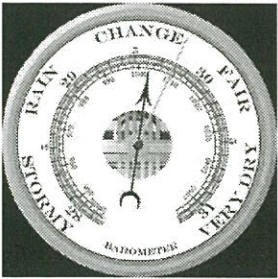
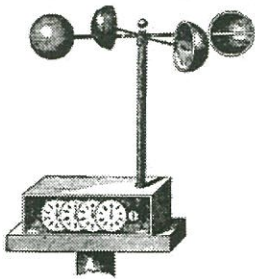
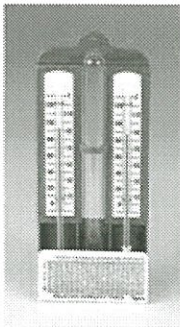

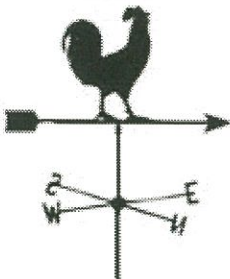


Chapter 6: Weather

Tools to Measure Weather

Barometer	Anemometer	Hygrometer	Rain Gauge	Wind Vane
				
-measures air pressure	-measures wind speed	-measures how much water is in the air	-measures how much rain has fallen	-measures the direction of the wind

The Chapter 6 test is scheduled for _____.

Review study guide on packet pages 1 and 2, packet pages 6, 7, 10, and book pages 188-189 to prepare for the test.

Name _____ Section _____


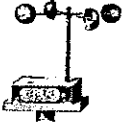
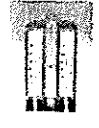


Chapter 6: Weather---Study Guide

These items can be found in your child's packet 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:

- weather
- atmosphere
- hurricane
- tornado
- blizzard
- weather instruments -*what they look like and their uses*

Tools to Measure Weather

<p>Barometer</p>  <p>-measures air pressure</p>	<p>Anemometer</p>  <p>-measures wind speed</p>	<p>Hygrometer</p>  <p>-measures how much water is in the air</p>	<p>Rain Gauge</p>  <p>-measures how much rain has fallen</p>	<p>Wind Vane</p>  <p>-measures the direction of the wind</p>
----------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------------------------------	-----------------------------------------------------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------------------------------------------------------

*Here are some links to help your child to study the vocabulary and concepts for Chapter 6.

*Review of vocabulary with games, quiz, and flashcards

<http://quizlet.com/1022428/scott-foresman-science-grade-3-chapter-6-flash-cards/>

*Weather Instrument and Uses—lyrics to the tune of Nikki Minaj song, "Starships"

<http://www.youtube.com/watch?v=kBfaANtWW4&sns=em>

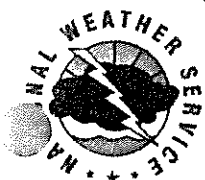
*A great resource website to help you learn about temperature, climate, wind, clouds, different types of instruments, different types of storms, weather safety, weather flashcards, and weather forecasting.

<http://www.weatherwizkids.com/>

Ideas to Know:

- What do the clouds on a bright sunny day look like? What do they look like on a stormy day? (text pg.175)
- Review map key weather symbols and what they mean. (text pg. 178)
- What kind of weather does western Washington state have? (text pg. 180)
- What kind of weather does eastern Washington state have? (text pg. 180)
- Cars and trucks help cause pollution alerts when the ozone and smog stay in the air. This can cause breathing difficulties for some people.
- Be able to identify the features of a blizzard, tornado, and hurricane. (how or when each occurs and what is seen or felt)
- How are hurricanes and tornadoes alike and how are they different? (see Venn Diagram completed in class on the back of this page)
- People usually know about hurricanes before they strike and have time to prepare.
- Tornadoes can form suddenly, and people may have only a few minutes to prepare for a tornado.
- Review the weather safety tips and know the difference between a watch and a warning.
- Blizzards are winter storms that have extremely low temperatures and lots of blowing snow. People can get lost or stuck in the snow. It's important to dress in layers to protect yourself from cold temperatures and get to a warm shelter quickly during a blizzard.

The National Weather Service warns people of severe weather on the radio, tv, phone apps, sirens, and the internet. A watch means that a storm could happen where you live. A warning means a storm is already in your area. (if it's not there now, it could reach you in the next few minutes.)

