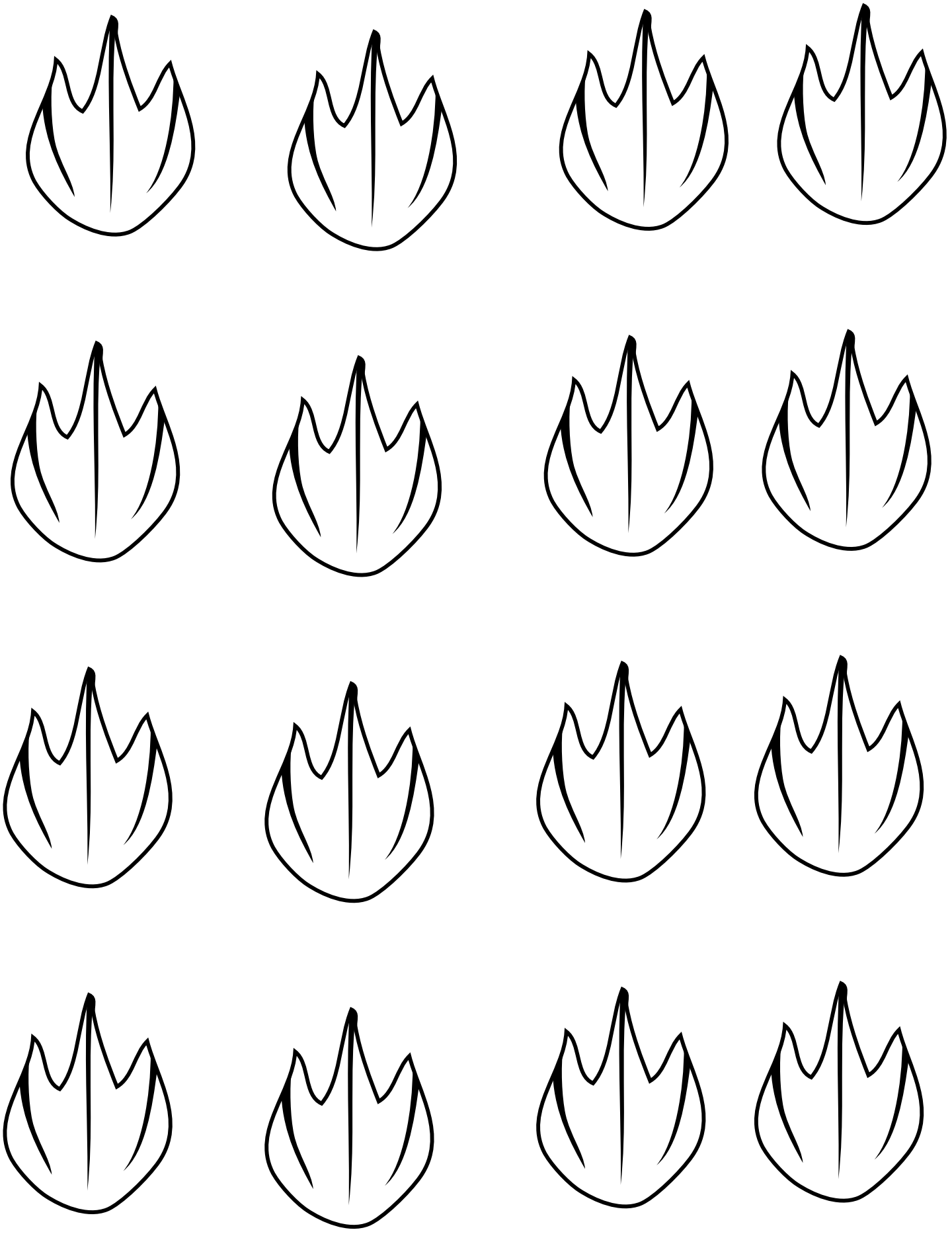
Name _____ Date _____

Finnagain!



Name _____

Date _____

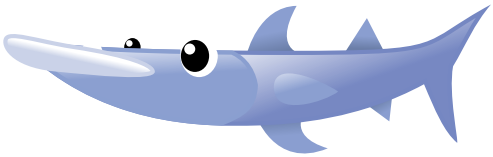


Today I learned...

Dinner Time for Fish

G

Dinner Time for Fish



CONCEPT / TOPICS TO TEACH

Animals in the ocean use a wide variety of strategies and skills to hunt for food. Feeding relationships in the marine ecosystem are complex, and include specialized feeding relationships between herbivores, omnivores, planktivores and piscivores. Students will explore a wide range of physical movements and vocabulary associated with feeding on the reef.

Objectives:

- Students will engage in imagination play to build spatial awareness and large motor skills through an activity requiring them to move to the words they hear in a collection of poems about fish.
- Students will use the scientific method of inquiry to make observations and predictions about how well simulated fish mouths will work to collect food.
- Students will build their skills at sequencing through an activity requiring them to differentiate and arrange a series of fish by size.
- Students will build literacy skills, fine motor coordination and creative thinking through an activity requiring them to design and describe a meal they could find in the ocean.
- Students will use deductive reasoning and logic to sort through a series of foods and determine which ones come from the ocean and which do not.

Character Education: GRATITUDE

GRATITUDE means being thankful and learning how to appreciate. Helping children understand how their behavior affects one another helps their emotional development. The best way to teach GRATITUDE is to model the behavior for your students. Younger children are often less aware of how their behavior affects another. Introducing sharing, thanks and GRATITUDE will create a more nurturing environment versus one of entitlement in your class. We can appreciate and have GRATITUDE for everything in our lives, from our friendships with one another to the food we eat. We can be grateful for our education and our imagination too!

When students are working together in their buddy teams, remind them to always thank one another when receiving help. Students can also learn how to give GRATITUDE for the simple things in their classroom like the power that operates the lights. As the leader, you can take a few moments with your class and have them look around the room. Before beginning the exercises, have students take a deep breath and think of all the different ways they can express GRATITUDE. Creating a moment of silence and an expression of thanks in your classroom instantly brings peace and calm to your students. When we express GRATITUDE, we change our state of being! When we breathe slowly and deeply like scuba divers, we immediately calm down.

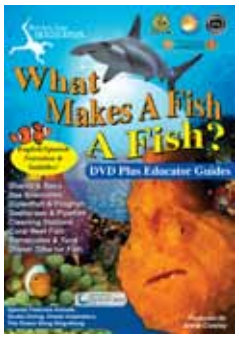
Ocean Annie and Scuba Divers express GRATITUDE and give thanks.

As scuba divers we express GRATITUDE for the wonders of nature and the underwater world. As scuba divers we explore a place very few get to see, yet the ocean is responsible for the health of our planet! Scuba divers appreciate nature and all of the gifts from the sea. Ocean Annie wants your students to feel connected to our environment. In order to create real change in our world, we need to help the next generation feel connected to the environment and appreciate our ocean. Our ocean is responsible for 70% of the oxygen our planet needs, our water and food. More than 70% of the world population relies on food from the ocean as their main source of protein. Everything we do on land affects the ocean and we need to keep our ocean healthy. When we break this down, children understand and grow up wanting to protect it. Introducing GRATITUDE and thanks for our ocean is a great way to start your class!

Getting Started

Required Materials

- ❍ DVD "What Makes A Fish, A Fish?" by Dive Into Your Imagination
- ❍ Large Dry Erase Board/Easel and Markers



TREASURE CHEST

- Gratitude
- Herbivore
- Omnivore
- Piscivore
- Planktivore
- Plankton
- Predator
- Scientist
- Species
- Sustainable

Anticipatory Set Lead-In

- ✧ Watch and become familiar with chapter seven "Dinner Time for Fish" from the DVD "*What Makes a Fish, a Fish?*"
- ✧ Before running the film clip, ask each student in class to imagine they are an ichthyologist, meaning they are scientists studying fish. Have them work with their team to collect information about the video clip as it plays.

Here are some questions and answers you can use to build a brainstorming session:

KWL LGL AG WP

Questions for Students	Answers for Educators
What is the biggest fish in the ocean and what does it eat?	*The whale shark grows up to 60ft and is the biggest fish in the ocean. It is a planktivore, meaning it filters organisms called zooplankton and phytoplankton from the water. These organisms are barely visible to the naked eye. The blue whale is the largest animal but the whale shark is the largest fish. Whale sharks are not whales or marine mammals; they are fish. If your students have a hard time with this concept discuss with them the different ways fish and marine mammals breathe. Compare gills to blow holes and fish to mammals.*
Do *all* fish have teeth?	*No! Fish have widely varied feeding apparatus; pointy teeth, molar-like teeth for crushing, and in some case no teeth at all!*
What kinds of things in the ocean do fish eat?	*It is widely varied, some fish eat other fish, some crunch up shellfish, and some even munch coral, plants, or scrape algae off rocks.*
What kinds of places do fish hide from other fish?	*Some hide in plain view using coloring to camouflage, and others look for holes, caves, coral and rocky overhangs to hide.*

Video Review

- After watching the video about "Dinner Time for Fishes," once or even a few times, discuss and write down additional facts, questions, and information students gained from the video for further research and discussion. What else do they want to know?
- Ask students to write a reflection in their journal about dinner time for fish or for themselves.
- Discuss gratitude. How is giving thanks and having gratitude important in our lives? What are students grateful for? Do they recognize the importance of nature and the ocean to our planet? Can you help them see our responsibility to care for our natural world?

Imagination Value

Before the activities begin, use this as an imagination exercise with your students. You can use this as a movement activity and have students act out what you are saying, or have them be silent and use only their minds. Children love to eat and talk about their favorite foods. Have students imagine what it would be like to be a fish and how they can discover what fish eat. You can either read this script or use your imagination and create your own!

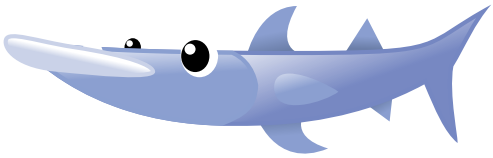
"On the count of three, let's say the magic word. 1, 2, 3…IMAGINATION! Now, imagine you are a fish. Think about what you look like. You may be purple and pink like a parrotfish, gray like a shark or maybe green like a moray eel! Your body adapted to life in the ocean. Think about your new mouth. What would your mouth look like if you were your favorite fish? Is it big or small, turned upward or downward or is your mouth oddly shaped? Do you have many teeth…or none at all? Are they big teeth or small teeth? Take a few moments to really imagine you were a fish in the sea!

We learn a lot about fish from the shapes of their mouths and their teeth! By thinking about a fish's mouth, you can learn about what kind of food their special mouth would eat. A big mouth might swallow a fish whole, or it might open wide and feed on the tiniest animals in the sea, plankton. Are your teeth sharp for snaring and grabbing like a barracuda, or flat nubby molars for crushing coral like parrot fish? Ichthyologists, scientists who study fish, observe fish and learn about them from the shape of the mouth, their teeth and the shape of the fish's body. Get together with your buddy to go scuba diving and discuss the fish you created in your imagination and tell one another what kind of food you eat! As we continue with our exercises let's pretend you are a scuba diving ichthyologist studying fish!"

Reduce, Refuse, Reuse and Recycle! You may know the 3 R's but the fourth R stands for Refuse. Refuse single use plastic by not purchasing or using it!

CLASSROOM ACTIVITY STATION G1

MUNCH TIME JAM!



Overview

Students will hear and respond with body movements to a series of poems describing how ocean animals move when they are hunting and eating. This activity will give students an opportunity to *explore locomotor and axial movements*, develop *body spatial awareness, gross motor coordination, rhythm*, and foster a connection with literacy.

Materials: Poems provided in *this* lesson plan, Assortment of instruments (optional)

Talking Points

- The ocean has many resources supporting life on land and in the ocean. Marine resources include food, medicine, and nutrients.
- Most animals living in the ocean find their food exclusively in the ocean.
- The ocean does not have an endless supply of seafood.
- If people are not careful about how they fish, there will be no food left for other living things that depend on the resources of the ocean.
- During this exercise, challenge students to use their imagination and become scientists studying what fish eat or the fish feeding.

Lesson Procedure

1. Ensure students have plenty of floor space to move freely during the exercise.
2. Inform students they are going to hear a series of poems describing how animals move while they are trying to secure food.
3. Instruct students to use body movements to simulate the words they hear as best they can to act out how the words "feel" to them.
4. Read each poem 2-3 times so students can really get the "feel" of the movement.
5. On some reads, have children use instruments with or instead of movement to sense "cadence" a different way.

Always carry a sustainable seafood card with you in your wallet when grocery shopping or at a restaurant. You can get a sustainable seafood card from our website or by visiting your local aquarium.

CLASSROOM ACTIVITY STATION G1 (Continued)

MUNCH TIME JAM!

POEM 1: Manta Ray Glide

Hover, spin, dip, swoop
Sliding by the reef…
Hover, spin, dip, swoop
Above and now beneath…
Hover, spin, dip, swoop
Loop 'd loop around…
Hover, spin, dip, swoop
Spiraling upside down
Hover, spin, dip, swoop
Fly…fly…fly…
Hover, spin, dip, swoop
The manta waves good-bye!

POEM 2: Parrot Fish Crunch

Crunch the coral
CRUNCH CRUNCH CRUNCH
Munching all day long…
Work your beak to
MUNCH MUNCH MUNCH
A lunch-y sounding song
Crack, grind,
CHOMP CHOMP CHOMP
Feeding all day long….
Gnaw, chew,
MUNCH THAT LUNCH
Swallow now it's gone!

Extension Ideas

» Work together as a class create more poems about how fish move and feed in the sea.

» Read the transcript from the DVD for memory recall. See if students can act out the script of the DVD.

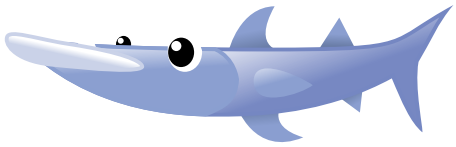
» Split the class in half. Have half the class pretend to be scuba divers and scientists while you read the poems and the other half fish. How do they act in different ways when role playing as the scuba divers and scientists verse when they are the fish?

» Use coloring pages in activity section to have students illustrate and write words about what they heard/learned in the poem.

Notes

CLASSROOM ACTIVITY STATION G2

BIG FISH LITTLE FISH



Overview

Students will organize a sequence of eight fish according to size and practice counting them. Through this activity students will get practice with understanding *sequencing, and counting*.

Materials: Fish Templates, Felt, Scissors, Double-sided Velcro squares with adhesive backs, Foam Core roughly 1' x 3'

Talking Points

- People eat food that comes from the ocean, yet the supply is limited. People must collect resources from the ocean sustainably which means in ways that we do not take out more than what can reproduce in order to maintain healthy populations. People have developed mathematical models to explore sustainability.
- People also study the ocean in order to understand how the ocean works, and to discover new ways that people can use and interact with it while doing so sustainably. Scientists use mathematical processes to figure out sustainable practices. What are other ways we use comparisons in our daily lives?

Lesson Procedure

1. Cover a piece of foam core with felt.
2. Place 8 adhesive backed squares of Velcro evenly spaced across the board.
3. Cut fish shapes out of felt, and secure a Velcro square to the back of each.
4. Instruct students to arrange the fish on the board from smallest to largest.
5. Alternatively (and for simplification) fish can be laminated and students can arrange them on the floor or another workspace.
6. During activity discuss: with students about the fact that animals in the ocean come in many shapes and sizes, and that many animals are found only in the ocean.

Bring Ocean Annie to your school to give presentations about sharks, manta rays and everything Ocean. She will entertain you with her experiences while inspiring you to believe you can do anything!

CLASSROOM ACTIVITY STATION G2 (Continued)

BIG FISH LITTLE FISH

Extension Ideas

» Challenge students to see if there are other ways to organize the fish in a logical way.

» See if students can remember from the video what fish are big fish and what fish are small fish.

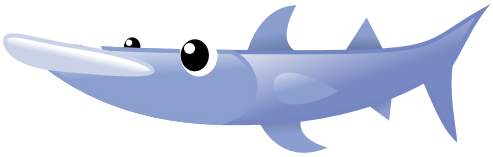
» Have students trace or draw their own series of fish and arrange by size, shape, color, etc.

» Write GRATITUDE and THANKS on a board. Discuss and list all the ways students can express GRATITUDE and give thanks.

Notes

CLASSROOM ACTIVITY STATION G3

FISH IT!



Overview

Students will "fish" for cards representing food and will be challenged to sort through their catch to determine which foods come from the ocean and which do not. Through this activity students will develop *analytical skills, eye hand coordination, and deductive reasoning*, and it will help them retain knowledge gained from the video.

Materials: Bucket, Paper clips, Magnets, String, Food Cards

Talking Points

- The ocean has many resources supporting life on land and in the ocean. Marine resources include food, medicine, and nutrients.
- Most animals living in the ocean find their food exclusively in the ocean.
- The ocean does not have an endless supply of seafood.
- If people are not careful about how they fish, there will be no food left for other living things that depend on the resources of the ocean.
- Challenge students to use their imagination and become scientists studying what fish eat during this exercise.

Lesson Procedure

1. Find 15-20 pictures of food in magazines or on our website to laminate on cards. Half of the cards should be foods found in the ocean, and half should be foods very obviously not from the sea.
2. Hook a paperclip securely through each card and place all the cards in the bucket.
3. Tie strings around magnets to simulate fishing poles.
4. Instruct students to fish for dinner in the ocean and make 2 piles of their catch: things they would find in the sea and things they would not.

Many species of seahorses are endangered because they are used in some cultures for medicine or to sell as souvenirs. Never purchase marine life as souvenirs or medicine!

CLASSROOM ACTIVITY STATION G3 (Continued)

FISH IT!

Extension Ideas

» Talk with students about what kinds of food their families eat. If you have a diverse group of students discuss unique ethnic foods.

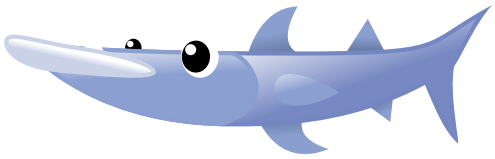
» Discuss the differences in people's food preferences. Fish can be herbivores, planktivores, carnivores or omnivores; people can be vegetarians, vegans or eat fish, poultry or red meat.

» Many children have allergies and it can be dangerous if they eat certain types of food. Use this exercise to open up discussions of food allergies to peanuts, gluten or shellfish.

Notes

CLASSROOM ACTIVITY STATION G4

MY DINNER IN THE SEA



Overview

At this station students will illustrate what it would look like if they had to find dinner in the sea. What kinds of food would they eat? Where would they find the plants or animals? Help students write in words or facts their drawing represents. Through this activity students will develop *artistic ability, fine motor coordination, literacy, and language skills*.

Materials: Dinner Setting design page, Crayons, Markers or Colored Pencils

Talking Points

- Ask students if they or members of their family have eaten foods from the ocean. If so, what kinds? Many important resources like food come from the ocean.
- Explain to students although there are many familiar foods from the sea like fish and crab, many products from the sea like kelp are contained in things we use every day like toothpaste, cosmetics, and even ice cream.
- Point out that although many products come from the ocean, the supply is limited. People must collect resources from the ocean sustainably which means in ways that we do not take out more than what can reproduce in order to maintain healthy populations.
- Point out people study the ocean in order to understand how the ocean works, and to discover new ways that people can use and interact with it.

Lesson Procedure

1. Ask students to color in the plate with food they might eat from the sea. Ask students if the creatures on their plate would look different when they are in the ocean. On the other side of the paper, have students draw what the foods on their plate might look like while living in the sea. Fish sticks on their plate would be fish in the sea.
2. As students complete their illustrations, help them to write key words and vocabulary into their pictures.
3. When all students have finished, pull all the pictures together into a class book.

CLASSROOM ACTIVITY STATION G4 (Continued)

MY DINNER IN THE SEA

Extension Ideas

» Have students illustrate what it would look like if they had to find their own dinner in the sea. Would they fish? Would they be scuba divers catching scallops or lobster? Would they pick seaweed or sea cucumbers? What kinds of foods would they eat? Where would they find the food? How would they catch it?

» Have students act out their Dinner Time For Fish ideas in a play.

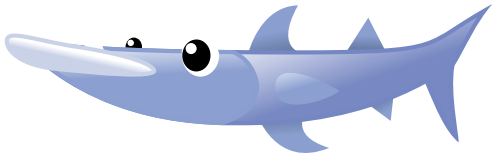
» Assign a project for home. Have students look in a cookbook for recipes with plants and animals that come from the sea, bring it to class and share what they learned.

» Create "Thank you Ocean!" posters, cards, and messages with your students. Create a list of all the reasons we need to be thankful for our ocean and express gratitude. Revisit the character education for ideas to share with students and then have them write or illustrate a "Thank You Ocean" card!

Notes

CLASSROOM ACTIVITY STATION G5

FISH MOUTH



Overview

Students will use different tools to simulate "mouth types" found on fish to see how effectively they can secure food. Participation in this activity will help students work *fine motor* and understand diversity in the ocean, the importance of form and function, and help build upon concepts taught in the video.

Materials: Large Bowl, Water, Rice to represent krill, Pliers to represent the beak style mouth like that of parrotfish, Fish Net with a smaller mesh than rice to represent the filter-feeding style mouth, Pipettes or turkey baster to represent the suction-style mouth of a seahorse or pipefish

Talking Points

- Scientists use observation to develop a hypothesis. We learn a lot about animals from making observations. If we study an animals head, eyes, mouth, teeth, and body, we can make guesses about what foods they eat.
- Ask students to name different kinds of fish, what their mouths look like, and what foods they know or think they eat.
- During this exercise, have students become scientists as they use their imagination to figure out what kind of mouth will work best for feeding on krill.

Lesson Procedure

1. Fill a large bowl half way with water and add 1-2 cups of *uncooked* rice.
2. Explain to students how each tool represents a different style of fish mouth. You can play the DVD chapter again without the narration and have students observe just the mouths of the fish and what they eat.
3. Ask students to predict or hypothesize which mouth styles will work best on the tiny rice representing krill.
4. Instruct students to use the pliers, net, and pipettes or turkey baster to try to catch the rice, explaining how these tools are very much like the types of real mouths seen on different kinds of fish from the film.
5. Ask students to observe whether some tools are better at getting the food than others. Have students draw a conclusion. Was their hypothesis or prediction correct on which device works best for feeding on "krill"?

CLASSROOM ACTIVITY STATION G5 (Continued)

FISH MOUTH

Extension Ideas

» Many animals feed on krill. Whale sharks use their mouths like a net and seahorses like a baster. What other fish use their mouths like a net, or a suction like a seahorse to feed on plankton? Would fish like parrotfish do well feeding on plankton? Why? Why not?

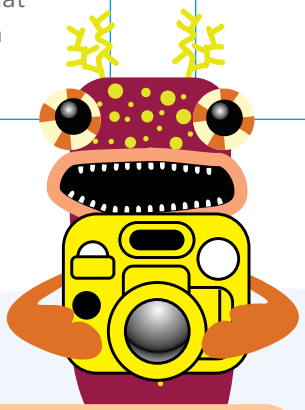
» Do the same exercise above using cold pre-cooked mostaccioli noodles to represent squid. Have students hypothesize about which tool will be best to catch these animals. Conduct the experiment and form a conclusion. Were their predictions correct? Why or why not?

» Discuss different land animals and how the mouths differ. Think about a chicken, cow, and lion. What do they know about the food the animal eats by observing the mouth?

» Have students think about their own teeth and how they use them for biting and chewing as well as how important their tongue and teeth are in everything they do.

» Have students draw a picture about what they learned about fishes' mouths from doing this exercise.

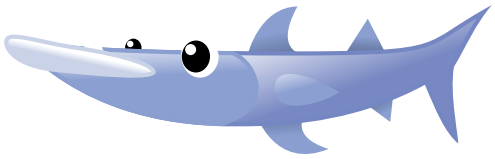
Notes



Make a checklist to keep yourself organized before and after scuba diving.

