

There's a Commotion in the Ocean

Grade Level: First Grade

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Length of Unit: 9

I. ABSTRACT

This unit was written for first grade students on the Core Knowledge topic of oceans. It should follow the unit on habitats. This unit will give students an understanding of ocean characteristics, including oceans, diversity of ocean life, the make-up of ocean water, tidal patterns, currents, the landscape of the ocean and dangers to ocean life. This unit uses a variety of hands-on experiences, written work, and technology to impart knowledge of the ocean.

II. OVERVIEW

A. Concept Objectives

1. Students will gain an understanding of the location and names of the oceans.
2. Students will gain an understanding of the diversity of ocean life.
3. Students will develop an understanding of ocean water, as well as currents and tidal patterns.
4. Students will develop recognition of threats to ocean life.

B. Content from the *Core Knowledge Sequence*

1. Most of the earth is covered with water
2. Locate oceans: Pacific, Atlantic, Indian, Arctic
3. Oceans are salt water (unlike fresh water rivers and lakes)
4. Coast, shore, waves, tides (high and low)
5. Currents, the Gulf Stream
6. Landscape of the ocean floor: mountain peaks and deep valleys (trenches)
7. Diversity of ocean life: from organisms too small for the eye to see (plankton), to giant whales
8. Dangers to ocean life (for example, overfishing, pollution, oil spills)

C. Skill Objectives

1. Students will locate and identify the oceans on a map.
2. Students will identify the layers of the oceans.
3. Students will conduct experiments to determine the difference between fresh water and salt water, as well as the density of salt water.
4. Students will understand tidal patterns and the effects of the Gulf Stream.
5. Students will create a sequenced flipbook containing the layers of the ocean, appropriate sea life for each layer, as well as descriptions of each layer.
6. Students will create a model of an ocean food chain.
7. Using a map of the world students will determine which ocean various animals live in.
8. Students will use their knowledge of the ocean to create a three-dimensional ocean scene.
9. Students will research ocean life online and select one ocean animal to write a report on.
10. Students will understand the effects of pollution and overfishing on ocean life.

III. BACKGROUND KNOWLEDGE

A. For Teachers

1. Ocean animals and their habitats – specifically which zone they reside in
 2. Awareness of interdependence between living things and their environment
 3. Ocean currents – the Gulf Stream
- B. For Students
1. World geography – specifically the continents and oceans
 2. A basic knowledge of conservation from Kindergarten
 3. A basic knowledge of the effects of pollution

IV. RESOURCES

- A. Andreae, G. *Commotion in the Ocean*. Wilton, CT: Tiger Tales, 2001. 1-58925-000-1.
- B. Baker, L. *Life in the Oceans*. New York: Scholastic Inc., 1990. 0-590-46132-X.
- C. Canizares, S., & Reid, M. *Coral Reef*. New York: Scholastic Inc., 1998. 0-590-76182-X
- D. <http://enchantedlearning.com>
- E. Hirsch, Jr. E.D. *A First Dictionary of Cultural Literacy*. Boston: Houghton Mifflin Company, 1996. 0-395-82352-8
- F. Hirsch, Jr. E.D. *What Your First Grader Needs to Know*. New York: Dell Publishing, a. 0-385-31987-8
- G. Smith, K. B. *Ocean Animals*. Flying Frog Publishing, 2002. 1-57755-481-7
- H. Worth, B. *Wish For a Fish: All About Sea Creatures*. New York: Random House, Inc., 1999. 0-679-991116-6.

V. LESSONS

Lesson One: Where in the World Are the Oceans?

- A. *Daily Objectives*
 1. Concept Objective(s)
 - a. Students will gain an understanding of the location and names of the oceans.
 2. Lesson Content
 - a. KWL - oceans
 - b. Most of the earth is covered with water.
 - c. Locate oceans: Pacific, Atlantic, Indian, Arctic.
 3. Skill Objective(s)
 - a. Class will complete a KWL about oceans.
 - b. The student will understand that most of the earth is covered with water.
 - c. The student will be able to locate the oceans on a map.
- B. *Materials*
 1. *Commotion in the Ocean* by Giles Andreae
 2. Chart tablet
 3. World map/globe
 4. Large clear bottle
 5. Sand
 6. Water
 7. Food Coloring
 8. Crayons and pencils
 9. World map handout – see appendix A
- C. *Key Vocabulary*

1. Ocean – The ocean is the mass of salt water that covers about 72 percent of the earth’s surface. Oceanic divisions are known by specific names such as the Atlantic Ocean, the Pacific Ocean, and the Indian Ocean.
2. Arctic Ocean – The Arctic Ocean surrounds the North Pole. It is the world’s smallest ocean and is mostly covered by solid ice, ice floes, and icebergs.
3. Atlantic Ocean – The Atlantic Ocean, the second largest ocean in the world, extends from the Arctic Ocean to Antarctica. It is east of North and South America and west of Europe and Africa.
4. Indian Ocean – The Indian Ocean, the third largest ocean in the world, lies between the Atlantic and the Pacific Oceans. It is south of Asia, east of Africa, and west of Australia.
5. Pacific Ocean – The Pacific is the largest ocean in the world, extending from the Arctic Ocean to Antarctica. It is west of North and South America and east of Asia and Australia.

D. *Procedures/Activities*

1. Read *Commotion in the Ocean* by Giles Andreae to create enthusiasm amongst students.
2. Discuss what students know about the ocean. During discussion, fill in the “K” section of your KWL.
3. Brainstorm what the students want to know about the ocean and fill in the “W” section of your KWL.
4. Using a large clear water bottle, explain to the students that the bottle represents the earth. Fill the bottle $\frac{1}{4}$ full with sand, which represents land. Fill the bottle $\frac{3}{4}$ full with colored water to represent the ocean. Explain to the students that the earth is covered mostly with water.
5. Locate the oceans: Pacific, Atlantic, Indian, and Arctic on a world map. Discuss their location in relation to the continents.
6. Hand out the world map (Appendix A) and have students label the continents and oceans.