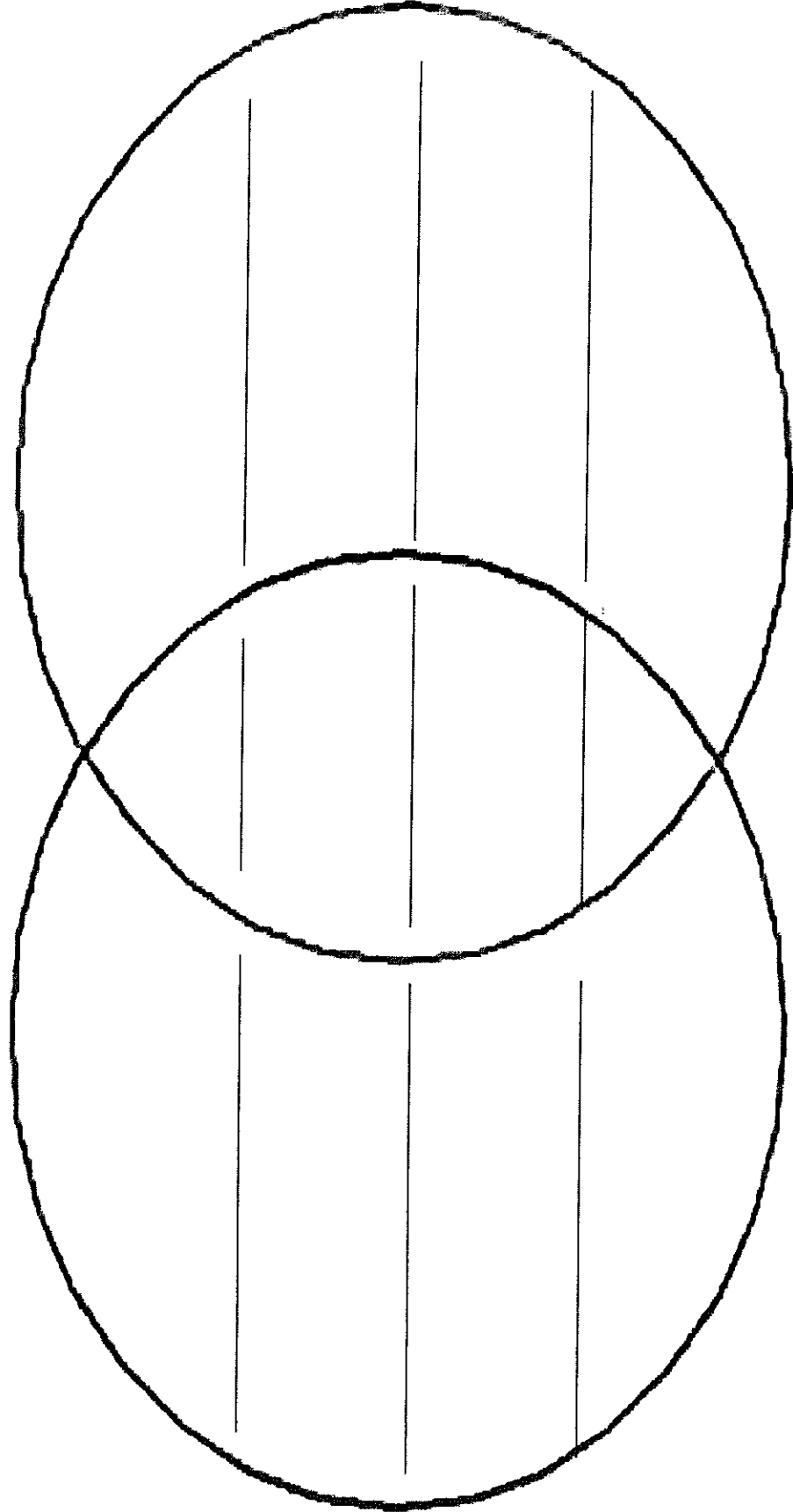


Use the words in the box to complete the venn diagram to compare and contrast hurricanes and tornadoes.

smaller	larger	shaped like a funnel	forms on land	forms over oceans
heavy rains	strong winds	causes great damage	warning before strikes	strong winds

Hurricane

Tornado



Explore: How can you measure wind speed?**3 Measure** and record the wind speed for 1 week.**Observe** at the same time each day.

Look for a pattern.

	Day 1	Day 2	Day 3	Day 4	Day 5
Wind Speed					

Explain Your Results**Infer:** Suppose you use a heavier ball on the wind gauge. What else would you have to change? Explain.

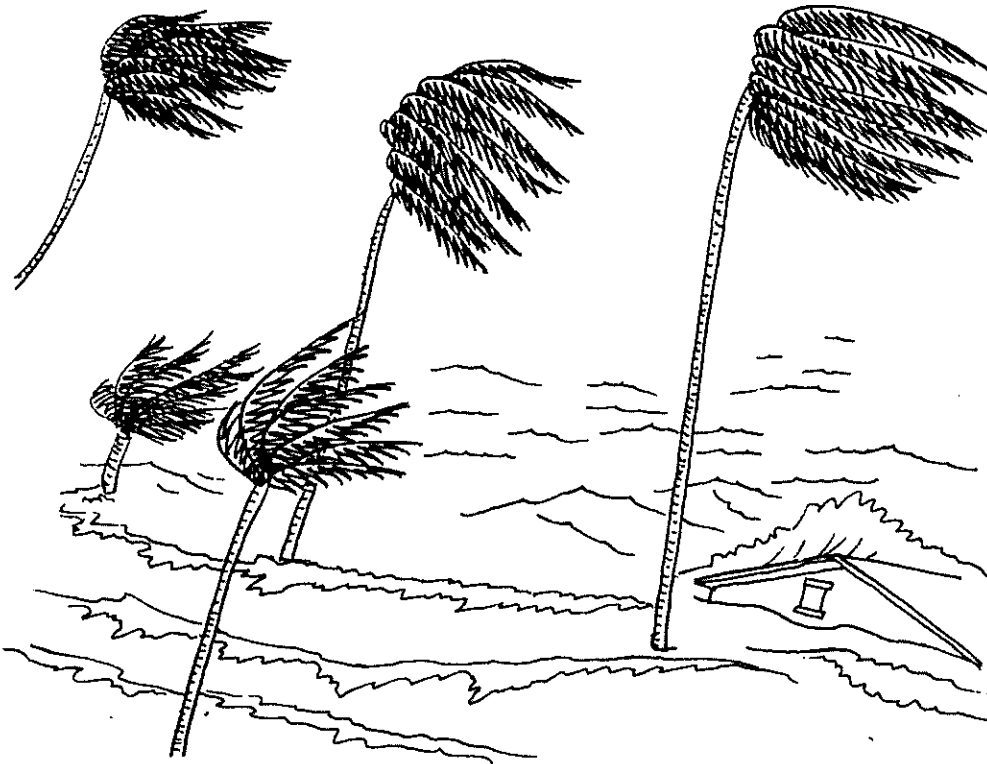


Make Inferences

Read the paragraph.

