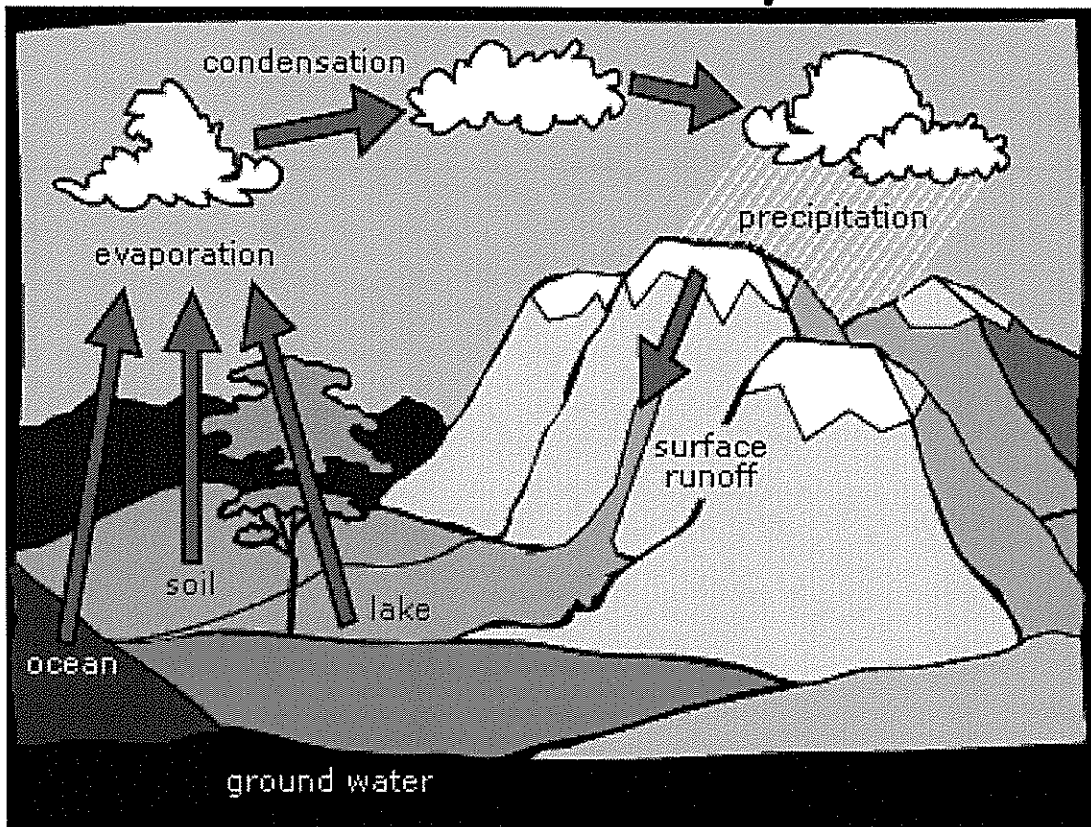


# Chapter 5: Water

## The Water Cycle



The Chapter 5 test is scheduled for \_\_\_\_\_.

Review study guide on packet page 1, packet pages 6, 7, and 8, and book pages 166-167 to prepare for the test.

