Super-Journal Week 1:8

Every night, you should be reading at least 30 minutes of whatever book you have checked out from your assigned reading list. Tape or glue (but do not staple) this sheet into your Super-Journal on the left-side page. Fill in the table below *every day* by recording the required data.

Day	Title	Start Pg.	End Pg.	Parent Sign.
Monday				
Tuesday				
Wednesday				
Thursday				
Friday				
Saturday				
Sunday				

On the right-side page of your Super-Journal, answer two of the questions below throughout the week. Be sure that the questions you choose to answer go with the appropriate type of book (Fiction or Nonfiction). The Super-Journal is due on the first day after the weekend (usually Monday). To earn credit for your journal entry, you *must* respond in at least five complete sentences per response and use **specific evidence from the text to support your claim** based on what you've read this week.
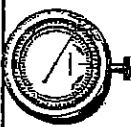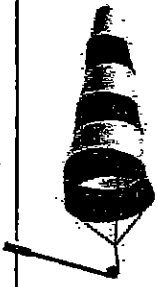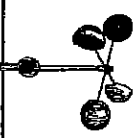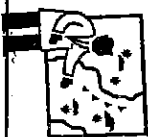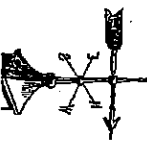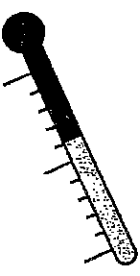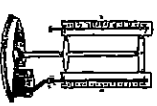
FICTION

1. Summarize what has happened so far.

2. What was the author's purpose in writing this text?

NONFICTION

1. Did the author use any evidence to support his thinking? Give an example.

2. Identify at least two points the author is trying to make in the text.

RL.1.1/RI.3.8

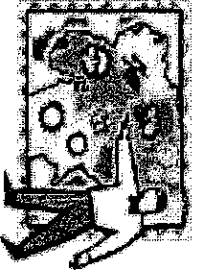| Picture	Name	Function
	Anemometer	Measures the amount of precipitation that falls
	Hygrometer	Measures air pressure
	Thermometer	Gathers data by using a variety of instruments and use data to predict weather patterns
	Wind Vane	Measures wind speed
	Wind Sock	Measures humidity in the air
	Barometer	Measures general wind direction and strength
	Rain Gauge	Measures wind direction
	Meteorologist	Measures the temperature of the air

Directions: Cut out the rectangles. Sort them in rows with the matching picture, word, and function. When you finish, glue the sort as directed by your teacher.

Meteorologists

Cross-Curricular Focus: Earth Science

Meteorology is the scientific study of the weather. The scientists who specialize in this area are called meteorologists. Their job is to collect data, make observations about the data and interpret the data. To interpret means to say what they think the data means. Their goal is to make informed predictions about what kind of weather we can expect.

Most weather systems in the United States move from the west to the east. Meteorologists track weather patterns to the west. Then they can be reasonably sure of the kind and severity of the weather that is approaching the areas that lie to the east.

Technological advances over the years have made the work of the meteorologists more and more respected. Over time, their ability to make accurate predictions has increased. Using computers, meteorologists are able to design and print weather maps. The maps show approaching weather patterns and how they are likely to behave when they reach us. They are filled with colorful symbols that show the different strengths and temperatures of wind, cloud formations, and storm systems.

Doppler radar stations provide meteorologists with radar images of weather all over the United States. They make it possible to anticipate weather systems sooner, and to understand how strong they are. Weather balloons are sent up into the higher levels of the atmosphere to gather data and take pictures. Satellites relay weather data from high above Earth down to reporting stations.

In addition to their high-tech computers and radar systems, meteorologists have some basic weather instruments that have been around for many years. We are all familiar with the first one: a thermometer. A thermometer allows us to measure the air temperature using either the Celsius or Fahrenheit scale. The United States mostly uses the Fahrenheit scale. An anemometer is used to measure the speed of the wind. A weather vane, or wind vane, is used to show the direction the wind is blowing. A barometer measures air pressure. In spite of all these tools, there is always a little bit of mystery involved in the weather.

Name: _____

Answer the following questions based on the reading passage. Don't forget to go back to the passage whenever necessary to find or confirm your answers.

