

# Zoology 2 Notebooking Journal

Below are descriptions of a suggested schedule and the activities included in this notebooking journal. The first three activities are taken directly from the coursework contained in *Exploring Creation with Zoology 2*. The others are additional optional activities coordinating with the book.

## Suggested Schedule

A suggested schedule for reading the *Exploring Creation with Zoology 2* text and completing the activities contained in the book and in this journal has been provided. Though not every student or parent will choose to utilize the schedule, those who do may find it very beneficial. Some parents will appreciate having their student's daily reading and assignments organized for them. Older students will find it easy to complete the book and journal by following the schedule on their own. Though the suggested schedule provides for the zoology 2 course to be completed in twenty-eight weeks, two days per week, it is flexible and can be made to fit your goals. The course can be expedited by completing three or four days of science per week. You can lengthen the course by studying science only one day per week. If you wish to do the extra activities found in the Dive Deeper pages, still another day of science can be added. Above all, use the suggested schedule in a way that best suits your family.

## Fascinating Facts

*Exploring Creation with Zoology 2* contains many facts, ideas and interesting notions. Although oral (verbal) narration is an effective means for retention, your student may wish to record some of the information either through drawing or writing. The Fascinating Facts pages can be used for written narrations. Some of the lessons provide two Fascinating Facts pages for your student's use. If your student is an avid writer, you can access more Fascinating Facts pages to print (free of charge) on the Apologia website. To do so, simply login to [www.apologia.com/bookextras](http://www.apologia.com/bookextras) and type in this password: Godmadethemswim. These additional pages can be included in this notebooking journal by simply stapling them onto one of the existing Fascinating Facts pages.

## What Do You Remember? Review Questions

These review questions are the same questions asked in the "What Do You Remember?" section found in each lesson of the book. They can be answered orally (verbally) or, for older students, as a written narration assignment. For co-ops or classroom use, these questions may also serve as a way to evaluate how much the students have retained from the reading. However, I would encourage you to review the material with the students before giving the questions as a written narration assignment. This will encourage better retention of the material and increase both the students' confidence and their ability to restate their learning. The answers to the review questions can be found on pages 219 through 223 of *Exploring Creation with Zoology 2*.

## Notebooking Assignments, Activities and Projects

The lessons in *Exploring Creation with Zoology 2* offer suggested notebooking assignments, activities and projects typically found at the end of each lesson. Provided in this journal are templates (blank pages with lines for writing or space for drawing) which your student can use for completing these activities. Colored pencils can be used to encourage creative, high quality work. Some projects require the student to use a Scientific Speculation Sheet. These sheets have been included in this notebooking journal. Drawings or pictures of the projects can be pasted onto the Scientific Speculation Sheets.

## Scripture Copywork

Incorporating the Word of God in your science studies through Scripture Copywork will provide many benefits to your student. It will encourage stronger faith and memorization of Scripture, as well as better writing, spelling and grammar skills. Each lesson has a corresponding verse for your child to copy, which may be printed or written in cursive.

## Vocabulary Crosswords

If you desire to expand your child's studies with vocabulary activities, the Vocabulary Crosswords can be used to review the new words and concepts mentioned in the lesson. Remember, working with the vocabulary in this manner is not a "test" of your child's knowledge, but should be viewed as a reinforcement and reminder of what he has learned. The answers to the Vocabulary Crosswords can be found on pages 194 and 195.

## Project Pages

Many of the projects and experiments in *Exploring Creation with Zoology 2* are "hands-on" and therefore cannot be preserved in a notebook. Each lesson in this notebooking journal provides a Project Page in which your student can write about what he did and learned from the various projects and experiments contained in the coursework. Be sure to take pictures of the finished products and glue them onto the Project Pages. Your child will enjoy looking back and remembering the fun he had learning zoology 2!

## Cut and Fold Miniature Books

At the back of this journal, you will find Cut and Fold Miniature Book craft activities that correspond with the reading. These miniature books are designed to review the concepts learned in each lesson. Writing lines are provided on the miniature books so your students can record the information they have learned. Some books ask for specific information. Others do not and allow the students to record the facts they found most interesting. Students will cut out the pattern, write what they have learned in the designated places, then assemble the books according to the directions. Paste Pages are included in this journal for each miniature book activity. The Paste Pages provide a place for your students to preserve and display their Cut and Fold Miniature Books. Instructions are included for pasting the miniature books onto the Paste Pages.