Name \_\_\_\_\_ Section \_\_\_\_\_

Name \_\_\_\_\_

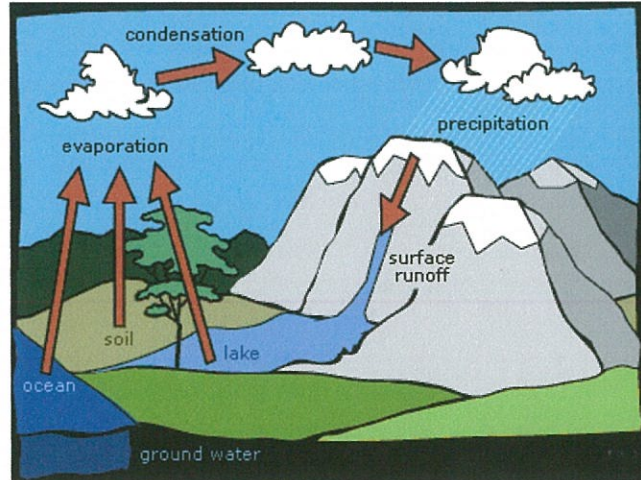
Test Date: \_\_\_\_\_

## Chapter 5 – Study Guide

These items can be found in your child's binder in the science section or in their science book. All items have been discussed at length in class. Please refer to the cover of the packet to view which packet pages to study.

### Words to Know:

- Groundwater
- Water vapor
- Evaporation
- Condensation
- Precipitation
- Water cycle



\*Here is a link to help your child to study the vocabulary words for Chapter 5.

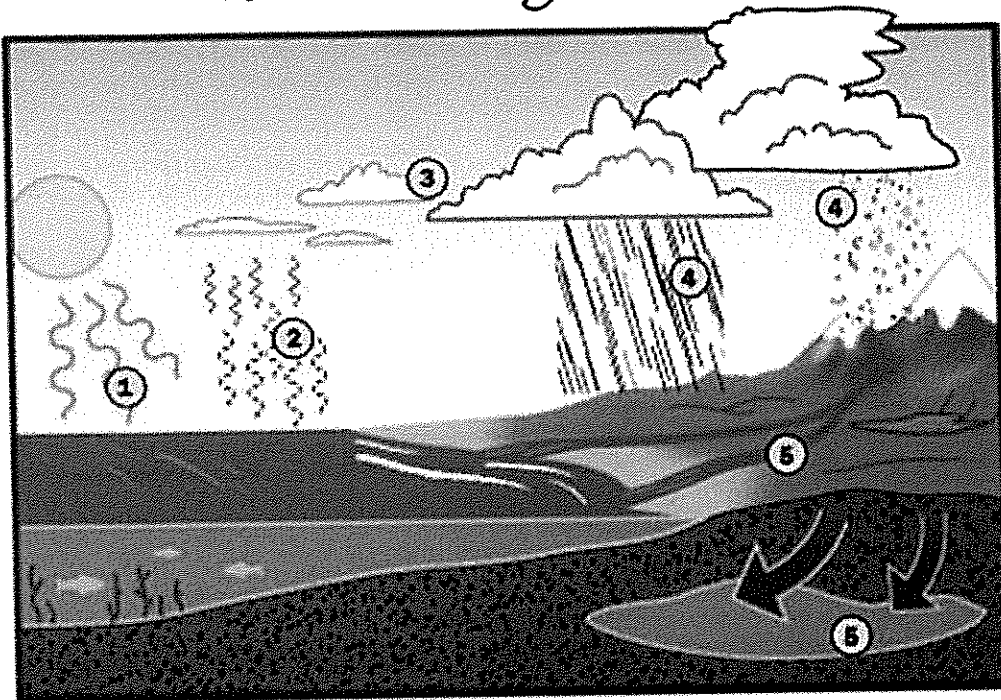
<http://quizlet.com/1022417/scott-foresman-science-grade-3-chapter-5-flash-cards/>

This link and various other links to help students review for the test are on your science teacher's website.

### Ideas to Know:

- Your body is made of 2/3 water.
- We need clean water for several reasons:
  1. People can get sick from using dirty water.
  2. Dirt or salt can harm machines.
- Wetlands are home to many animals.
- Be able to label a diagram showing the water cycle (see diagram above).
- Evaporation is when water becomes a gas (water vapor is in the air).
- Condensation is when water vapor in the air turns back into a liquid.
- Precipitation occurs when water particles in the clouds have grown in size and weight and fall to the Earth in the form of rain, sleet, snow, or hail.
- Groundwater is water that seeps down and collects in underground spaces.
- The 3 states of matter that water can be are solid, liquid, and gas.
- People use water for many reasons:  
drinking, food, electricity, industry, factories, and crops and farms.
- People use the power of water to make electricity.
- 75% of the earth is covered by water.
- Water freezes solid at 32 degrees Fahrenheit and 0 degrees Celsius.
- If water is frozen, it expands and takes up more space.
- Chemicals are added to water at the water treatment area in order to kill germs in the water.

