HURRICANES: Storms With Eyes

Hurricanes are deadly storms. A single one can be as strong as 80 earthquakes. Its energy could replace all our electricity for six months.

Most hurricanes start on a calm, cloudless day. The sun shines on the warm ocean. Moisture rises and forms clouds. Warm air mixes with cool to make wind. For some unknown reason, these forces pick up power and speed. About 10 days later, the hurricane strikes our coasts.

But first, warning signs appear. Ocean waves slow down to only four or five a minute. Thin, ragged clouds build. They make halos around the sun and moon. The storm may still be days away.

But soon, the winds grow. From above, the black clouds spin out like a pinwheel. Finally, heavy rains arrive. They carry so much dirt that it becomes hard to breathe. During a 1921 Texas hurricane, 38 inches of water fell in one day.

The rain makes waves grow as high as 70 feet. Winds may reach 150 miles per hour or more. Buildings fall down, but you can’t hear them crash because the wind is so loud.

Then the storm seems to go away. But it will soon return. This calm is only the eye, or center, of the storm.

In 1727, a hurricane killed 300,000 people in India. It was the third worst disaster in history.

1. What are the signs of a hurricane? _______________________________________________

2. What is the center of a hurricane called? ________________________________________

3. Why can’t you hear buildings fall in a hurricane? _________________________________

4. What is a word that means “tiny drops of water”? ________________________________
ACROSS CLUES:
3. The __________ in the air makes it hard to breathe.
6. The center of the hurricane is called the ______________.
7. When the eye passes, the storm _______.
8. The rain makes the waves ________________.
10. The eye is a time of great ________________.
11. Hurricanes are _________________ storms.
12. _____ clouds appear before a hurricane.
13. Most hurricanes start on a calm, _______ day.
14. Hurricanes strike our _________________.
16. A hurricane caused the third worst __________ in history.
17. ________ can be seen around the sun and moon.
18. ________ may reach speeds of 150 miles an hour.

DOWN CLUES:
1. Black clouds spin out like a _____________.
2. The hurricane strikes when _________ rains arrive.
4. The strong wind makes ______ fall down.
5. The _________ is so loud, you can’t hear a thing.
9. A hurricane’s energy could _________ electricity.
12. Clouds form when moisture _____________.
14. When buildings fall, you can’t hear them _________________.
15. Before a hurricane, ocean waves ___________ down.
One time a herd of sheep were grazing in a field. All at once, a mighty cloud circled them. It was shaped like a funnel. When it left a moment later, the sheep had lost all their wool! But none of them were hurt. They kept right on eating.

This funnel cloud was a tornado. Think of tornados as dark, angry, storm clouds with powerful winds. Sometimes they swirl to the ground. When they do, death and damage happen.

If you could peek inside a tornado, you would be terrified. You would see non-stop green and purple lightning. The deafening thunder would roar like hundreds of planes.

Tornados form when warm, light air meets cool, heavy air high in the sky. Sometimes, the warm air is trapped below the cool air. Spinning clouds form. They suck up objects the way a giant vacuum cleaner does.

The path of a tornado is about 10 to 40 miles long. The funnel itself is only a few hundred yards wide. But its winds may blast at speeds up to 500 miles per hour.

In 1925, the worst tornado in the world struck three states. Almost 2,000 people were hurt and 689 died. In some towns, not one building was left standing. The 219-mile path was one of the longest ever known.

1. What is the shape of a tornado?

2. How strong are the winds of a tornado?

3. What is the inside of a tornado like?

4. What is a word that means “full of fear”? 
TORNADOES: Crossword Puzzle

ACROSS CLUES:
1. The world’s ______ tornado struck in 1925.
5. One of the ______ tornado paths was 219 miles.
6. The deafening ______ roars like planes.
7. The worst tornado struck ______ states.
8. Tornados are dark, angry clouds that ______ to the ground.
10. The tornado’s winds blast at high ______.
12. Two thousand people were ______ in a single tornado.
14. A mighty cloud ______ the sheep.
15. A tornado cloud looks like a ______.
17. Lightning in a tornado strikes non-______.

DOWN CLUES:
1. The ______ of a tornado is only a few hundred yards.
2. Tornados act like a giant vacuum ______.
3. The lightning is green and ____________.
4. Warm, light air plus cool, ______ air can lead to a tornado.
9. The tornado made the sheep lose all their ________.
10. In some towns, not one building was left _________.
11. Tornados ______ up objects from the ground.
13. The sheep were ________ in the field.
16. The sheep kept right on _________.
18. You would be terrified to _________ inside a tornado.
A flood occurs when heavy rains fall. Most of the time, the ground can absorb all the water. But sometimes it becomes too much. The water gathers and moves downhill. Streams and rivers overflow and cross dry land. Entire towns have been wiped out by floods.

