

Time of Wonder Unit Study and Lapbook

Book by Robert McCloskey

Unit study and lapbook created by Wende, Ami, Lee Ann Slosar, and Debbie Palmer

Geography: Islands and Other Landforms

An island is a piece of land surrounded by water. You may want to take this opportunity to teach your student about other various landforms that are similar to islands yet different.

island: a piece of land surrounded by water

isthmus: a narrow strip of land connecting two larger landmasses. An isthmus has water on two sides

atoll: a ring (or partial ring) of coral that forms an island in an ocean or sea

archipelago: a group or chain of islands clustered together in a sea or ocean.

peninsula: a peninsula is a body of land that is surrounded by water on three sides

cape: a pointed piece of land that sticks out into a sea, ocean, lake, or river

Geography: Maine

The story takes place in Maine. Can your student find it on a map? Maine's capital city is Augusta and the most eastern capital in the country. It is our 23rd state and was adopted into the Union in 1820. There are numerous lighthouses along its coast including Portland Head Light, which is the oldest lighthouse in Maine.

Some fun facts on Maine include:

- Maine produces 99% of the blueberries in our country!
- Maine's nickname is the Pine Tree State since 90% of its land is covered in forests.

- Maine is the only state that shares its border with only one other state. Which one?
- Maine used to be a part of the Massachusetts Colony.
- Maine is the most northeasterly state in the Union.

McCloskey wrote three books about Maine while living there-- *Time of Wonder, Blueberries for Sal,* and *One Morning in Maine*. You may want to check the other books out from the library and read them on the day you study Maine.

Science: Different Types of Clouds

What is a cloud? A cloud is a collection of tiny water droplets or ice crystals being carried by a current of air. Clouds indicate approaching weather.

There are three basic different types of clouds including cumulus, stratus, and cirrus. (Your older student may want to research beyond these three basic types.) You may want to find some books at the library or some pictures on the internet to illustrate each type of cloud listed below.

Cumulus clouds are the puffy clouds that look like marshmallows, cotton, or white cauliflower. As long as they stay small, they are indicators of fair weather. When they grow, they can turn into thunderstorms.

Stratus clouds are low hanging, found in layers, and have the appearance of a gray blanket. If they get low enough, they turn into fog. I light grey clouds that look like even sheets and cover all or part of the sky. The clouds are made of itty bitty water droplets that become larger as they collide with one another.

Cirrus clouds are the whitest, highest clouds. They are up high. In fact, they are up so high they are made of tiny ice particles. These types of clouds are seen before rain or snow.

Science: Deep Water Currents

The general circulation of water in the Atlantic and Pacific is driven by deep, slowmoving currents of cold water that flow from the poles toward the equator. When sea water freezes, its salt separates from it. Sea ice is fresh, but the water close to it is saltier than other water because it contains the salt that was removed during freezing. This makes the water denser. Water close to the ice is also cold, and this dense water sinks all the way to the ocean floor, flows away from the ice and is replaced by warmer surface water which then cools and sinks.

These deep water currents move only 2-3 yards a day. This experiment shows you how to make a deep-water current in a dish.

Supplies:

- 1. ice
- 2. food coloring
- 3. eye dropper
- 4. water
- 5. glass dish
- 6. aluminum foil

Directions:

1. Fill the glass dish with warm water, and leave it until the water has become quite still. This represents a warm ocean such as the mid-Pacific.

2. Wrap some ice cubes carefully in foil, making sure no melted water will be able to leak out. Put the foil package in one end of the glass dish and leave it until the water is still once again. The ice will start to cool the warm water.

3. Place a few drops of food coloring over the foil so the color trickles into the water. What happens to the color as it sinks to the bottom of the dish? This is how deep-water currents carry water toward the equator from the poles.

Science: Hurricanes

Hurricanes are the most powerful of all storms. They form over warm, tropical seas when the water temperature is above 80 degrees F. They are circular and vary in size. A hurricane can be 400 miles in diameter with wind speeds of 125 miles per hour (or more!). Once a hurricane forms, it follows a path *away* from the equator, usually growing in intensity while it remains over warm water. They dissipate once they reach cool water or land. In the Atlantic, these storms are called hurricanes; in India and Australia, they are named cyclones; in the western Pacific, they are called typhoons.

Science: Ocean Life

Who lives in the ocean? Check out books from your local library and investigate some of the amazing creatures who live in the sea.