E. *Assessment/Evaluation*

1. The student should have the world map correctly labeled with all continents and oceans. Retain this map for use in lesson three.

Lesson Two: How Salty is the Ocean?

A. *Daily Objectives*

1. Concept Objective(s)
 - a. Students will gain an understanding of the diversity of ocean life.
2. Lesson Content
 - a. Oceans are made up of salt water.
 - b. Salt water is more dense than fresh water.
3. Skill Objective(s)
 - a. The student will be able to identify that the oceans are composed of salt water.
 - b. The student will be able to distinguish between salt water and fresh water.
 - c. The student will recognize that salt water is denser than fresh water.

B. *Materials*

1. 2 small cups per child
2. Pitcher of salt water
3. Pitcher of fresh water
4. 2 – 16 oz. clear glasses

5. 2 eggs
 6. Eye dropper
 7. $\frac{1}{4}$ cup measure
 8. 1 cup measure
 9. Water
 10. Salt
 11. Food coloring
- C.** *Key Vocabulary*
1. Density – Density is the weight of a liquid divided by the space it occupies.
- D.** *Procedures/Activities*
1. Mix a pitcher of water with 3 to 4 spoons of salt before beginning lesson.
 2. Explain to students that oceans differ from lakes, rivers, and streams. Oceans are made of salt water, while lakes, rivers, and streams are filled with fresh water.
 3. Give each student a cup with a taste of salt water and a cup with fresh water. Have students observe the water and discuss any differences they see. Tell students to taste the fresh water and then taste the salt water. Discuss the differences in the taste.
 4. Explain to students that the following experiment involves a comparison between the density of salt water and fresh water. Explain to students that density is how heavy the water is.
 5. Fill one of the glasses with 1 cup of water. Gently drop one of the eggs into the water and watch what happens. Record observations on the board.
 6. Fill the second glass with 1 cup of water, $\frac{1}{4}$ cup of salt, and a few drops of food coloring and allow it to sit for five minutes. Carefully and slowly add fresh water using the eyedropper, being careful not to disturb the settled colored salt water. Drop the second egg into the glass and watch what happens. Record the results on the board.
 7. Have a class discussion using the following questions:
 1. Compare the way the two eggs float and describe the differences.
 2. Why do you think the eggs float differently in the separate glasses?
 3. What does this experiment tell you about the differences in the water?
 8. After the students have shared their thoughts, explain that the egg sank in the fresh water because it had greater density. The egg floated in the salt water because when salt is added to water its density becomes greater than that of the egg. That makes the egg float.
- E.** *Assessment/Evaluation*
1. Monitor student responses for understanding while conducting the experiments.

Lesson Three: The Highs and Lows of the Ocean

- A.** *Daily Objectives*
1. Concept Objective(s)
 - a. Students will develop an understanding of the diversity of ocean life.
 2. Lesson Content
 - a. Oceans have many currents, including the Gulf Stream.
 - b. Twice daily the tide, in a regular pattern, rises and falls as it meets the shore.
 - c. The wind, water temperature, land masses, and water density influence water currents.
 3. Skill Objective(s)
 - a. The student will understand the tidal patterns of oceans.

- b. The student will understand how currents affect the ocean.
- c. The student will be able to identify the path of the Gulf Stream.
- d. The student will map the patterns of the Gulf Stream.
- e. The student will learn about the influences of wind, water temperature, land masses and water density on currents.

B. *Materials*

- 1. Large world map
- 2. World map handout – See Appendix A
- 3. Crayons
- 4. *What Your First Grader Needs to Know* by E. D. Hirsch (Revised Edition)
- 5. Pie tins (one per student group)
- 6. Water
- 7. Oregano
- 8. Straws

C. *Key Vocabulary*

- 1. Gulf Stream – The Gulf Stream is a warm current that runs from the Gulf of Mexico, up the coast of Florida, and then north up the coast of the United States as far as North Carolina before it crosses the Atlantic Ocean.
- 2. Ocean currents – Ocean currents are moving streams that are similar to rivers flowing through the ocean.
- 3. Shore – The place where the ocean meets the land.
- 4. Tides – Tides are regular changes in the height of the ocean: two high tides and two low tides occur each day. The level of the ocean rises and falls as it meets the shore.
- 5. High tide – At high tide, the edge of the ocean comes way up, covering the beach so that all you see is a little stretch of land.
- 6. Low tide – At low tide, the water level drops and the edge of the ocean moves farther away, leaving a broad sandy beach.

D. *Procedures/Activities*

- 1. Display vocabulary words on the board or chart paper. Draw a diagram of a shoreline and explain that the place where the ocean meets the land is the shore.
- 2. Display and enlarge the picture of the tides found on page 282 of *What Your First Grader Needs to Know* by E. D. Hirsch Jr. Explain that every day, twice a day in a regular pattern, the level of the ocean rises and falls as it meets the shore. These changes are called the oceans tides. As you show the pictures to the students explain that if they were to spend the day at the beach they would see changes in the tides. At high tide, the edge of the ocean comes way up covering the beach. At low tide, the water level drops and the edge of the ocean moves farther away, leaving a broad sandy beach.
- 3. Divide the class into small groups. Give each group a pie plate. Fill the plate to the inner rim with water. Sprinkle a teaspoon of oregano over the surface. Using a straw have students blow across the middle of the surface from one side of the pan. Discuss what was observed. Students should observe that the water is rippled by the artificial wind they created and that the currents on the surface circulated around the edges of the pan.
- 4. Explain to students that the water in the ocean moves all the time. The wind moves it and forms the oceans surface into waves. In some parts of the ocean the water moves in great streams, almost like rivers flowing though the ocean. We call these moving streams ocean currents. Ships in the Atlantic Ocean often travel on a current called the Gulf Stream. The Gulf Stream is a warm current

that runs from the Gulf of Mexico, up the coast of Florida, and then north up the coast of the United States as far as North Carolina before it crosses the Atlantic Ocean.