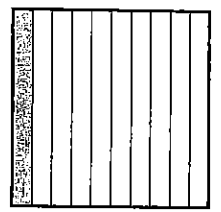1) Which direction do most weather systems move in the United States?

_____

_____

2) Do you think it is easier or harder than it used to be to be a meteorologist? Explain your thinking.

_____

_____

3) Name two technologically advanced tools that a meteorologist uses.

_____

_____

4) What is the central idea of this reading passage?

_____

_____

5) What is an anemometer?
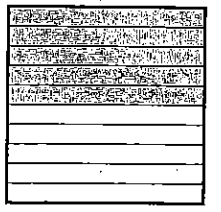
_____

_____

Determining Decimal Value (Visual)

Determine which letter best represents the amount shaded of the whole.

1)
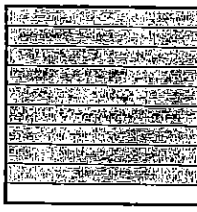A. 0.1
B. 10
C. 100
D. 0.01

2)
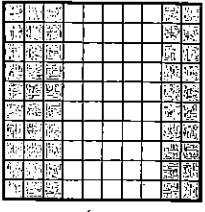A. 97
B. 0.97
C. 0.097
D. 970

3)
A. 5
B. 0.05
C. 50
D. 0.5

4)
A. 900
B. 9
C. 90
D. 0.9

5)
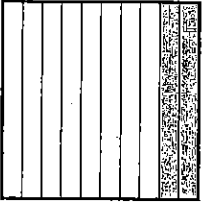A. 0.08
B. 80
C. 800
D. 0.8

6)
A. 9.1
B. 0.91
C. 910
D. 0.091

7)
A. 500
B. 50
C. 0.05
D. 0.5

8)
A. 200
B. 2
C. 0.2
D. 20
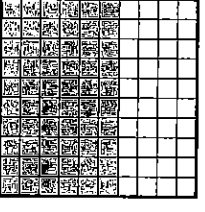
9)
A. 0.6
B. 600
C. 0.06
D. 6

Answers

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____

| 1-9 | 89 | 78 | 67 | 56 | 44 | 33 | 22 | 11 | 0 |

Determining Decimal Value (Visual)

Determine the amount shaded of the whole. Write your answer as a decimal.

1)

2)

3)

4)

5)

6)

7)

8)

9)

10)

11)

12)

Answers

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____
11. _____
12. _____

| 1-10 | 92 | 83 | 75 | 67 | 58 | 50 | 42 | 33 | 25 | 17 |
| 11-12 | 8 | 0 | | | | | | | | |
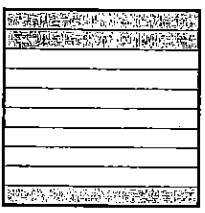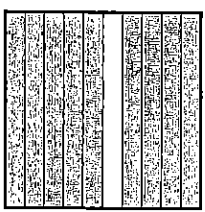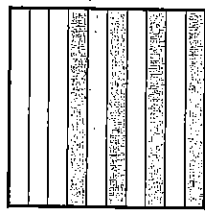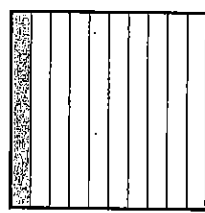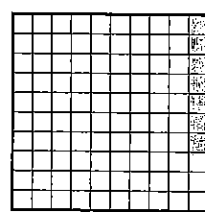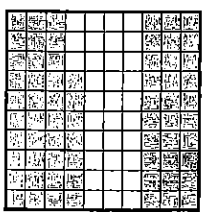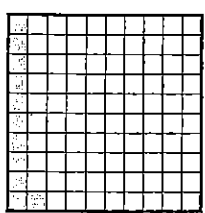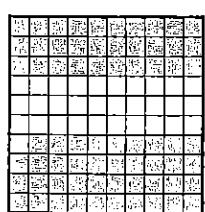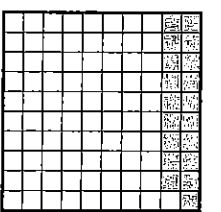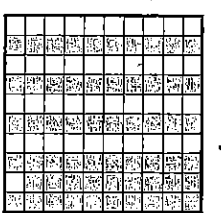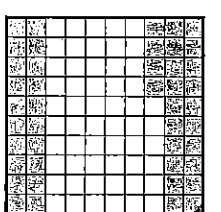
Extreme Weather