Take a closer look at dolphins and sharks. Here is some information to compare and contrast the two animals:

Bottle-nosed Dolphin	Both	Great White Shark
Mammal		Fish
Eats shrimp and squid	Both eat fish	Eats seals and dolphins
Has one baby at a time		Has one or two babies
		at a time
	Both live in warm seas	

Science (and a little Math): Hummingbirds

Hummingbirds are small birds (females are about 8 inches) that can fly forwards, backwards, and hover. Using a ruler, show your student how large a hummingbird is. You may want to compare it to his own height.

These birds are absolutely one of God's incredible creations flapping their wings 55-80 times each second allowing them to travel at speeds as fast as 25 miles per hour! If you want calculate how many times a hummingbird can flap its wings in one minute (choose a number between 55-80 and multiply it by 60) 80 x 60 = 480 times! Have your students pretend to be hummingbirds-- using a stop watch, count how many times they can flap their "wings" in one minute. Are they as fast as hummingbirds? A hummingbird's heart beats about 250 times each minute, and it takes approximately 250 breaths per minute! Using the stop watch again, compare that to your own student's heartbeat (pulse) and breath. (Don't try to breathe too quickly—just normal, human breaths.)

Hummingbirds eat little bugs and drink nectar out of flowers. They prefer red flowers, but will drink out of others as well.

Learn more about Hummingbirds with <u>Homeschool Share's Hummingbird Lapbook</u>.

Science: Tide

Tides are the rising and falling of the sea. During high tide, the water is deeper and comes further onto the beach. Another name for high tide is flood tide. During low tide, the water is more shallow and does not come as far onto the beach. Another name for low tide is ebb tide.

Tides are created because the Earth and the moon are attracted to each other just like two magnets. The moon tries to pull on anything on the Earth to bring it closer. The Earth is able to hold on tight to land, but it can't hold on to its ever-moving water.

The Earth makes one complete turn every 24 hours. When a side of the Earth faces the moon, the moon's pulling force causes a high tide. Since the Earth is spinning, the area the moon pulls at changes. If you are on the ocean beach and the moon is pulling on the water there, then you will experience a high tide.

There are three types of tides caused by the moon's pull:

Diurnal Tides
One high and one low water per tidal day
This happens in the Northern Gulf of Mexico and Southeast Asia

Semi-diurnal Ties
Two high and two low waters per tidal day
Common on the Atlantic coasts of the U.S. and Europe

3. Mixed Tides

In certain shallow seas, the tides have a different pattern One of the two daily tides is appreciably higher than the other or the time between successive tides is unequal Found in the Pacific Coast of North America as well as other areas

The sun also plays a role in tides. Your older student may want to research about neap tides and spring tides to learn more.

Science: Time of Wonder

Have a time of wonder each day and take the time to find answers to questions.

Language Arts: Adverbs

An adverb is a word that describes an adjective or a verb. Adverbs often tell how.

Make a list of all the *-ly* adverbs found in this book with your student. He can save the list and use some in his own writings-- a good rule of thumb is not to use adverbs like *very*, *much*, etc.

Here are some adverb examples from the book:

slowly silently suddenly softly lonely solemnly gently

What other -ly words can your student think of to add to his list? (wildly, quickly, sparingly, sadly--the possibilities are endless!)

Go-along book about adverbs: Up, Up, and Away by Ruth Heller

Language Arts: Point of View

This story is unique because it is written in second person. Most stories are written in first or third person (as you may have studied in the past). This one, however, refers to the reader as if the reader was part of the story. "**You** smile...**you** almost got feet wet that time...**you** can hear an insect."

Using the second person gives the book an entirely different feel. What if McCloskey would've written from first person? Can you and your student translate a few lines into first person? "I smile...I almost got my feet wet that time...I can hear an insect." What does third person look like? "They smiled. They almost got feet wet that time. They could hear an insect."

What are the differences between the different points of view? Why do you think McCloskey chose 2nd person? *He wanted the reader to experience his experience.* We almost feel like we are there, and, in a way, we are because most of us have had similar experiences as children. Maybe we have never been to Maine, but we know what a time of wonder is, and this book brings us back to that.

Language Arts: Repetition (-ing words)

This story uses lots of -ing words for repetition. Let your student make a list. For an extra challenge, have your student put the list in alphabetical order. Some of the words include:

cackling shackling battening tolling slamming lessening hauling gazing gliding snorting unfurling migrating feuding

Language Arts: Vocabulary

Silhouette: the outline of an object formed by its shadow

Glacier: a large body of ice moving slowly across the land

Quartz: a kind of shiny rock

Skiff: a small light sailing ship

Pennant: flags on ships tapering to a point or swallowtail

Schooner: a sailing ship with two masts and fore and aft sails

Bible Memory Verse: Psalm 46:10

"Be still and know that I am God."