5. Model the path of the Gulf Stream with your finger on the world map. Next, have students trace this path with their finger on their world map (Appendix A). Then, have students use crayons to draw the Gulf Stream.

E. Assessment/Evaluation

1. Ensure that students have correctly traced the Gulf Stream on their maps.

Lesson Four: In the Deep Blue Sea

A. Daily Objectives

1. Concept Objective(s)
 - a. Students will gain an understanding of the diversity of ocean life.
2. Lesson Content
 - a. There are four zones in the ocean: the Sunlight Zone, the Twilight Zone, the Dark Zone, and the Abyss.
 - b. Each zone has specific traits and characteristics.
3. Skill Objective(s)
 - a. The student will be able to identify and describe each ocean zone.
 - b. The student will be able to classify animals that live in each zone.

B. Materials

1. *Wish For a Fish: All About Sea Creatures* by Bonnie Worth
2. Vocabulary word and zone characteristics posters (teacher created)
3. 12" X 18" sheet of white construction paper – one per student
4. 4" X 6" strips of black construction paper – two per student
5. 4" X 6" strip of brown construction paper – one per student
6. 4" X 6" strip of dark blue construction paper – one per student
7. 4" X 6" strip of light blue construction paper – one per student
8. 4" X 6" strip of lined paper – four per student
9. Scissors
10. Glue or glue stick
11. Crayons
12. Ocean Zone descriptions – Appendix B
13. Ocean Zone animal cut-outs – Appendix C

C. Key Vocabulary

1. Sunlight Zone – This is the shallowest zone and is home to almost ninety percent of all ocean life. It is the only zone fully lit by the sun. Plants and animals thrive here.
2. Twilight Zone – Very little sunlight reaches this zone. No plants grow here. Some sea creatures living in this dark zone have special organs that glow in the dark.
3. Dark Zone – This zone receives no sunlight and is pitch-dark. Ocean life is very scarce. Some animals living here are skillful hunters. Others are scavengers.
4. Abyss – Very few animals live in this deep and dark zone. The water is extremely cold, and food is very scarce.
5. Marianas Trench – The Marianas Trench is a deep valley in the floor of the Pacific Ocean. It is the deepest place on the earth's surface.

D. Procedures/Activities

1. Read *Wish For a Fish: All About Sea Creatures* by Bonnie Worth.
2. Draw a diagram on the board illustrating the ocean zones. Display the posters with the definition and characteristics of each zone (Appendix B). Introduce

each zone and give details about the water temperature, sunlight that reaches the zone, and the plants and animals that reside in each zone. Discuss the Marianas Trench located in the Pacific Ocean.

3. Display a model of the ocean zone flipbook for students to reference.
4. Instruct students to fold their white sheet of construction paper in half vertically (the result is a 6" by 18" folder). Next, instruct students to fold the paper down in half, and then fold it down in half again. Students open the paper and cut along the folded lines to the center so that there are four flaps on the front.
5. Students glue a sheet of black construction paper to the bottom two squares. Instruct students to glue a sheet of dark blue construction paper above the black. Instruct students to trim the top of the light blue sheet to resemble waves, and then have them glue it to the top section of the paper. Have the students cut or tear the brown strip to resemble the ocean floor and glue it to the bottom black layer.
6. Discuss the different characteristics of the ocean animals found in Appendix C to decide which zone they reside in.
7. Instruct students to color, cut out and place the animals in the appropriate zone.
8. On the left side of the inside instruct students to glue the names of the ocean zones in the appropriate order.
9. Using the ocean zone posters, have the students write the description for each zone on a small sheet of writing paper. There should be one sheet for each zone. Have the students glue the descriptions in the appropriate order on the right side of the inside.

E. Assessment/Evaluation

1. Check the student's ocean zone flipbook to evaluate their understanding.

Lesson Five: Eat Up and Down the Food Chain

A. Daily Objectives

1. Concept Objective(s)
 - a. Students will gain an understanding of the diversity of ocean life.
 - b. Students will develop recognition of the threats to ocean life.
2. Lesson Content
 - a. Plankton depend on sunlight to grow.
 - b. For a food chain to be successful each member of that chain must be present.
3. Skill Objectives
 - c. The student will create a model of an ocean food chain.

B. Materials

1. One sheet of yellow construction paper per student
2. Eight 1 1/2" X 9" strips of blue construction paper per student
3. Four index cards per student
4. Crayons
5. Glue

C. Key Vocabulary

1. Food chain – A food chain is a series of plants and animals that are linked together because they feed on each other.

D. Procedures/Activities

1. Explain that food chains link the plants and animals in the ocean and that they depend on the sun to grow. All of the pieces of the food chain must be present for the species to thrive.

2. Draw an ocean food chain on the board that includes the sun, a plant, a plant eater, and two meat eaters.
 3. Students use the yellow construction paper to cut a sun shape.
 4. Students use the blue strips to make a paper chain. The final link should be used to connect the strips to the sun.
 5. Students use their index cards to illustrate each link of the food chain and label the plant or animal.
 6. Students glue the index cards to the chain to complete the project.
- E. *Assessment/Evaluation*
1. The student will complete a food chain model.

Lesson Six: Where in the World Do the Animals Live?