Cross-Curricular Focus: Earth Science

...... systems. Warm, wet air begins rising into the air. The higher it rises, the cooler it becomes. Water vapor in the air forms drops. This process is called condensation. The drops join together to form clouds. Precipitation in the form of rain, sleet, snow or hail falls down to Earth's surface.

Conditions must be very specific for a thunderstorm to develop. Even so, thunderstorms remain the most common kind of extreme weather. Before a thunderstorm can develop, there have to be three conditions present. First, the air has to be full of moisture. Next, there must be either an approaching cold front or an intensely heated piece of Earth's surface sending warm air up quickly. Finally, the warm air that rises must be warm enough to stay warmer than the air it passes through. When these conditions are met, the moisture in the rising air condenses. Clouds form, and a storm begins.

A cold front happens when cold air is moving near the surface of Earth, and it pushes warm air up very quickly. This is often the beginning of a thunderstorm. Clouds form, and heavy rains begin falling. Opposite electrical charges inside storm clouds separate. This causes lightning to flash towards Earth. Lightning has enough energy to heat the air all around it. This sudden burst of heat is what causes the noise we know as thunder.

Thunderstorms often bring disasters with them. This can be in the form of floods, fires caused by lightning, damage from hailstones or strong winds, and even tornadoes. A **tornado** is a spinning mass of air over land that can destroy virtually everything in its path.

A **blizzard** is a combination of strong winds and extremely low temperatures. Snowfall increases until it is so heavy it is difficult or impossible to see. People can become lost in the snow and freeze to death. Homes can be covered over with snow, trapping people indoors.

A **hurricane** is the most powerful storm known on Earth. It forms over warm ocean waters off the coast of the tropics, becoming a gigantic swirling mixture of air and water. It can grow to between 100 and 900 miles wide. Wind speeds can average 75 miles per hour or more. Hurricanes do the most damage to coastal cities because they quickly lose their strength as they move over land. Hurricanes are so large and powerful that their swirling clouds can be seen from space.

Name: _____

Answer the following questions based on the reading passage. Don't forget to go back to the passage whenever necessary to find or confirm your answers.

1) What kind of weather system encourages a thunderstorms to develop?

_____

2) Why does thunder usually occur during storms that have lightning?

_____

3) What is one of the conditions necessary for a thunderstorm to develop?

_____

4) Name one danger associated with blizzards.

_____

5) Which kind of extreme weather do you think would be the most difficult to face? Why?

_____

Multiplying by Positive Powers of Ten (A)

Name: _____ Date: _____

Multiply each number by positive powers of ten.

$8 \times 1 =$

$8 \times 10 =$

$8 \times 100 =$

$8 \times 1000 =$

$8 \times 10,000 =$

$5 \times 1 =$

$5 \times 10 =$

$5 \times 100 =$

$5 \times 1000 =$

$5 \times 10,000 =$

$3 \times 1 =$

$3 \times 10 =$

$3 \times 100 =$

$3 \times 1000 =$

$3 \times 10,000 =$

$7 \times 1 =$

$7 \times 10 =$

$7 \times 100 =$

$7 \times 1000 =$

$7 \times 10,000 =$

$4 \times 1 =$

$4 \times 10 =$

$4 \times 100 =$

$4 \times 1000 =$

$4 \times 10,000 =$

$9 \times 1 =$

$9 \times 10 =$

$9 \times 100 =$

$9 \times 1000 =$

$9 \times 10,000 =$

$1 \times 1 =$

$1 \times 10 =$

$1 \times 100 =$

$1 \times 1000 =$

$1 \times 10,000 =$

$6 \times 1 =$

$6 \times 10 =$

$6 \times 100 =$

$6 \times 1000 =$

$6 \times 10,000 =$

$2 \times 1 =$

$2 \times 10 =$

$2 \times 100 =$

$2 \times 1000 =$

$2 \times 10,000 =$

$10 \times 1 =$

$10 \times 10 =$

$10 \times 100 =$

$10 \times 1000 =$

$10 \times 10,000 =$

Multiply and Divide by 10 (A)

Find each product or quotient.