What is a wonder? Do you take time to ponder the beauty of the world around you that God has created?

Art: Caldecott Award

Time of Wonder was awarded the distinguished Caldecott Award in 1958. The Caldecott Medal was named in honor of nineteenth-century English illustrator Randolph Caldecott. It is awarded annually by the Association for Library Service to Children, a division of the American Library Association, to the artist of the most distinguished American picture book for children

Here are some discussion questions you may want to use with your student.

1. Why do you think this book won the award?

2. What emotions do you feel as you look at the pictures? (happy, afraid, secure, calm, wonder, etc.)

- 3. Do the illustrations go well with the story?
- 4. Do you like the illustrations? Why or why not?

You may also want to compare this book (and illustrations) to McCloskey's, *Make Way for Ducklings* which also won the Caldecott Award.

Art: Mock illustrations

Light:

Let your student try to create the same effect as McCloskey created on pages 42-43. Paint a night time scene with a light illuminating through the window.

Movement:

Pages 44-47 are good examples of showing motion in pictures. Have your child illustrate pictures of movement by emulating McCloskey's style.

Stars (Splash Technique):

On pages 28-29, the background appears to be watercolors possibly painted over a textured fabric. The stars are painted using a splash technique. Have your student paint a watercolor scene. After it is completely dry, dab an old toothbrush into acrylic paint; flick the bristles at the picture to duplicate the speckled stars in Time of Wonder. Your student may want to practice this on a scrap piece of paper first (so he learns how to do it before he accidentally ruins his beautiful watercolor scene).

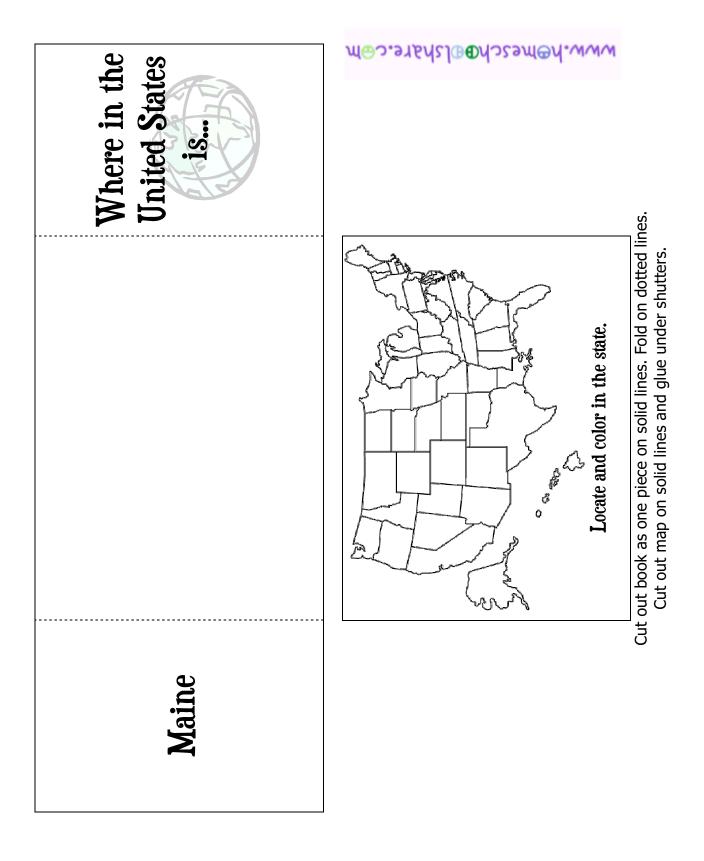
Drawing Rain:

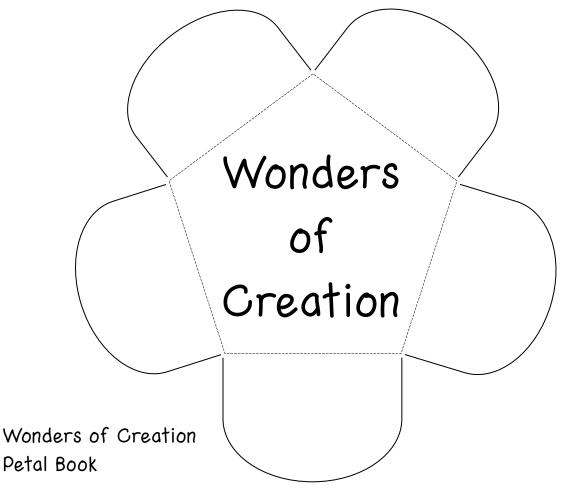
On pages 10-11, the parallel rain lines draw your eyes to the circular splashes in the water. Encourage your student to practice drawing some rain like this. Look through other books at different ways rain is illustrated.