These books are entirely optional. Some students thrive with the hands-on approach, while other students do not benefit academically from this type of activity. Allow your students to try the Cut and Fold Miniature Books to see if they enjoy learning in this way.

## Dive Deeper

The Dive Deeper suggestions are designed to give your student additional ideas and activities that might enhance his studies such as: experiments, hands-on activities, research and living book titles, as well as audio and video resources. Because these assignments are entirely optional, they are not included in the suggested schedule for completing the notebooking journal.

## Field Trip Sheets

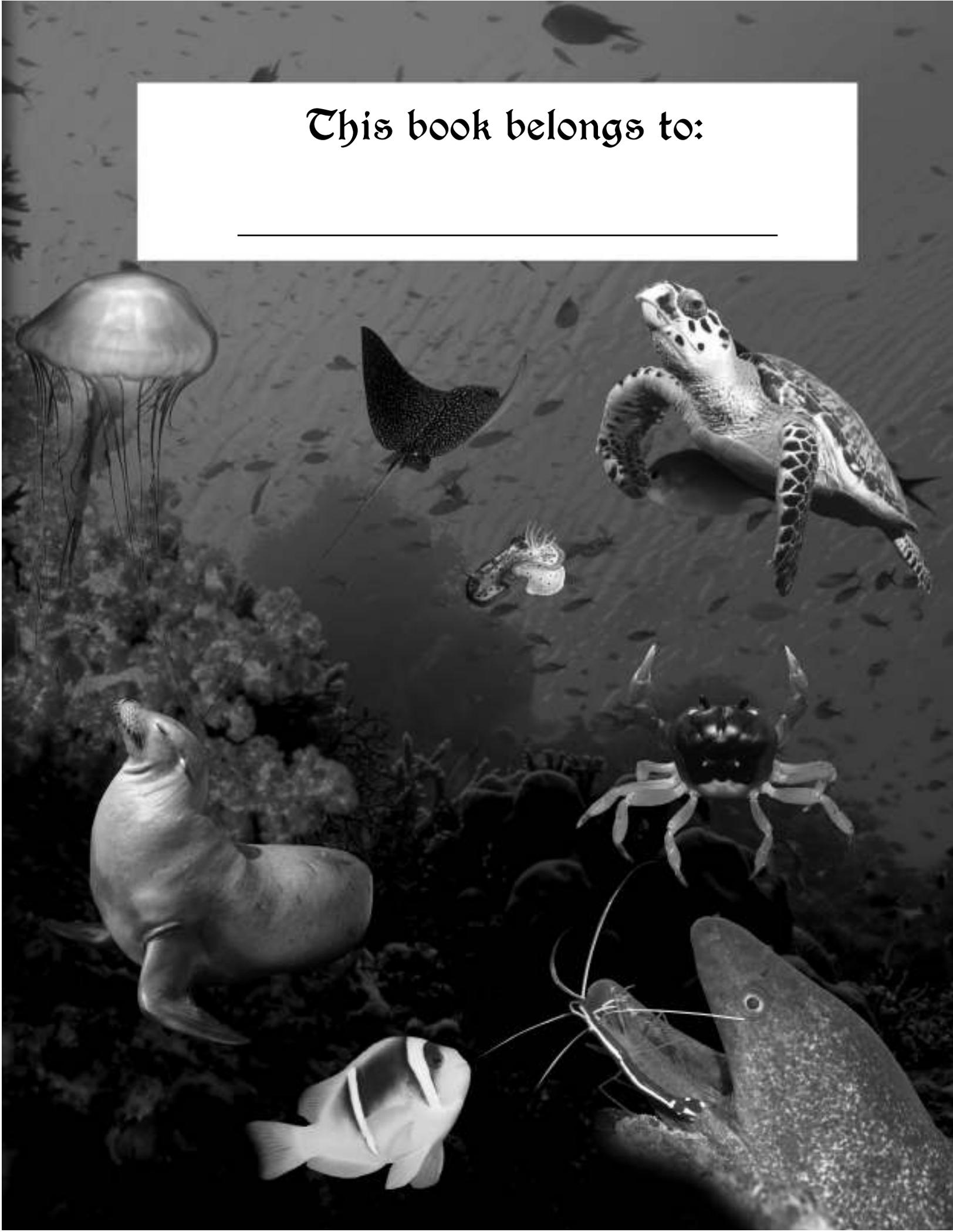
Your family may wish to further enhance your studies by visiting a science museum, aquarium or perhaps Sea World. Field Trip Sheets are provided at the back of this notebooking journal to record your visits. You can make a pocket on the back of these sheets to hold any brochures or additional information you receive. Simply glue three edges (sides and bottom) of a half piece of construction paper to the bottom of the Field Trip Sheet.