CLASSROOM ACTIVITY STATION G6

BOOK STALL



Overview

Providing a reading and or computer area where students can look through books about the subject being discussed will help to build early literacy. Even if the children are not reading yet, looking at pictures and building dialogue around the pictures is helpful to developing *vocabulary and language skills*.

Materials: The book *Humu: The Little Fish Who Wished Away His Colors* by Kimberley Jackson

Lesson Procedure

1. As a class, read the story *Humu: The Little Fish Who Wished Away His Colors.* Talk about how the main character Humu learned to appreciate and even have GRATITUDE for his special colors even though they made him different from everyone else.
2. Make a class list of the things that each student appreciates and feels grateful for at school.
3. Make a list of things students are grateful for at home.
4. Make a list of things students are grateful for about our environment.
5. Create a mantra for students to use. "I am grateful for..."

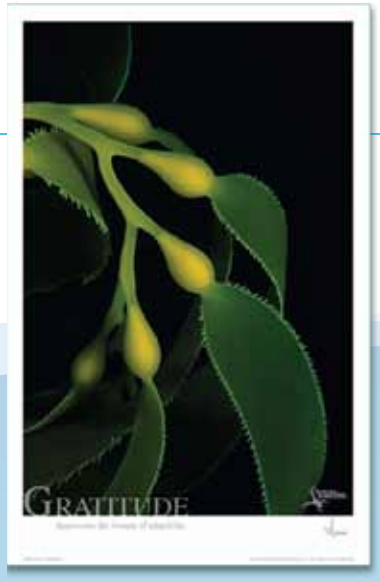
Character Education: GRATITUDE

"Appreciate the beauty of simplicity"

Fine Art Prints, posters, greeting cards and other products are available to decorate your classroom or school while inspiring your students with real ocean animals and environmental scenes. Contact us to learn more.

Research all the places kelp grows in the sea based on water temperature. Have students find locations on a world map.

Kelp frond, California



There is lots of different equipment you can use underwater, always get properly trained.

Book Suggestions

» Baldwin, Robert. *This is the Sea That Feeds Us.* Illus. Don Dyen. Nevada City, California: Dawn Publications, 1998. Ages 5-10.

» Coldiron, Deborah. *Barracudas.* Edina, Minnesota: ABDO Publishing, 2008. Ages 4-8.

» Heller, Ruth. *How to Hide an Octopus and Other Sea Creatures.* New York, New York: Grosset and Dunlap, 1992. Ages 4-8.

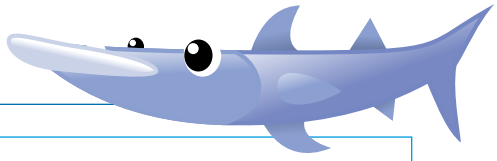
» Hunter, Anne. *What's in the Tide Pool?* Mankato, Minnesota: Capstone Press, 2003. Ages 4-8.

» Jackson, Kimberly A. *Humu The Little Fish Who Wished Away His Colors.* Waipahu, HI: Island Heritage Publishing, 2010. Ages 4-8.

» Jenkins, Steve. *Down, Down, Down: A Journey to the Bottom of the Sea.* Tulsa, Oklahoma: Usborne Books, 2009. Ages 4-10.

» Lionni, Leo. *Swimmy.* New York: Random House, 1973. Grades K-2.

» Pfeffer, Wendy. *What's it Like to be a Fish.* Illus. Holly Keller. New York, New York: Harper Collins, 1996. Ages 4-8.



Closure and Follow Up

✧ Once students experienced the learning stations, spend time reviewing new facts learned from participating in the activities and correcting previous statements with new information.

✧ Seafood is a wonderful way to get important nutrients the body needs, but many fish are endangered. To help ensure that there are enough fish to eat, people should use a sustainable seafood card. Remind students about the sustainable seafood cards available at all Aquariums so families can make choices about food to eat that maintains balance in the ocean. If you contact an aquarium near you, they may send sustainable seafood cards or even a representative to talk with your class.

✧ To reinforce learning, review key vocabulary from the treasure chest, main concepts, and ideas associated with food webs and sustainability.

Plan for Independent Practice

» Have students keep a weekly journal of things they eat or products they use from the sea. Check to see if they are sustainable.

» Students can talk about what kinds of foods their pets eat. Have them check the ingredients of the food to see if there are plants or animals from the ocean in the pet food.

» Perform a movement study and simulate the different ways students saw fish move in the video. Include instruments to add a dimension to the concept of cadence and rhythm.

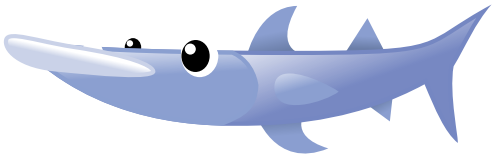
» Review the word GRATITUDE with students and discuss how it relates to their character and their lives. Encourage them to think of all the ways they can express GRATITUDE for their friends, family and our environment.

» Create a poster giving thanks to our ocean and all of the animals in the sea! You can help them cut out large circles from poster board to represent a globe. Students can decorate the globe. 2/3 of our Earth is Ocean. Everything we do on land affects the Ocean. We need a clean ocean in order to have a healthy planet.

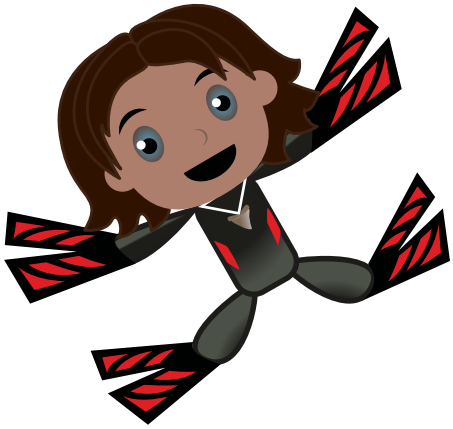
» Select stories from the suggested reading list to read as a class or for self-study.

DVD TRANSCRIPT

Dinner Time For Fish



Under the ocean, beneath the sea animals need to feed. Big fish eat little fish.



Little fish eat teeny tiny fish.

Whale Sharks are the biggest fish in the ocean and eat the tiniest plants and animals in the sea called plankton!

Little fish hide from bigger fish. Bigger fish try and find little fish. Fish group hunt with Mrs. Octopus.

Some fish try to look like something else. Other fish lie in wait of unsuspecting bait.

Some fish can't wait to get into school.

Some fish live and hunt in the sand. Other fish live in the rocks and slither along the land. Lots of fish live and eat on a coral reef.

Some fish don't eat fish at all, they have no teeth. The shape of their mouths shows us what they might like to eat.

These fish eat coral polyps, look at their snouts. And these fish eat WORMS! What do you think these fish eat with their big teeth?

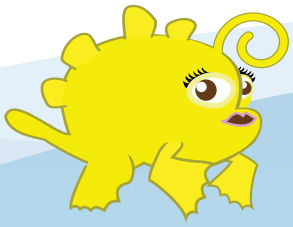
Some fish are vegetarians, only feeding on plants and algae. These fish use their teeth to chomp coral and eat the algae growing inside.

Some fish have big teeth. Some fish have no teeth.

Sharks are fish.

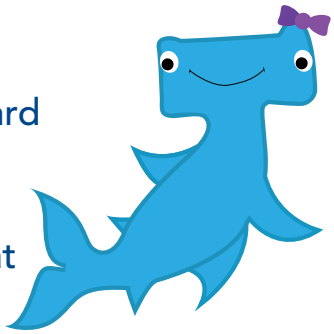
Don't be scared of sharks though. They like to eat other fish.

Under the ocean, beneath the sea, all animals need to feed.

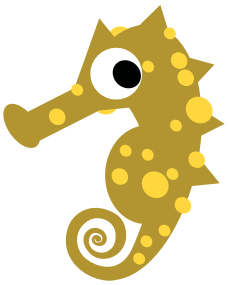


Go Blue! Ten Ocean Annie Tips to Help Our Environment

1. Support marine reserves and protected areas prohibiting fishing.
2. Dispose of garbage, especially plastic, properly. Eliminate using plastic bags or any single use products.
3. Never buy souvenirs or other material that came from living animals.

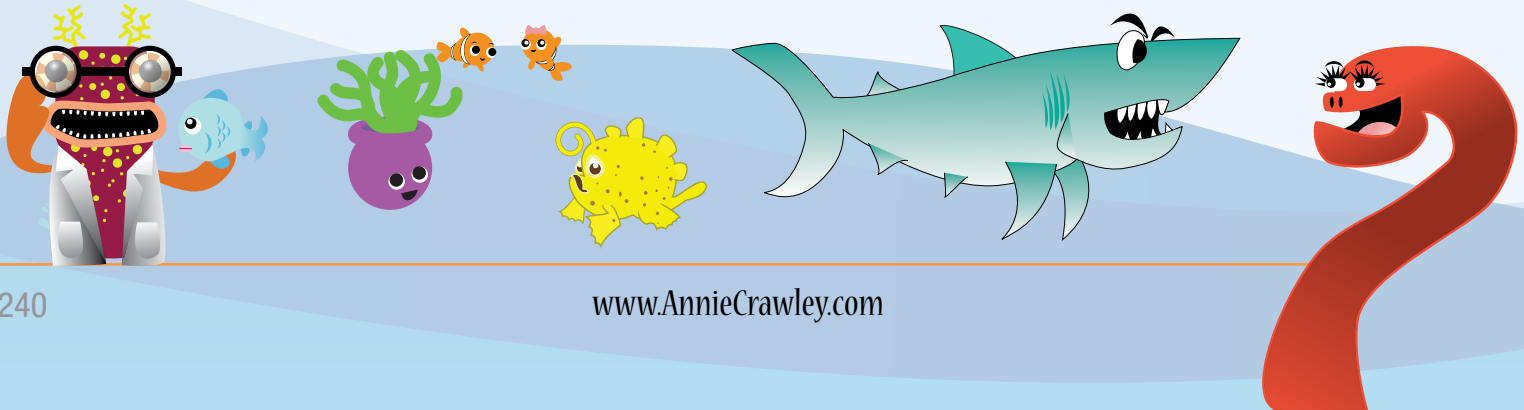


4. If you like to fish in non-protected areas, be sure never to discard fishing line or other gear where it can end up in the water.
5. Know about and support laws that protect fish and their habitat like the Endangered Species Act (ESA) and Convention on International Trade in Endangered Species (CITES).



6. When you travel, do not collect living material to take home.
7. Spread the word! Tell everyone you know about how special marine animals are and what we can do to protect them.
8. Write a letter to your local, national or international governments to create laws to protect sharks, tuna and other fish.

9. Collect money as a class and donate it to a charity or scientist studying and helping our ocean. Contact us for a list!
10. Keep your curiosity alive, brainstorm how else you can help the ocean or your local environment and share your ideas with us!



Dinner Time For Fish ACTIVITIES

G

Name _____ **Date** _____

Treasure Chest of Words

plankton
predator
scientist
species
sustainable

gratitude
herbivore
omnivore
piscivore
planktivore

Manta Ray Glide

Hover, spin, dip, swoop
Sliding by the reef…
Hover, spin, dip, swoop
Above and now beneath…
Hover, spin, dip, swoop
Loop 'd loop around…
Hover, spin, dip, swoop
Spiraling upside down
Hover, spin, dip, swoop
Fly…fly…fly…
Hover, spin, dip, swoop
The manta waves good-bye!

Manta Ray Glide

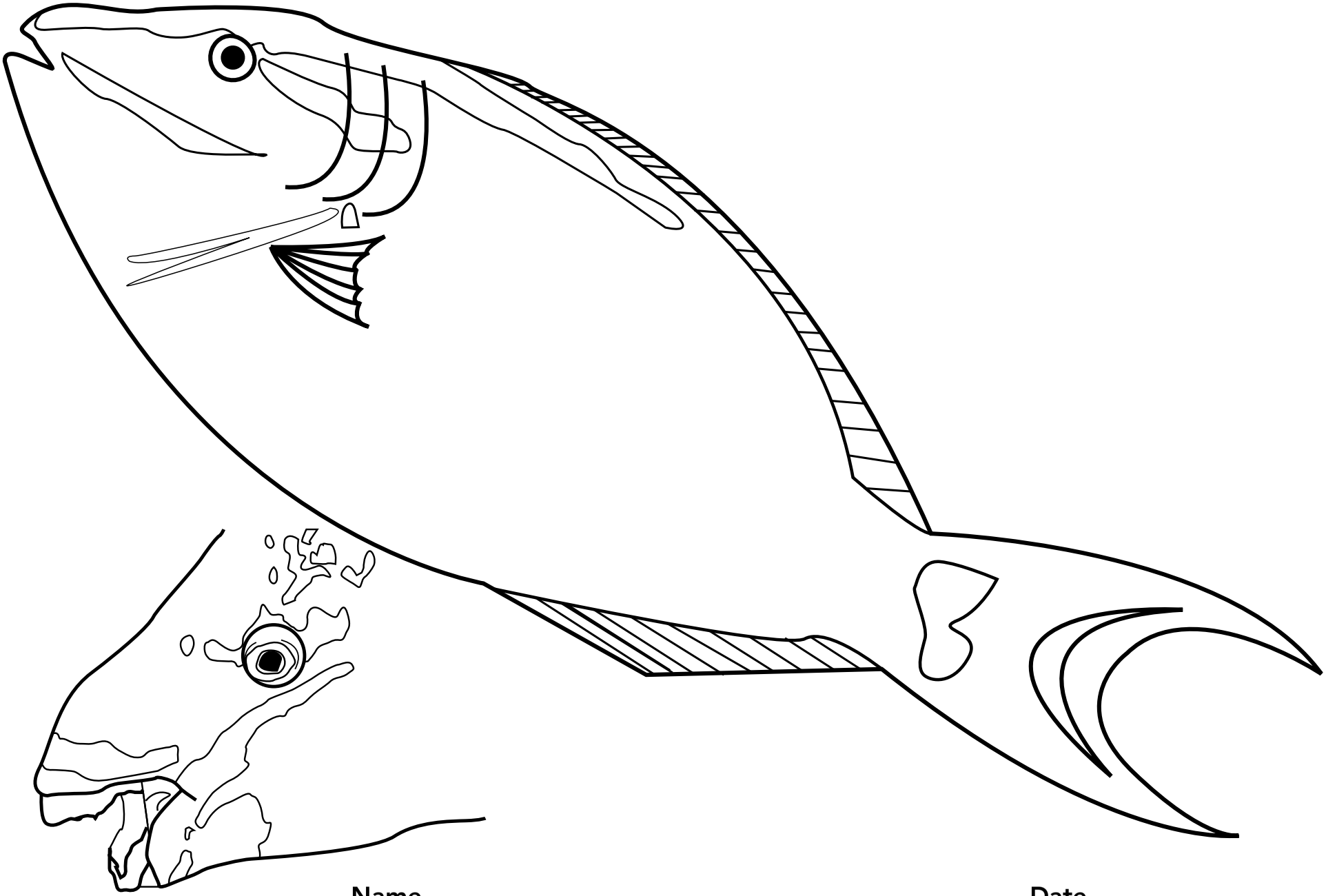
Name _____ **Date** _____

Directions: Draw and write down movements you created from moving to the poem.

Parrot Fish Crunch

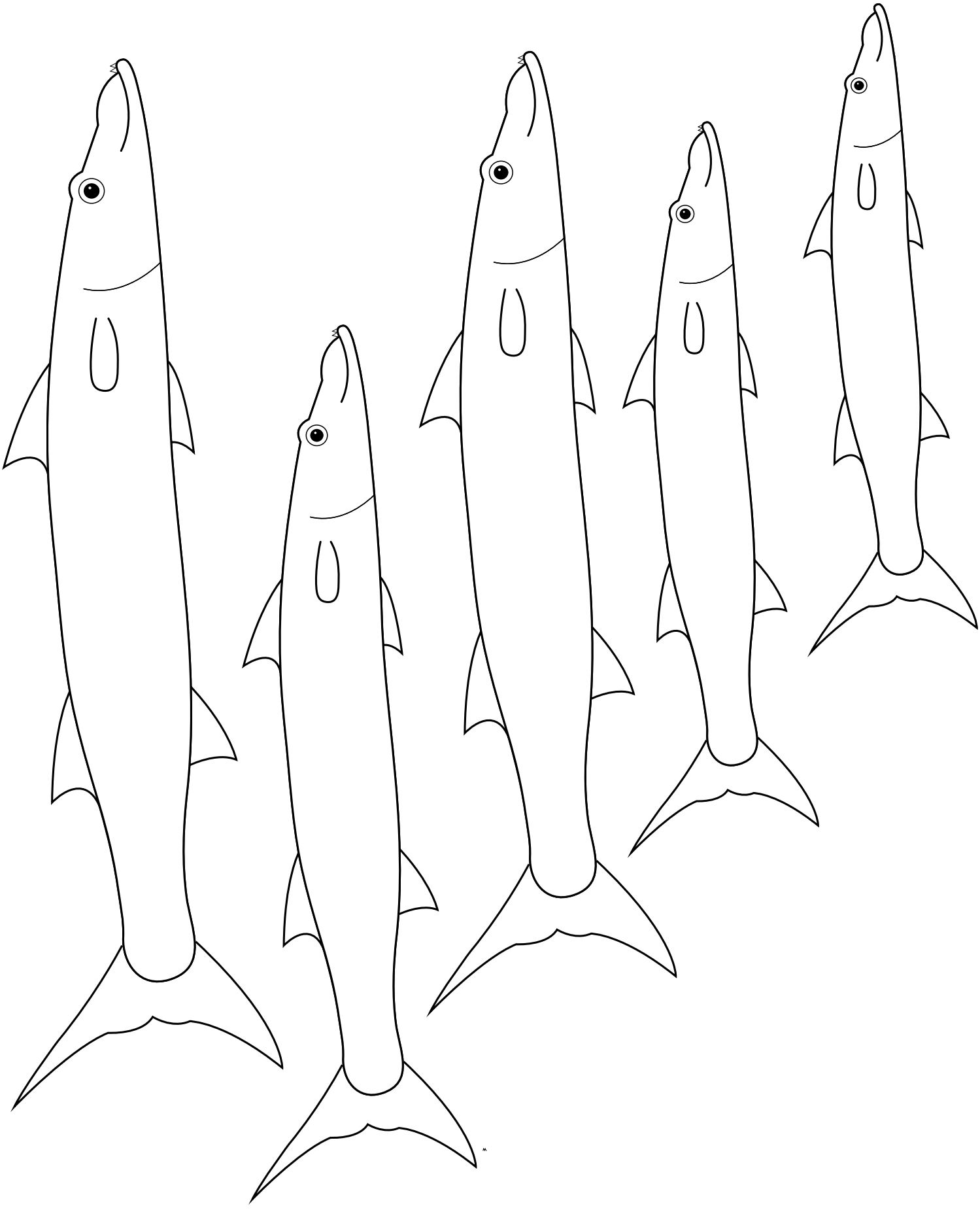
Crunch the coral
CRUNCH CRUNCH CRUNCH
Munching all day long…
Work your beak to
MUNCH MUNCH MUNCH
A lunch-y sounding song
Crack, grind,
CHOMP CHOMP CHOMP
Feeding all day long….
Gnaw, chew,
MUNCH THAT LUNCH
Swallow now it's gone!