Math: Time

If you have already taught your student how to tell time, you can create story problems using seconds, minutes, hours, days, weeks, etc. How many minutes are in a day? In a week?

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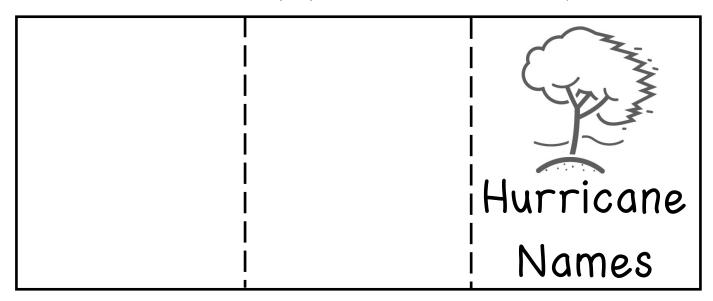




Directions: Cut out shape as one piece. Fold flaps in using the dotted lines as your guide. Tuck the last flap under so that book will stay closed. On each petal, let your student write one amazing thing God created.

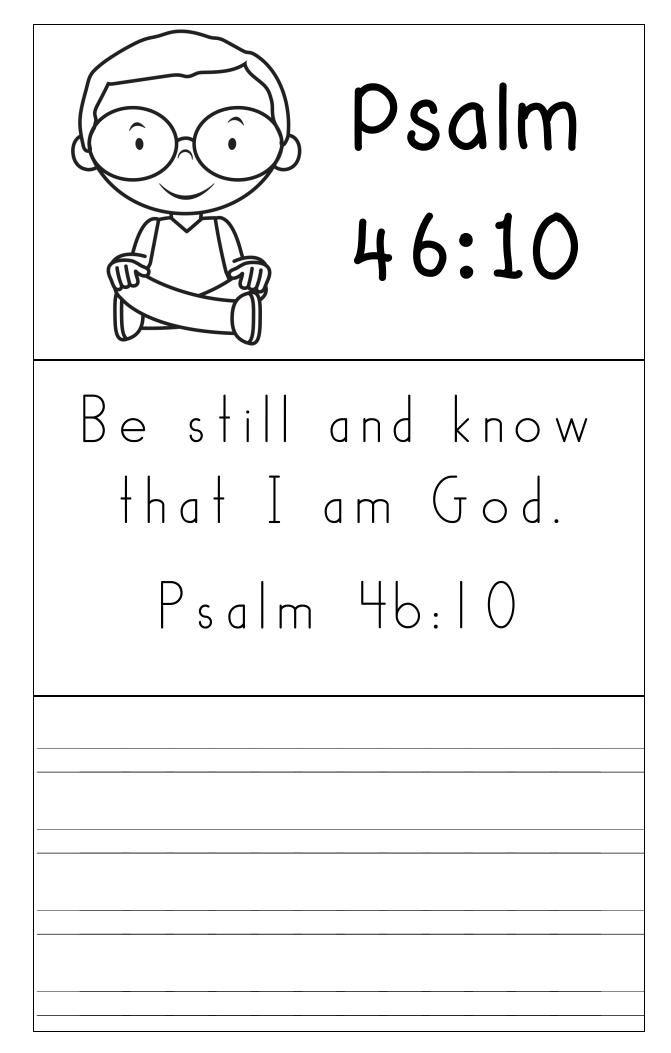
Hurricane Names Trifold

Directions: Cut book out as one piece. Fold in thirds with "Hurricane Names" on the cover. On the inside, write what different people call hurricanes and where they are from.