In fact, floods kill more people than any other weather problem. At least 200 people die in floods each year in the United States. Our worst flood was in Pennsylvania in 1889. A dam broke after heavy rains fell. The wall of water grew 125 feet tall and moved at 50 miles per hour. The town of Johnstown was swept away. About 2,200 of its 12,000 people died.

A certain river in China causes the worst floods. In 1887, this river changed its path and overflowed. At least two million, and maybe seven million, people died. This same river flooded again in 1931. Four million people died. It happened a third time in 1939. Ten million people lost their homes. About 200,000 people died.

These floods are among the worst disasters in all history.

People can take steps to prevent damage caused by floods. They can use sandbags along the edge of a river. They can stop building in danger zones. They can make stronger dams to hold back the water. These steps are called "flood control."

1. Why do floods occur? __________________________________________________________
   ____________________________________________________________________________
   ____________________________________________________________________________

2. Where do the worst floods happen? _____________________________________________

3. What is the term that means "to take steps to prevent floods"?___________________
   ____________________________________________________________________________

4. What is a word that means "to soak in"? ________________________________

   ____________________________________________________________________________
FLOODS: Crossword Puzzle

ACROSS CLUES:
1. In a flood, rivers _________________.
5. People should place __________ along the river.
7. The steps that prevent floods are called flood ___________.
8. Buildings should not be built in danger ___________.
11. People can ___________ some floods.
13. Water gathers and moves ___________.
15. One _____ in China causes many floods.
17. The worst weather _____ of all is a flood.

DOWN CLUES:
2. Our ________ flood was in Pennsylvania.
3. As water gains speed, it becomes like a high ___________.
4. A flood can make a __________ break.
6. Water can be held back if _________ dams are built.
7. The country of _____ has the worst floods.
9. Sandbags should be placed along the river’s ___________.
10. When heavy rains fall, a _______ occurs.
12. This Chinese river has overflowed at least __________ times.
13. A river in China has caused millions to ___________.
14. Floods can __________ out entire towns.
16. In a flood, the ground cannot _________ all the water.
No two people are quite alike. No two snowflakes share the exact same pattern, either. One flake can have six matching arms and resemble a star. Another looks long and narrow. Some have no special shape at all.

A snowflake is born when tiny water particles mix with cool air. These beads of moisture attach themselves to bits of dust and salt in the sky. Instead of falling as rain, cold air turns the drops into snow. It must be 32° F. or colder for this to happen.

A flake that forms eight miles above the ground may be quite small. On its journey to earth, it gathers moisture and grows. Then, three miles above the ground, that same flake might be much larger than before.

A single flake is beautiful. Billions of them at once spell trouble. A blizzard is a storm with bitter cold, gusty winds and extra-heavy snow.

During the East Coast blizzard of 1888, 30 inches of snow fell in three days. People were not prepared. New York City came to a standstill.

Europe had a fierce blizzard in 1956. Heavy clumps of snow formed in the mountains. Then they broke away and buried the villages. About 900 people died in that snowstorm.

1. What is necessary to turn rain into snow? ______________________________

2. What makes a snowflake grow larger? ______________________________

3. Besides snow, what does a blizzard have? ______________________________

4. What is a word that means “look like”? ______________________________

5. What is a word that means “windy; stormy; coming in gusts”? ______________________________
ACROSS CLUES:
4. No two snowflakes ____ the same pattern.
7. Snow buried _______________ in Europe.
9. A blizzard has _______________ winds.
10. Some flakes look long and ___________.
11. It must be very ________ for snow to form.
12. Particles _______________ with cool air.
14. New York City once came to a _______ in a blizzard.
17. A storm with billions of flakes is a ________.
18. One sign of a blizzard is the _______ cold.
19. During Europe’s blizzard, heavy ________ of snow formed.

DOWN CLUES:
1. A snowflake contains tiny water ________.
2. In 1888, people were not ________ for the blizzard.
3. Some snowflakes have no special ________ at all.
5. One flake can _______________ a star.
6. On the way to the ground, a snowflake may ____________ in size.
8. 900 people died in Europe’s ________.
13. In 1888, a terrible blizzard hit the ________ Coast.
15. A snowflake may be much larger ________ miles above the ground.
16. In 1956, Europe had a ________ blizzard.
17. Moisture ________ attach themselves to dust and salt.
The people of San Francisco were asleep. It was early on the morning of April 18, 1906. Suddenly, the earth seemed to shake and roll. Buildings collapsed and crushed people. Gas and water lines burst and fires started.

A great earthquake had struck. In two minutes, the city was nearly flattened. This became the most famous earthquake in U.S. history.