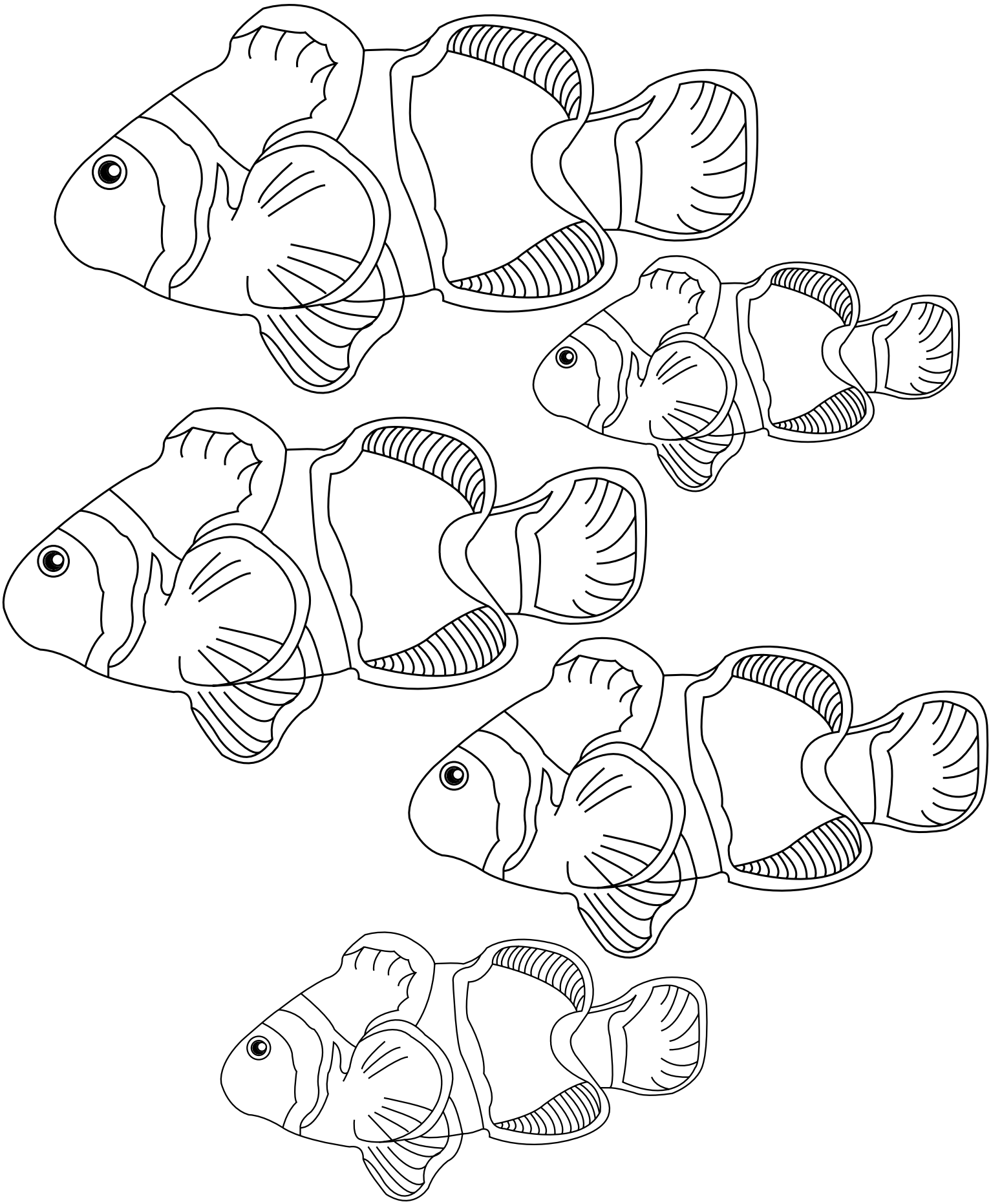
Parrot Fish Crunch

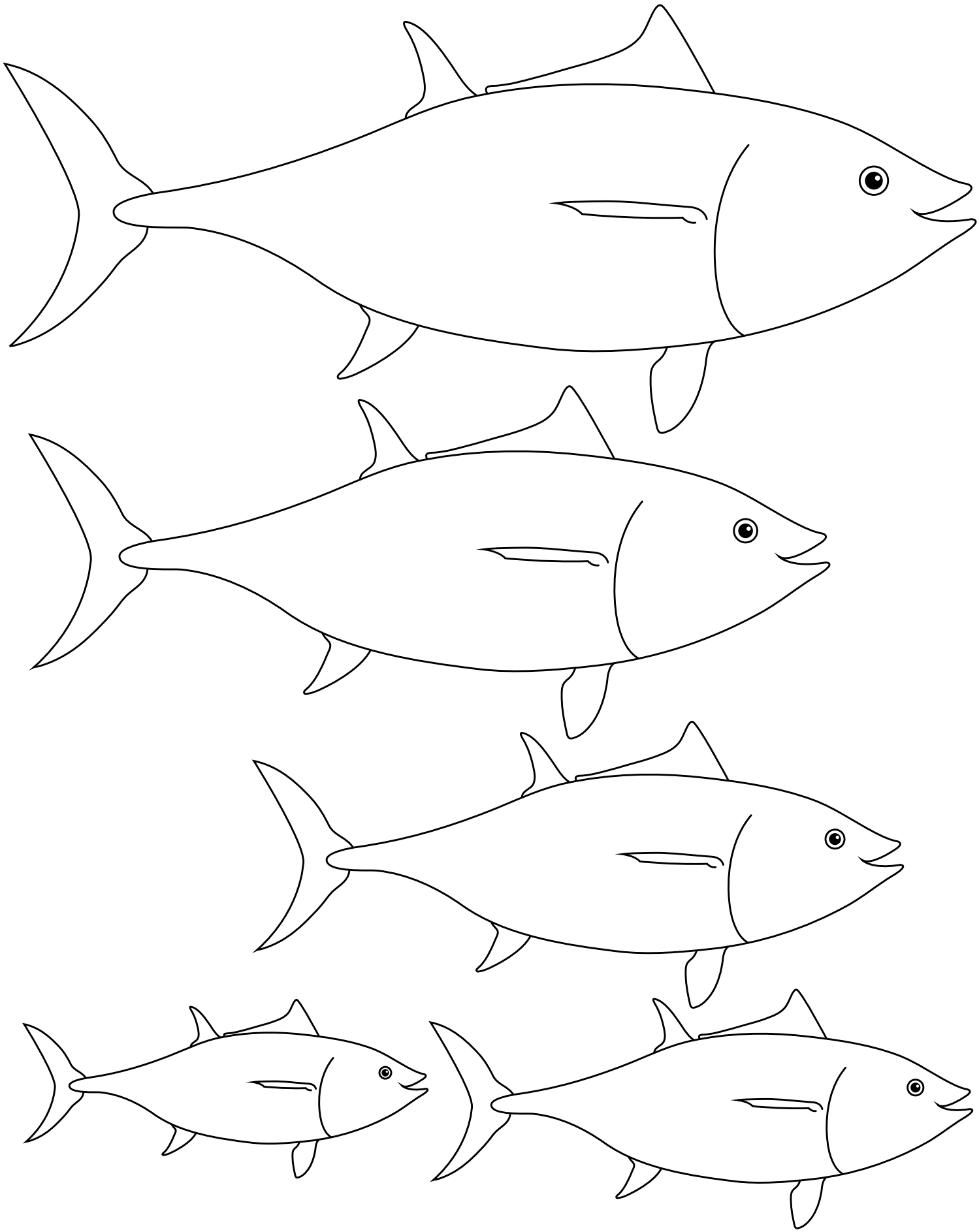


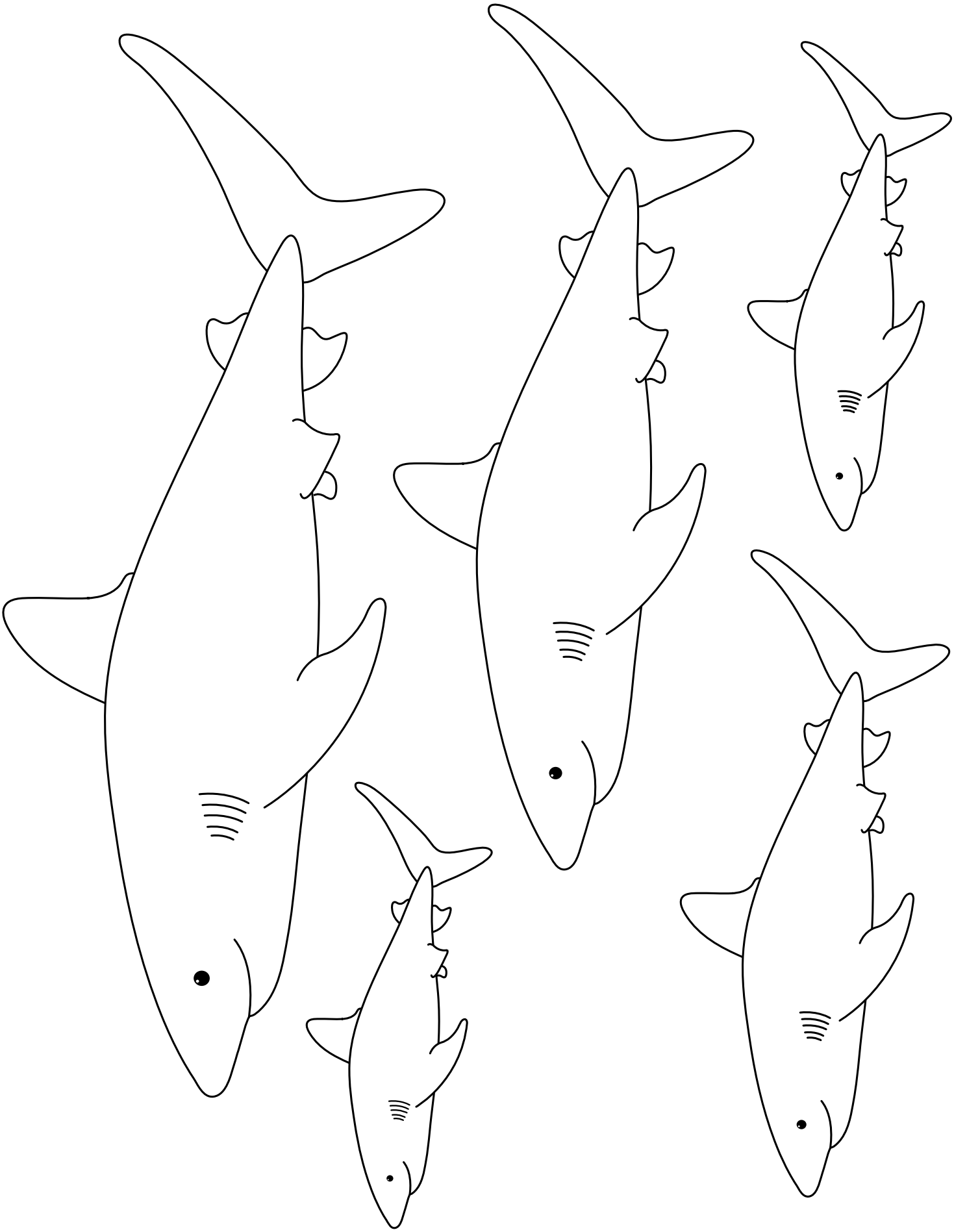
Name _____ **Date** _____

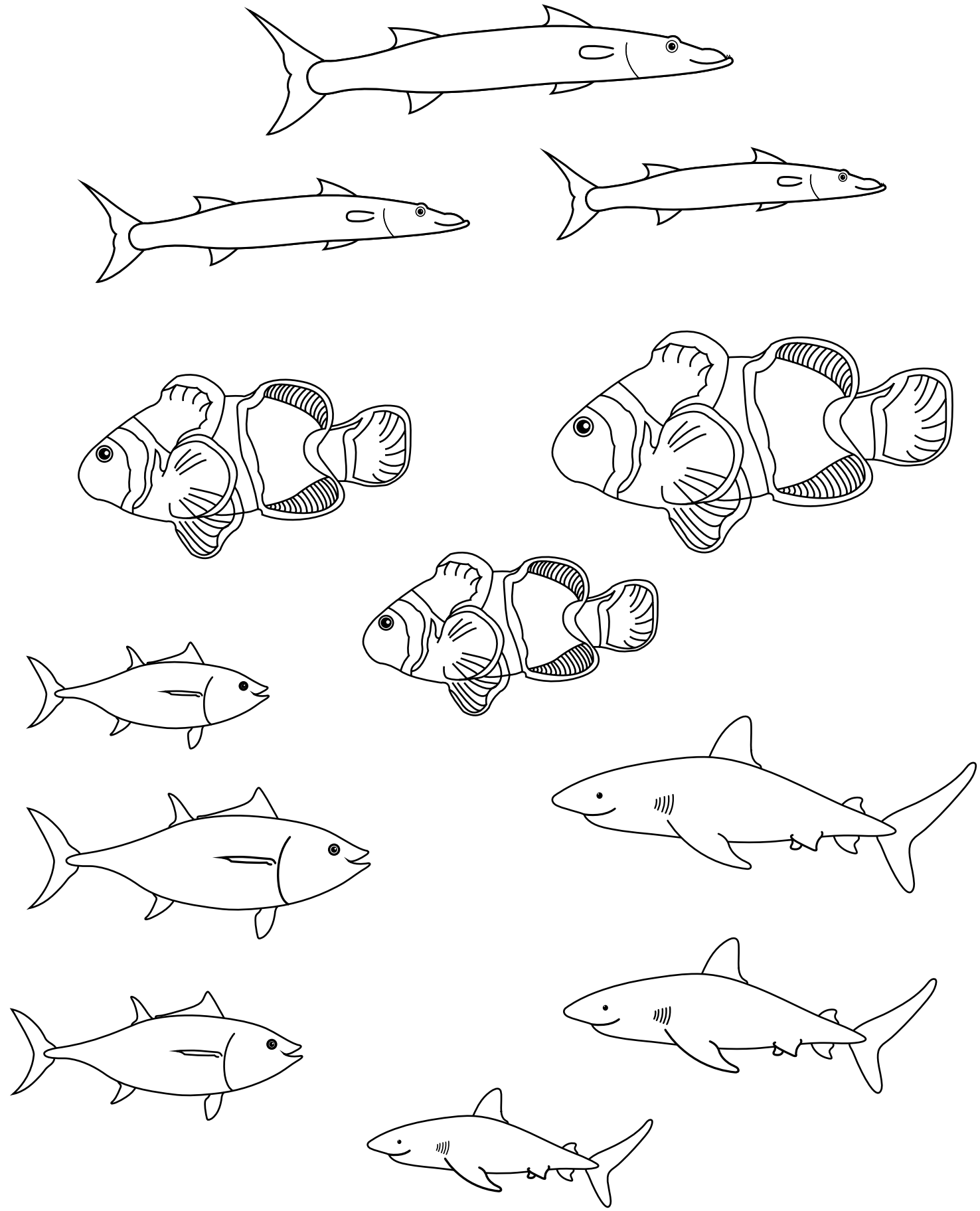
Directions: Color in the parrot fish and write down or draw his/her favorite food.



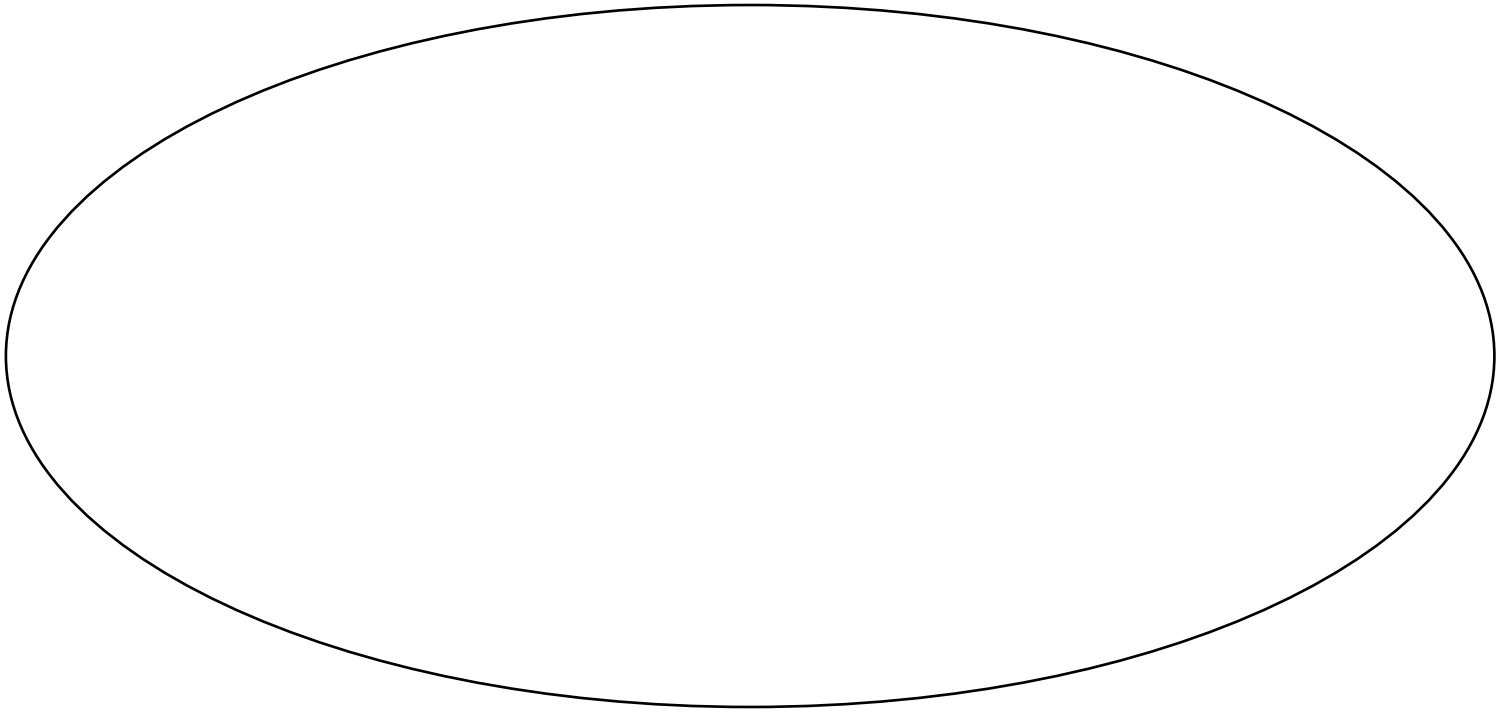






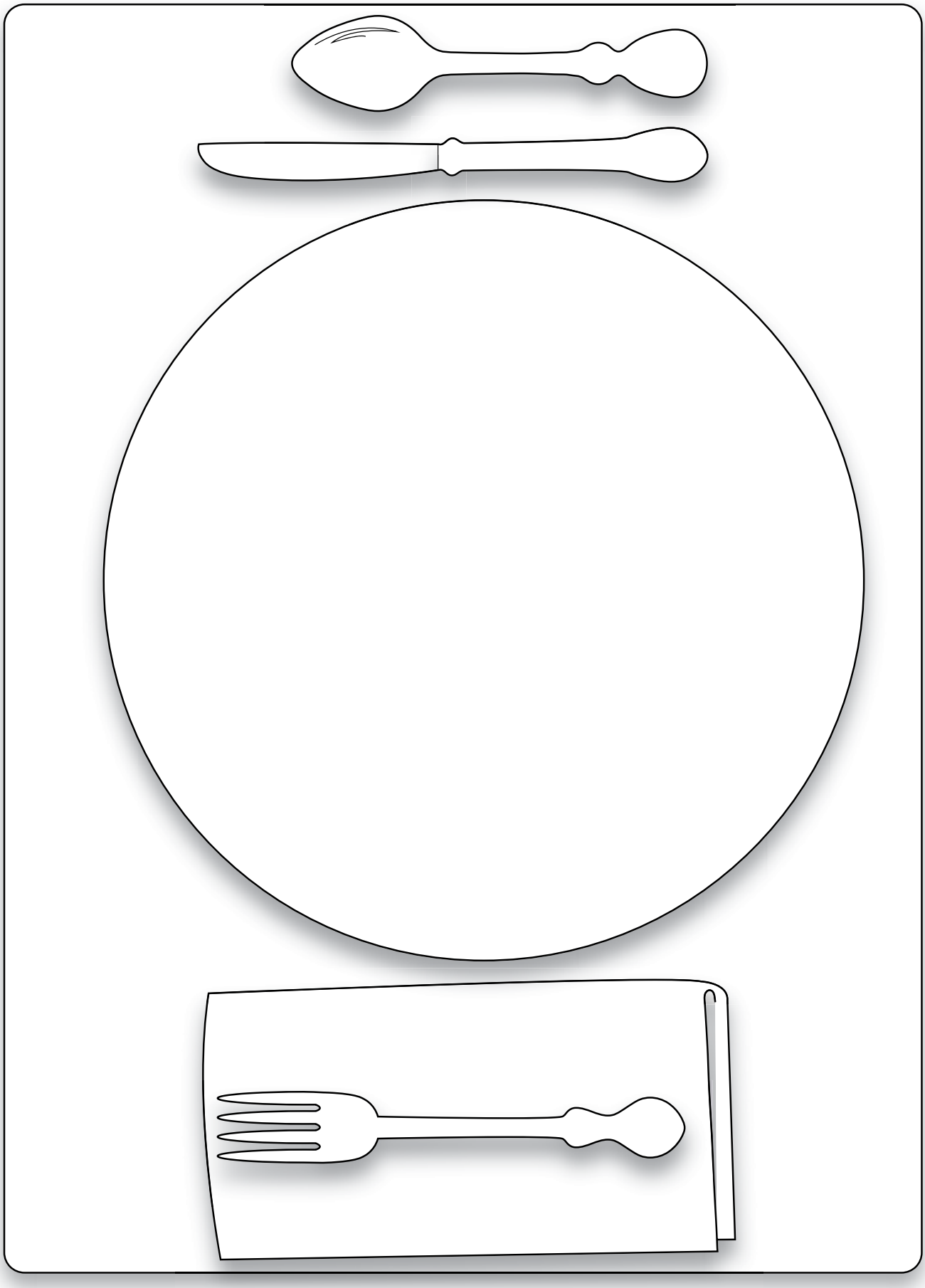


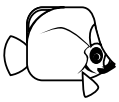
Fish It!

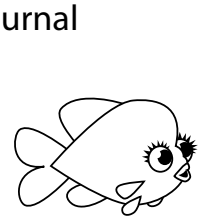


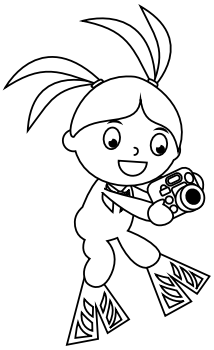
Name _____ **Date** _____

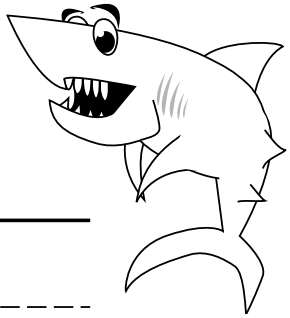
Directions: Fish come in many shapes and sizes. They may be round, triangular or rectangular. Using this basic oval shape, add in the details of your special fish. Mouth, Eyes, Gills, Fins, Tail, Scales or Skin.



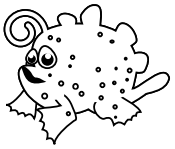


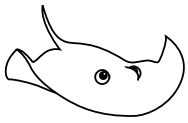


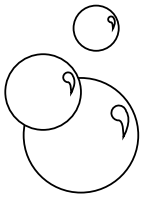


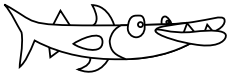


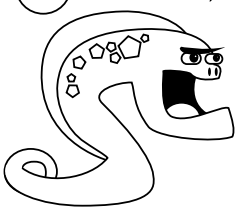
Today I learned...

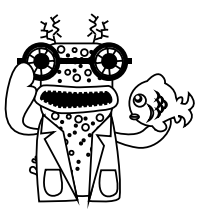


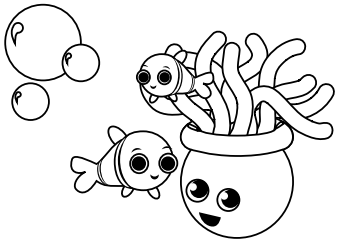


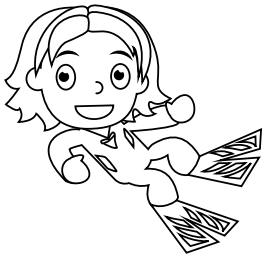






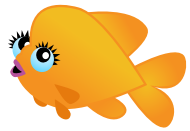






Fishes, Fishes, More and More Fishes

Fishes, Fishes, More and More Fishes



CONCEPT / TOPICS TO TEACH

There are many diverse types of fish that live in the sea. They belong to different families based on similar physical characteristics, like seahorses, sharks, and frogfish are distinct families, yet they all have things in common that make them fish. Throughout the ocean fish come in all shapes, colors, and sizes, therefore fish are "*diverse*."

Objectives:

- Students will build confidence and teamwork skills through an activity where buddy teams find ways to help one another throughout the day.
- Students will practice creative process, fine motor coordination, and teamwork skills as they work together to build an ocean mural.
- Students will engage imagination play through an elaborate scenario allowing them to be scuba divers, scientists, boat captains, or animals interacting in a simulated ocean.
- Students will use fine motor skills and logic through an activity requiring them to identify and draw in the missing body parts on a collection of fish.
- Students will develop literacy skills, fine motor coordination, and creativity in an activity requiring them to recall something they learned about fish to incorporate into their own fish design.

Character Education: SELF-EXPRESSION

By the time a child goes to school, they have often heard the word "no" thousands of times. Dive Into Your Imagination believes children need to be reminded they are great. Children can do anything they imagine as long as they understand the steps needed in order to make dreams a reality. Learning positive SELF-EXPRESSION is very important to the development of their self-esteem. Through hard work and education children can turn their dreams and imagination into reality. In your class, if your students experience respect, compassion and a nurturing environment they will be able to freely express their feelings, emotions, and thoughts, allowing creativity and learning!

The Ocean is a great platform and can be used as a metaphor for students to learn SELF-EXPRESSION. There are thousands of unique species of fish adapted to life in the sea. Each and every one of your students is unique. Each and every species of the thousands of fish are unique! You have a unique school of fish in your class needing to express themselves. Children need to feel they can safely use SELF-EXPRESSION and imagination, which in turn will give them great personal power.

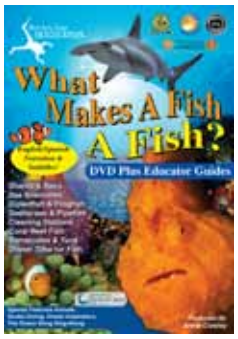
The ocean is such an unbelievable world! The ocean allows children to learn and discover the unbelievable is real. Try to choose to say yes as often as possible! Fostering a child's ability to fully be able to SELF EXPRESS and celebrate one another's uniqueness builds self-confidence and self-esteem.

Get your students into buddy teams. Remind them of the common hand signals you use in your classroom when you go scuba diving into your imagination. Ask them to use their imagination, think about all the things they have learned. What animal can they relate to and how can they use this to express themselves through the next exercises? Remind students of the rules of scuba diving. We wear regulators in our mouths and communicate through hand signals or by making notes. As students learning SELF EXPRESSION, remind them to always practice patience and respect one another's unique forms of SELF EXPRESSION.

Getting Started

Required Materials

- ❍ DVD "What Makes A Fish, A Fish?" by Dive Into Your Imagination
- ❍ Large Dry Erase Board/Easel and Markers



TREASURE CHEST

- Camouflage
- Cell
- Chromatophore
- Disguise
- Estuary
- Mating
- Population
- Predator
- Scales
- Scientist
- Species
- Zoologist

Anticipatory Set Lead-In

- ✧ Watch and become familiar with chapter eight "Fishes, Fishes, Fishes, More and More Fishes" from the DVD "*What Makes a Fish, a Fish?*"
- ✧ Before running the film clip, have students imagine they are zoologists, meaning they are scientists who specialize in the behavior of animals as they study the animals in the film clip. Have them get into their buddy teams to look for answers to questions you give them.