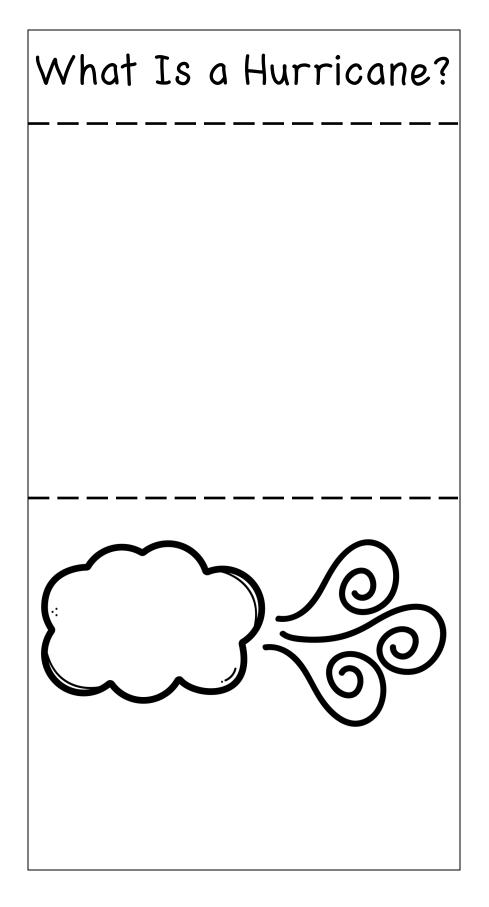
Psalm 46:10		
Be still and know that I am God. Psalm 46: 10		

indicated. Fold like an accordion. Paste the back of the last page to your lapbook. Directions: Cut out the strip as one piece. Let your student complete the copywork. Attach extra pages by gluing the tab as



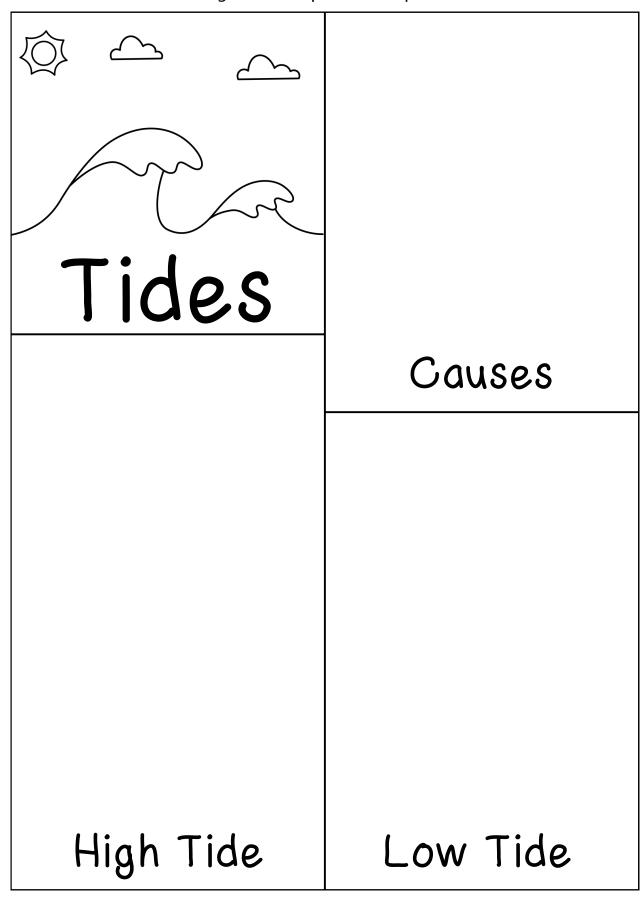
Directions: Cut out the strip as one piece. Let your student complete the copywork. Attach extra pages by gluing the tab as indicated. Fold like an accordion. Paste the back of the last page to your lapbook.

What Is a Hurricane? Matchbook Directions: Cut out book. Fold on lines (matchbook style).