# The Water Cycle



- ① The sun heats the ocean.
- ② Ocean water evaporates and rises into the air.
- ③ The water vapor cools and condenses to become droplets, which form clouds.
- ④ If enough water condenses, the drops become heavy enough to fall to the ground as rain and snow.
- ⑤ Some rain collects in groundwells. The rest flows through rivers back into the ocean.

## Water Cycle Song

(to the tune of "She'll Be Coming Around the Mountain")

Water travels in a cycle, yes it does.

*Use pointer finger to draw large circle in air.*

Water travels in a cycle, yes it does.

*Repeat above motion.*

It goes up as evaporation.

*Raise arms at side with palms up.*

Forms clouds as condensation.

*Brings hands together above head, forming large cloud shape with arms.*

Then falls down as precipitation, yes it does.

*Slowly lower arms at side with palms down, fingers moving.*

Name \_\_\_\_\_

## **Explore:** Where is Earth's water?

### **Explain Your Results**

**Infer:** Why should people use fresh water wisely?

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<b>Self-Assessment Checklist</b>	
I labeled 4 cups.	_____
I used an eyedropper to put the correct amount of water in the atmosphere cup and the lakes-rivers-streams cup.	_____
I used a graduated cylinder to <b>measure</b> the amount of water needed for the groundwater cup and for the icecaps-and-glaciers cup.	_____
I labeled the bottle.	_____
I correctly <b>inferred</b> why it is important to use fresh water wisely.	_____



**Notes for Home:** Your child observed the proportions of water on Earth and found that most water is in oceans and seas, and the least amount of water is found in the atmosphere.

**Home Activity:** With your child, discuss how you can use fresh water wisely and the things you can do at home to conserve water.



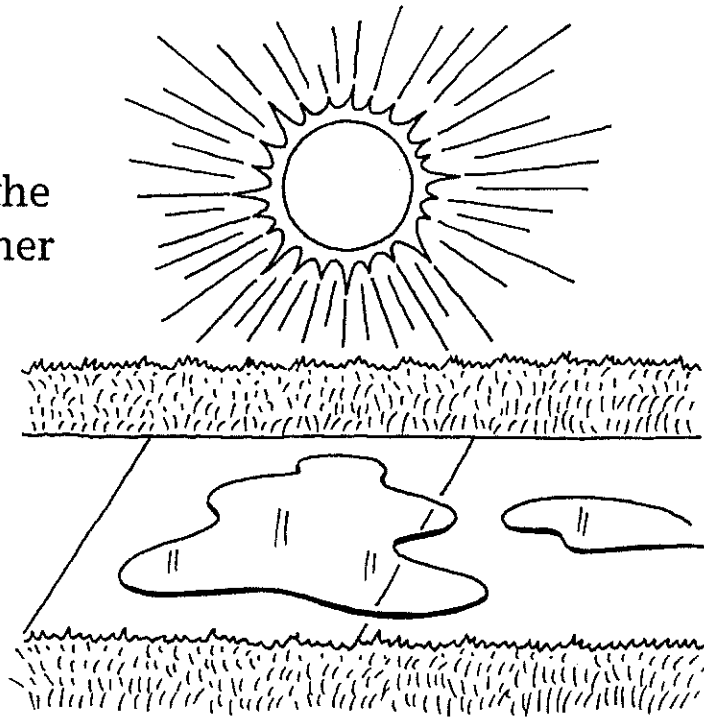
## Cause and Effect

Read the science article.