Hurricane Warning

The weather forecasters put out a hurricane warning for the Gulf Coast of Florida. The hurricane would hit land in two days. People were busy nailing wood over their windows. They bought extra food and water. Some people got in their cars and drove inland.

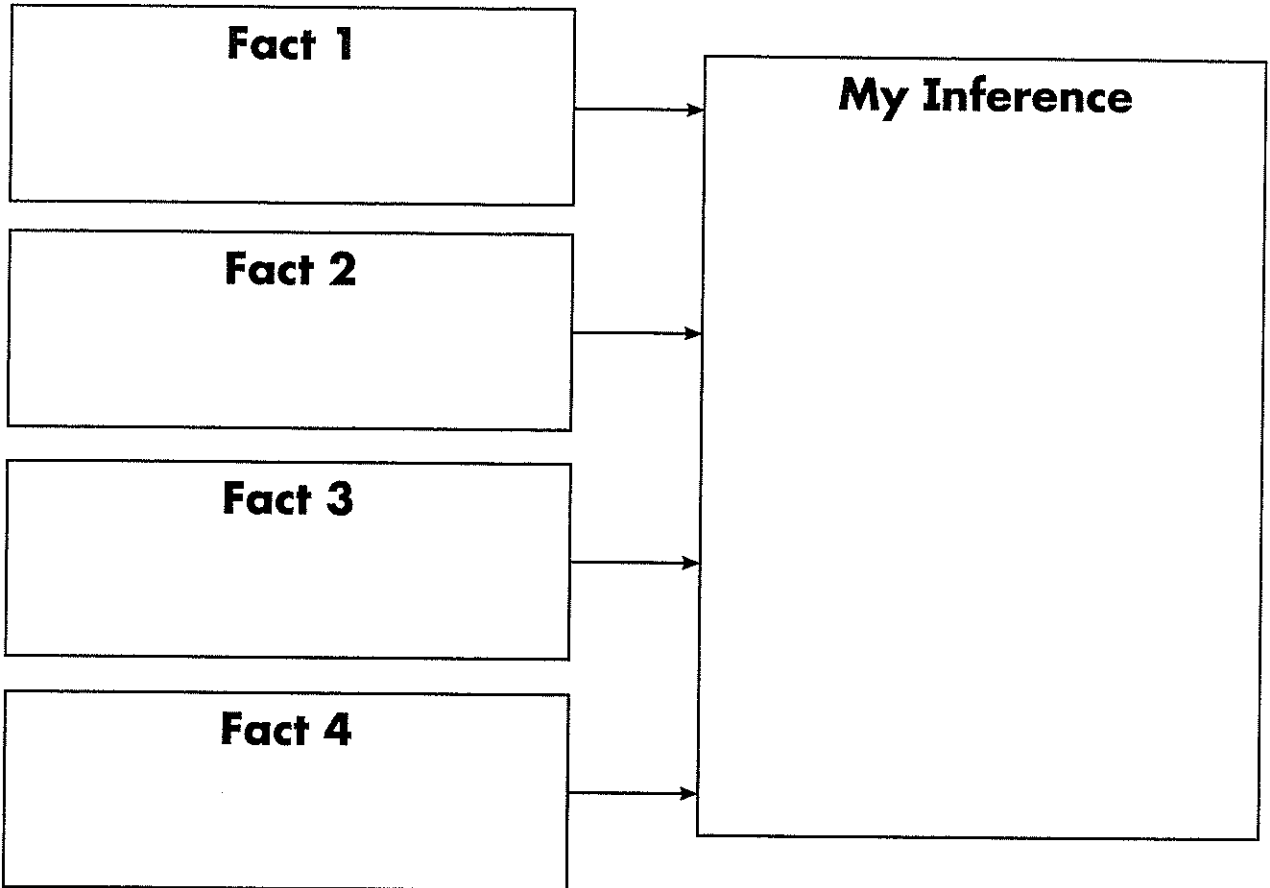


Apply It!

What inference can you make from the facts in the paragraph? Write the facts and your inference in the graphic organizer on page 55.

Name _____

Use with Chapter 6.



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Notes for Home: Your child learned how to evaluate the facts to make an inference.

Home Activity: Describe a situation, for example: "You wake to find the grass wet and puddles on the street." Have your child make an inference about what happened.

Reviewing Terms: Sentence Completion

Complete each sentence with the correct word.