## Final Review

At the end of this journal are 50 questions that review the entire course. They can be answered orally or in writing. This is an optional activity; however, I believe your students would be pleasantly surprised to see how much they know about zoology 2 after answering the questions. The answers to the Final Review can be found on page 196.

This book belongs to:

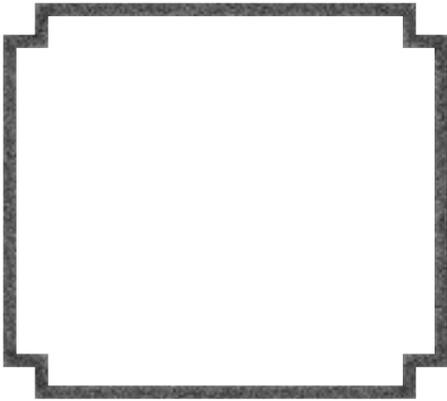
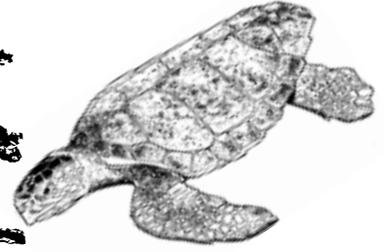
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# Fascinating Facts

about

## AQUATIC ANIMALS



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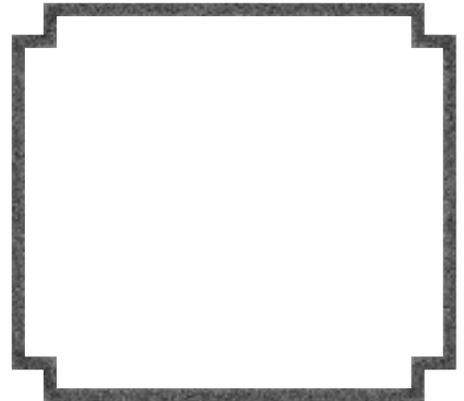
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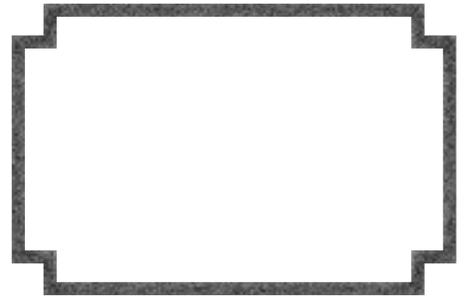