$4.314 \times 10 =$ $8.768 \div 10 =$

$8.45 \times 10 =$ $6.0139 \times 10 =$

$9.528 \times 10 =$ $4.06 \div 10 =$

$7.6364 \times 10 =$ $1.952 \div 10 =$

$9.88 \div 10 =$ $7.0081 \times 10 =$

$4.2 \div 10 =$ $9.788 \times 10 =$

$6.5464 \div 10 =$ $6.13 \times 10 =$

$7.6 \times 10 =$ $7.3225 \div 10 =$

$9.4 \times 10 =$ $8.4 \div 10 =$

$5.75 \times 10 =$ $2.6061 \div 10 =$

Multiply by Powers of Ten (A)

Find each product.

58 × 10 =	75 × 10 =
54 × 10 =	21 × 0.1 =
2 × 0.001 =	3 × 0.1 =
54 × 1,000 =	71 × 100 =
61 × 10 =	24 × 100 =
33 × 10 =	61 × 10 =
95 × 1 =	4 × 0.01 =
68 × 10 =	17 × 0.01 =
89 × 1 =	52 × 1,000 =
20 × 0.001 =	49 × 1 =

Multiply and Divide by Positive Powers of Ten (A)

Find each product or quotient.

6.3 ÷ 100 =	7.129 × 100 =
2.97 ÷ 1,000 =	0 × 1,000 =
0.193 ÷ 10 =	2.3979 ÷ 1,000 =
2.3 × 1,000 =	1.175 ÷ 100 =
8.4 × 1,000 =	9.1 × 1,000 =
9.6 × 1,000 =	8.425 × 1,000 =
8.3 ÷ 1,000 =	1.13 ÷ 100 =
5.6629 ÷ 100 =	1.88 ÷ 1,000 =
0.1804 ÷ 1,000 =	5.2 ÷ 100 =
8.84 × 10 =	9.63 × 1,000 =

The Earth's Safety Blanket
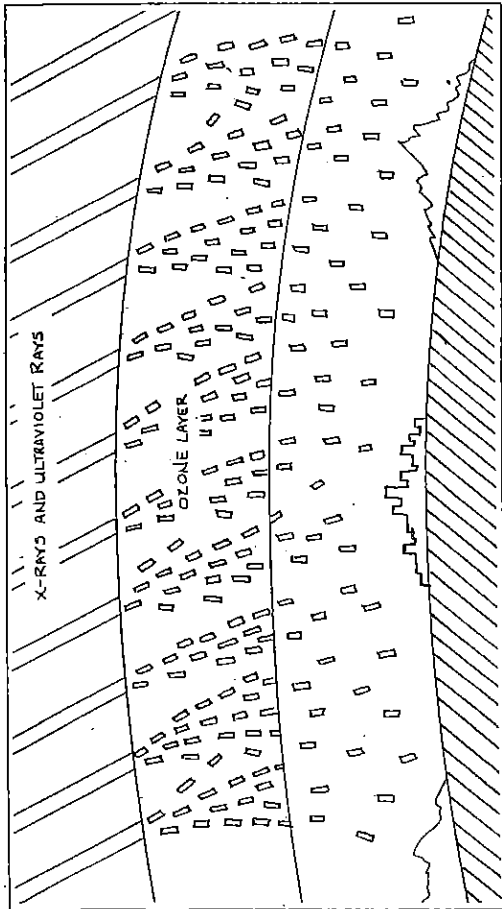
A few years ago, whenever people used hair spray or insect spray or spray paint, they were destroying an important part of our world. Although no one knew it, the gases in spray cans were harming the ozone layer.