Think of a puzzle. If you shake the pieces, they fall apart. That happens underground from time to time. The earth shifts and separates. This motion is felt as an earthquake. The movement lasts just seconds. But the damage continues for years.

Earthquakes are given points to measure their power. One that is 2.0 points is weak. The strongest would be 8.9 points. The San Francisco quake was 8.3 points.

Strong as that was, it was not our worst quake. In 1964, a quake in Alaska measured 8.5 points. During that quake, a man was fishing in his small boat. Suddenly, the force of the quake swept him towards land. When it stopped, he and his boat were inside a schoolhouse! They were five blocks inland.

Scientists try to predict when quakes will strike. They measure movement in the earth’s crust. They also check the heat inside the ground. Someday they may be able to give “earthquake warnings.”

1. Where was the most famous earthquake in U.S. history? ___________________________
   __________________________________________________________________________________

2. Where was the worst quake in U.S. history? ___________________________

3. Why does an earthquake happen? ___________________________
   __________________________________________________________________________________

4. What is a word that means “fallen down”? ___________________________

5. What is a word that means “to guess ahead of time”? ___________________________
EARTHQUAKES: Crossword Puzzle

ACROSS CLUES:
2. In an earthquake, the earth _______ and separates.
4. The worst _______________ was in Alaska.
6. In an earthquake, you would feel lots of _______.
7. The man and his boat were swept inside a _______.
9. Most of the people were _______ when the earthquake struck.
10. Scientists check the _______ inside the ground.
12. A low number of points means the earthquake is _______.
13. When buildings collapse, people are ___.
16. The great 1906 earthquake lasted two ___.
18. Someday, we may have earthquake _____.
19. The man and his boat were five blocks ___.

DOWN CLUES:
1. An earthquake is like the pieces of a ___.
3. In a short time, the city was nearly _______.
5. The power of an earthquake is measured by _______.
7. In an earthquake, the earth seems to _______ and roll.
8. In 1906, San Francisco had a great _____.
11. Fires start when gas and water lines _____.
14. Scientists measure _______ in the earth’s crust.
15. In Alaska, a man was _______ in his small boat.
17. A high number of points means the earthquake is ________.
At any moment, 1,800 thunderstorms take place on earth. Storms start when warm air rises into the sky. Moisture in the air forms huge, gray-white clouds. The wind picks up speed and the temperature cools.

Storm clouds may reach eight to ten miles into the sky. A chain of thunderstorms is called a “squall.”

Dogs and horses can smell the odor of a nearby storm. Birds can’t fly as well since the air pressure changes. Some people can feel their joints become stiff and sore.

Most storms last less than an hour. They provide water during the growing season. But a few turn violent, with dangerous lightning.

Lightning is electricity loose in the skies. It bounces from cloud to cloud or from clouds to the ground. Lightning strikes 100 times each second somewhere in the world.

When lightning heats the air, thunder follows. You will see the flash before you hear the crash. That happens because light travels faster than sound.

People once thought that storms stood still. But we know that they move. Squalls that hit your neighborhood one night may strike 300 miles away the next day.

1. What are the four steps that lead to a storm? ____________________________________
   ____________________________________________________________________________
   ____________________________________________________________________________

2. Name one good reason for storms. ______________________________________________
   ____________________________________________________________________________
   ____________________________________________________________________________

3. What is most dangerous about storms? __________________________________________
   ____________________________________________________________________________
   ____________________________________________________________________________

4. What is a word that means “a chain of storms”? ________________________________
   ____________________________________________________________________________
   ____________________________________________________________________________
ACROSS CLUES:
1. People once thought that storms _______ still.
3. Storms bring water during the _______ season.
5. Electricity _______ in the skies is called lightning.
6. Most thunderstorms last less than an ____.
9. Before a storm, some people feel their _______ become stiff.
10. Before the crash, you see the _______.
12. Each second, a _________ takes place on Earth.
15. The wind picks up _____________________.
17. Moisture forms clouds that are _______ and white.

DOWN CLUES:
1. Light travels faster than _____________.
2. Lightning _______ from cloud to cloud.
4. The air _______ changes so birds can’t fly as well.
5. The most dangerous part of a storm is the _________.
7. A chain of storms is a _________________.
8. A storm begins with _________________ air.
11. Dogs and horses can smell the storm’s _____________.
13. After the lightning, you hear _____________.
14. Warm air ___________________ in the sky.
16. Storm clouds may reach _____________ to ten miles into the sky.
Do you have any houseplants? If so, you know what happens if they don’t get water. At first, they wilt. After a week or two, the leaves turn yellow, then brown. Finally, they fall from the stem.

Your thirsty plants are having a drought. A drought means a long, long time passes without water. Outdoors, a drought starts with a lack of rain. The ground becomes very hard and dry. In time, the plants may die. Then animals and people face a shortage of food, called a “famine.”