### What Happens to Rain?

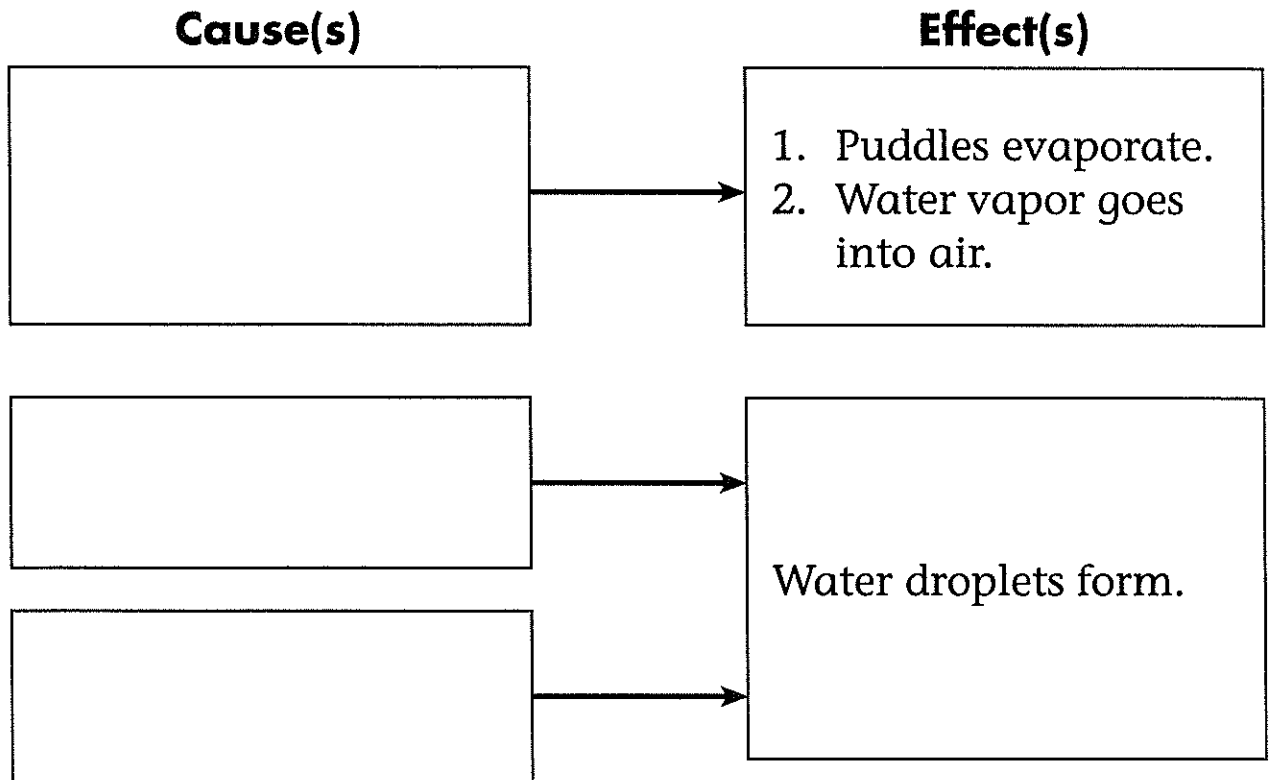
What happens to the rain that falls? Some of it sinks into the ground. Some of it runs off into rivers and streams. And some of it rests in puddles. Over time, warmth from the Sun strikes water in puddles, causing it to evaporate. This water then becomes water vapor in the air.

Water vapor rises in the atmosphere. The higher it goes, the cooler the air becomes. When the water vapor becomes cool enough, it condenses. This means it forms droplets of water.



### Apply It!

Write the cause or causes for each effect in the boxes.



**Notes for Home:** Your child learned how to identify causes and effects.  
**Home Activity:** Together read a newspaper or science magazine article that explains a process. Talk with your child about causes and effects the process explains.

Name \_\_\_\_\_

**Vocabulary Preview**

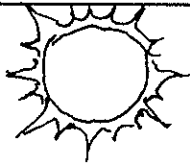
Use with Chapter 5.