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# Fascinating Facts

about

## AQUATIC

## ANIMALS



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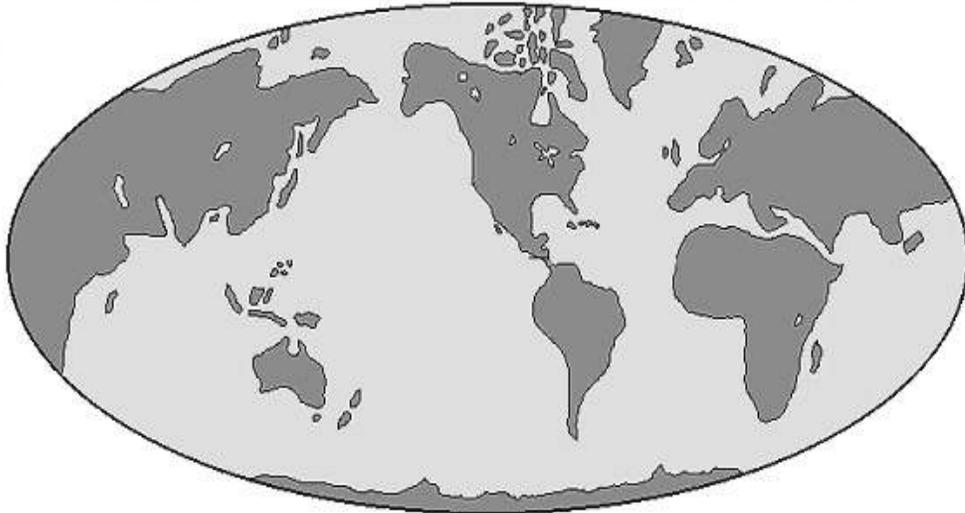
# Fascinating Facts

about

## CURRENTS & WATER



### SURFACE CURRENTS



### SALT WATER

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### FRESH WATER

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# Fascinating Facts

about the



# Ocean



ZONES

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Abyssal Animals

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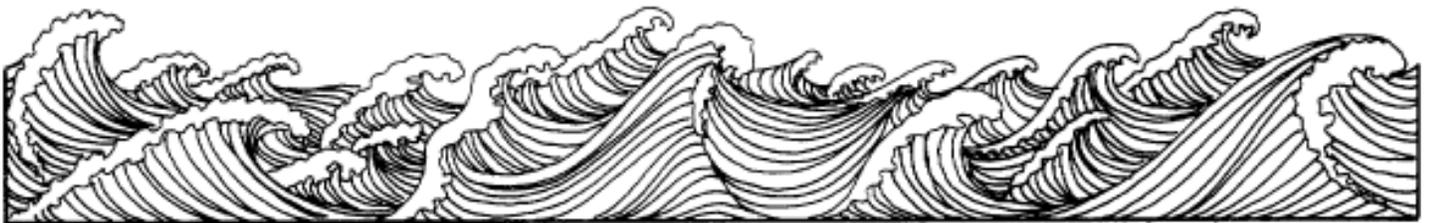
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# WHAT DO YOU REMEMBER? LESSON 1 REVIEW QUESTIONS

1. What are nektonic creatures?
2. What are benthic creatures?
3. What are plankton?
4. Where can zooplankton be found at night?
5. Why are plankton important to all sea life?
6. What are filter feeders?
7. Can you name the four oceans in the world?
8. What are seas?
9. What are estuaries?
10. Beginning from the shore out to the deep, what are the four zones of the ocean floor?
11. From the surface of the ocean to the deep, what are the three zones in which aquatic creatures live?
12. What are the circular currents called?
13. What are the currents caused by temperature and salt levels called?
14. What causes the tides?

## What Causes the Tides

## Regions of the Ocean Floor

# COPYWORK

Praise the LORD from the earth,  
you great sea creatures and all  
ocean depths.

Psalm 148:7

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# COPYWORK

*Praise the LORD from the earth,  
you great sea creatures and all  
ocean depths.*