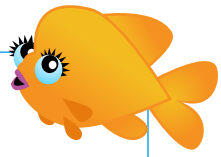
Here are some questions and answers you can use to build a brainstorming session:

KWL LGL AG WP

Questions for Students	Answers for Educators
What different colors do you see on the fish?	*Fish come in almost every color imaginable: pink, red, blue, green, orange, purple, yellow, and many more colors. They also come in many combinations of color.*
Are all fish you see the same size?	*No! Some are barely a centimeter long while others like the whale shark can grow up to sixty feet!*
Can you remember some of the names of different fish you see in the video?	*Hawkfish, Leaf Fish, Frogfish, Hairy Fish, Angelfish, Devilfish,Trumpetfish, Tuna Fish, Kelpfish, Catfish, Batfish, Parrotfish, Porcupine Pufferfish, Lizardfish, Cardinalfish, Waspfish, Scorpionfish! All of the names are located in the transcript.*
What is the most interesting fish you remember from the video? Why?	*This opportunity allows students to share their personal perspective.*

Video Review

- After watching the video about "Fishes, Fishes, More and More Fishes" once or even a few times, discuss and write down additional facts, questions, and information students gained from the video for further research and discussion.
- Ask students to write a reflection in their journal about the variety of fishes.
- Self-expression is an important part of our lives. We are all the same, yet we are all different. Have students reflect on the importance of respecting one another and our ability to self-express.



Imagination Value

Have your students imagine they are scuba divers. They are going to imagine entering another world. Have students think of ways they can be unique through SELF-EXPRESSION, while following the rules necessary for safety underwater. You can read this script to them or use your imagination and create your own!

"On the count of three we are going to say the magic word and become SCUBA DIVERS! 1, 2, 3…IMAGINATION! In order for scuba divers and snorkelers to see underwater, we have to wear a mask over our eyes with our nose enclosed. People need air in front of their eyes in order to see underwater when snorkeling or scuba diving. In order to swim and conserve our energy, we wear fins on our feet and never use our arms for propulsion.

What would you do if you became an underwater photographer or a marine biologist. Would you move differently underwater? Maybe slower! Get together with your buddy and check your equipment. You need to put on your mask, fins, tank, and other scuba equipment on so you can go underwater and observe fish in their environment. Remember the golden rule in scuba diving is to stop, think, and breathe slowly. If you breathe fast, you move fast and will scare the fish away, yet when you breathe slowly, you move slowly! Are you ready to go? Get with your buddy and signal OK to go down! Put your regulator in your mouth and descend… Everything is silent underwater. Underwater you witness the unbelievable is REAL!

What fish would you like to film and study? Perhaps you will collect parrotfish, barracuda, a seahorse, an eel or maybe even a shark. How much can you learn about animals through observation? How much can we learn about one another through observations? Remember as scuba divers you need to go slow so as not to scare the fish! Scuba divers talk with hand signals underwater and use slates to write down notes, draw pictures or even symbols. Scuba divers carry special cameras to photograph and video what we observe. It is a lot of fun to imagine you can go underwater as a scuba diver! The animals you choose to study are a reflection of you. How will you express yourself in class today? As a scuba diving underwater photograher can you bring out your best? The more you learn, the more you grow!"

CLASSROOM ACTIVITY STATION H1

GO FISH

Overview

Students will be given a colorful fish and asked to find the classmate with the matching counterpart. For the rest of the day they will be a team and look for ways to help each other just as the sea anemone and clownfish do. This activity will help students *build confidence and teamwork skills*, and reinforce key content from the video.

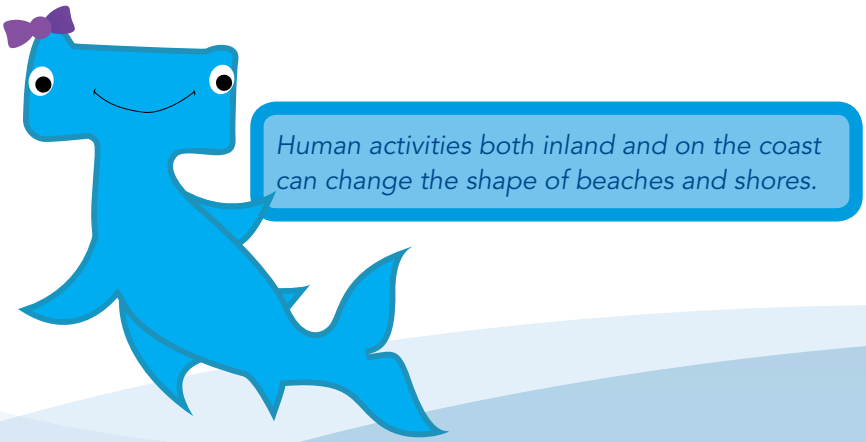
Materials: Fish Templates, Colored Construction Paper, Scissor

Talking Points

- ✧ After handing out fish cutouts to students, ask them to look around at all of the fish in the circle.
- ✧ Point out there are many kinds of fish in the group. What do they know about the different fish?
- ✧ Explain ocean animals form partnerships that help them to thrive and survive, and today each student will have an opportunity to explore how teamwork promotes survival.

Lesson Procedure

1. Make fish cutouts in color pairs. Number the fish so students can find the buddy who has the same color fish and the same number.
2. Sit students in a circle and give each a fish.
3. Ask students to find the student who has a fish of the color and number matching their fish.
4. Students will form buddy teams based on the matched sets of fish.
5. For the rest of the day, students will maintain their "buddy teams" and look for ways to help each other.



CLASSROOM ACTIVITY STATION H1 (Continued)

GO FISH

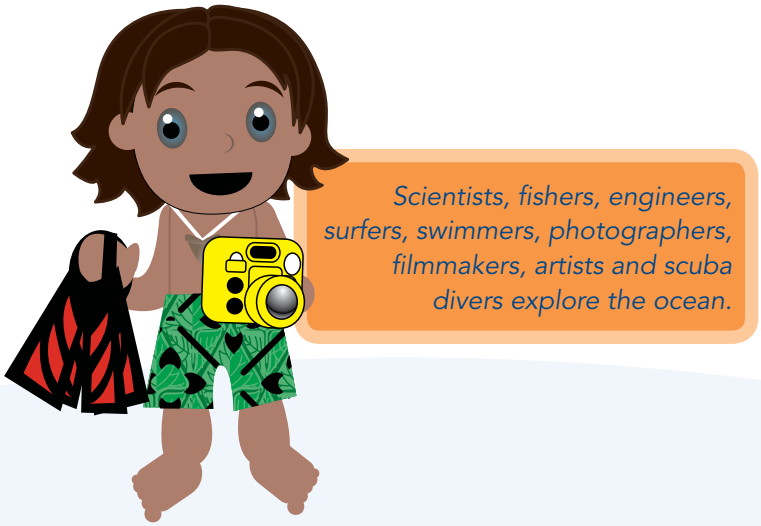
Extension Ideas

» Talk with students about ways they help their family at home.

» Have students form buddy teams for the day and realize how important it is to rely on one another. Have students change buddies the next day. At the end of the day reflect with students what kinds of things were similar and/or different with each partner experience.

» Discuss how much fun it is to have a buddy and be able to share with one another. Give students positive reinforcement as they express themselves and share their ideas.

Notes



Scientists, fishers, engineers, surfers, swimmers, photographers, filmmakers, artists and scuba divers explore the ocean.

CLASSROOM ACTIVITY STATION H2

OCEAN MOTION

Overview

Students will create a wall mural of fish in different shapes, sizes, and colors. Participating in this activity will provide students with an opportunity to review *recognition of shapes, size, colors, and counting*, build *fine motor coordination*, and collaborate on a group art activity.

Materials: Butcher Paper, Inkpads, *Sponges cut in fish shapes to be dipped in paint or ink and pressed on the paper, Fish Templates, Paint, Glitter, Construction Paper cut in fish shapes students can decorate and glue to the paper, Scissors, Glue sticks

Talking Points

- Moving water can cause coastal build up and erosion, carrying earth materials from one place to another and shapes the shoreline. There is a constant force adding land and taking it away through nature.
- Earth materials from the ocean, such as sand, shells, corals and rocks, are carried to the shore by waves. Shorelines are built up by these materials plus those brought by rivers, such as rocks, sand, and soils.
- Erosion is the wearing away or taking away of rocks, soil, shells and other earth materials and features. Waves can also break down and wear away cliffs, beaches and materials brought to the shore, changing the shape of the shoreline.
- Rocks, shells, corals, plants and other materials can be broken down into sand. There are many ecosystems living along the shoreline. What different ocean ecosystems can your students name where fish live?

**Sponges can be purchased in flat sheets that are like cardboard from craft stores. These can easily be cut into shapes using outlines from activities.*

Lesson Procedure

1. Lay butcher paper out on a flat, clean area or hang it on a wall where students will have easy access to work.
2. Instruct students to decorate the paper with all kinds of fish by using fish cut outs, sponges dipped in paint or ink, and whatever other available materials. For example, potato mashers can be dipped in paint and used to make imprints resembling coral, as can cut potatoes and even leaves.
3. During activity discuss with students about the different kinds of life and habitat they saw in the film. Emphasizing diversity such as range of colors, shapes, sizes etc. and how diversity relates to SELF-EXPRESSION.

CLASSROOM ACTIVITY STATION H2 (Continued)

OCEAN MOTION

Extension Ideas

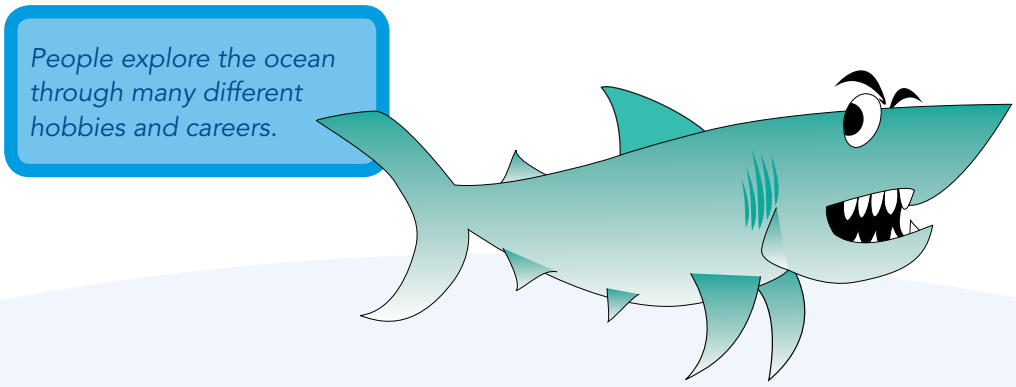
» Have students name their fish and develop a story about their fish. Using their imagination, have students discuss how their fish's colors are a form of SELF EXPRESSION and imagination.

» Have students paint their hand and leave their handprints in a row on the butcher paper. They can then look at the size, shape, and fingerprints on their hands. Have students think of ways they are diverse.

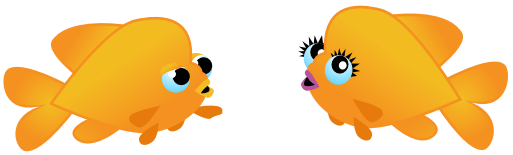
» Have students use teamwork to create a fish story on the butcher paper. Each student can be a different fish and find ways to include their fish and paint it into the story.

» After hanging the painting, play a game of "I Spy" or "I am thinking of the color…"

Notes



CLASSROOM ACTIVITY STATION H3
EXPLORE WITH ME!



Overview

Students will take turns exploring and being the creatures in an imaginary ocean. Participating in this activity will provide students with an opportunity to engage in *fine motor activity, art, and imagination play.*

Materials: Several empty 1 or 2 liter soda bottles, Thick silver duct tape, A few yards of thick elastic band, A wide paint brush, Black paint or permanent marker for use on plastic, Black felt, Hole punch, Shoelace style elastic, Scissors, Swim fin templates, Mask template, Crayons or Colored Pencils, String

Talking Points

- Ask students why they think people study the ocean. Affirm that there are many reasons including general curiosity, the need to find out what kinds of animals and features the ocean has, and to find resources that can help people live better lives.
- Ask students what kinds of tools people need to explore the ocean. Affirm there are many tools, a very important one of them being SCUBA which is used by hobbyists and scientists alike.
- Explain to students they will have an opportunity to explore a classroom ocean as SCUBA divers.
- SCUBA stands for Self Contained Underwater Breathing Apparatus.

Lesson Procedure

1. Build SCUBA gear as directed in *this* lesson plan.
2. Spread blue sheets or blankets on the floor designating it "the ocean." To really simulate features of the seafloor, you can use chairs to create caves or mountains etc.
3. Set up a work area where students can color in mask templates. Affix string or elastic to help hold them on.
4. Instruct class they will have turns to explore the ocean, the area of your room where the blue sheet or blanket represents the ocean. They can be animals that live in the ocean wearing their fish masks or scuba divers wearing their tanks! *See Set Up Procedure on next page.*

We need to learn about ocean resources through exploration and scientific investigation.

CLASSROOM ACTIVITY STATION H3 (CONTINUED)

EXPLORE WITH ME!

Set Up Procedure

Making SCUBA Tanks

- Use scissors to cut two slits on each side of bottle 2-litre bottles.
- Paint bottles black or any other color you wish and set them aside to dry. Scuba tanks come in many colors from blue to neon pink to silver!
- Feed a strip of elastic approximately 2 inches wide and 12 inches long through the slits to create a "belt".
- Staple the two loose ends of the belt together to hold them shut and wrap duct tape around it to look like a buckle. Check the edges and make sure there are no sharp edges. If sharp edges, use the duck tape to make them smooth.

Making Swim Fins

- Using the template, cut out several pieces of felt to make as many pairs of fins as desired. If you do not have felt, you can use a heavier card stock. Swim fins come in many colors so be creative with your colors! You can also glue the felt to the cardstock so the fins last longer.
- Use a hole punch to punch holes in the fabric.
- Cut the shoelace style elastic into 4 inch pieces (one for each fin)
- Carefully tie the shoe-lace style elastic as shown in the diagram.

Extension Ideas

» Turn the exercise into a scavenger hunt activity by assigning individuals or buddy teams certain things they must find in the ocean.

» Ask students to journal about the experience in pictures or words to simulate a scuba divers log. Scuba divers log every dive and scientists write reports.

» Have students bring in their special equipment they use for swimming. Many have goggles or swim aides. You can do a show and tell with these items.

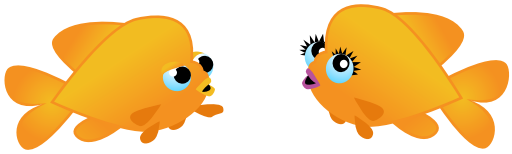
» Visit your local scuba diving shop and see if they have a program for kids. You also might be inspired to Discover Scuba Diving!

» Hire Ocean Annie to come to your school. For more information on Annie Crawley's speaking engagements, visit her website at www.AnnieCrawley.com.

Notes

CLASSROOM ACTIVITY STATION H4

FINISH THE FISH!



Overview

Students will look at the illustrations of different kinds of fish on their worksheets and try to see what body part of the fish is missing. Students will draw in the missing part and teacher will help them write down the words describing why the missing part is important to the fish. Participating in this activity helps students develop *visual perceptual skills, fine motor coordination, logic, observation, and reasoning abilities.*

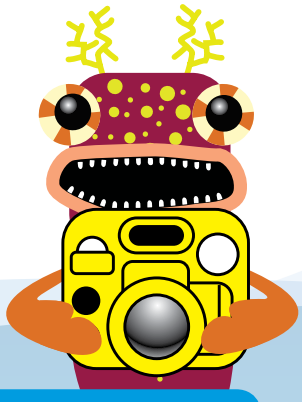
Materials: "Finish the Fish" Activity

Talking Points

- Review with students, what makes a fish, a fish? There is great diversity in our ocean. There are more than 32,000 species of fish making them the most diverse group of vertebrates on the planet. Have students explain what are vertebrates verse invertebrates? Are sharks fish? What makes a shark a fish? How are they different from bony fishes?
- Challenge students to use their imagination and become scientists observing fish. What a fish looks like may help students understand what they eat, where the fish may live, how they protect themselves, etc. It will take great observation skills to find all the missing parts of the fish! Have fun with this, have students pull out their magnifying glass to examine the fish!

Lesson Procedure

1. Provide each student with a copy of the "Finish the Fish" activity.
2. Instruct students to identify the missing body part on the fish and draw it in as best they can.
3. Assist students as needed in writing down how this body part helps the fish live.



Human activities sometimes pollute the ocean. Help keep our ocean clean!

CLASSROOM ACTIVITY STATION H4 (Continued)

FINISH THE FISH!

Extension Ideas

» Have students get together in their buddy teams and go on an imaginary scuba dive. They have to decide where they are going to go, what they will see and teach each other hand signals before going underwater because they can't talk while scuba diving. Have them prepare for their dive, and then go around the classroom on a ten-minute scuba dive exploring their destination.

» Have students draw or write about their experience and what it is like to be a scuba diver. Encourage the use of imagination and the freedom of full SELF-EXPRESSION.

» Have students use their imagination to come up with their own, funny body parts to add onto the fish. Have them cut them out and create their own, made up fish and write/tell a story about it.

» Have students think about their own body parts and how each one helps them in a certain way. Allow them to compare and contrast their body parts to that of fish and come up with ideas on why they are different or similar.

Notes

CLASSROOM ACTIVITY STATION H5

FISH TALES

Overview

Each student will draw an interesting fish they remember from the video. Help students write down what they found interesting about the fish on their drawing page. Compile the pages into students journals. Participation in this activity will provide an opportunity for student recall of what they saw in the video, *build literacy skills*, *fine motor skills*, and expand *vocabulary*.

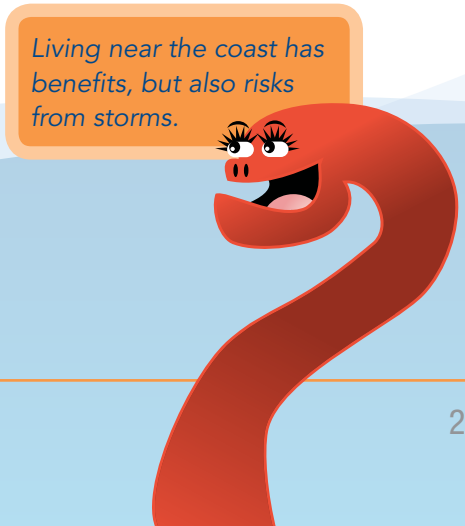
Materials: Paper, Crayons and/or colored pencils, Transcript from FISHES, FISHES, FISHES

Talking Points

- Where does rain come from? Where does the water in our lakes come from? Help students follow the trail of water back to the ocean by discussing these points with them. Fish live in almost every body of water on our planet. There are more than 32,000 species of fish.
- The ocean is a major influence on weather and climate. Local weather, including precipitation fog and wind, can be caused by the ocean—no matter where you live.
- Most of the water in lakes, ponds, rivers and the ground comes from water that evaporated from the ocean and fell to the land as precipitation. Most of the water from land and in the atmosphere eventually returns to the ocean as runoff from rivers, or precipitation. Our ocean is responsible for our water, food and oxygen. We need a healthy ocean, we are interconnected.
- Some people study the ocean for their profession while others use it for recreation. Have students imagine they are either scientists or scuba divers while creating their unique fish!

Lesson Procedure

1. Set out paper, crayons and/or colored pencils.
2. Instruct students to create their own unique fish including these body parts: fins, gills, eyes, mouth and body.
3. As students begin their drawings, replay the chapter or read them the transcript to increase their creativity.
4. Spend time exploring elements that the creatures in each illustration share in common, and also what makes them diverse.



CLASSROOM ACTIVITY STATION H5 (Continued)

FISH TALES

Extension Ideas

» Have students use memory recall and name all the different fish they can remember from the video. Write down all the names they can remember. Play the video again to see if after you play it again they can add to the list!

» Encourage students to create their own imaginary fish, but have them give reasons for the eyes, mouth or tails they draw relating to how the fish lives. Encourage them to express themselves through their art and their words both scientifically and through their imagination.

» Challenge students to research fish at home or from one of the books in the book stall and share their new facts with the class.

» Have students think about what fish they would like to be if they lived in the ocean. Children can then use teamwork to create an ocean play, with each of them as a different fish/character.

Notes

Most of the water from land and in the atmosphere eventually returns to the ocean as runoff from rivers, or precipitation.

CLASSROOM ACTIVITY STATION H6
BOOK STALL

Overview

Providing a reading and or computer area where students can look through books about the subject being discussed will help to build early literacy. Even if the children are not reading yet, looking at pictures and building dialogue around the pictures is helpful to developing *vocabulary and language skills.*

Materials: The book *Hello Ocean* by Pam Munoz Ryan

Lesson Procedure; Character Education, SELF-EXPRESSION

1. As a class read the story *Hello Ocean* by Pam Munoz Ryan that relates the five senses to the experience of being at the ocean
2. Create an experiment through which students taste, smell, or touch a variety of objects and graph the results for each student indicating which things they liked or didn't like in columns.
3. Spend time discussing how our preferences are a form of self expression, and that our likes and dislikes make us unique and special. Have students write or illustrate one of their strong likes and dislikes.

Poster: BELIEVE

"There are no risks in life if you are true to your intentions."

Fine Art Prints, posters, greeting cards and other products are available to decorate your classroom or school while inspiring your students with real ocean animals and environmental scenes. Contact us to learn more.

Using a map, have students find Darwin Island in the Galapagos. Hammerheads go here to get cleaned by butterflyfish!

Hammerhead shark , Darwin Arch Galapagos

Book Suggestions

» Coldiron, Deborah. *Ocean Sunfish*. Edina, Minnesota: ABDO Publishing, 2009. Ages 4-8.

» Davies, Kate. *Sea Under the Sea*. Illus. Colin King. Tulsa, Oklahoma: Usborne Books, 2009. Ages 4-8.

» Johnson, Jinny. *Children's Guide to Sea Creatures*. New York, New York: Simon and Schuster, 1998. Ages 5-10.

» Kudlinski, Kathleen. *The Seaside Switch*. Illus. Lindy Burnett. Minnetonka, Minnesota: North Word Books for Young Readers, 2007. Ages 4-8.

» Munoz Ryan, Pam. *Hello Ocean*. Illus. Mark Astrella. Watertown, Massachusetts: Charlesbridge Publishing, 2001. Ages 3-8.

» Priddy, Roger. *Big and Busy Ocean*. New York, New York: Priddy Books, 2009. Ages 4-8.

Closure and Follow Up

✧ Once students experience the learning stations, gather them to discuss what new facts they learned from participating in the activities and reflect on how much they learned.

✧ Talk with students about endangered fish. Fish are endangered because they are disappearing from the ocean because people collect them to eat or to keep in aquariums. Help students understand that we can protect the ocean by taking care when selecting fish to eat or keeping as pets. We should eat only sustainable seafood.

✧ It is okay to take things from the ocean as long as we do it in a sustainable way, meaning that we only take small amounts at a time, and leave the rest alone to grow and have babies so that there will still be animals in the future.

✧ Show students a globe or world map, and ask them where they think fish live. Confirm fish live in all parts of the ocean and fish have specialized bodies and adaptations that help them live in different parts of the ocean.

✧ To reinforce the learning, you can review new vocabulary from the treasure chest and incorporate it into sentences or a story.

✧ Everything we do on land affects the Ocean. Our ocean is responsible for more than 70% of the oxygen we breathe, food we eat, and our water. We need to protect our ocean.

Plan for Independent Practice

» Ask students to think of all the things that make them unique or diverse from their classmates, and things that make them the same. Spend time comparing and contrasting these qualities.

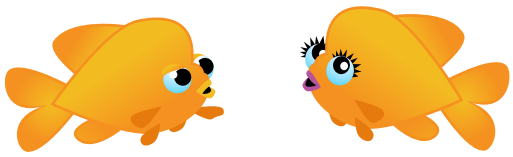
» Select stories from the suggested reading list to read as a class or for self-study.