No one has ever seen the ozone layer because it isn't on the earth. It is part of the atmosphere, a thick blanket of air that covers the world. The atmosphere is made up of many gases, especially nitrogen and oxygen. Close to the earth, the atmosphere is thick and heavy, but as it gets farther away from the earth, the atmosphere gets thin. There, the energy from the sun changes the way the gases behave. For instance, oxygen atoms usually travel in the air connected together in pairs. But high in the atmosphere, the sun's energy causes three oxygen atoms to connect together instead of two. These groups of three oxygen atoms are called ozone. And the place high in the air where regular oxygen changes to ozone is called the ozone layer.

The ozone layer is very important to life on earth even though it is far away. It soaks up dangerous rays from the sun that harm plants and animals. Even more important, the ozone layer helps keep the earth cool. Without it, the earth might become so hot that the icecaps would melt and flood much of the world. That is why scientists were worried when they found out that gases from spray cans were destroying the ozone layer. Now spray cans contain safe gases. So even though some of the ozone layer has been destroyed, it is no longer being harmed by people's spray cans.

Think About It
Besides not using spray cans, think of three other ways that we can protect life on earth.

Name _____

The Earth's
Safety Blanket

Main Idea
1. This story explains
____ the use of spray cans.
____ the ozone layer of the atmosphere.
____ the dangerous rays of the sun.

Sequencing
2. Number the events below in the order that they happened.
____ Spray cans were changed to contain safe gases.
____ Scientists became worried about the ozone layer.
____ People using spray cans were destroying the ozone layer.
____ The ozone layer was no longer being harmed by spray cans.

Reading for Details
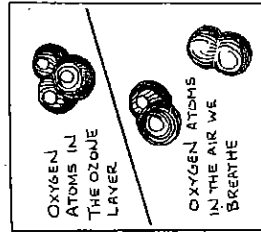3. Use the clues to answer these questions.

What is the atmosphere made of? (paragraph 2) _____

Where is the atmosphere thick and heavy? (paragraph 2) _____

Where is it thinner? (paragraph 2) _____

Why is the ozone layer important to the earth? (paragraph 3) _____

How was the ozone layer being harmed? (paragraph 1) _____

OXYGEN ATOMS IN THE OZONE LAYER

OXYGEN ATOMS IN THE AIR WE BREATHE

Reading for Understanding
4. Place the correct letter in the blank.

____ ozone layer   a. thick blanket of air that covers the earth

____ atmosphere   b. groups of three oxygen atoms

____ ozone   c. place high in the atmosphere where regular oxygen changes to ozone

____ spray cans   d. used to contain harmful gases

Multiply by 10² (A)

Find each product.

$9,9461 \times 10^2 =$

$9,31 \times 10^2 =$

$6,44453 \times 10^2 =$

$9,545 \times 10^2 =$

$1,5075 \times 10^2 =$

$1,6 \times 10^2 =$

$9,797 \times 10^2 =$

$2,43 \times 10^2 =$

$1 \times 10^2 =$

$8,694 \times 10^2 =$

$3,5 \times 10^2 =$

$8,56 \times 10^2 =$

$4,388 \times 10^2 =$

$8,327 \times 10^2 =$

$9,892 \times 10^2 =$

$0,7 \times 10^2 =$

$7,292 \times 10^2 =$

$0,4 \times 10^2 =$

$9,4 \times 10^2 =$

$1,33 \times 10^2 =$

Multiply by 10² (B)

Find each product.