- _____ 1. The blanket of air that surrounds Earth is the _____. (anemometer, atmosphere)
- _____ 2. _____ is the temperature, clouds, precipitation, and wind conditions in an area. (Weather, Pollution)

Reviewing Concepts: True or False

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

- _____ 3. Clouds are made up of water droplets in the air.
- _____ 4. There is one kind of cloud.
- _____ 5. Earth's atmosphere has layers that have different temperatures than one another.
- _____ 6. The force of the atmosphere pressing down is called air pressure.
- _____ 7. Humidity is the amount of water vapor in the air.
- _____ 8. Weather data can be gathered with satellites.

Applying Strategies: Making Inferences

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

- 9. Terry checked the barometer reading several times during the day. The barometer reading was lower each time she checked. What does a barometer measure? What weather conditions could Terry expect?

Reviewing Terms: Matching

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

- | | |
|-----------------------------------------------------------------------------|--------------|
| _____ 1. a winter storm with blowing snow | a. hurricane |
| _____ 2. a storm with a funnel-shaped column of air that touches the ground | b. blizzard |
| _____ 3. storms with heavy rain, strong winds, and huge waves | c. tornado |

Reviewing Concepts: Sentence Completion

Complete the sentence with the correct word or phrase.

- _____ 4. Patterns of weather are _____ everywhere on Earth. (different, the same)
- _____ 5. As air moves up a mountain it gets _____. (colder, wetter)
- _____ 6. All deserts are _____. (hot, dry)
- _____ 7. Heavy rains and very high waves can both cause _____. (floods, blizzards)
- _____ 8. Hurricanes, tornados, and blizzards all have _____. (wind, low temperatures)

Writing

Use a complete sentence to answer question 9. (2 points)

9. Write a sentence that describes one way the National Weather Service helps to keep people safe.

Comparing Temperatures

The table shows temperatures for the town of Smithport. Each temperature represents the average daytime high for July in a certain year. Do you see a pattern?

Changes in High Temperature for Smithport, 1980–2005

Year	1980	1985	1990	1995	2000	2005
Average daytime high for July	79°	79°	81°	80°	83°	84°

Use the table to answer these questions.

1. What trend, or pattern, do you see happening over 25 years?

2. When did the biggest change occur?

3. How much warmer was it, on average, in July in Smithport in 2000 than in 1985?

4. What could explain the change?



Notes for Home: Your child learned how to read a table to compare data.
Home Activity: Help your child make a table showing the high temperature every day for a week. Talk about any pattern you see.

Weather Words

Look for the words in the puzzle and circle them.

atmosphere	blizzard	hurricane
tornado	weather	

H U R R I C A N E W
 V Y D T O R K M X G I T H E
 B D T P R D A S T M L Y Q R E
 L B P R J C P V J H E R E
 I O R D A C P V J H E R E
 Z O R J C P V J H E R E
 Z N V L K S P A S E W R E
 A T M O S P H E R E
 R G V T O A S E W R E
 D I S E H M A E W E

Extreme Weather

Hurricanes, tornadoes, and blizzards can bring strong rain, winds, or snow. Read the words in the box and write them where they belong in the table.

snow	storm	funnel
oceans	Strong	waves

Hurricanes	Tornadoes	Blizzards
Huge storms that form over _____	Spinning _____ shaped columns of air	A winter _____
Heavy rain, strong winds, and huge _____ in the ocean	_____ winds	Blowing _____