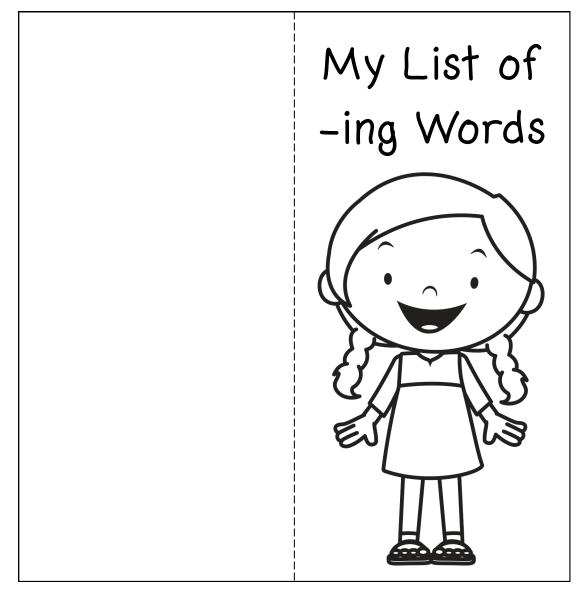
Tides Layer Book

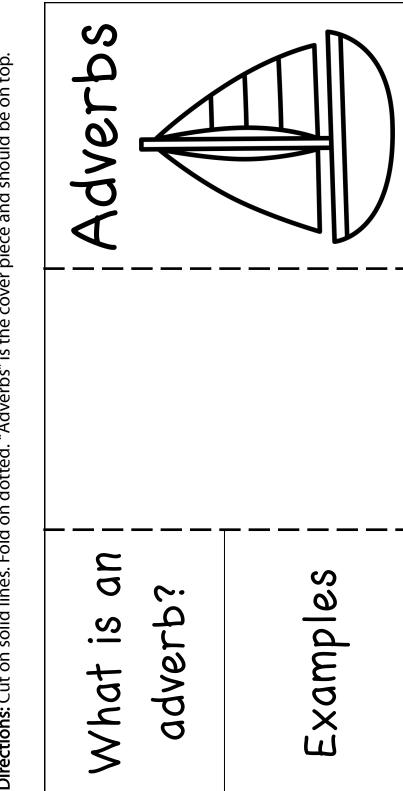
Directions: Cut out pieces. Stack together smallest to largest and staple at the top.



My List of -ing Words Simple Fold Book

Directions: Cut book out as one piece. Fold in half.

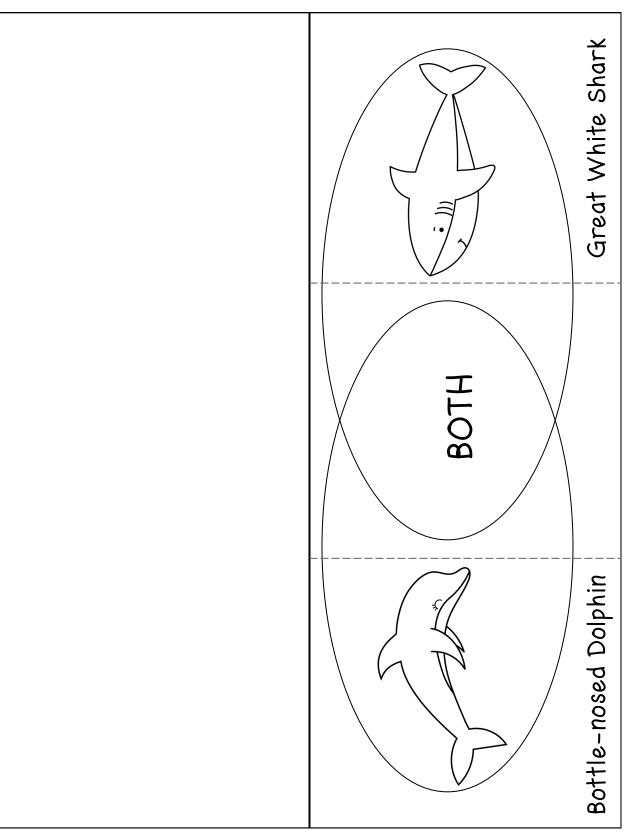




Directions: Cut on solid lines. Fold on dotted. "Adverbs" is the cover piece and should be on top. Adverbs Flap Book

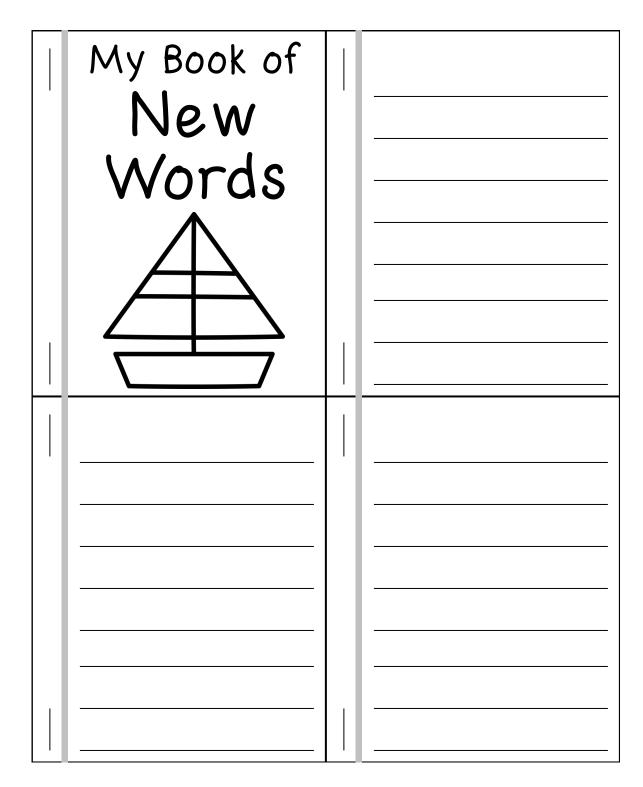
Comparing Dolphins and Sharks Venn Diagram

Directions: Cut out book as one piece. Fold in half on the black line. Cut on the dotted lines to form three flaps.