Not all places require the same amount of rain. Deserts need only about seven inches a year. Cities in the Midwest get 25 to 30 inches a year. Each of these is normal. In a drought, the rain is much less than normal for that area.

One or two weeks without rain is not enough for a drought. You could still wash the family car, water the grass, and drink water in a restaurant. But after four or five months, problems would occur. Corn, wheat, and crops would die. After a year, the birds and cattle would suffer.

When a drought lasts for several years, people can starve. That has happened in China, Africa, and India. But you are in little danger in this country. Water can be sent from some other city or state.

1. How does a drought start? ______________________________________________________
   __________________________________________________________________________

2. What is the normal amount of rain needed? _____________________________________
   __________________________________________________________________________

3. What is a word that means “shortage” or “not enough”? _________________________

4. What is a shortage of food called? _____________________________________________

   __________________________________________________________________________
**ACROSS CLUES:**

1. If you don’t water your house plants, they ___________.
2. One country where people have starved in a drought is ___________.
3. The ground becomes very ______ and dry in a drought.
4. A shortage of food is a ______________.
5. In a drought, a long time ______ without water.
6. Without water, your plants’ leaves turn ______ then brown.
7. In a long drought, people can _______.
8. In our country, we are not in ________ in a drought.
9. Animals like birds and ____________ suffer.
10. To have a drought, there must be little or no _________.
11. Not all places ________ the same amount of rain.
12. Deserts need only about seven ______ of rain a year.
13. If we have a drought, water can be sent from another ________.
14. To have a drought, the rain must be less than ________ for that place.
15. In the ____________, the cities get about 30 inches of rain a year.
16. In a true drought, no ______________ falls.
17. Without rain, corn, wheat and other ____________ die.
18. After four or five months without water, problems ___________.

**DOWN CLUES:**

2. Without water, your plants’ leaves turn ______ then brown.
3. A shortage of food is a ______________.
4. In a drought, a long time ______ without water.
5. In our country, we are not in ________ in a drought.
6. To have a drought, there must be little or no _________.
7. The place that needs the least rain is the ________.
8. In a long drought, people can _______.
9. In the ____________, the cities get about 30 inches of rain a year.
10. Deserts need only about seven ______ of rain a year.
11. Not all places ________ the same amount of rain.
12. Animals like birds and ____________ suffer.
13. One country where people have starved in a drought is ___________.
14. If you don’t water your house plants, they ___________.

Page 1: 1) heavy dust storms in eight states 2) three years 3) bare ground and drought and wind 4) harsh 5) copper

Page 2: ACROSS: 2) football 7) bare 9) reported 10) grazing 11) droughts 13) eight 16) farms 17) red 19) yellow 20) purple DOWN: 1) bowl 3) lasted 4) crops 5) heights 6) volcano 8) farming 12) tons 14) harsh 15) rained 18) copper

Page 3: 1) pollution 2) sore throat, eyes sting, headache, dizzy, can't breathe well 3) car fumes and sunlight 4) soft coal smoke 5) collided 6) admitted

Page 4: ACROSS: 2) strong 3) soft 4) bath 7) rubber 9) sting 11) particles 14) trapped 16) one 17) fumes 18) dizzy DOWN: 1) London 2) schools 5) air 6) lungs 8) breathe 9) sore 10) hard 12) closed 13) harbor 15) smog

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Page 7: 1) threat of an avalanche 2) slides down the mountain slopes 3) it becomes unstable 4) spring 5) practice 6) barriers

Page 8: ACROSS: 2) strong 3) soft 4) bath 7) rubber 9) sting 11) particles 14) trapped 16) one 17) fumes 18) dizzy DOWN: 1) London 2) schools 5) air 6) lungs 8) breathe 9) sore 10) hard 12) closed 13) harbor 15) smog

Page 9: 1) a crack in the earth's crust 2) fiery, liquid rock 3) Hawaii 4) sky was covered with ash 5) erupted

Page 10: ACROSS: 2) black 6) sing 8) choked 9) escape 10) snow 14) melt 16) happen 17) blast 18) collapsed DOWN: 1) masks 2) boulders 3) builds 4) force 5) clouds 7) crack 9) exploded 11) night 12) mountain 13) asleep 15) lava

Page 11: 1) earthquakes at sea 2) tidal waves 3) 10 to 75 feet above land 4) tower 5) toppled

Page 12: ACROSS: 2) floods 3) warns 7) acres 9) cub 10) orphan 11) lookout 12) crown 13) ditches 16) people 17) forest DOWN: 1) plants 3) wind 4) symbol 5) spreading 6) ground 8) smoke 9) crews 14) campfires 15) beauty

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