- A. *Daily Objectives*
1. Concept Objective(s)
 - a. Students will gain an understanding of the location and names of the oceans.
 2. Lesson Content
 - a. Locate oceans: Pacific, Atlantic, Indian, Arctic
 - b. Oceans vary in temperature.
 - c. Ocean animals live in certain ocean zones and areas of the world based on their own unique distinctions.
 3. Skill Objective(s)
 - a. The students will work as a class to label a map of the world.
 - b. The students will work as a class to identify where ocean animals live.
- B. *Materials*
1. *Ocean Animals* by Kathie Billingslea Smith
 2. Large world map traced onto butcher paper
 3. Ocean map animal cut-outs – Appendix D
 4. Glue sticks
 5. Markers, crayons, or colored pencils
- C. *Key Vocabulary* – There is no new vocabulary for this lesson.
- D. *Procedures/Activities*
1. Read *Ocean Animals Unfold and Learn*
 2. Have students label the ocean and continents on the map.
 3. Distribute the ocean map animal cutouts (Appendix D) and discuss the characteristics of each ocean animal. Then, have students color and cut out the cards.
 4. Have students place each animal in the appropriate ocean on the map.
- E. *Assessment/Evaluation*
1. The student will be able to name the continents and oceans. They will also be able to place the creature cutout in the appropriate ocean or oceans.

Lesson Seven: Coral Reef Adventure

- A. *Daily Objectives*
1. Concept Objective(s)
 - a. Students will gain an understanding of the diversity of ocean life.
 2. Lesson Content
 - a. Coral reefs are shallow, warm, clear ocean habitats.
 - b. Coral reefs are located throughout the world's oceans.
 - c. A large variety of plants and animals live in coral reefs.
 3. Skill Objective(s)

- a. The student will identify characteristics of an ocean reef.
 - b. The student will identify plants and animals that live on a coral reef.
 - c. The student will evaluate his or her own work for completeness.
- B. *Materials*
- 1. *Coral Reef* by Susan Canizares and Mary Reid
 - 2. Overhead transparency of the coral reef map – Appendix E
 - 3. Several sheets of blue construction paper for each student
 - 4. One sheet of brown construction paper per student
 - 5. A wide variety of construction paper
 - 6. One shoe box per student
 - 7. Glue
 - 8. Tape
 - 9. Thread or yarn
 - 10. Scissors
 - 11. Sand
 - 12. Student checklist – Appendix F
 - 13. Optional glitter, colored noodles, pipe cleaners, beads, buttons, or any other decorative items.
 - 14. Optional: Coral reef animal cut-outs from enchantedslearning.com
- C. *Key Vocabulary*
- 1. Coral reef – The reef is a warm, clear, shallow ocean habitat that is rich in life. The reef is made of a layer of living coral animals attached to a wall of many millions of dead skeletons.
 - 2. Great Barrier Reef – This reef is the largest coral reef in the world. It is over 1,257 miles long.
- D. *Procedures/Activities*
- 1. Read *Coral Reef* by Susan Canizares and Mary Reid. Introduce the terms coral reef and Great Barrier Reef.
 - 2. Display the map of the coral reefs (Appendix E) and discuss their characteristics and locations.
 - 3. Have students line their shoebox in the back and three sides with blue construction paper.
 - 4. Students should line the bottom of their shoebox with brown construction paper, then sprinkle sand over the brown paper to resemble the ocean floor.
 - 5. Students begin constructing their coral reef scene following the guidelines outlined in the checklist. Allow students to use a variety of art materials to show their creativity.
- E. *Assessment/Evaluation*
- 1. The student will complete the checklist (Appendix F) to verify that they have shown the required elements in their diorama. Display the dioramas and invite other classes to tour your students' coral reefs.

Lesson Eight: Where in the World Wide Web?

- A. *Daily Objectives*
- 1. Concept Objective(s)
 - a. Students will gain an understanding of the diversity of ocean life.
 - 2. Lesson Content
 - a. Diversity of ocean life: from organisms too small for the eye to see (plankton) to giant whales
 - 3. Skill Objective(s)

- a. The student will use online resources to research an ocean animal of their choosing.
 - b. The student will use the information gathered to write a report on the selected ocean animal.
 - d. The student will present their report to the class.
- B. *Materials*
- 1. Computer with online access
 - 2. Web site resources – Appendix G
 - 3. Research report form – Appendix H
 - 4. Writing paper
 - 5. Report Rubric – Appendix I
- C. *Key Vocabulary - There is no new vocabulary for this lesson.*
- D. *Procedures/Activities*
- 1. The student will choose an ocean animal of his/her choice to report on.
 - 2. The student will use the Internet to research the animal and its habitat. (www.enchantedlearning.com is a great place to start)
 - 3. The student will complete the Research Report Form (Appendix H) to organize their information.
 - 4. The student will use this information to write a report about their ocean animal. The student will also include a drawing of their animal.
 - 5. Allow students to share their report with the class.
- E. *Assessment/Evaluation*
- 1. The student will be assessed on their ability to collect information and use that information to write a report. The report rubric (Appendix I) should be used to assess the student's work.

Lesson Nine: What is Happening to Our Oceans?

- A. *Daily Objectives*
- 1. Concept Objective(s)
 - a. Students will develop recognition of the threats to ocean life.
 - 2. Lesson Content
 - a. There are many dangers to ocean life, such as pollution, overfishing, and oil spills.
 - 3. Skill Objective(s)
 - a. The student will demonstrate an understanding of the dangers to ocean life.
 - b. The student will create a poster to demonstrate their knowledge of the dangers of pollution to ocean life.
 - c. The student will present their poster to the class.
- B. *Materials*
- 1. *Life in the Oceans* by Lucy Baker
 - 2. 1 large white sheet of construction paper per student
 - 3. Markers
 - 4. Crayons
- C. *Key Vocabulary*
- 1. Pollution – Pollution is caused when substances that are harmful to life are released into the air or water or onto land.
- D. *Procedures/Activities*
- 1. Read pages 20-23 in *Life in the Oceans* by Lucy Baker. Discuss the effects of pollution on the oceans and the animals that reside in it. Discuss the dangers of overfishing to ocean life.

2. As a class brainstorm ways to keep our oceans clean, stop pollution, and eliminate overfishing.
 3. Have students work in partners or individually to create a poster that illustrates a way to save the oceans.
 4. When the posters are complete have students share their posters with the class.
- E. *Assessment/Evaluation*
1. Evaluate the student's poster to ensure understanding the effects of pollution.