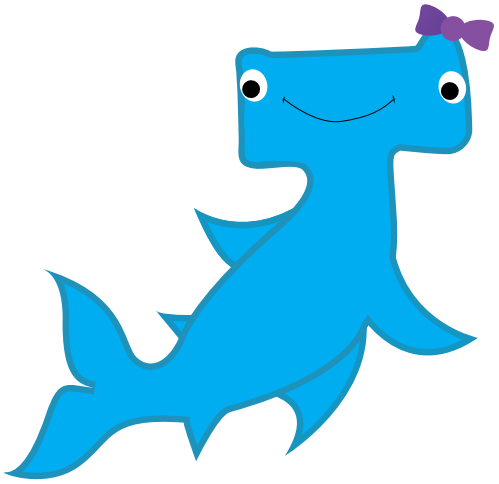
» Students can look for diversity in other animal groups: dogs, cats, butterflies etc.

» Review the word SELF-EXPRESSION with students and discuss how it relates to their character. Encourage them to use their imagination and think of all the ways they express themselves. Can they draw themselves and how they are proud of how they express themselves? What do they like to do? What can they share they are good at? Can they write a poem about themselves? Maybe they sing or dance and want to compose a song or create a dance to share their talents.

DVD TRANSCRIPT

Fishes, Fishes, Fishes, More And More Fishes





Fishes, Fishes, Fishes, More and More Fishes

New Fish, Old Fish, Silver Fish, Gold Fish

Hawkfish, Leaffish, Frogfish

Hairy Fish, Scary Fish, Spiked Fish, Striped Fish

Pink Fish, Purple Fish, Pink and Purple Fish

Giant Fish, Teeny tiny Fish, Fighting Fish, Hiding Fish

Angelfish, Devilfish

Thin Fish, Thick Fish,

Trumpetfish, Tuna Fish

One Fish, Two Fish, Three Fish, Lots-and-lots-of-Fish

Clear Fish, Kelpfish

Catfish, Batfish, Stick-out-your-tongue Fish

Parrotfish, Porcupine Pufferfish, Spotty Fish

Lizardfish, Cardinalfish, Waspfish, Scorpionfish

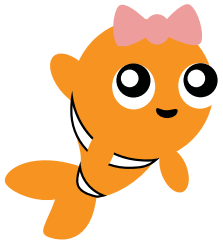
Warty Fish, Big Lip Fish

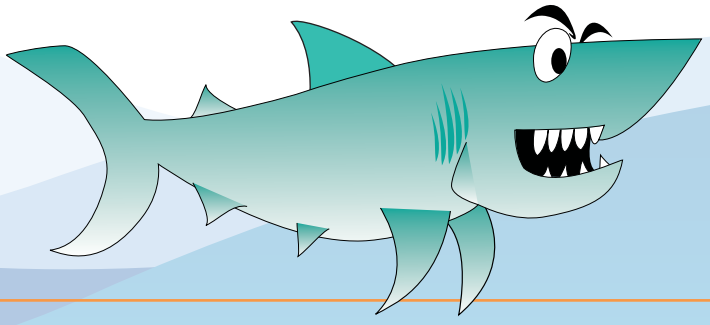
Orange Fish, White Fish, Green Fish, Glass Fish

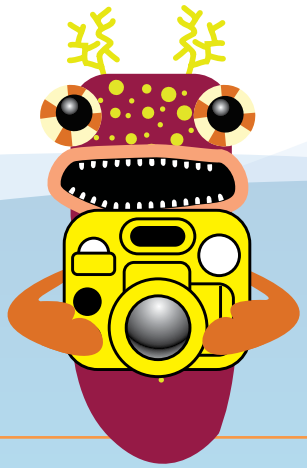
Pygmy Fish, Schooling Fish, Hey, Look-at-me Fish

Small mouth Fish, Big mouthed Fish, Sleepy Fish, The tail End Fish!

Fishes, Fishes, Fishes, More and More Fishes



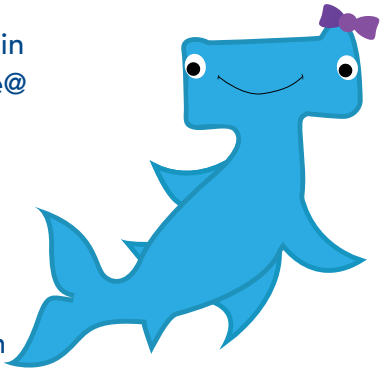




Go Blue! Ocean Annie's Tips to Help Our Environment

We want to hear from you!

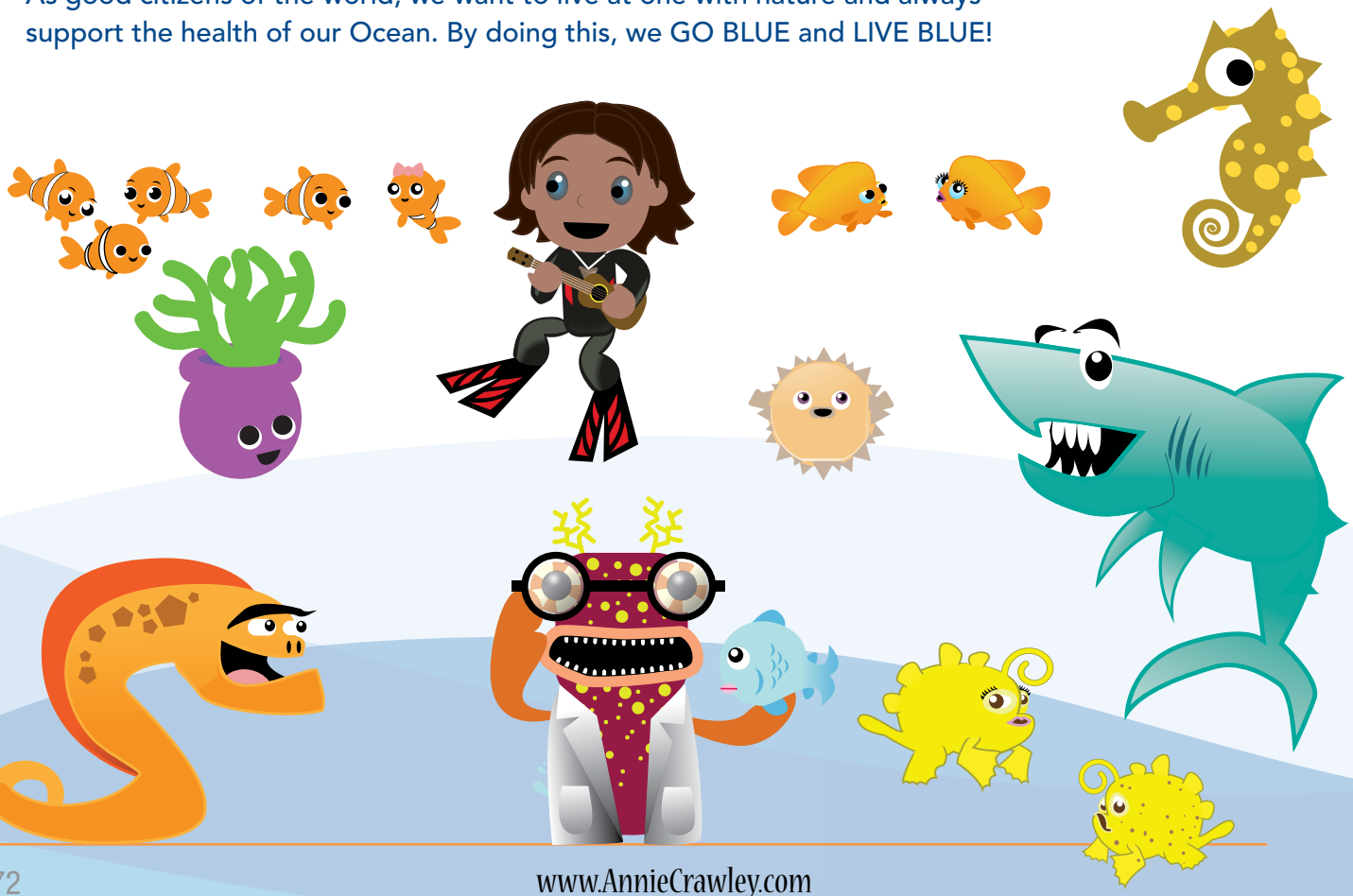
How did our GO BLUE environmental tips help your home, class, or community? Were you able to create a local or global initiative? Did you meet Ocean Annie's challenge and make your school and homes a no single use zone? What ways were you successful in reducing the amount of waste you create? We want to be able to share your positive environmental initiatives. Send us your story we can publish on our website, newsletter, and share with others. Please include images, video or artwork!

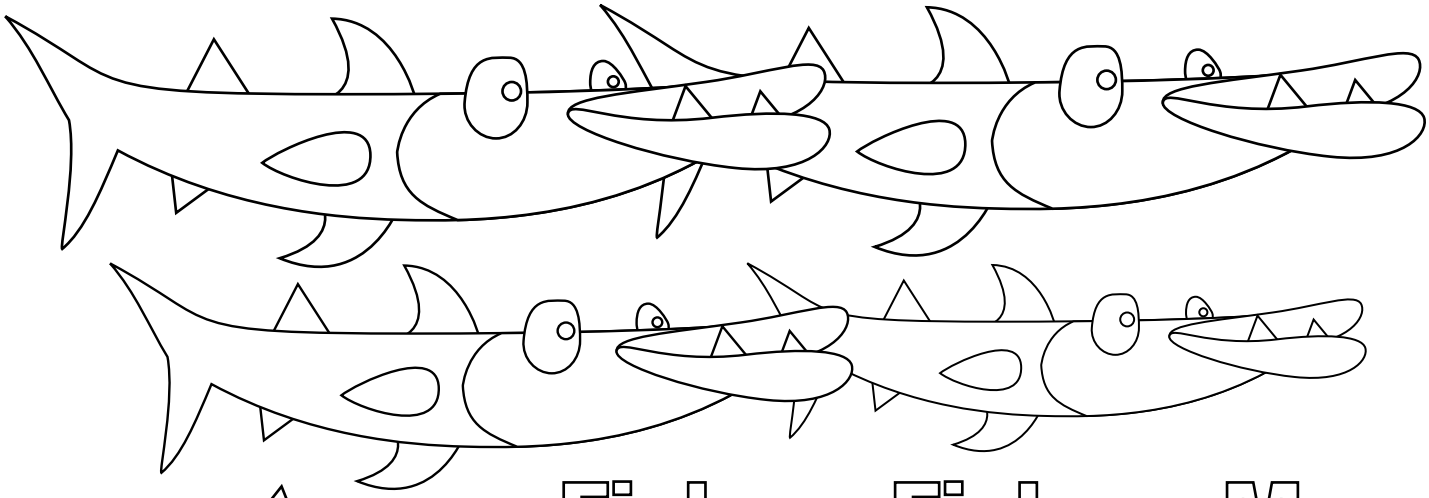


If you are interested in following Annie Crawley to locations around the world in real time, register your class or summer program by sending an email to Annie@AnnieCrawley.com She is also available to speak at schools around the world. Dive Into Your Imagination is working on developing relationships between schools too, let us know if you are interested in other initiatives.

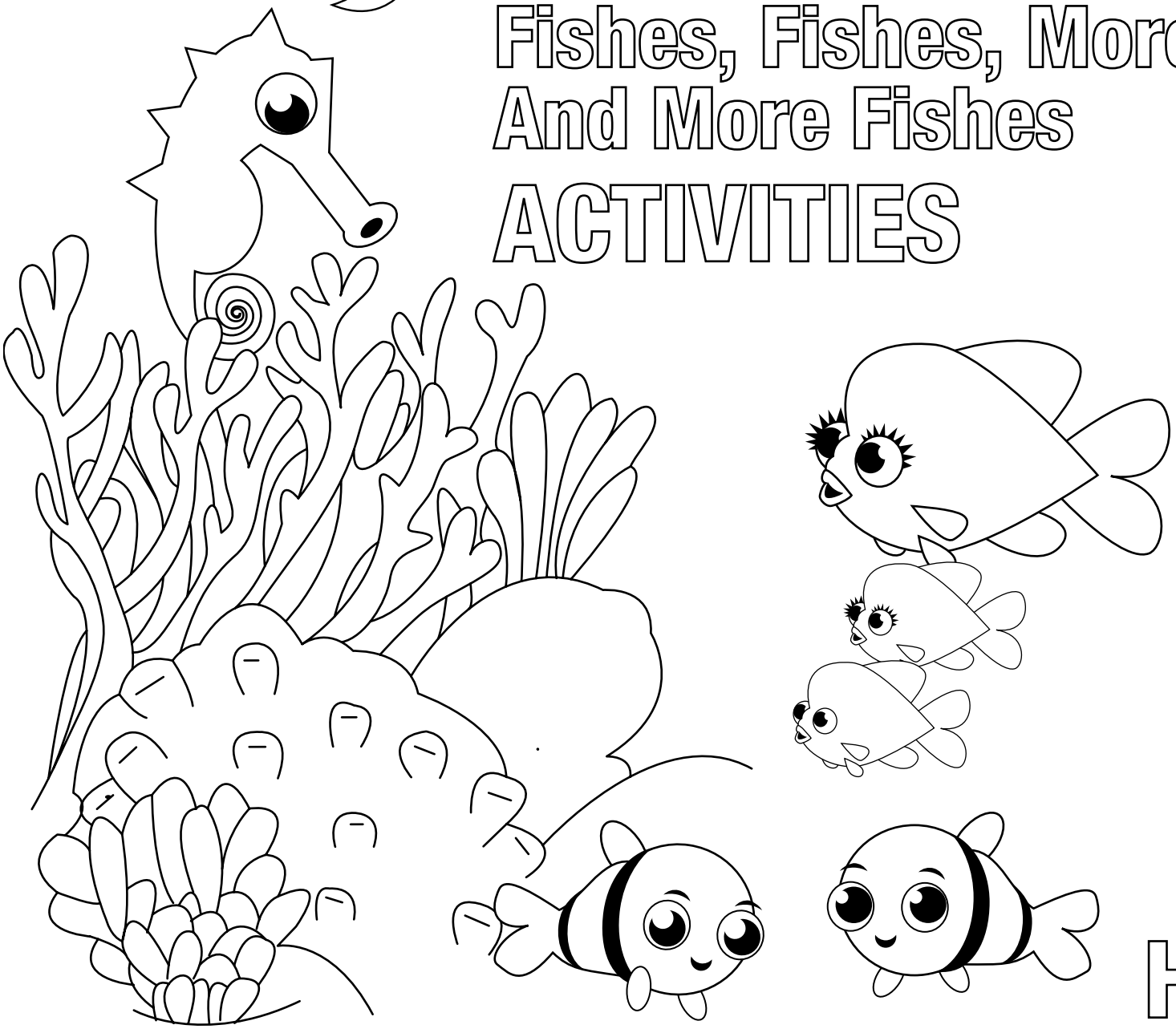
How can we help support your continuing education? Share your experiences through social media. You can post on our Facebook fanpage http://www.facebook.com/DiveIntoYourImagination and twitter account @DiveImagination

As good citizens of the world, we want to live at one with nature and always support the health of our Ocean. By doing this, we GO BLUE and LIVE BLUE!





Fishes, Fishes, More And More Fishes ACTIVITIES



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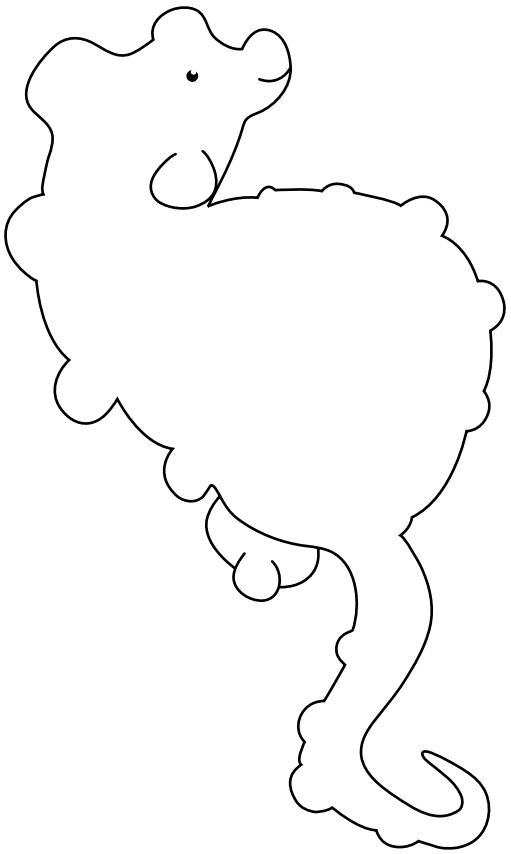
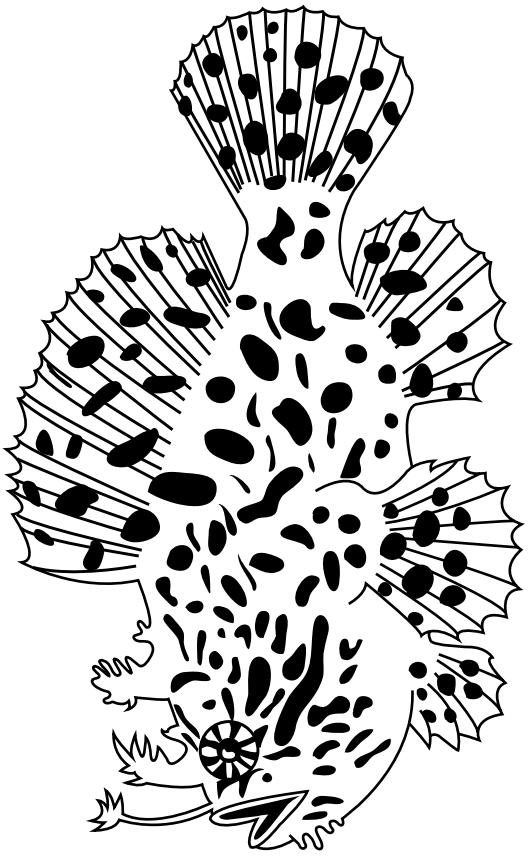
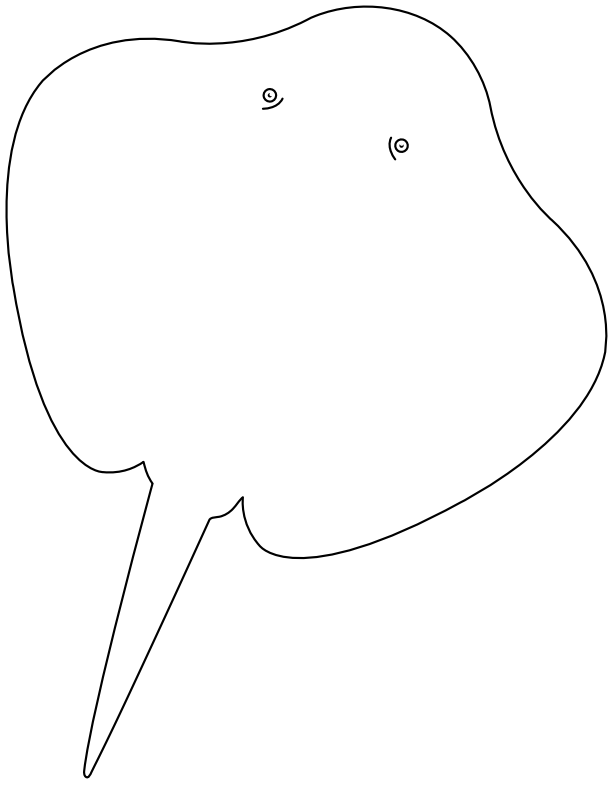
Name _____ **Date** _____

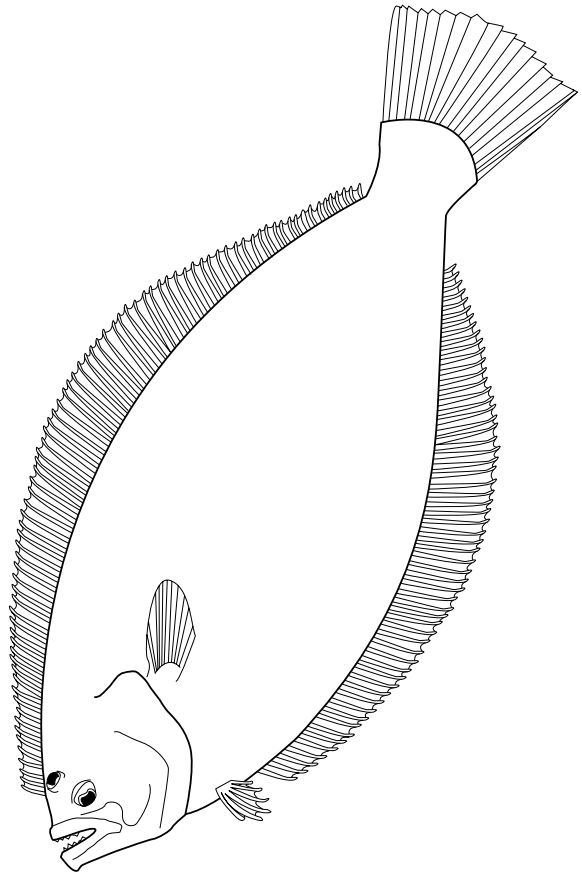
Treasure Chest of Words

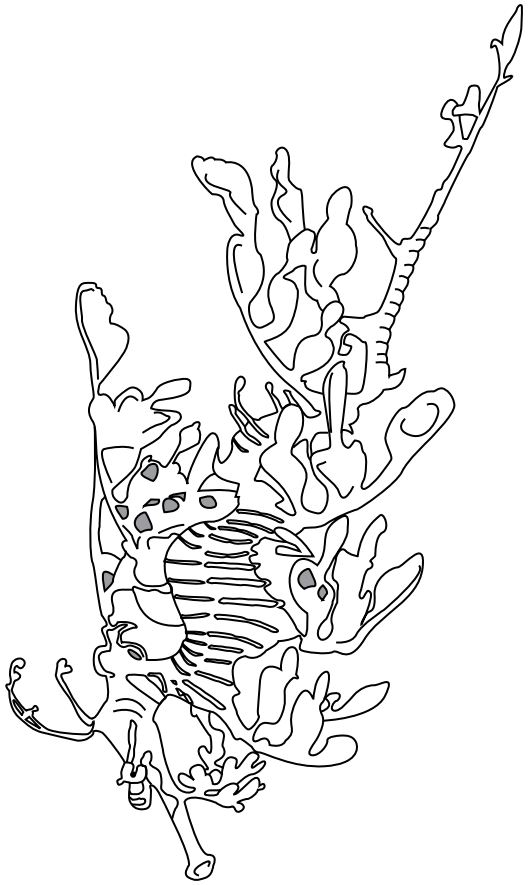
camouflage
cell
chromatophore
disguise
estuary
mating
population
predator
scales
scientist
species
zoologist