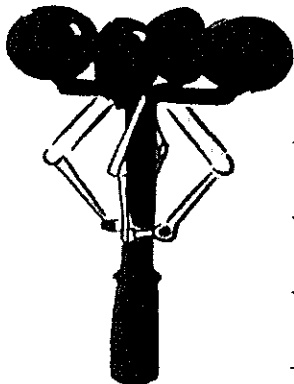
Name: _____

Weather Instruments

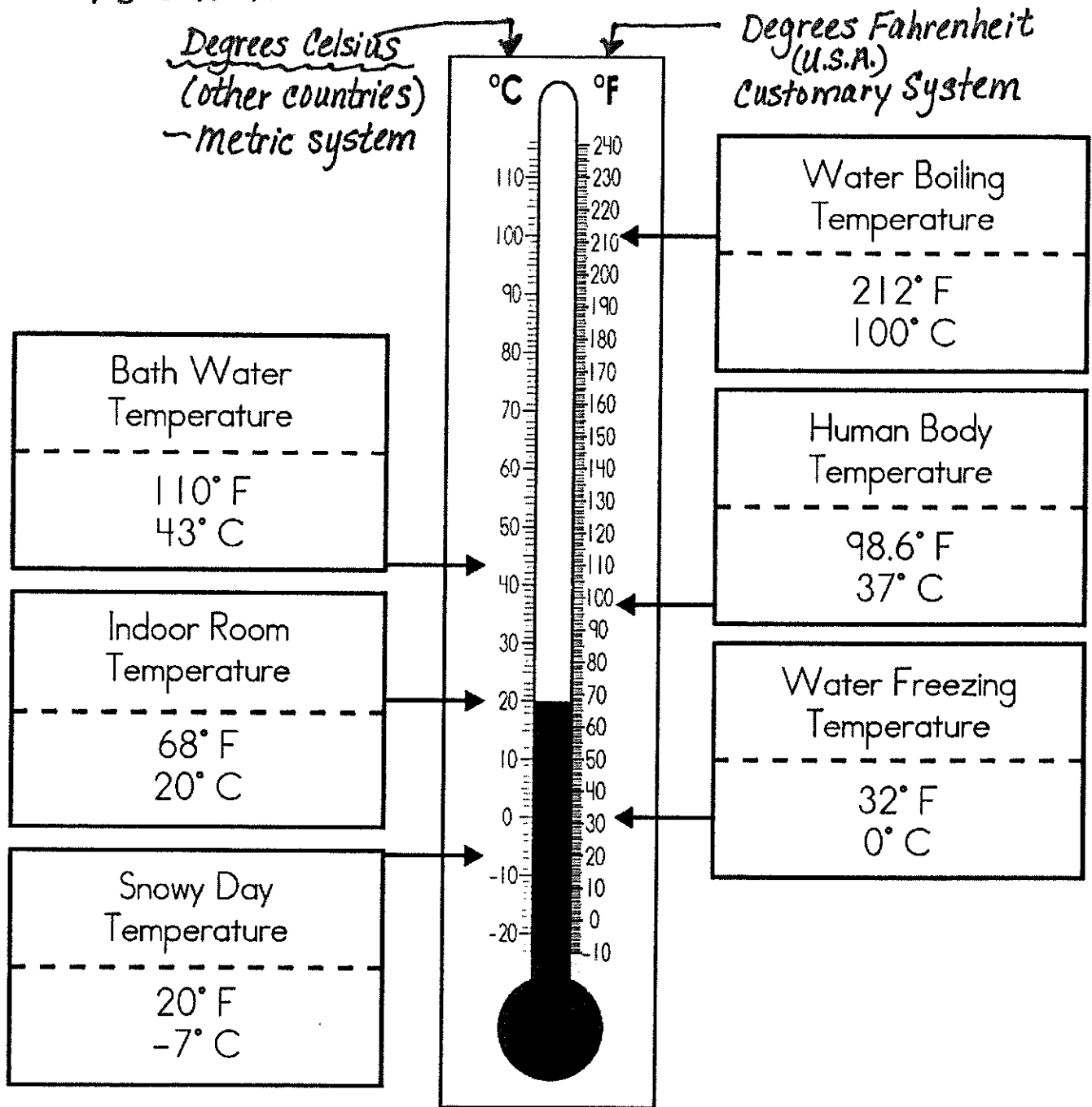
Match the name of each weather instrument on the left with its purpose on the right.

- | | |
|----------------------|------------------------------------------------|
| _____ 1. thermometer | a. measures humidity in the air |
| _____ 2. hygrometer | b. measures high and low pressure in the air |
| _____ 3. anemometer | c. measures air temperature |
| _____ 4. barometer | d. measures the amount of rain that has fallen |
| _____ 5. wind vane | e. measures direction of the wind |
| _____ 6. rain gauge | f. measures speed of the wind |

7. Write the name of the instrument in the picture and explain how it works.

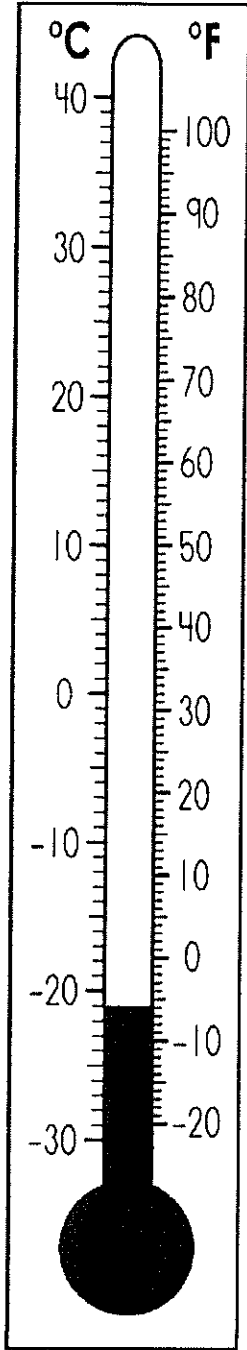


A thermometer is a tool to measure temperature.