*Psalm 148:7*

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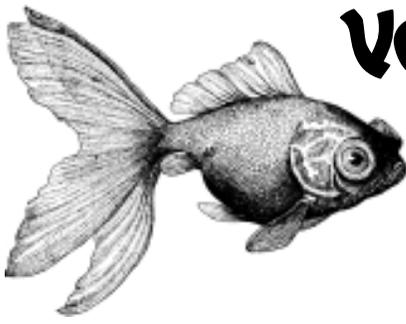
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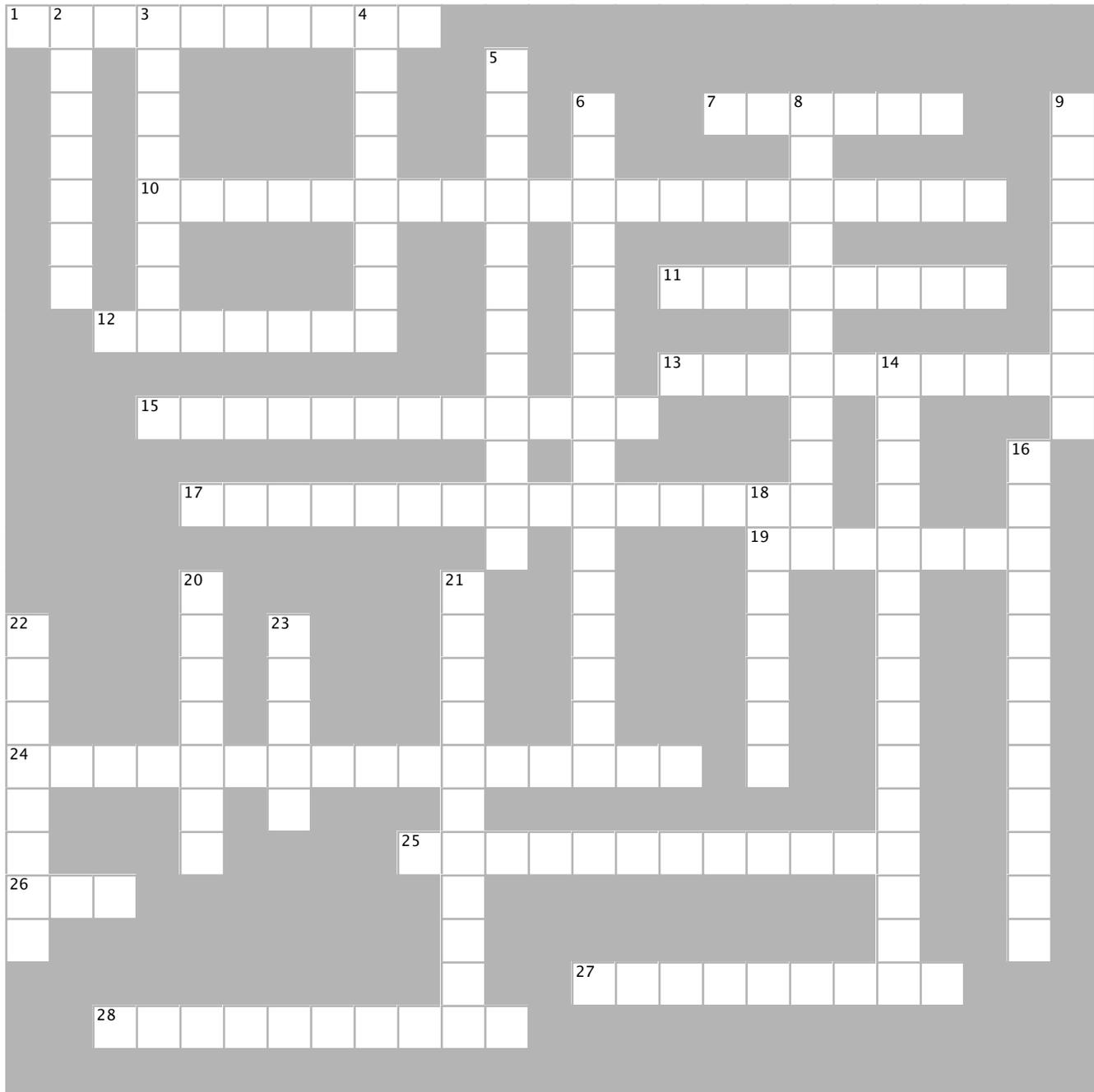
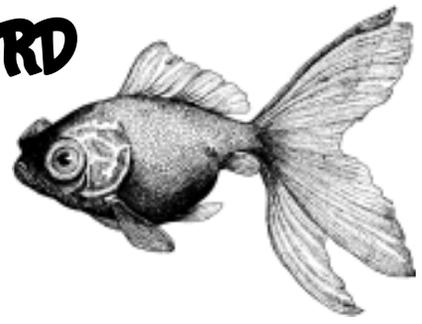
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# VOCABULARY CROSSWORD