Use the vocabulary words in the box to complete the labels on the diagram.

condensation  
wetlands  
evaporation  
water vapor  
precipitation  
water cycle  
groundwater

Water on Earth moves through  
a \_\_\_\_\_.

The Sun can turn water  
into a gas through  
\_\_\_\_\_.



\_\_\_\_\_ happens when the gas  
cools to form water drops.

This gas, called  
\_\_\_\_\_,  
is in the air.

These drops of water  
may fall from clouds as  
\_\_\_\_\_.

Water is found in oceans, lakes,  
rivers, and \_\_\_\_\_  
on Earth's surface.

Some water is stored  
inside the Earth as  
\_\_\_\_\_.

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**Notes for Home:** Your child learned the vocabulary terms for Chapter 5.  
**Home Activity:** Use vocabulary words as you talk with your child about how water changes form. Show evaporation and condensation using boiling water and a glass of ice water.

### Reviewing Terms: Sentence Completion

Complete each sentence with the correct word or phrase.

- \_\_\_\_\_ 1. Water that is an invisible gas found in the air is called \_\_\_\_\_. (water vapor, groundwater)
- \_\_\_\_\_ 2. A \_\_\_\_\_ is a place with wet or water-covered ground. (groundwater, wetland)
- \_\_\_\_\_ 3. Water that collects in spaces between underground rocks is called \_\_\_\_\_. (groundwater, ocean water)

### Reviewing Concepts: True or False

Write T (True) or F (False) on the line before each statement.

- \_\_\_\_\_ 4. Plants need water to make their own food.
- \_\_\_\_\_ 5. Most animals can live without water.
- \_\_\_\_\_ 6. The power of moving water can be used to make electricity.
- \_\_\_\_\_ 7. Ocean water is used for drinking and washing clothes.
- \_\_\_\_\_ 8. Many animals live in wetlands.

### Writing

Use complete sentences to answer question 9. (2 points)

- 9. Describe one way that fresh water and ocean water are alike. Then describe one way they are different.

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## Reviewing Terms: Matching

Match each definition with the correct word or phrase. Write the letter on the line next to each definition.

- |   |                  |
|---|------------------|
| _____ 1. movement of water back and forth between air and the Earth's surface | a. condensation  |
| _____ 2. rain, snow, and sleet  | b. water cycle   |
| _____ 3. water vapor changing to a liquid                                     | c. evaporation   |
| _____ 4. liquid water becoming a gas  | d. precipitation |

## Reviewing Concepts: Sentence Completion

Complete each sentence with the correct word.

- \_\_\_\_\_ 5. \_\_\_\_\_ is the process that causes dew to form. (Evaporation, Condensation)
- \_\_\_\_\_ 6. The Sun's energy and \_\_\_\_\_ cause evaporation as water moves through the water cycle. (wind, sleet)
- \_\_\_\_\_ 7. The form of precipitation depends on the \_\_\_\_\_ at the Earth's surface. (condensation, temperature)
- \_\_\_\_\_ 8. Dirt, germs, and \_\_\_\_\_ are removed from water at a water-treatment plant. (fluoride, salt)

## Applying Strategies: Identifying Cause and Effect

Use complete sentences to answer question 9. (2 points)

9. If the water in a lake is liquid, identify what must happen to the temperature to cause the water to become ice.

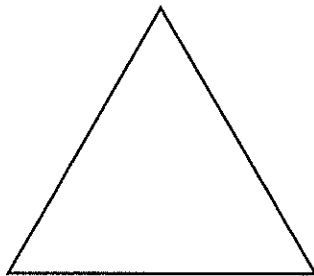
\_\_\_\_\_

\_\_\_\_\_

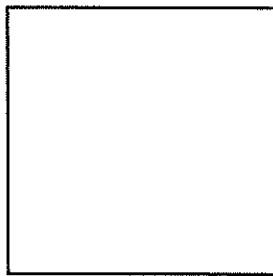
## Symmetry and Shapes

Some shapes have symmetry. They are exactly the same on both sides of a line of symmetry. A symmetrical shape may have one, two, or more lines of symmetry.