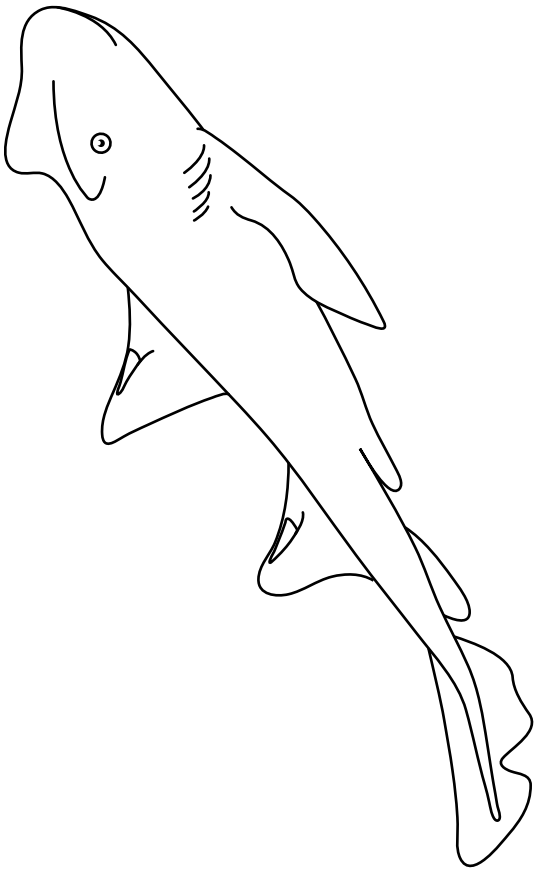


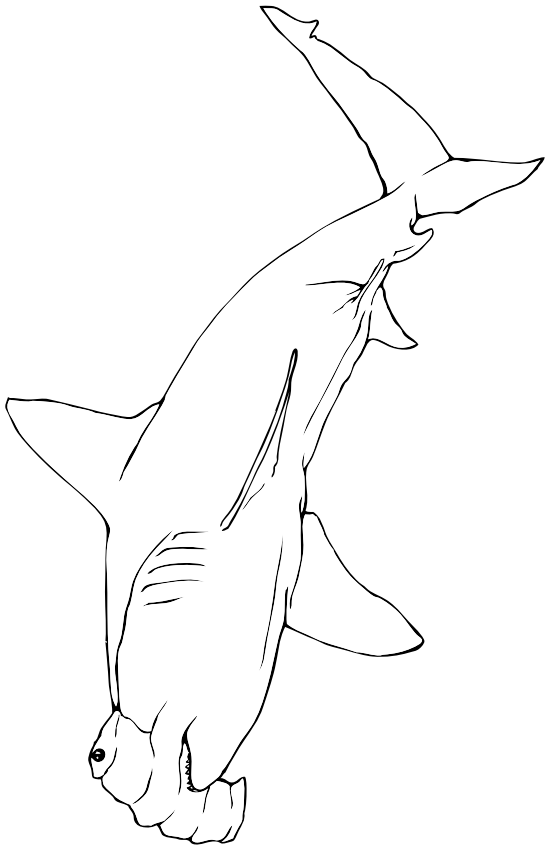


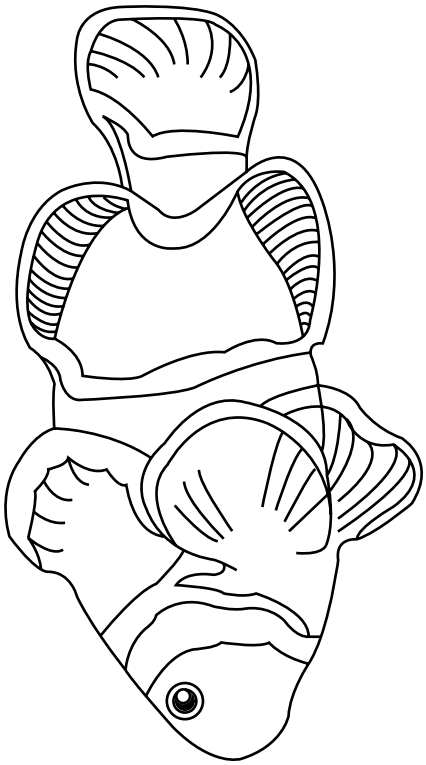


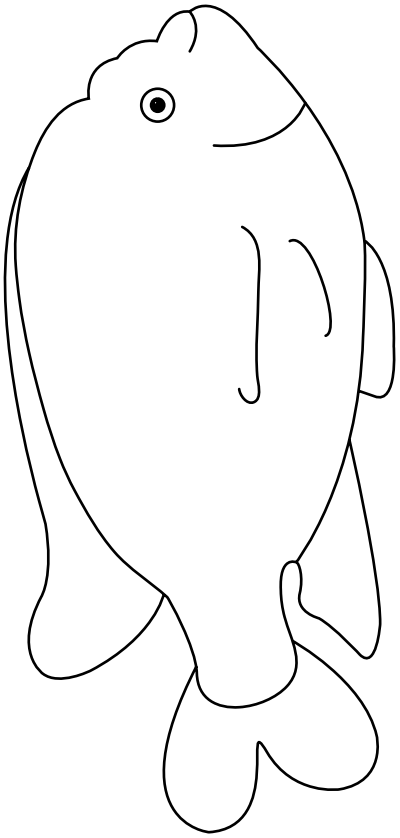


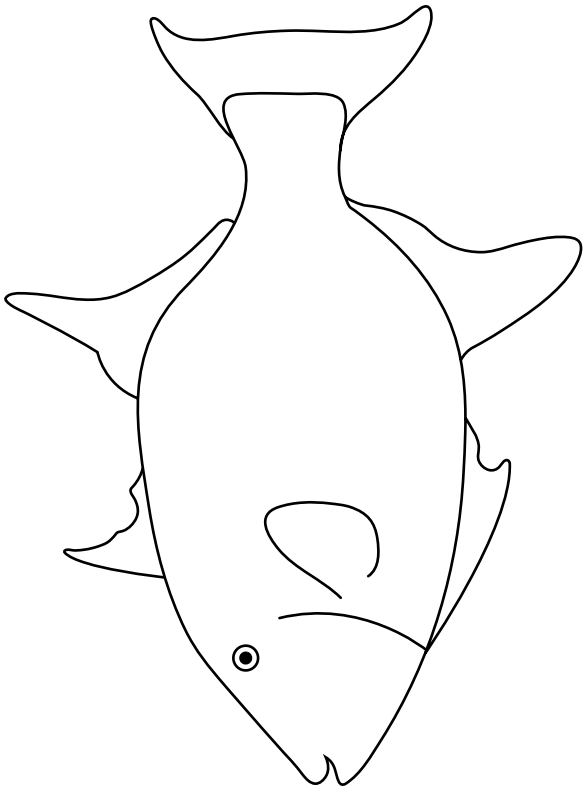


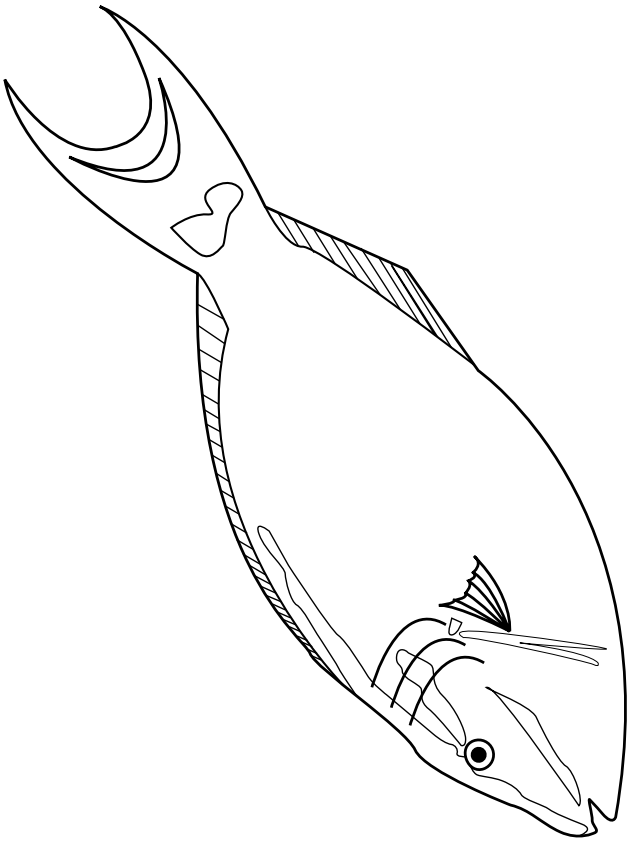


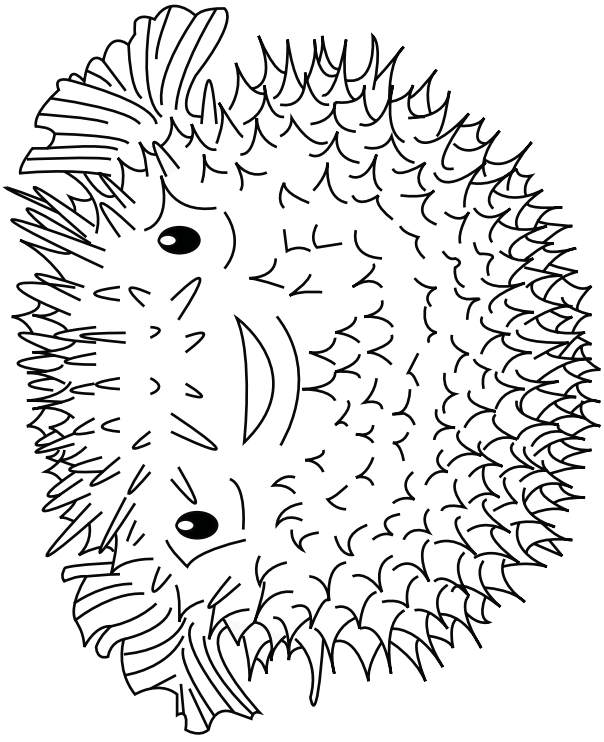


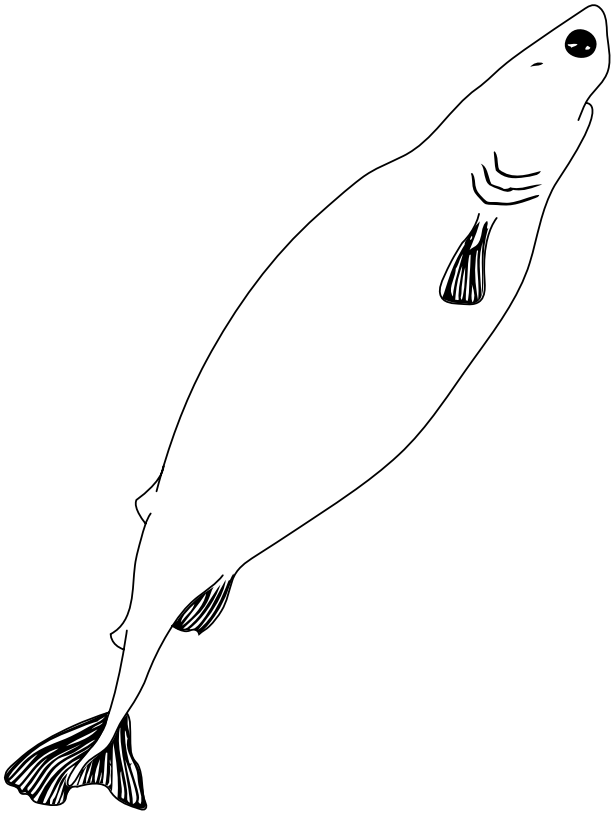


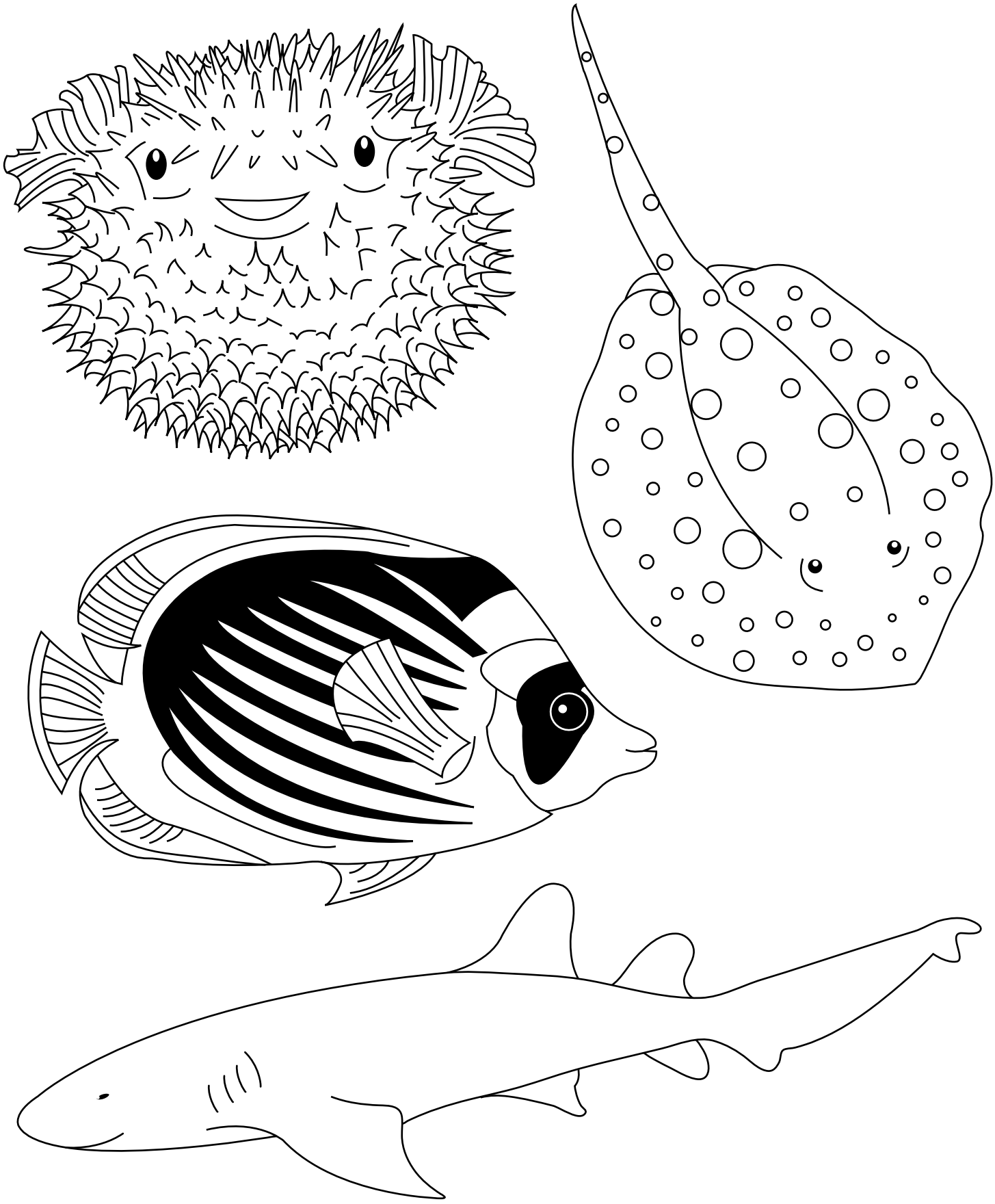


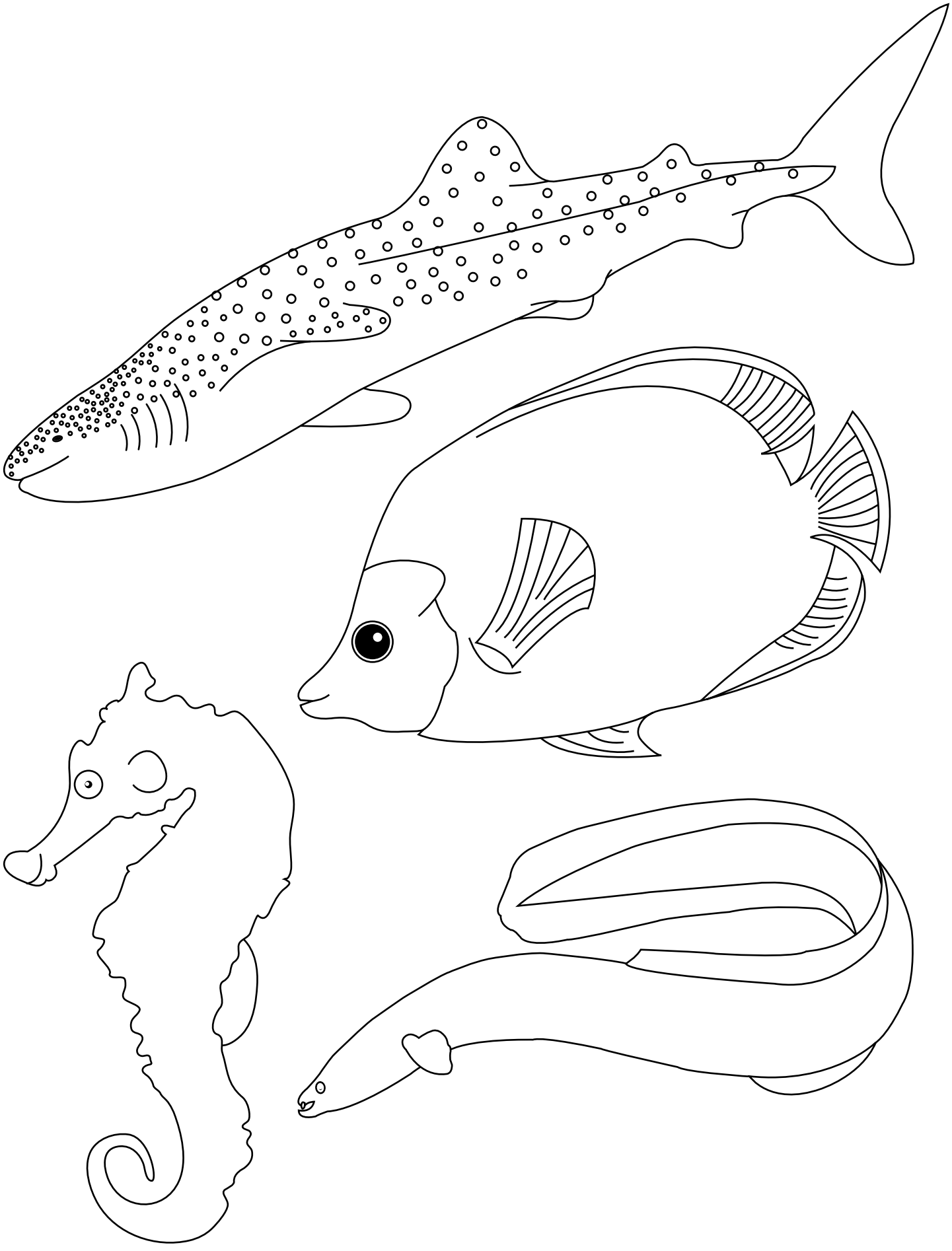


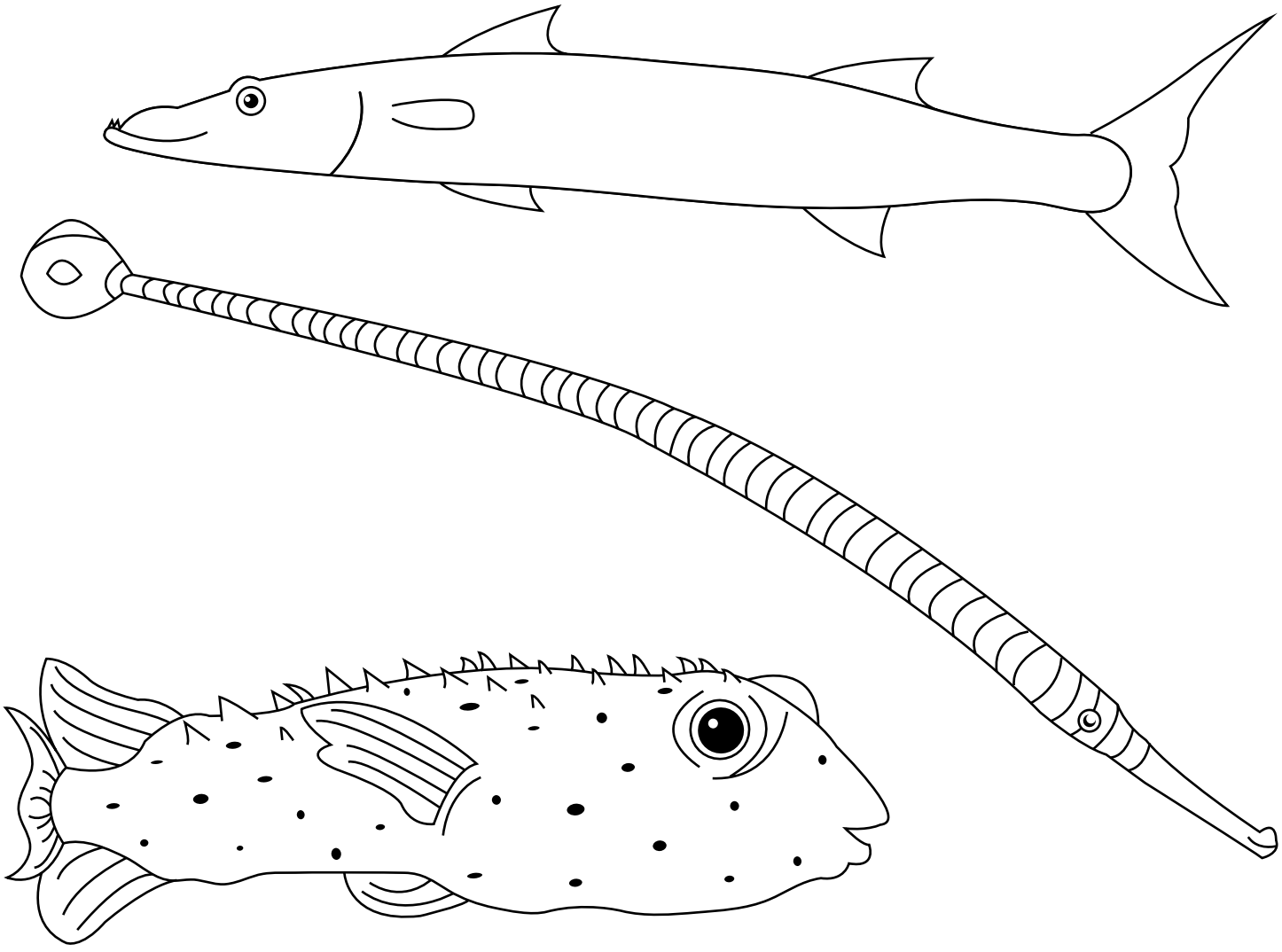


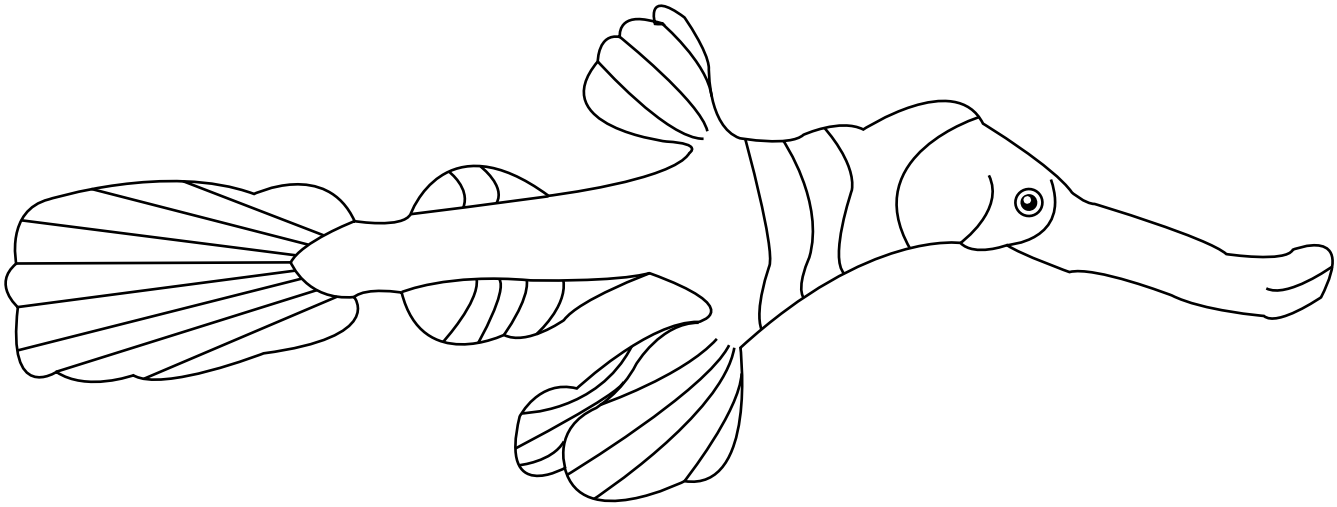


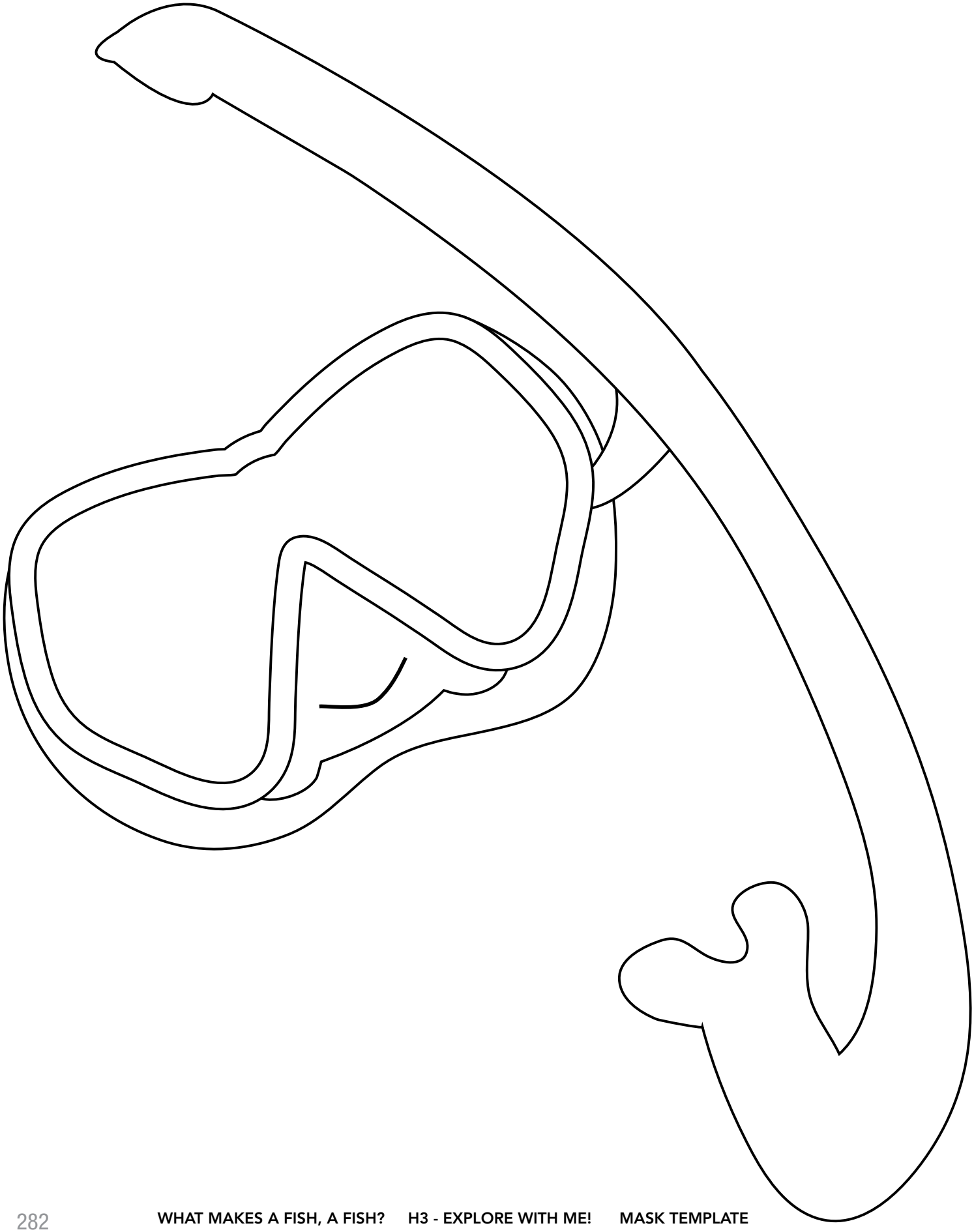


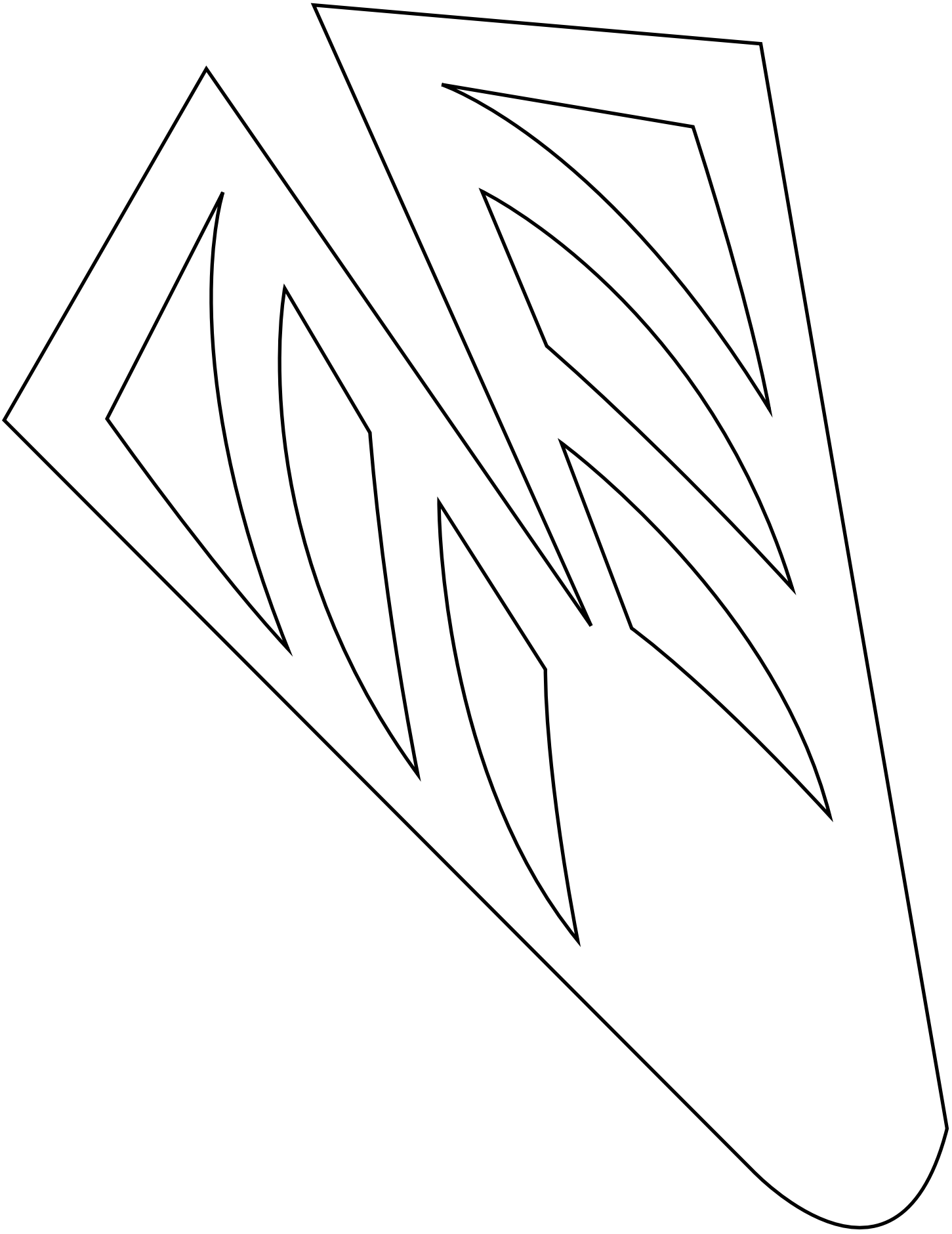


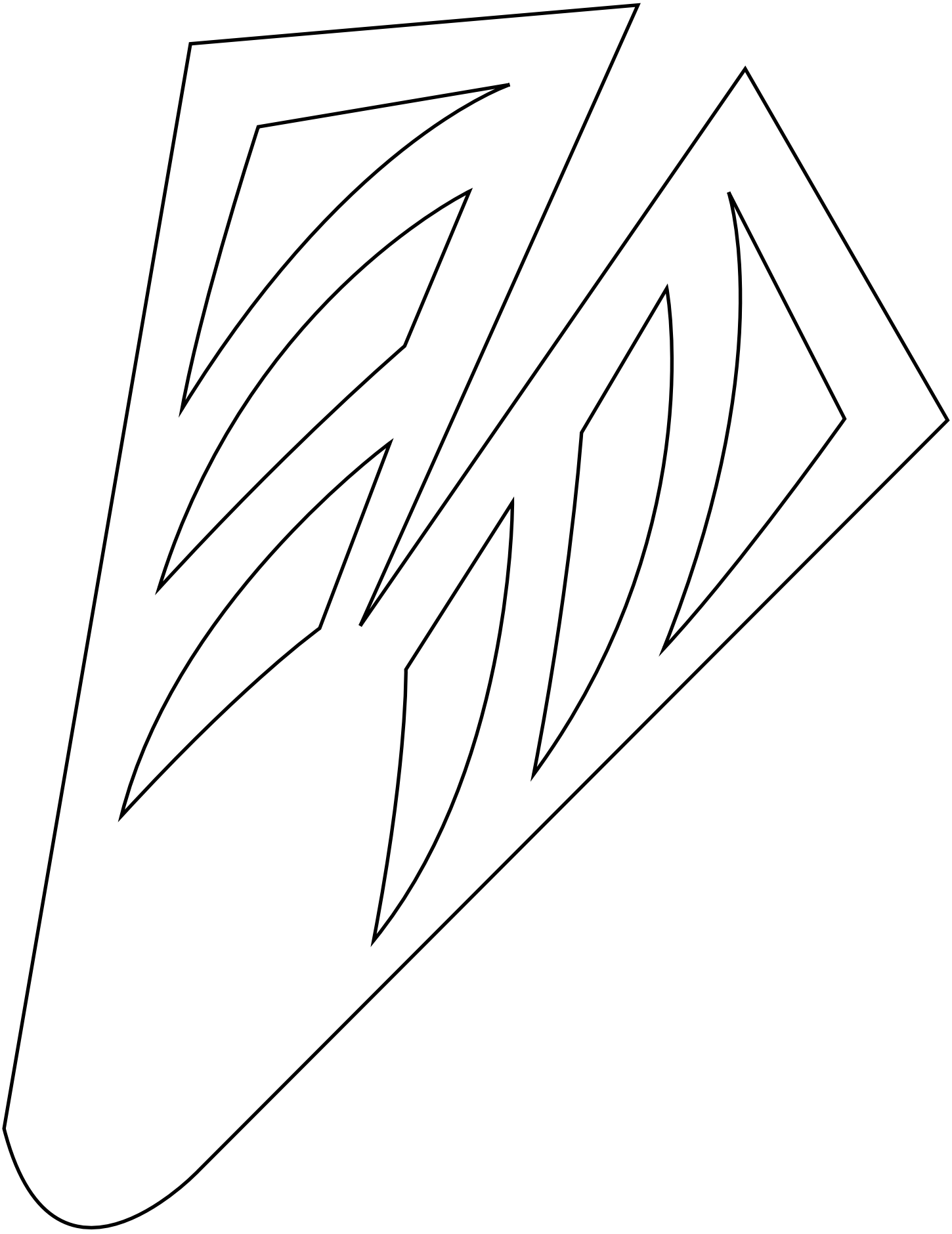








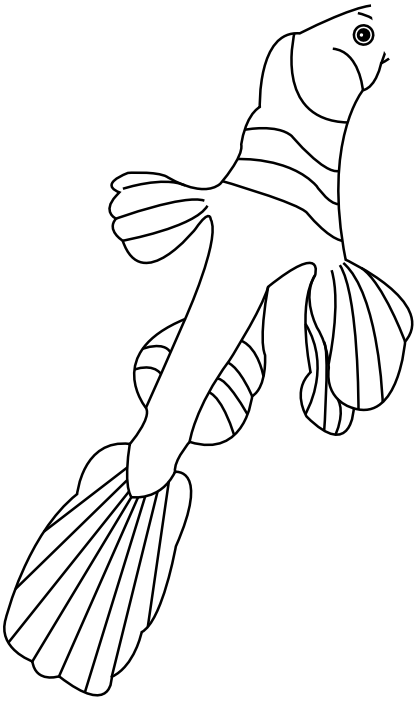


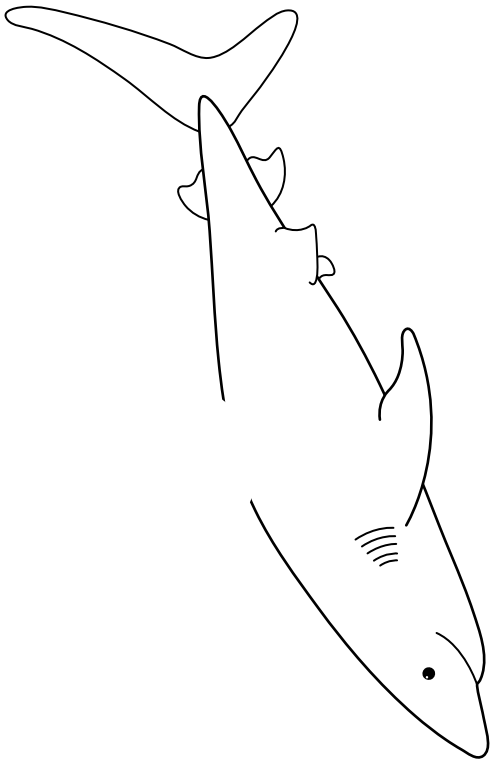


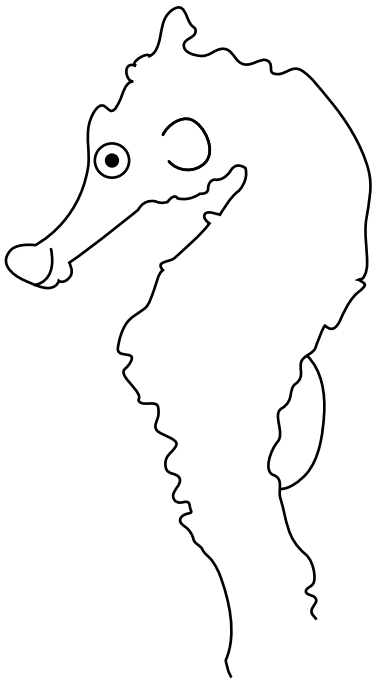
Finish The Fish!

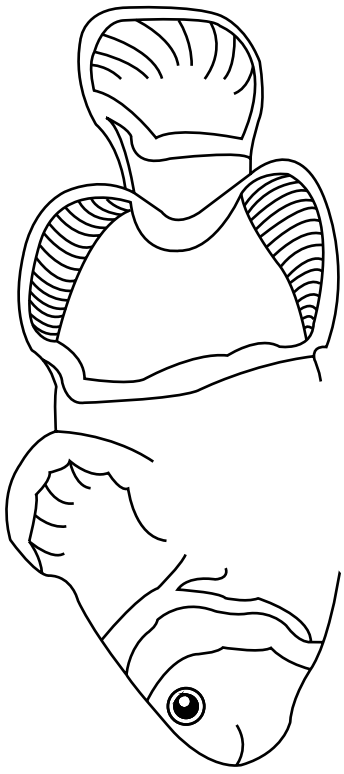
Name _____ **Date** _____

Directions: Draw in the missing part on each of the fish on this page.









Finish The Fish!

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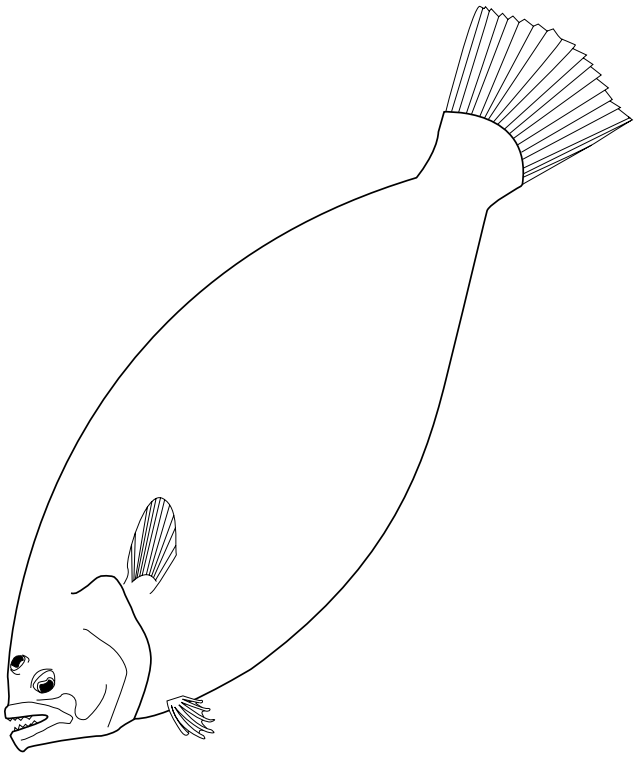
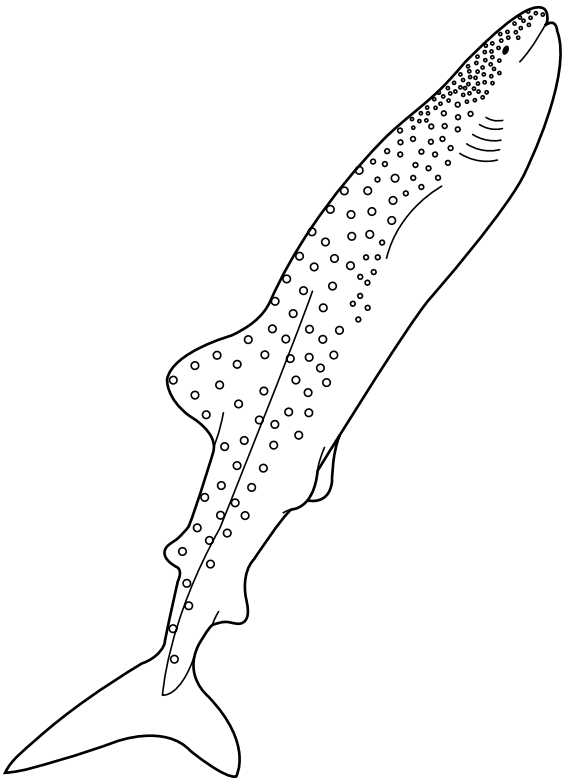
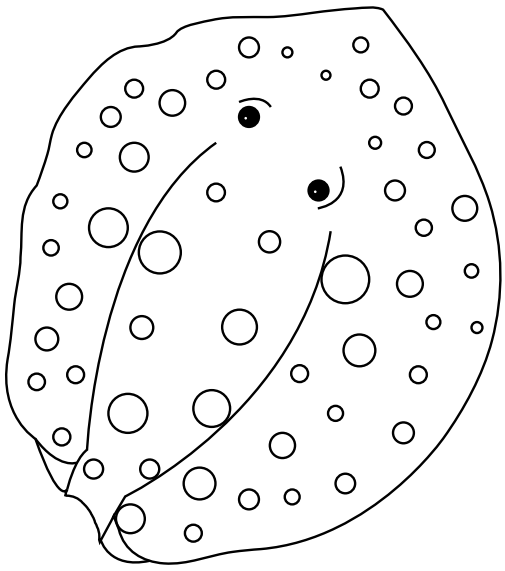
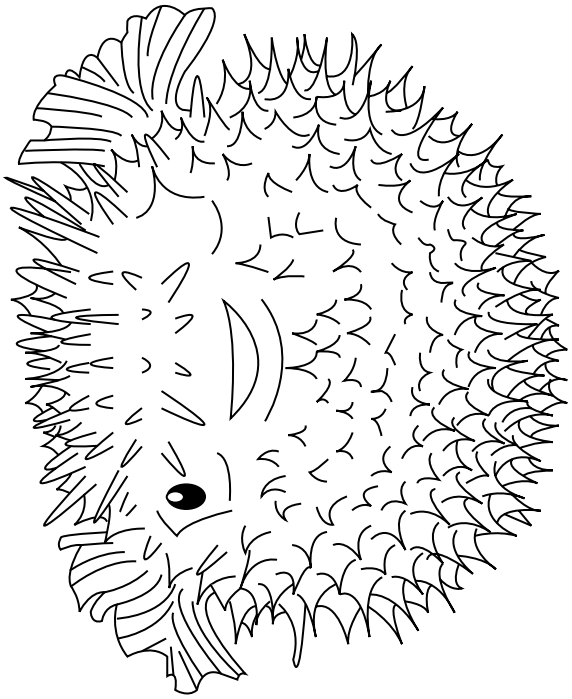


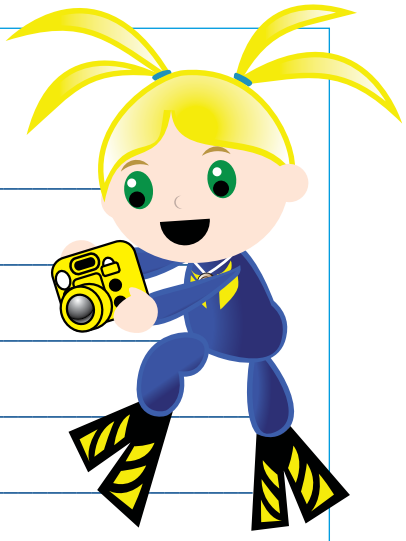






Today I learned...

NOTES



Treasure Chest Terms

These are definitions to the words used in each chapter of this Guide.

Algae

» Any chlorophyll-containing, mainly aquatic eukaryotic organism ranging from microscopic single-celled forms to multicellular forms 100 ft. (30 m) or more long, distinguished from plants by the absence of true roots, stems, and leaves.

Anemone

» Any of the relatively large, solitary polyps of the phylum Cnidaria. Unlike the closely related corals, they do not create a calcium carbonate skeleton. Most are predators, immobilizing their prey with the aid of specialized stinging cells called nematocysts.