VI. CULMINATING ACTIVITY

- A. Complete the KWL begun in lesson 1
- B. Visit an aquarium if one is available in your city.

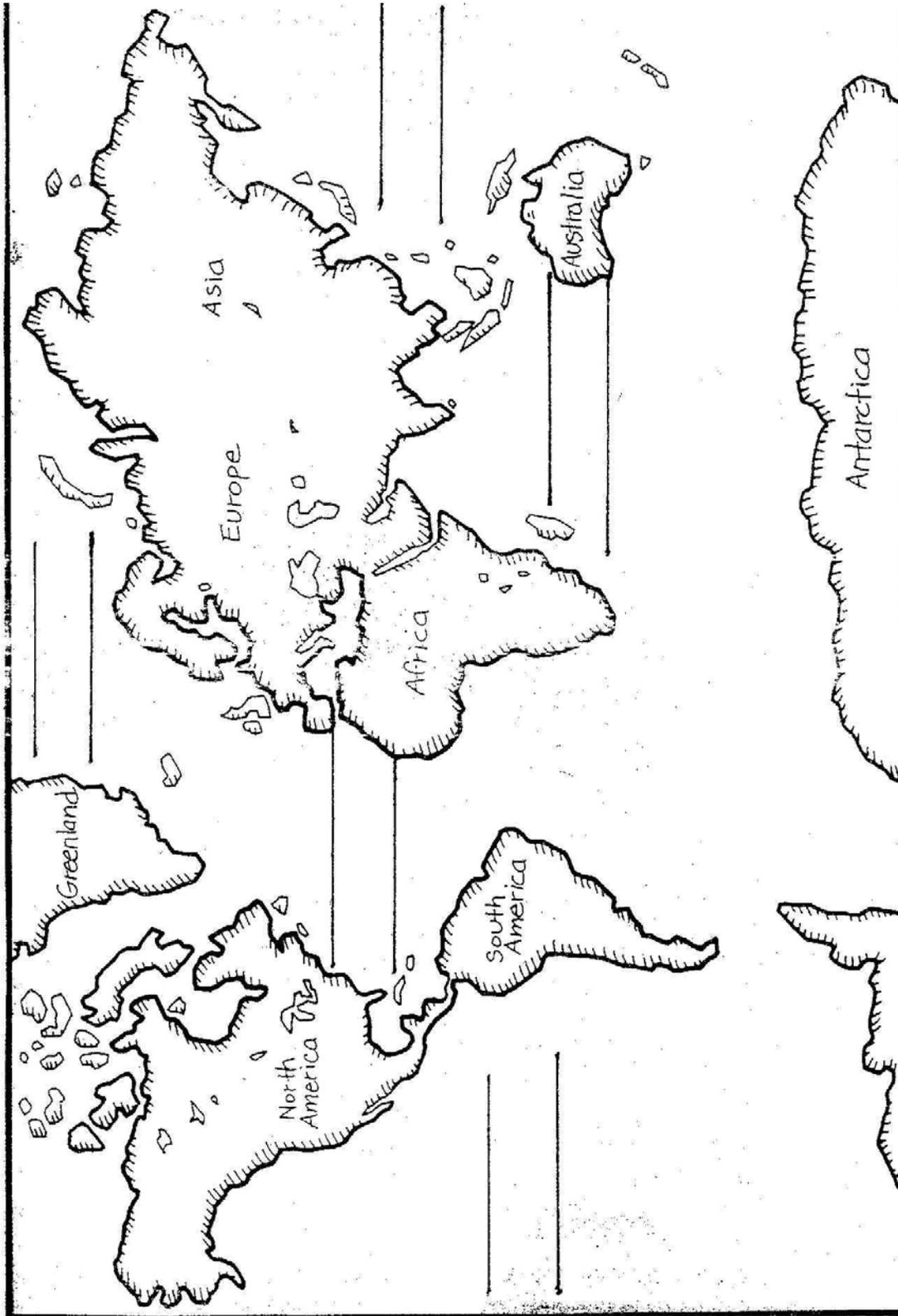
VII. HANDOUTS/WORKSHEETS

- A. Appendix A – World map
- B. Appendix B – Ocean Zone descriptions
- C. Appendix C – Ocean Zone animal cutouts
- D. Appendix D – Ocean Map animal cutouts
- E. Appendix E – Coral Reef Map
- F. Appendix F – Coral Reef student checklist
- G. Appendix G – Web site resources
- H. Appendix H – Research report form
- I. Appendix I – Report rubric
- J. Appendix J – Recommended books

VIII. BIBLIOGRAPHY

- A. Andreae, G. *Commotion in the Ocean*. Wilton, CT: Tiger Tales, 2001. 1-58925-000-1.
- B. Baker, L. *Life in the Oceans*. New York: Scholastic Inc., 1990. 0-590-46132-X.
- C. Canizares, S., & Reid, M. *Coral Reef*. New York: Scholastic Inc., 1998. 0-590- 76182-X
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- H. Worth, B. *Wish For a Fish: All About Sea Creatures*. New York: Random House, Inc., 1999. 0-679-991116-6.

Appendix A



Appendix B

Ocean Zones

The Sunlight Zone

This is the shallowest zone and is home to almost 90 percent of all ocean life! It is the only zone fully lit by the sun. Plants and animals thrive here.

The Twilight Zone

Very little sunlight reaches this zone. No plants grow here. Some sea creatures living in this dark zone have special organs that glow in the dark.