## LESSON 1

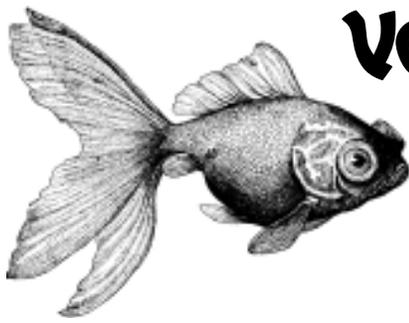


NEKTONIC  
 BENTHIC  
 PLANKTON  
 MAMMALS  
 MIDNIGHT ZONE  
 CONTINENTAL SLOPE  
 CONTINENTAL RISE  
 THERMOHALINE CURRENTS

REPTILES  
 HIGH TIDE  
 SUNLIT ZONE  
 AMPHIBIANS  
 INVERTEBRATE  
 BIOLUMINESCENCE  
 SPRING TIDES  
 FISHES

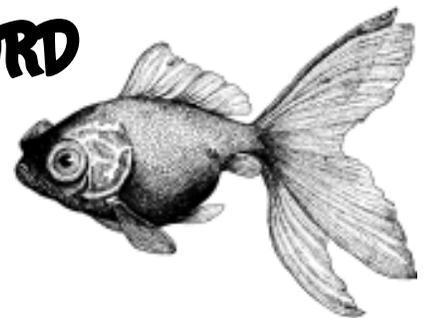
LOW TIDE  
 BRACKISH  
 TWILIGHT ZONE  
 ZOOPLANKTON  
 CONTINENTAL SHELF  
 ABYSSAL PLAIN  
 VERTEBRATE  
 NEAP TIDES

GYRES  
 ESTUARY  
 SEA  
 SESSILE



# VOCABULARY CROSSWORD

## LESSON 1



### Across

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1. These creatures are like reptiles, but they don't have scales.
7. Animals that are cold-blooded and have a backbone, but don't breathe air.
10. Deep currents in the ocean resulting from water evaporating from the surface of the ocean. TWO WORDS
11. Organisms that drift or float in the water because they cannot swim strongly enough to move against the ocean current.
12. Animals that don't swim, but scurry, crawl, hop, scoot, burrow, or slither across the bottom of a body of water. They are also called the benthos.
13. An animal that has a backbone.
15. The area that begins before the bottom of the ocean floor, where it is darker than midnight. No light from the sun ever reaches down this deep into the ocean. TWO WORDS
17. One part near the very end of the continental slope drop off, where the slope becomes much more gentle. TWO WORDS
19. The place where a river meets with an ocean or sea.
24. The part of the continent that is underwater. It slopes gradually downward, and the water gets deeper and deeper. TWO WORDS
25. An animal that doesn't have a backbone.
26. A body of water that is smaller than an ocean. It is made up of salt water because it is connected to an ocean.
27. Tides that occur when the sun's gravity works against the moon's gravity, causing the high tides to become lower and the low tides to become higher. TWO WORDS
28. The part of the ocean that is well lit by the sun. TWO WORDS

### Down

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2. Warm-blooded creatures that breathe air and give birth to live young that drink milk from their mother's body. They also have a backbone and hair.
3. What we call it when the ocean's water comes way up onto the shore. TWO WORDS
4. What we call animals that can get from one place to another by propelling, gliding, or paddling through the water.
5. The area deeper down the continental slope where it is fairly dark with very little sunlight coming through. TWO WORDS
6. A giant cliff-like drop-off at the end of the continental shelf in the ocean. TWO WORDS
8. Tides that are caused by the sun working with the moon to pull on the oceans of the world, causing the high tide to become higher than usual and the low tide to become lower than usual. TWO WORDS
9. Cold-blooded creatures that have scales, breathe air, lay eggs and have a backbone.
14. What we call it when a creature has the ability to make its own light, much like a firefly.
16. The deep, dark ocean floor, located at the end of the continental rise. TWO WORDS
18. Animals that stick themselves to one place and do not move around.
20. What we call it when the ocean's water pulls way back, sometimes exposing a lot of the beach. TWO WORDS
21. A certain type of plankton that are a lot like animals because they need to eat to get food.
22. Water that is less salty than seawater but saltier than fresh water.
23. Circular patterns formed by the surface currents in the world's oceans.