$7,154 \times 10^2 =$

$8 \times 10^2 =$

$2,029 \times 10^2 =$

$4,21 \times 10^2 =$

$1,8886 \times 10^2 =$

$2,9 \times 10^2 =$

$5,141 \times 10^2 =$

$5,6683 \times 10^2 =$

$4,222 \times 10^2 =$

$8,859 \times 10^2 =$

$3,52 \times 10^2 =$

$0,2266 \times 10^2 =$

$1,28 \times 10^2 =$

$6,8026 \times 10^2 =$

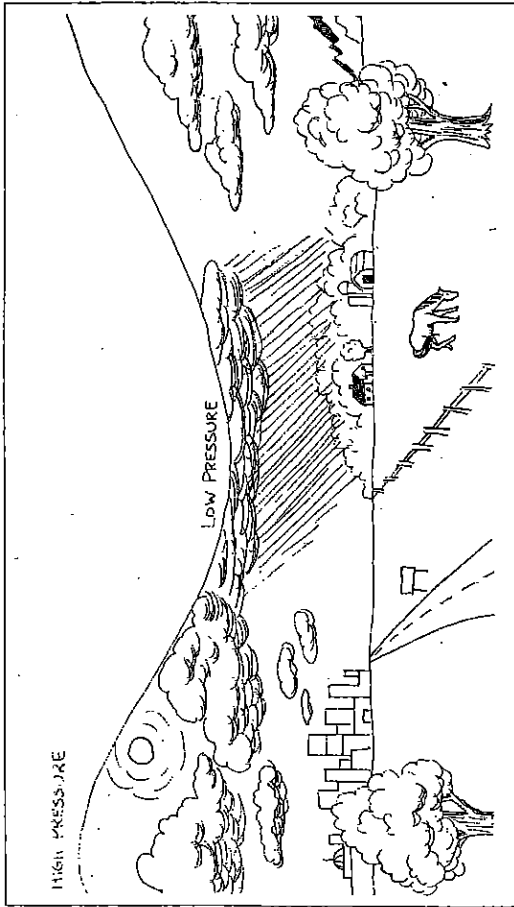$3,748 \times 10^2 =$

$5,2289 \times 10^2 =$

$2,861 \times 10^2 =$

$5,6522 \times 10^2 =$

$4,65 \times 10^2 =$

$5,3 \times 10^2 =$

The Ups and Downs of the Barometer

HIGH PRESSURE

LOW PRESSURE

Every day on the radio or television, you can hear the weather forecaster say, "The barometer is thirty inches and falling," or "The barometer is twenty-nine inches and rising." Barometers must have something to do with the weather. But what really rises and falls? And what do the inches measure?

A barometer measures air pressure. The air around us has weight, and this weight is called air pressure. But the air doesn't always have the same weight. Sometimes the air is light, and we say the air pressure is low. When the air is heavy, we say the air pressure is high. Barometers tell just how high or low the air pressure is.

A barometer is made of a long tube with a heavy silver liquid called mercury. The tube is closed at the top, and the bottom of the tube stands in a dish of mercury. When the air presses on the mercury, it pushes some of the mercury into the tube. The higher the air pressure is, the more mercury it pushes up into the tube. When the air pressure becomes lower, the air doesn't press as hard on the dish of mercury. So some of it comes out of the tube and back into the dish. The height of the mercury in the tube is measured in inches.

Warm, moist air is usually light, and has low pressure. So a falling barometer can forecast a warm, rainy day. On the other hand, cool, dry air is heavy and has high pressure. When the barometer rises, look for a dry, sunny day. As you can see, the barometer's ups and downs are the weather forecaster's best friend.

Think About It
Think of some other ways of forecasting weather changes.

Name _____

The Ups and Downs of the Barometer

Main Idea
1. Choose another title for this story.

_____ The Weather Forecaster's Best Friend

_____ Light Air and Heavy Air

_____ Weather Reports

Sequencing
2. Number the events below in the order that they happen.

_____ Some of the mercury comes out of the tube and goes back into the dish.

_____ The air pressure gets lower.

_____ Some of the mercury pushes into the tube.

_____ Air presses on the mercury at the bottom of the tube.

Reading for Details
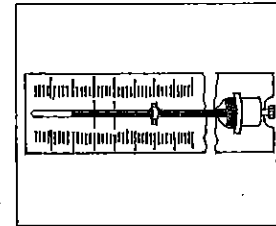3. Use the clues to answer these questions.

Who reports the barometer readings on radio and television? (paragraph 1) _____

Why is the barometer an important tool? (paragraph 4) _____

What makes the mercury rise and fall in the barometer? (paragraph 3) _____

When is the air pressure high? (paragraph 2) _____

What happens to the mercury in the barometer when the air pressure is high? (paragraph 3) _____

Reading for Understanding
4. Place the correct letter in the blank.

_____ barometer

_____ mercury

_____ falling barometer

_____ rising barometer

_____ low air pressure

_____ high air pressure

a. forecasts a warm, rainy day

b. a heavy, silver liquid

c. forecasts a dry, sunny day

d. means air is light

e. instrument which measures air pressure by inches

f. means air is heavy