The Dark Zone

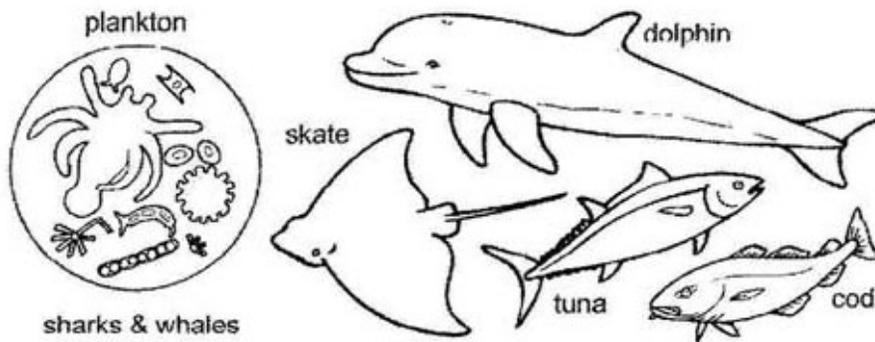
This zone does not get any sunlight and is pitch-dark. Ocean life is very scarce. Some animals living here are skillful hunters. Others are scavengers.

The Abyss

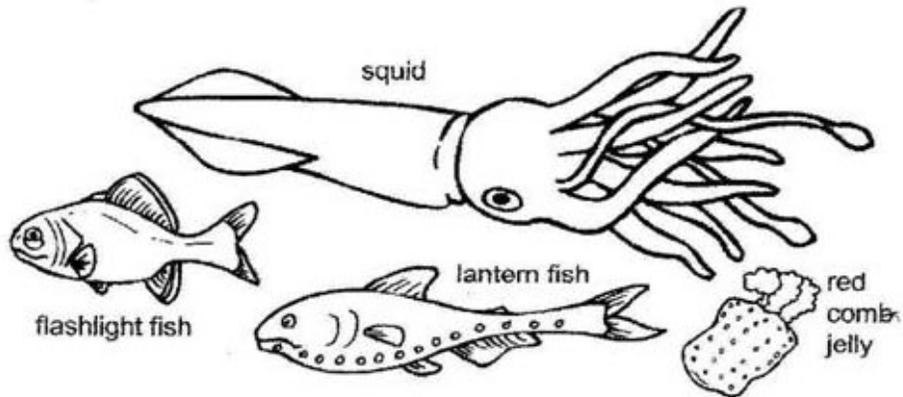
Very few animals live in this deep and dark zone. The water is extremely cold, and food is very scarce.