New Words Book

Directions: Cut on the solid lines. Write in definitions. Stack pages together with cover on top and staple on the left side.



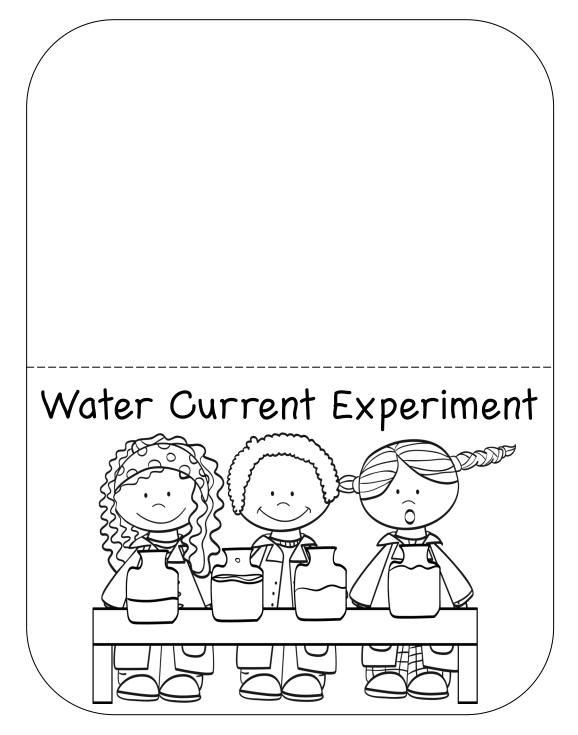
New Words Book

Directions: Cut on the solid lines. Write in definitions. Stack pages together with cover on top and staple on the left side.



Water Current Experiment Simple Fold

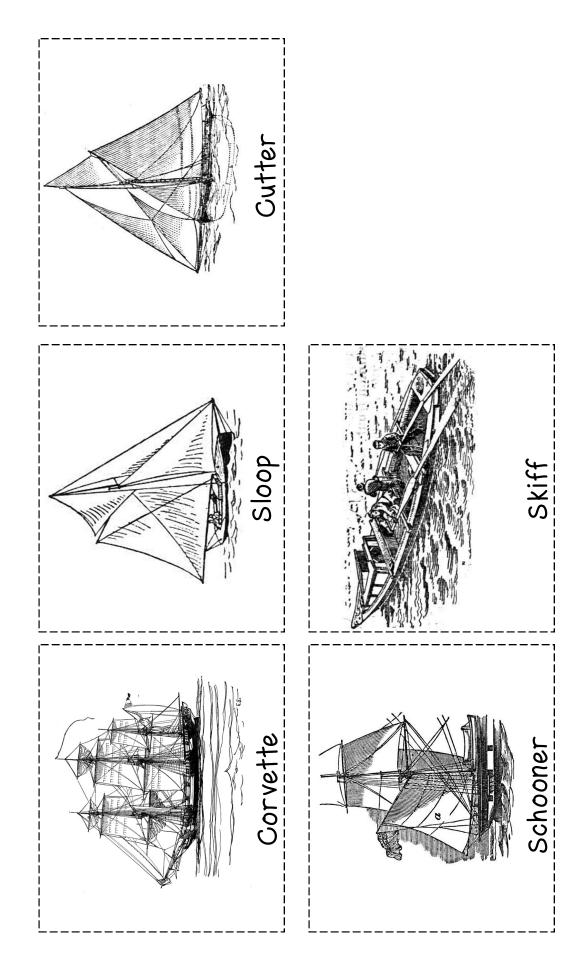
Directions: Cut book out as one piece. Fold in half. Use the inside to record the results of your experiment or what you learned from your experiment.