Bacteria

» Single-celled organisms that exist singly or in chains, various species of which are involved in fermentation, putrefaction, infectious diseases, or nitrogen fixing.

Bone

» Hard connective tissue forming the substance of the skeleton of most vertebrates composed of a collagen-rich organic matrix impregnated with calcium, phosphate, and other minerals.

Camouflage

» Concealment by some means that alters or obscures the appearance: *Drab plumage provides the bird with camouflage against predators.*

Cartilage

» A firm, elastic, flexible type of connective tissue of a translucent whitish or yellowish color; gristle.

Cell

» Microscopic body that is the basic structural unit of all organisms.

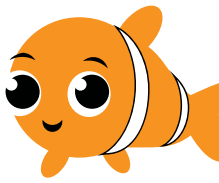
Chromatophore

» (kr*uh*-**mat**-*uh*-fawr) A cell containing pigment, that through contraction and expansion produces color change in the skin, as in fishes and octopuses.

Cleaning Station

» An area on a coral reef where fish gather to be picked free of parasites, dead skin, or to generally be cleaned by other reef animals specialized to perform this task.

Denticles



» A small tooth or toothlike projection.

Disguise

» To change the appearance or guise of so as to conceal identity or mislead, as by means of deceptive garb.

Diversity

» A point or respect in which things differ. Variety or multiformity: *"Charles Darwin saw in the diversity of species the principles of evolution that operated to generate the species: variation, competition and selection" (Scientific American).*

Ectotherm

» A member of the group that displays the ability to regulate its internal body temperature largely by exchanging heat with its surroundings.

Elasmobranch

» Any of numerous fishes of the class Chondrichthyes, characterized by a cartilaginous skeleton including the sharks, rays, chimaeras, and skates.