Appendix C

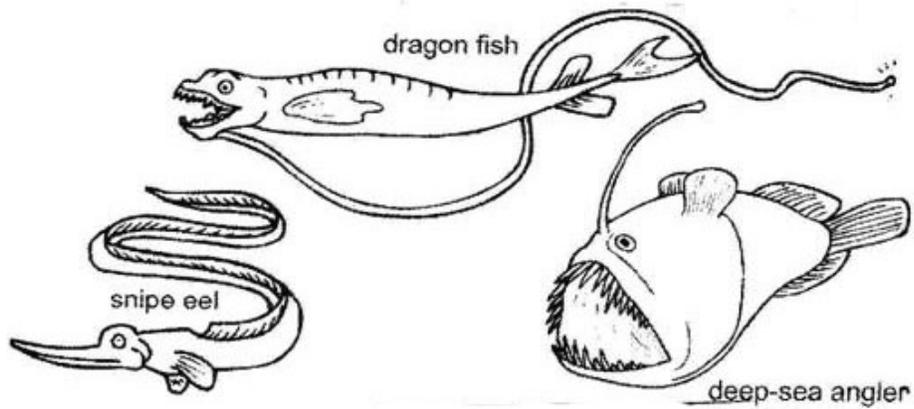
The Sunlight Zone



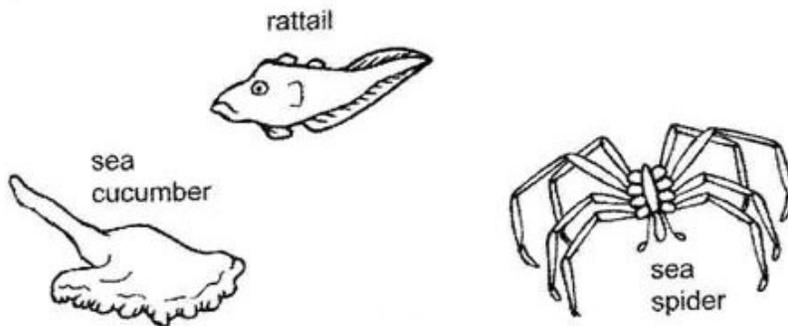
The Twilight Zone



The Dark Zone

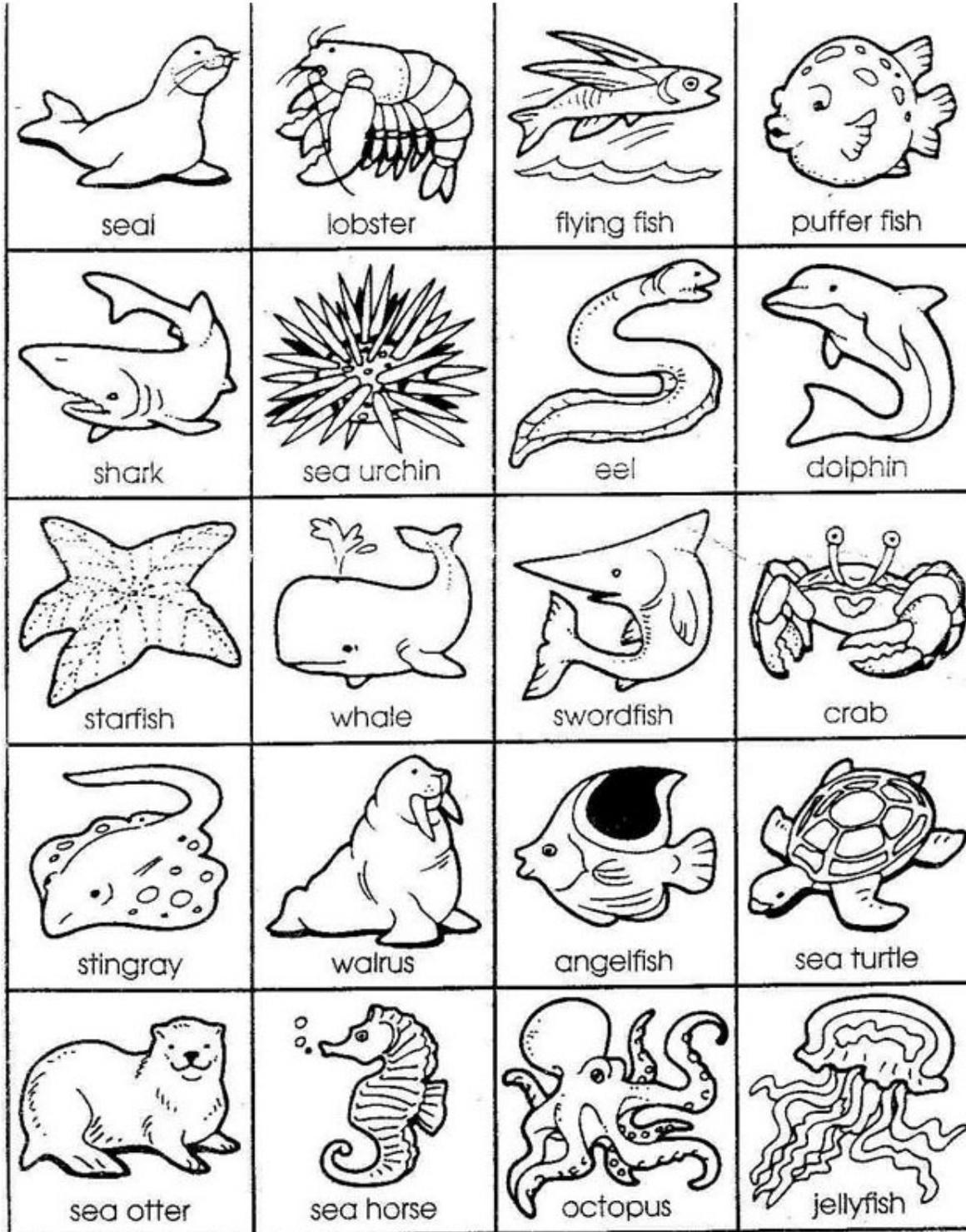


The Abyss



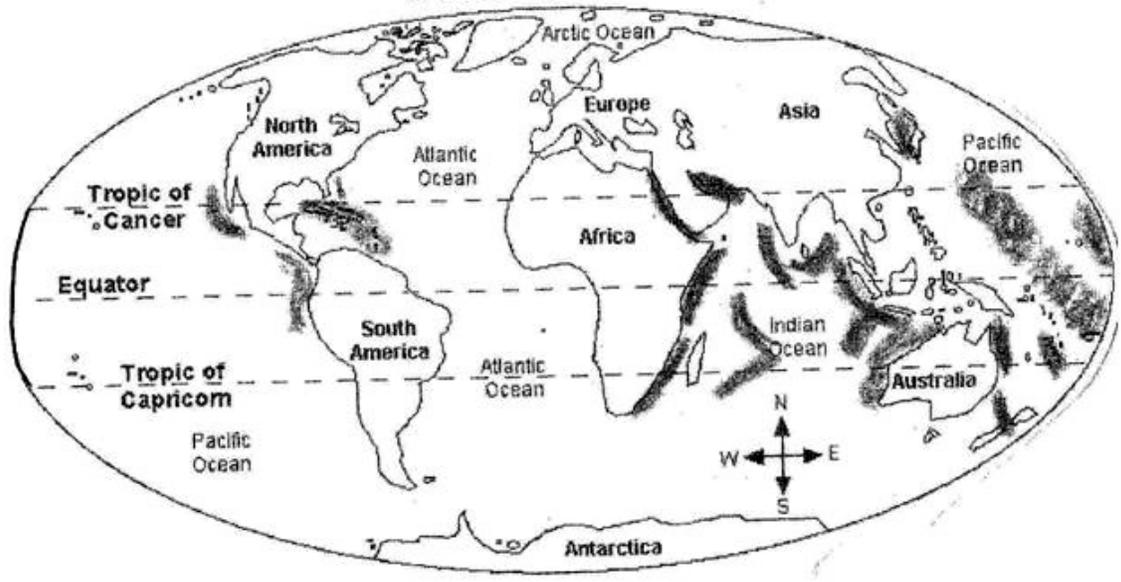
Appendix D

Ocean Map Animal Cut-Outs



Appendix E

The World



Coral Reefs ■ = Coral reefs

Appendix F

Name _____

Corral Reef Diorama

1. My coral reef has an ocean floor.	yes	no
2. My coral reef has at least one kind of coral.	yes	no
3. My coral reef has at least three different ocean animals.	yes	no
4. My coral reef has at least one kind of plant.	yes	no

Self Evaluation

I am proud of my work because _____

_____.

My favorite part is _____

_____.

Appendix G

Websites for Online Research

www.aqua.org (National Aquarium in Baltimore)

www.coralfilm.com

www.coralreef.org

www.brainpop.com (This site has great games, movies, and quizzes)

www.dltk-kids.com/animals.ocean.html (animal projects)

www.dwazoo.com (Dallas World Aquarium)

www.enchantedlearning.com

www.geocities.com/dolphindreamlands/dolphinfun.html (Facts and pictures about dolphins)

www.germantown.k12.il.us/html/animals1.html (Ocean animals)

www.germantown.k12.il.us/html/coral.html (Coral)

www.hamptonbays.k12.ny.us/Elem/resources/ocean%20animals.htm (Ocean animal facts)

www.letsfindout.com/subjects/browse?undersea (Ocean animals)

www.library.thinkquest.org/J002747/klMyst.html?tqskip1=1&tqtime=1020
(Mysterious ocean animals)

www.library.thinkquest.org/J002747/klWellK.html?tqskip1=1&tqtime=1020 (Well known ocean animals)

www.masla.com/jellyfishbasics.htm (Jellyfish)

www.mbayaq.org (Click on "teachers and kids")