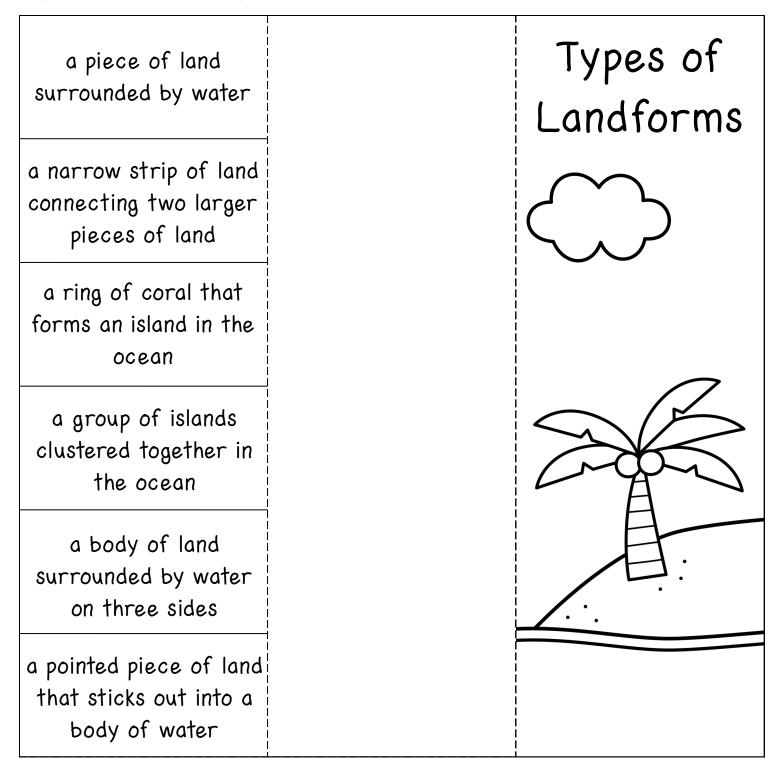
Types of Sailing Ships T-book

Directions: Cut out as one piece. Fold left side in. Fold right side in. Fold top down. Paste ships on the inside and outside flaps.

Types of Sailing Ships
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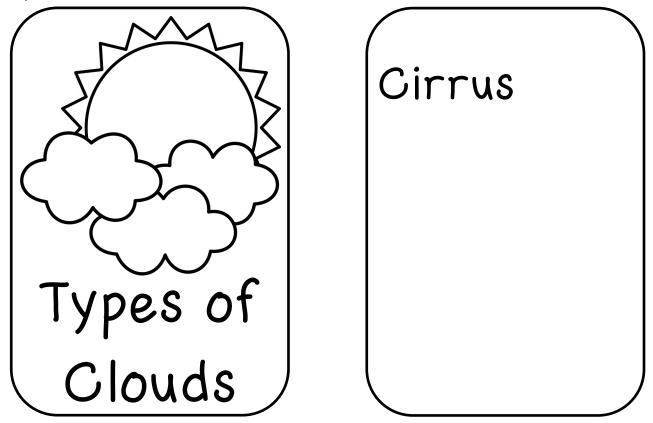


Types of Landforms Flap Book



Directions: Cut out book as one piece. Fold left side in. Fold right side in. Open book. Cut on dotted lines to form six flaps. Refold book. Write the name of each landform under the flap. If desired, draw a picture to represent the landform.

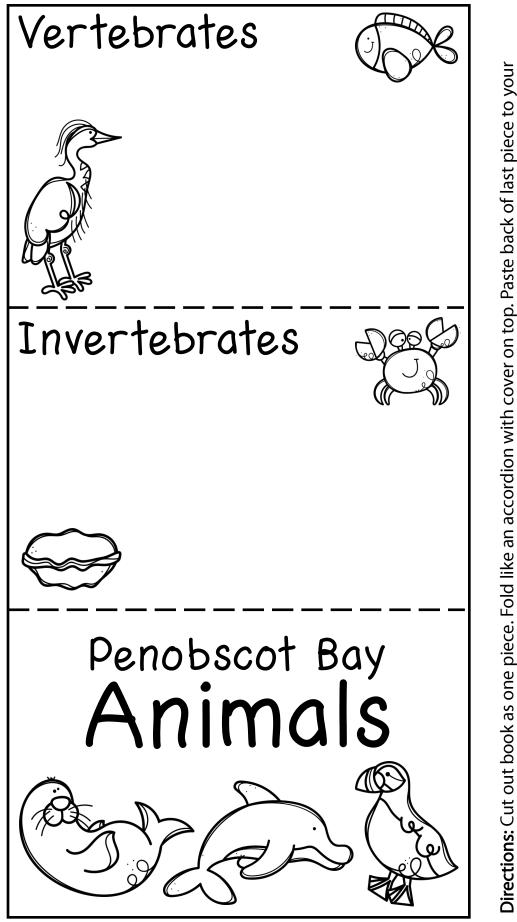
Types of Clouds Book



Directions: Cut out each page. Draw the different types of clouds. Stack pages together with cover on top and staple to secure.

Stratus	Cumulus





apbook. Write the names of the vertebrates and invertebrates that can be found at Penobscot Bay.

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