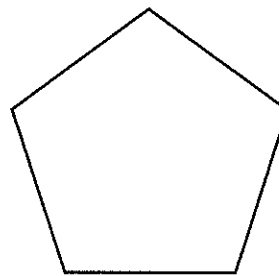
Look at the figures. Use them to answer the questions.



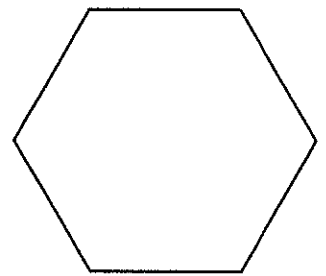
A



B



C



D

1. Which of these figures are symmetrical? \_\_\_\_\_
2. Which figure has only five lines of symmetry? \_\_\_\_\_
3. How many lines of symmetry does the square have? Trace the square and show these lines. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_



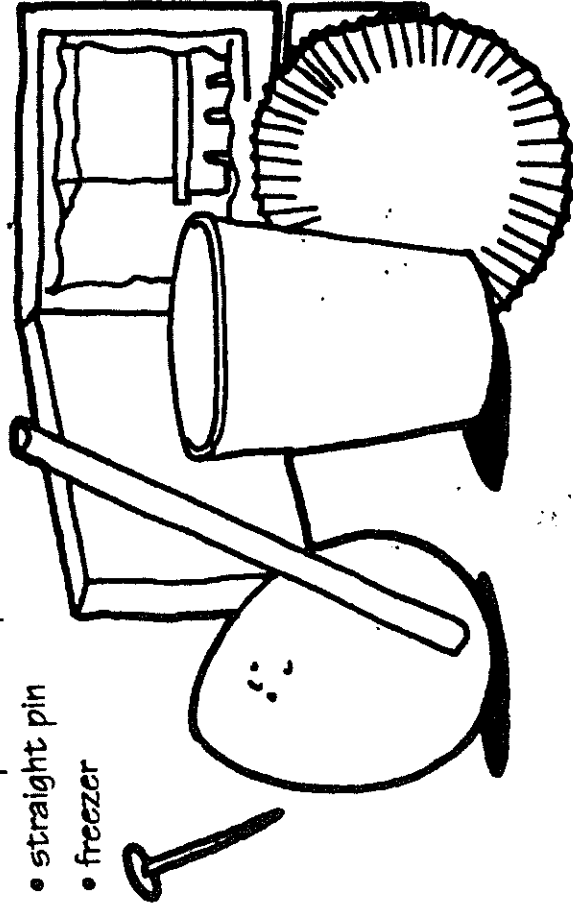
**Notes for Home:** Your child learned how to identify symmetry in geometric figures and to draw lines of symmetry.

**Home Activity:** Use cookie-cutter shapes to cut out dough or clay. Help your child identify which shapes have symmetry and which do not.

# Expanding Water

## MATERIALS

- a raw egg
- drinking straw
- paper plate
- water
- small plastic cup to rest the egg on
- straight pin
- freezer



## WHY IT WORKS

Freezing the egg overnight simulates what happens to the earth's surface after years of exposure to water and ice. Water expands about 10% when it is frozen. This is enough of an expansion to crack your eggshell in much the same way ice can crack rocks on the surface of the earth. The plastic cup provides a catch basin for water that forms stalactites and stalagmites.

## LET'S DO IT!!

1. Using a straight pin, poke a hole big enough to insert a drinking straw in the top of an egg.
2. Holding the egg over a paper plate, carefully blow into the straw, emptying the raw egg.
3. Fill your empty egg with water and stand it in the plastic cup so the water will not drip out.
4. Place the egg and cup in the freezer overnight.
5. Remove your egg and observe the changes that occurred.