Elasmobranchologist

» A scientist who specializes in the study of sharks and other fish that possess cartilage based skeletons.

Endemic

» A group of organisms is endemic when they are found in a particular geographic area.

Esca

» A piece of flesh that is attached to the illicium and modified to look like a lure or bait that will attract potential prey.

Estuary

» That part of the mouth or lower course of a river in which the river's current meets the sea's tide.

Fins

» Limbs used to help the fish find balance and steer swimming.

Fishes

» Correct plural of fish when referring to multiple fish of different species. "Fish" is the correct form when talking about multiple fish of the same species.

Gills

» The respiratory organ used by the fish and other aquatic animals to pump gases in and out of the body.

Herbivore

» An animal that feeds chiefly on plants and algae.

Hover

» To hang fluttering or suspended.

Hydrodynamic

» Having a shape or features that allow a shape to move through the water more efficiently.

Hygiene

» Condition or practice that supports the preservation of health, as cleanliness.

Ichthyologist

» (ik-thee-**ol**-*uh*-jist) a scientist who studies fishes.

Ichthyology

» (ik-thee-**ol**-*uh*-jee) The branch of zoology dealing with fishes.

Illicium

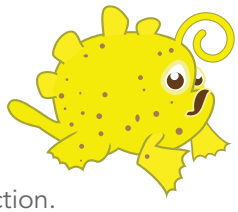
» the first spine of the dorsal fin is modified into a moveable fishing rod or luring apparatus.

Invasive Species

» A species that is not native to a certain area and potentially out-competes natural species.

Invertebrate

» Any animal lacking a backbone.



Mating

» To pair for the purpose of reproduction.

Naturalist

» One who is an expert or interested in botany or zoology (particularly out in the field) and studies plants and animals in their natural surroundings.

Omnivore

» An animal whose normal diet includes both plants and animals.

Organ

» A grouping of tissues into a distinct structure, as a heart or kidney in animals or a leaf or stamen in plants, which performs a specialized task.

Parasite

» Organism that lives on or in another species from which it receives a benefit while negatively impacting the host organism.

Treasure Chest Terms

(Continued)

Piscivore

» A carnivorous animal, which lives on eating fish.

Planktivore

» An animal feeding primarily on plankton.

Plankton

» A generic term for organisms that float in the sea and cannot swim against a current.

Population

» The assemblage of a specific type of organism living in a given area.

Predator

» Any organism that exists by preying upon other organisms.

Scales

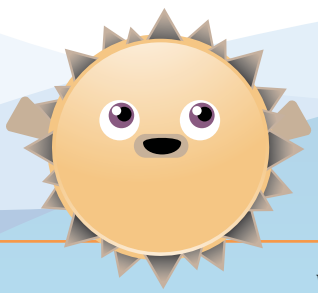
» One of the hard, bony or dentinal plates, either flat or denticulate, forming the covering of certain other animals, as fishes.

Scientist

» A person having expert knowledge of one or more sciences, especially a natural or physical science.

SCUBA

» The commonly used acronym for "self-contained underwater breathing apparatus" referring to portable equipment containing compressed air and used for breathing under water. SCUBA divers carry their air supply with them below the surface of the water.



Skeleton

» The bones of a human or an animal considered as a whole, together forming the framework of the body.

Species

» The basic category of biological classification, composed of related individuals that resemble one another, are able to breed among themselves, and produce offspring capable of breeding.

Swim bladder

» Gas-filled organ that allows some fish to control their buoyancy.

Symbiosis

» Any interdependent or mutually beneficial relationship between two organisms.

Tentacles

» Elongated flexible organs present in some animals, especially invertebrates. Usually, they are used for feeding, feeling and grasping.

Type

» A number of things or persons sharing a particular characteristic, or set of characteristics, that causes them to be regarded as a group.

Vertebrate

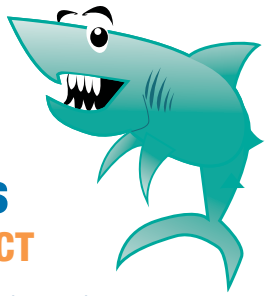
» An organism that has a brain enclosed in a skull or cranium and a segmented spinal column.

Water

» a transparent, odorless, tasteless liquid, compound composed of hydrogen and oxygen.

Zoologist

» A scientist who specializes in the study of the structure, function, behavior, and evolution of animals.



SPECIAL SECTION: Ocean Annie teaches you about Scuba Diving!

Essential Communication Skills for Scuba Divers

COMMUNICATION SKILLS: STOP, THINK, BREATHE SLOWLY, THEN ACT

When snorkeling or scuba diving you wear a mouthpiece for breathing so you need to learn how to talk with your hands, not your voice when under water. Scuba divers use hand signals, eye contact, and special waterproof slates to write notes to one another. Scuba divers dive in buddy teams. You can dive in groups of 3, 4 or more, but you always want to have one special buddy. There are several important hand signals to learn so you can communicate effectively with your buddy.

Let's start with OK. When you signal your buddy OK, you are saying, I am OK. Are you? Then you need to wait for your buddy to respond. If there is something wrong, you need to let your buddy know.

One of the most important rules while scuba diving is to move slowly, breathe slowly and never hold your breath. When students get really excited, such as during play or before tests, they start to breathe really fast or may even forget to breathe altogether. Scuba divers must learn to control breathing because we carry tanks of air and we need our air to last. When a scuba diver breathes fast they tend to move fast, use air quickly, and miss seeing marine life. If you move fast you appear as a bubble-blowing monster and can scare all the animals. Fish swim away if you move and breathe fast. When you breathe slowly, you move slowly. Remember the golden rule is to Stop, Think, Breathe Slowly, and then Act.

You can establish a positive atmosphere in any classroom or household using hand signals and these breathing techniques. Use the mantra with your students: Stop, Think and Breathe Slowly. Share this lesson with parents to provide consistency in the classroom and at home.

Once you master these hand signals and concepts with your students, set the stage to go scuba diving during imagination play with your students before every activity. You can either use this as a script or create your own!

Before we dive into our imagination and travel under water, let's go through the steps to become scuba divers!

1. Get together with your buddy.
2. Get your equipment in place. Put your mask on, get your fins on and review hand signals with your buddy, remember we are silent when we go scuba diving.
3. Signal your buddy that you are OK to go down.
4. On the count of three, let's use our imagination and become scuba divers, scientists and underwater explorers! Let's say the magic word (imagination) 1, 2, 3…Imagination!

Anytime your students get off task, use the mantra with your hand signals: Stop, Think and Breathe Slowly!

Communication Signals

"Are you OK?" or "OK!"

Use to ask your buddy if they are OK or to signal to your buddy that you are OK

1. Make a circle with your thumb and forefinger
2. Extend remaining three fingers
3. Combine with other signals to form sentences

"Go up" or "Are you ready to go up?"

Use to signal to your buddy that you are ready to go to the surface

1. Make a fist with one hand
2. Point your thumb toward the surface
3. Combine with the "OK" signal

"Go down" or "Are you ready to go down?"

Use to signal to your buddy that you are ready to go dive

1. Make a fist with one hand
2. Point your thumb down
3. Combine with the "OK" signal

"Get with your buddy"

Use to signal to a group that each person should get closer to their buddy

1. Make a fist with both hands
2. Extend index fingers
3. Bring hands together

"Hold hands"

Use to signal to your buddy that they need to hold your hand to stay close

1. Clasp your hands together
2. Show your buddy your clasped hands

"Look at" or "Watch"

Use to signal to your buddy when you want them to look at something or watch you

1. Make a fist with one hand
2. Point your index and middle finger toward your eyes
3. And point to what you want them to look at

"Me" or "I"

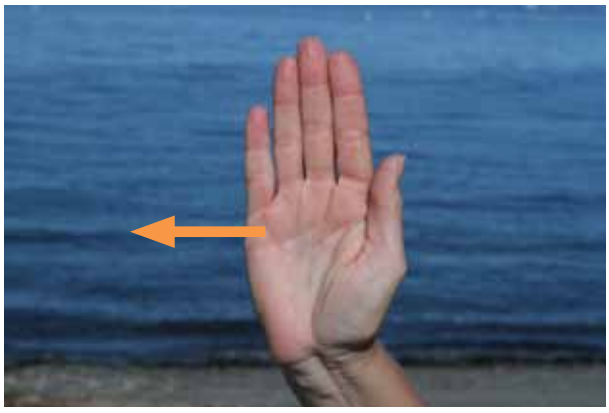
Use to signal to indicate to yourself to your buddy

1. Point to your chest with your thumb or index finger
2. Combine with other signals to form sentences

"Stop"

Use to signal to your buddy that you would like them to stop

1. Raise your hand
2. With your fingers together, turn your palm toward your buddy
3. Move hand slightly forward
4. Combine with other signals to give instructions



"Think" or "Remember"

Use to signal to your buddy when you want them to think or remember something

1. Make a fist
2. Point index finger to your head
3. Combine with other signals to form sentences

"Slow down"

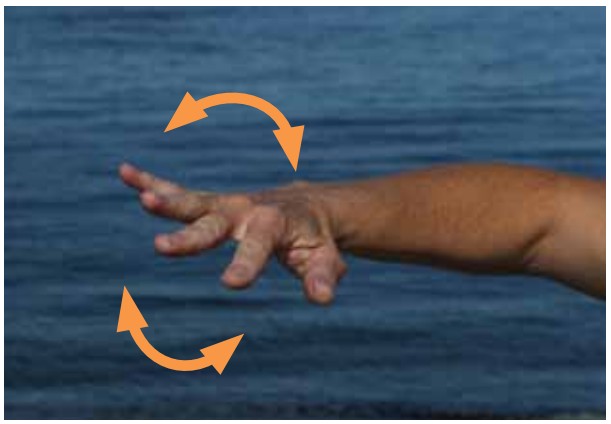
Use to signal to your buddy that they should slow their breathing or to stop moving fast

1. With your fingers together, press your palm down
2. Move hand up and down slowly
3. Combine with other signals to form sentences

"Something is wrong"

Use to signal to your buddy that something is not right

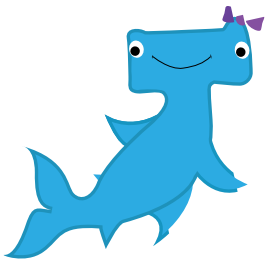
1. With your palm facing down, spread your fingers apart
2. Rotate your hand at the wrist back and forth
3. Combine with other signals to form sentences



"Danger!"

Use to signal to your buddy that something is dangerous and they should be careful

1. Make a fist with one hand
2. Extend your fist in the direction of danger
3. Combine with other signals to form sentences



SPECIAL SECTION: Ocean Annie teaches you about Scuba Diving!

Special Equipment Needs For Scuba Diving

SCUBA stands for Self Contained Underwater Breathing Apparatus. The basic equipment needed for snorkeling and scuba diving include a mask, snorkel, fins and wetsuit. In addition to this, scuba divers need a SCUBA tank, BCD and regulator. Below is a detailed description of all of the equipment needed for scuba diving, so that you can become a scuba instructor in your class:

Mask

Humans need air in front of their eyes in order to see otherwise everything under water would be blurry. When you go swimming, you might wear swim goggles, but when snorkeling and scuba diving, you need to wear a mask so your nose is enclosed within the air space. Water pushes the mask to your face as the pressure of the water increases with depth. Exhaling through your nose adds air to the mask and balances the pressure, a process called equalization. When snorkeling and scuba diving we need the mask to enclose our noses.

Snorkel

A snorkel is a hollow tube attached to the mask that allows snorkelers and scuba divers to comfortably float or swim on the surface of the water without having to lift the head to breathe.

Fins

Human feet are very small and do not provide great propulsion in water, so when swimming in the water legs become tired quickly. Wearing fins that lengthen the leg and widen the feet improves propulsion which is why scuba divers and snorkelers wear fins that help them move like a fish. Many marine animals have different shaped fins because they have adapted to different lifestyles in the sea. There are different fin styles snorkelers and scuba divers can choose too!

Wetsuit

Under water heat leaves our bodies 25 times faster than it does on land, so people get colder more quickly in water. Wearing a wetsuit made of neoprene rubber helps keep people warm. If the wetsuit fits properly it will be snug over the entire body, and trap in water that will be warmed by the heat given off by the wearer.

The ocean has many different water temperatures. Near the equator where it is warm, snorkelers and scuba divers may only need a rash guard or thin wetsuit to stay warm. When diving in cold water, they wear a thicker wetsuit or a drysuit. A drysuit is warmer because it prevents water from entering the suit. The drysuit connects to the scuba tank, keeping air next to the body instead of water. Air does not conduct heat away from the body as quickly as water so people stay warmer under water in a drysuit.

SCUBA Tank

Humans need oxygen in air in order to live. Air is composed of approximately 79% nitrogen and 21% oxygen. Because scuba divers submerge completely under water, they need to carry air to breathe. The SCUBA tank is an aluminum or steel cylinder filled with pressurized air. The tank is what allows scuba divers to breathe air underwater in combination with our SCUBA regulator.

SCUBA BCD

BCD stands for Buoyancy Control Device. The BCD is a jacket-like device that straps the SCUBA tank in place. In addition to carrying the tank, the BCD helps controls buoyancy. Air is added to the BCD because it has a bladder inside of it like a balloon. By filling it up with air, you will float. If the air is deflated from the BCD, you will sink. When scuba diving, we add and subtract the air in the BCD in order to be neutrally buoyant underwater. Scuba divers don't float or sink when scuba diving, they are like astronauts in space with zero gravity. Did you know astronauts learn how to scuba dive to practice what it will feel like before going into outer space?

Ocean Annie teaches you about Scuba Diving! (Continued)

SCUBA Regulator

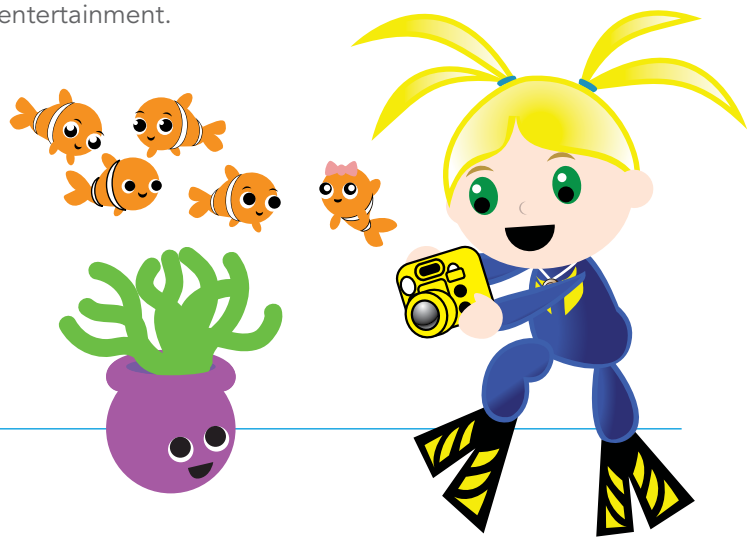
The SCUBA regulator is the device attached to our SCUBA tanks that converts high pressure air into one that the user can breathe under water.

SCUBA Gauge

Scuba divers have to know how much air is inside the scuba tank. The deeper you dive, the more air you use which affects how much time can be spent underwater. A scuba gauge provides the information needed so you can monitor the air in the SCUBA tank. Many gauges also have a compass attached to them that can help the wearer determine the direction of travel while under water.

Underwater Camera

There are special underwater cameras and lights snorkelers and scuba divers use to document the dives. Photographs and videos taken under water can be used for scientific reasons, education or entertainment.

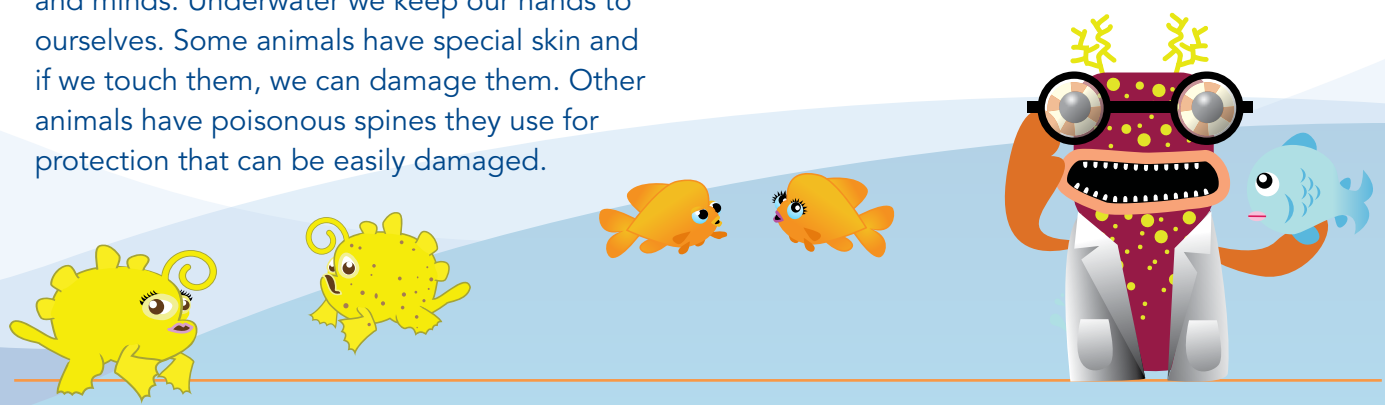


RESPECT THE ENVIRONMENT AND OUR BUDDY

Before we go scuba diving, we have to learn how our equipment works and about the environment we will enter. Sometimes we will scuba dive in a pool, lake or in the ocean. In class, you will be scuba diving into your imagination and exploring the world through the knowledge you are learning with books, DVDS and these activities. When we enter the water we must not only respect the equipment and our buddy, but we also must respect the animals we will encounter. It is tempting to touch the animals because they look so amazing, yet we have to understand that we are only allowed to touch with our eyes, thoughts and minds. Underwater we keep our hands to ourselves. Some animals have special skin and if we touch them, we can damage them. Other animals have poisonous spines they use for protection that can be easily damaged.

It is important to use and show respect in all areas of our lives! So remember, we don't need to touch our buddies to work with them, just like we don't need to touch the animals to observe and experience them!

The more we learn about the Ocean, the more you will want to protect it. Our ocean is responsible for 70% of the Oxygen our planet needs, all of our water and many people rely on the food from the sea as their only source of protein. Everything we do on land affects the Ocean. We rely on the Ocean for the health of our planet. I hope you will want to help protect our sea!



Can you identify Ocean Annie's SCUBA gear?

Mask
BCD
Air tank
Regulator
Compass
Fins
Wet suit
Snorkel

Annie Crawley

DIVE INTO YOUR IMAGINATION

The Many Faces of Award Winning Author, Photographer, Producer and Empowering Speaker Annie Crawley

Keynote Speaker & Professional Development

Annie Crawley brings the Ocean to LIFE!

Cross Curricular Connections Embedding ALL Content Areas & Flexible, Customizable Teacher Professional Development

Journalist, underwater filmmaker, youth leader, and curriculum designer, Annie Crawley incorporates empowering messages while integrating all content areas, including character education into every inspiring presentation.

Master Storyteller Ocean Annie tailor makes her presentations specifically for each audience, then combines the message with real ocean images and video.

Every presentation, seminar, or professional development is catered to meet your teacher and student needs. Annie Crawley's multi-media programs engage and empower your students Kindergarten through College! Whether you want Annie to address science, the environment, self-esteem, or motivate your teachers to embrace change, Ocean Annie has the qualifications and experience to do it. Combining life's lessons she learned from the sea, Annie uses SCUBA diving, sharks, dolphins, cephalopods and more to educate and inspire.

Annie Crawley is a dynamic and entertaining speaker that your group will value:

- Communicates ideas effectively while incorporating humor, education, conservation, and ocean metaphors.
- Customizes presentations based on organizational needs.
- Passionate delivery captivates the audience and leaves a lasting impression to instill positive environmental change.

These programs can be given to individual classrooms or in large auditoriums with hundreds of students. When speaking to larger groups we recommend breaking the grade levels: K-2; 3-4; 5-6; 7-8; High School; College/University.

Samples of Annie's Topics:

Sharks, Mantas, and You

Dive Into Your Imagination & Explore Our Blue World

Let's Talk Trash
The Great Pacific Garbage Patch and how you can help

The Camera Coach
Learn to Shoot Photography, Video & Editing

Create Your Life
Perfect for Student Career Days or Professional Development

Your Personal Brand
Who are you in this 21st Century World?

Math and Science Nights

Meet the Author

Environmental Education

Keynotes or Professional Development

Available Formats:

- 45 minute to 1-Hour Program
- 3-Hour Program
- Full Day
- Three-Day to Weekly Workshops
- PADI Discover Scuba Diving One Day Program
- PADI Scuba Certification Five-Seven Day Program by Destination

Dive Into Your IMAGINATION.

www.AnnieCrawley.com

www.DiveIntoYourImagination.com

Ocean Annie

Contact **Annie@AnnieCrawley.com** or call **(805) 453-1947** to book her today!

Annie Crawley

Dive Into Your Imagination

The Many Faces of Award Winning Author, Photographer, Producer and Empowering Speaker Annie Crawley

Keynote Speaker

Create Your Life

"Annie Crawley was born to inspire people. She lives the message she brings to the world, empowering people to use their imagination to live out of their vision of themselves, rather than their history. Annie Crawley is what the world needs now more than ever before." – ***Les Brown***

What will you do with your moment in time? Annie Crawley was born to inspire. Drawing upon the past two decades of experience as an underwater expert, world traveler and entrepreneur, she uses Ocean metaphors, video and photography in her multi-media and thought provoking presentations. Annie Crawley, reaches thousands of people every year as a renowned inspirational and motivational speaker.

Utilizing her techniques, you will understand how to create a more fulfilling life and career by helping you change your mindset to get you focused and motivated. Her presentations and workshops are unique because she uses the Ocean as a metaphor, teaching you to dive deeply into possibilities, breathe differently, face your fears, set goals, anchor your life, adapt to changes and focus on what is important today in order to reach your full potential. Annie Crawley gives you the power to believe in yourself as you dive into your greatness.

Annie Crawley's programs are tailored to your corporate, group or school's needs. Please review Annie's topics and choose one that suits your group best or contact us to create a personalized program.

Contact Annie Crawley at **Annie@AnnieCrawley.com** or call **(805) 453-1947** to talk with her today!

Meet Annie Crawley

Through public speaking tours, workshops and programs, Annie Crawley reaches a worldwide audience. While creating a successful business, Dive Into Your Imagination, Annie Crawley, aka Ocean Annie, continues to travel and document the world focusing on life in our Ocean. She is uniquely qualified to speak about our ocean, obtaining success by taking calculated risks, living your dreams and creating your greatest life. Originally from Chicago and trained as a photo and broadcast journalist, Annie Crawley spent the past two decades living and working around the world. After learning to scuba dive and sail, she became a PADI Master Scuba Diving Instructor and a 100 ton US Coast Guard Boat Captain. Annie Crawley specializes in the Underwater Realm as an underwater photographer, filmmaker, field biologist and expert. As a producer, Annie Crawley created an award winning series of ocean books, DVDs and educator lesson plans after being awarded four grants from the Save Our Seas Foundation. She was also responsible for single-handedly producing, shooting, and editing a series of programs taken on the SEAPLEX expedition with Project Kaisei and Scripps Institution of Oceanography in the Great Pacific Garbage Patch. She has worked with National Geographic, BBC, the Food Network and is published in magazines worldwide. Annie Crawley relates the lessons she learned traveling in a way that will inspire you to protect our environment and Ocean.

What are you waiting for, Dive Into Your Imagination and bring inspirational speaker Annie Crawley to your area today!

AnnieCrawley.com

DiveIntoYourImagination.com

Dive Into Your IMAGINATION.

Ocean Annie

Contact Annie@AnnieCrawley.com or call (805) 453-1947 today!