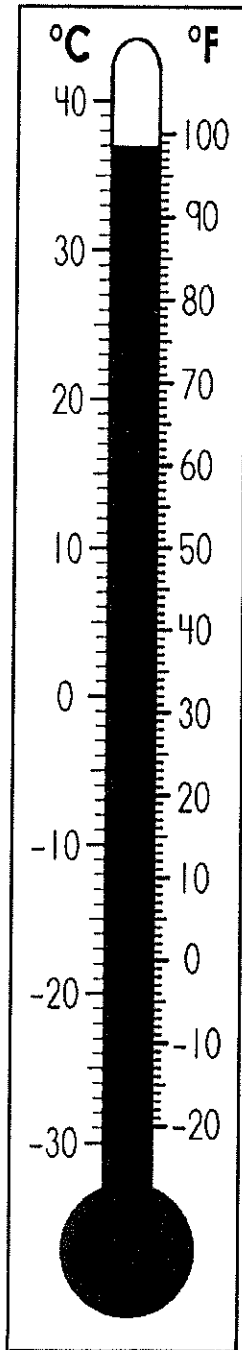


Name: _____

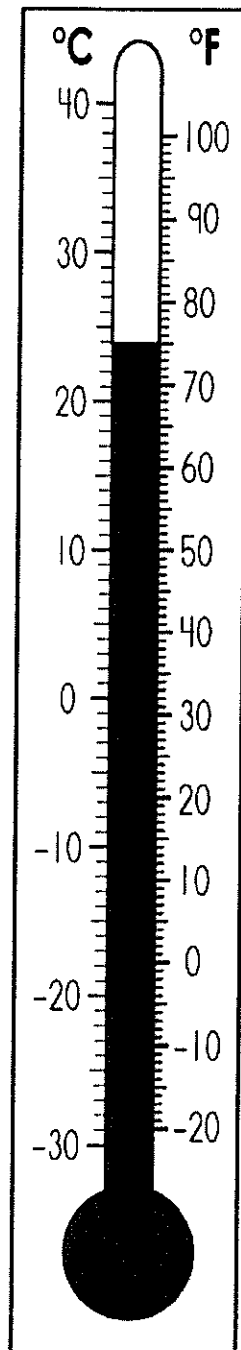
Reading Thermometers



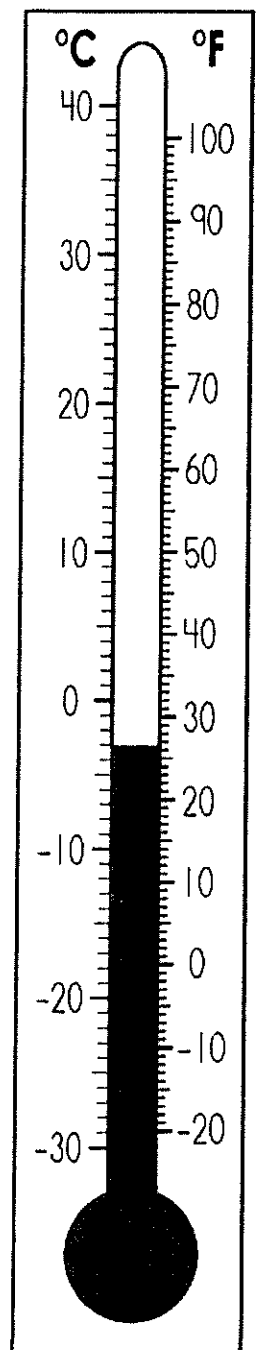
_____ °C



_____ °C



_____ °C

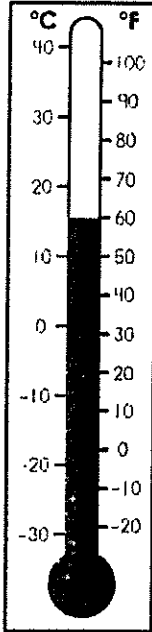


_____ °C

Name: _____

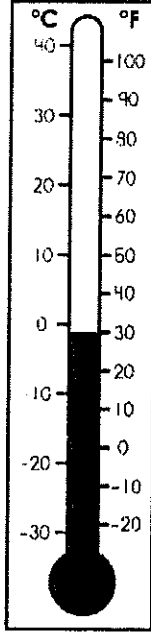
Reading Thermometers

1.



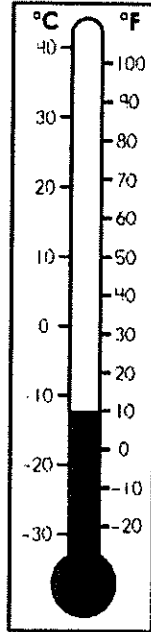
_____ °F

2.



_____ °F

3.



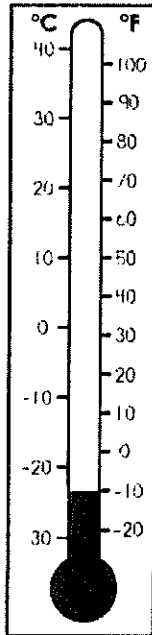
_____ °F

4.



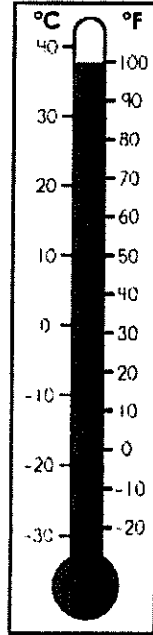
_____ °F

5.



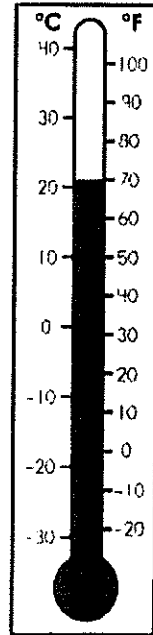
_____ °F

6.



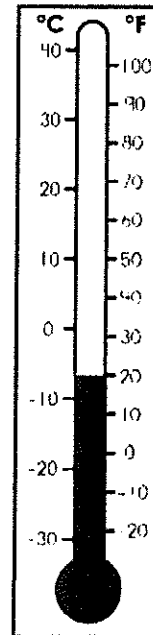
_____ °F

7.



_____ °F

8.