<http://mbgnet.mobot.org/salt/oceans/zone.htm> (Ocean zones)

www.mos.org/oceans

<http://ms.mathscience.k12.va.us/lessons/ocean/explore.html> (Explore the ocean)

Appendix G continued

www.perspective.com/nature/animalia/starfish.html (Starfish)

www.projects.edtech.sandi.net/valencia/puppetplay/ocean_animals.html (More ocean animals)

www.sandralamarche.com/ocean_animals.htm (Whale pictures)

www.seasky.org/reeflife/sea2.html (Reef life)

www.sheddnet.org

www.stemnet.nf.ca/CITE/oceancrabs.htm (Facts and pictures about crabs)

<http://teacher.scholastic.com/dolphin/about.htm> (Dolphins)

www.thirteen.org/savageseas/deep-side-monsters.html

www.whaletimes.org/whafshn.htm (Facts about ocean animals)

www.wh.who.edu/faq/index.html (Fish questions and answers)

www.zoobooks.com/ocean/quiz.html (Ocean animal quiz)

Appendix H

Name _____

Animal Information

1. What is the name of your ocean animal? _____

2. What does your animal like to eat? _____

3. Where does your animal spend most of its time?

a. in deep water

b. near a reef

c. on the ocean floor

4. What ocean zone does your animal live in? _____

5. How does your animal move around? _____

6. Why did you choose this animal and what makes it special? _____

7. List any other facts you would like the class to know. _____

Appendix I

Online Report Rubric

Student name _____ Date _____

	Yes	No
1. Is the name of the ocean animal listed?		
2. Is the animal's diet listed?		
3. Is the animal's habitat listed?		
4. Is the ocean zone listed?		
5. Does the student list how the animal moves around?		
6. Does the student list why he/she chose the animal?		
7. Does the student list why the animal is special to them?		
8. Did the student list any special facts?		

	Emergent	Developing	Proficient	Comments
Capitalization				
Punctuation				
Spelling				
Word use				
Fluency				
Beginning, middle, and end				

Additional notes _____

Appendix J

Recommended Books

- Aliki. *My Visit to the Aquarium*. New York: Harper Collins Publishers, 1993. 0-06-446186-6.
- Andreae, G. *Commotion in the Ocean*. Wilton, CT: Tiger Tales, 2001. 1-58925-000-1.
- Baker, L. *Life in the Oceans*. New York: Scholastic Inc., 1990. 0-590-46132-X.
- Berger, G., & Berger, M. *Is a Dolphin a Fish?*. New York: Scholastic Inc., 2001. 0-439-26667-X.
- Canizares, S. & Moreton, D. *This Bird Can't Fly*. New York: Scholastic Inc., 1998. 0-590-76968-5.
- Carle, E. *A House For Hermit Crab*. New York: Scholastic Inc., 1987. 0-590-42567-6.
- Cerullo, M. *Dolphins: What They Can Teach Us*. New York: Scholastic Inc., 1999. 0-439- 14037-4.
- Chanko, P. *Sea Creatures*. New York: Scholastic Inc., 1998. 0-590-63880-7.
- Chanko, P. & Chesson, B. *A Dolphin is Not a Fish*. New York: Scholastic Inc., 1998. 0-590-63882-3.
- Cole, J. *The Magic School Bus On the Ocean Floor*. New York: Scholastic Inc., 1992. 0-590-41431-3.
- Davies, N. *One Tiny Turtle*. Cambridge, MA: Candlewick Press, 2001. 0-439-42983-8.
- Dubowski, C. E. *Shark Attack!* New York: DK Publishing, Inc., 1998. 0-7894-3440-7.
- Earle, S. A. *Dive!: My Adventures in the Deep Frontier*. New York: Scholastic Inc., 1999. 0-439-16027-8.
- Elhert, L. *Fish Eyes*. Orlando: Harcourt Brace & Company, 1990. 0-15-228051-0.
- Gibbons, G. *Penguins!* New York: Scholastic Inc., 1998. 0-439-06132-6.
- Gibbons, G. *Sea Turtles*. New York: Scholastic Inc., 1995. 0-439-22119-6.
- Goodman, P. & Sacks, J. *Arty Facts: Oceans & Art Activities*. New York: Crabtree Publishing Company, 2002. 0-7787-1115-3.
- Guiberson, B. Z. *Ocean Life*. New York: Scholastic Inc., 2001. 0-439-20550-6.
- Gunzi, C. *Whales and Dolphins*. New York: Scholastic Inc., 2001. 0-439-41773-2.
- Hall, D. & Associates. *Animals on the Seashore*. London: Octopus Publishing Group Ltd., 2001. 1-85854-270-7.
- Llewellyn, C. *The Best Book of Sharks*. New York: Scholastic Inc., 1999. 0-439-37602-5.

Appendix J continued

Markle, S. *Sea Babies*. New York: Scholastic Inc., 2002. 0-439-33489-6.

Marsh, T. J., & Ward, J. *Somewhere in the Ocean*. New York: Scholastic Inc., 2000. 0-439-22035-1.

Parker, S. *Whales and Dolphins*. London: Quarto Publishing plc, 1994. 0-87156-465-3.

Robinson, F. *Wacky Fish*. New York: Scholastic Inc., 2003. 0-439-33015-7.

Rose, D. L. *Into the A, B, Sea*. New York: Scholastic Inc., 2000. 0-439-09696-0.

Tibbitts, C. K. *Seashells, Crabs and Sea Stars*. Minocqua, WI: North Word Press, Inc., 1996. 1-55971-542-1.

Twist, C. *Shark Dictionary and Other Sea Creatures*. New York: Tangerine Press, 2002.
0-439-46133-2.