# Aquatic Animals & the Ocean Minibook



# DIVE DEEPER



## Create Abyssal Animals

You can create some abyssal animals for your ocean box. Find images on the Internet, or look for them in the books or DVDs below to see what they look like.

## Why Don't Oceans Freeze?

Have you ever wondered why rivers and lakes freeze in the winter, but oceans do not? Let's do an experiment to see why.

### You will need:

- 1 gallon freezer bag
- 1 quart freezer bag
- Crushed ice
- 1 cup salt
- A thermometer

Fill the gallon freezer bag half way with crushed ice and water. Measure the temperature and record it. Add salt and seal the bag. Allow the ice to melt for 1 hour. Check the temperature again. The temperature should be less than 32 degrees Fahrenheit. Even though the temperature is below freezing, the ice continues to melt. This is because the salt lowered the freezing point of the water. The water will not freeze unless it reaches a much colder temperature than 32 degrees. This is why water in the ocean rarely freezes. The salt keeps the ocean water from freezing. Occasionally, the top layer of the water, which has less salt, will freeze, while the bottom does not. This enables ocean animals to live all year long in their watery world.

## Create a Model of the Ocean Floor

Using the salt dough recipe below, you can create a model of the ocean floor.

### Ingredients:

- 4 cups flour
- 1 cup salt
- 1 1/2 cups hot water (tap water)
- 2 teaspoons vegetable oil (optional)
- Food coloring

Mix the ingredients together. You may want to add this to your ocean box.

## Book and DVD Suggestions

***The Deep: The Extraordinary Creatures of the Abyss*** by Claire Nouvian. This picture book contains the strange, beautiful, grotesque and wonderful creatures that inhabit the abyss. Artistically presented.

***Down, Down, Down: A Journey to the Bottom of the Sea*** by Steven Jenkins. A top to bottom look at the ocean.  
***IMAX Deep Sea*** (DVD) narrated by Johnny Depp and Kate Winslet. This stunning film is an exploration of the world beneath the sea and its bizarre and exotic inhabitants.

\*Be aware that some titles may contain evolutionary content

# My Aquatic Animals Project

What I did:

What I did:

What I learned:

What I learned:



# Scientific Speculation Sheet

## Water Temperature

Name \_\_\_\_\_

Date \_\_\_\_\_

Materials Used:

Procedure:

Hypothesis:

Results:

Conclusion:

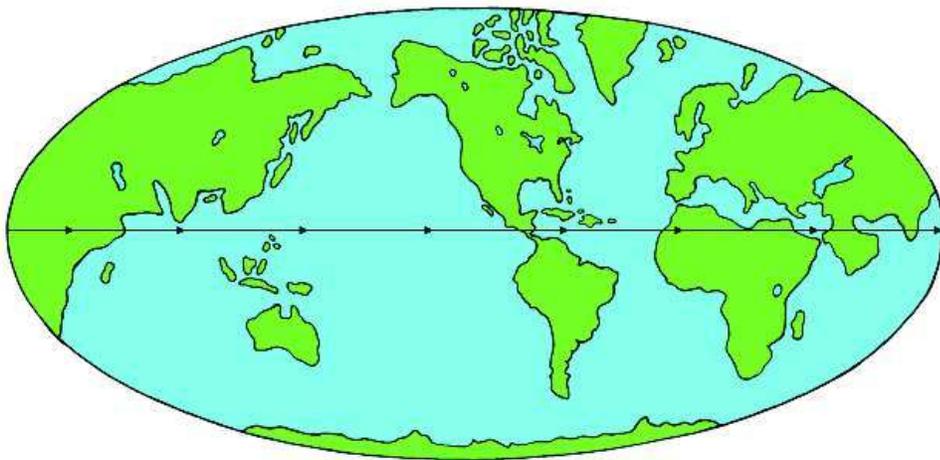




# Currents

Handwriting practice lines consisting of 12 vertical lines, each with a solid top and bottom line and a dashed middle line.

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**The Abyss**