_____ °F

Name: _____

Measuring Tornadoes

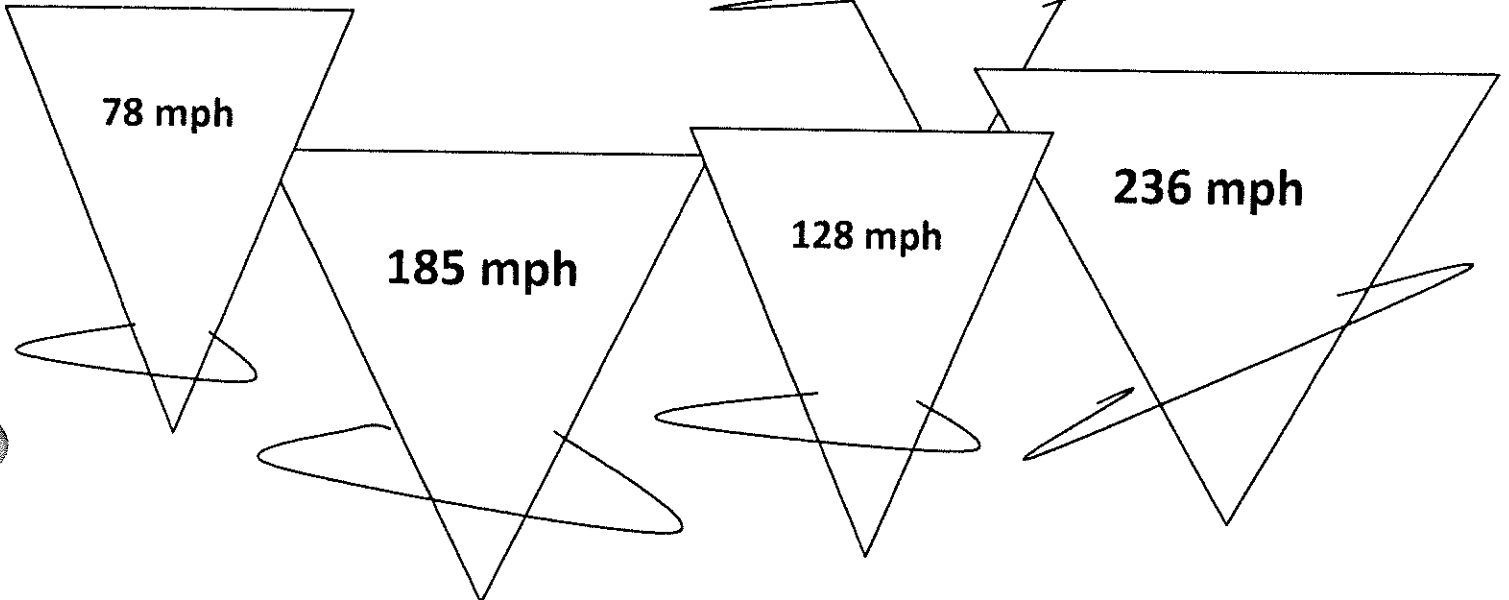
Meteorologists use the Enhanced Fujita Scale to measure how strong a tornado is. The scale is based on wind speed. The higher the wind speed the more damage a tornado can cause.

Enhanced Fujita Scale

Wind Speed	Rating	Damage
65-85 mph	EF-0	Light
86-110 mph	EF-1	Moderate
111-135 mph	EF-2	Considerable
136-165 mph	EF-3	Severe
166-200 mph	EF-4	Devastating
>200 mph	EF-5	Incredible

Check these tornado wind speeds out.
What rating would a meteorologist give them on the Enhanced Fujita Scale?

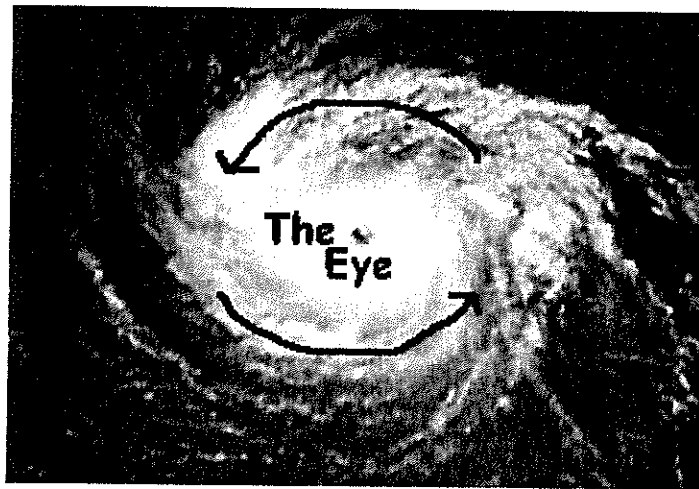
1. Write the scale rating on each tornado.
2. Color the highest rated tornado blue.



Hurricanes

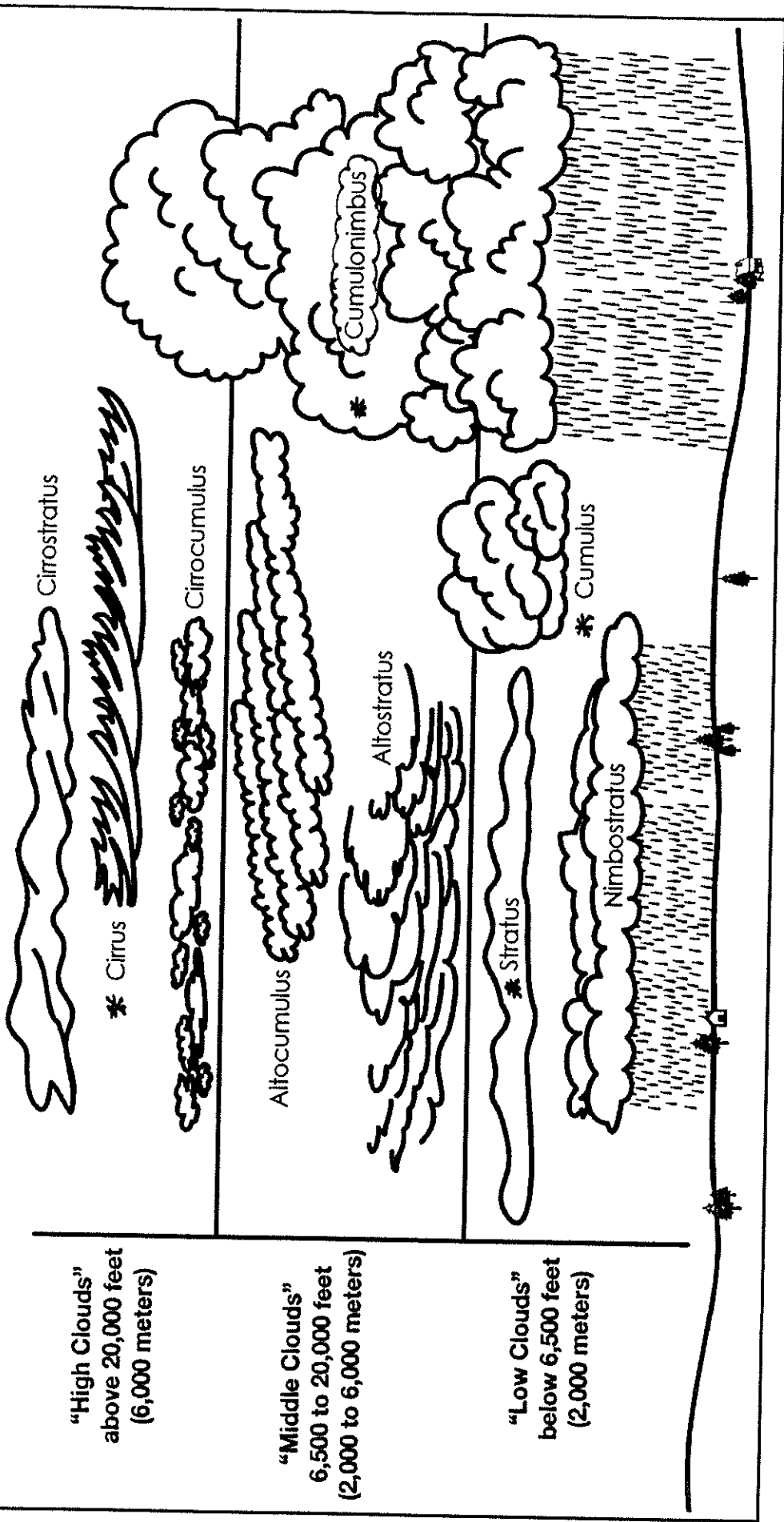
What is a hurricane?

A hurricane is a huge storm! It can be up to 600 miles across and have strong winds spiraling inward and upward at speeds of 75 to 200 mph. Each hurricane usually lasts for over a week, moving 10-20 miles per hour over the open ocean. Hurricanes gather heat and energy through contact with warm ocean waters. Evaporation from the seawater increases their power. Hurricanes rotate in a counter-clockwise direction around an "eye" in the Northern Hemisphere and clockwise direction in the Southern Hemisphere. The center of the storm or "eye" is the calmest part. It has only light winds and fair weather. When they come onto land, the heavy rain, strong winds and large waves can damage buildings, trees and cars.



Name: _____

Cloud Types



"High Clouds"
above 20,000 feet
(6,000 meters)

"Middle Clouds"
6,500 to 20,000 feet
(2,000 to 6,000 meters)

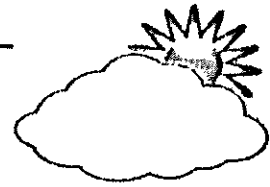
"Low Clouds"
below 6,500 feet
(2,000 meters)

* Taught in 3rd grade

Name: _____

Side A

Weather Scavenger Hunt



Fact Card #1: What is the average lifespan of a tornado?

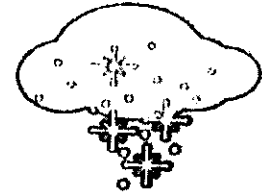
Fact Card #2: Why is the South Pole the sunniest place on Earth?

Fact Card #3: What was the hottest temperature ever recorded in the United States?

Fact Card #4: What was the coldest temperature ever recorded on Earth?

Fact Card #5: What is the name of the instrument used to measure wind speed?

Fact Card #6: What is humidity?



Fact Card #7: How hot is a bolt of lightning?

Fact Card #8: What is the driest state in the United States?

Fact Card #9: Where is the safest place to be during a tornado?





Weather Scavenger Hunt

Fact Card #10: Name two things that lightning is attracted to.

Fact Card #11: Do crickets chirp faster or slower when the weather is warm?

Fact Card #12: What are fluffy, cotton-like clouds called?

Fact Card #13: What is fog?

Fact Card #14: How are hurricane names before 1979 different from those after 1979?

Fact Card #15: What is a waterspout?

Fact Card #16: How fast are the winds in a category 5 hurricane?

Fact Card #17: During what time of the day are rainbows most likely to form?

Fact Card #18: What is a meteorologist?
