



EYEWITNESS NEWS

WEATHER SKETCHERS' CLUB



EYEWITNESS NEWS METEOROLOGIST

TRACY BUTLER'S WEATHER ACTIVITIES

NAME





Curious Kids Ask...?

WHAT MAKES WEATHER?

The sun is the “engine” which motorizes the world’s weather.

HOW DO YOU PREDICT THE WEATHER?

By using satellites, radar, computer models and observations from all over the United States.

WHAT TOOLS DO YOU USE?

A graphics computer to draw the maps, satellites to study where the clouds are and radar to see where precipitation is located.

WHY DID YOU WANT TO BE A METEOROLOGIST?

I love building puzzles. Forecasting is like building a puzzle with the various layers of the atmosphere as your pieces.

WHAT DID YOU STUDY IN SCHOOL TO BECOME A METEOROLOGIST?

Math, science, geography and of course it’s important to study English and spelling so that you do a great presentation.

WHAT DO YOU LIKE BEST ABOUT YOUR JOB?

As I mentioned earlier, it’s like building a jigsaw puzzle and I love puzzles!

WHAT IS A TORNADO?

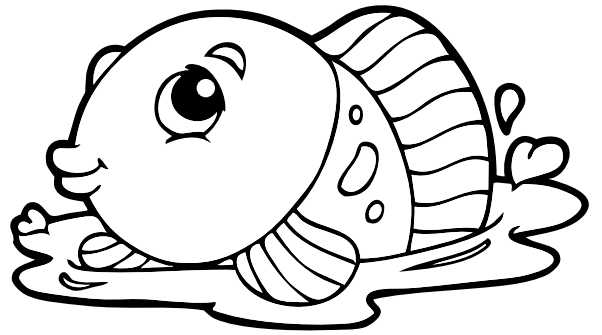
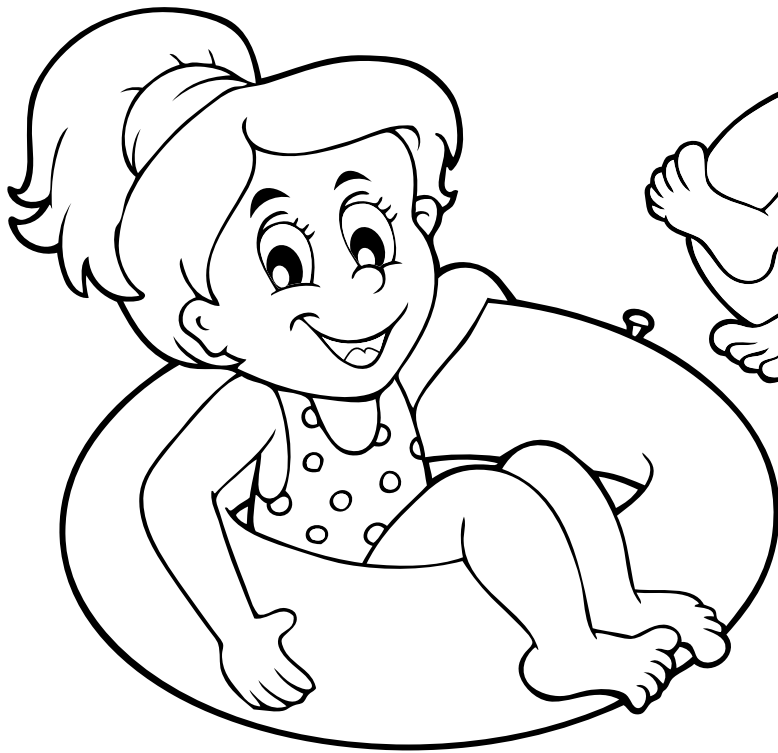
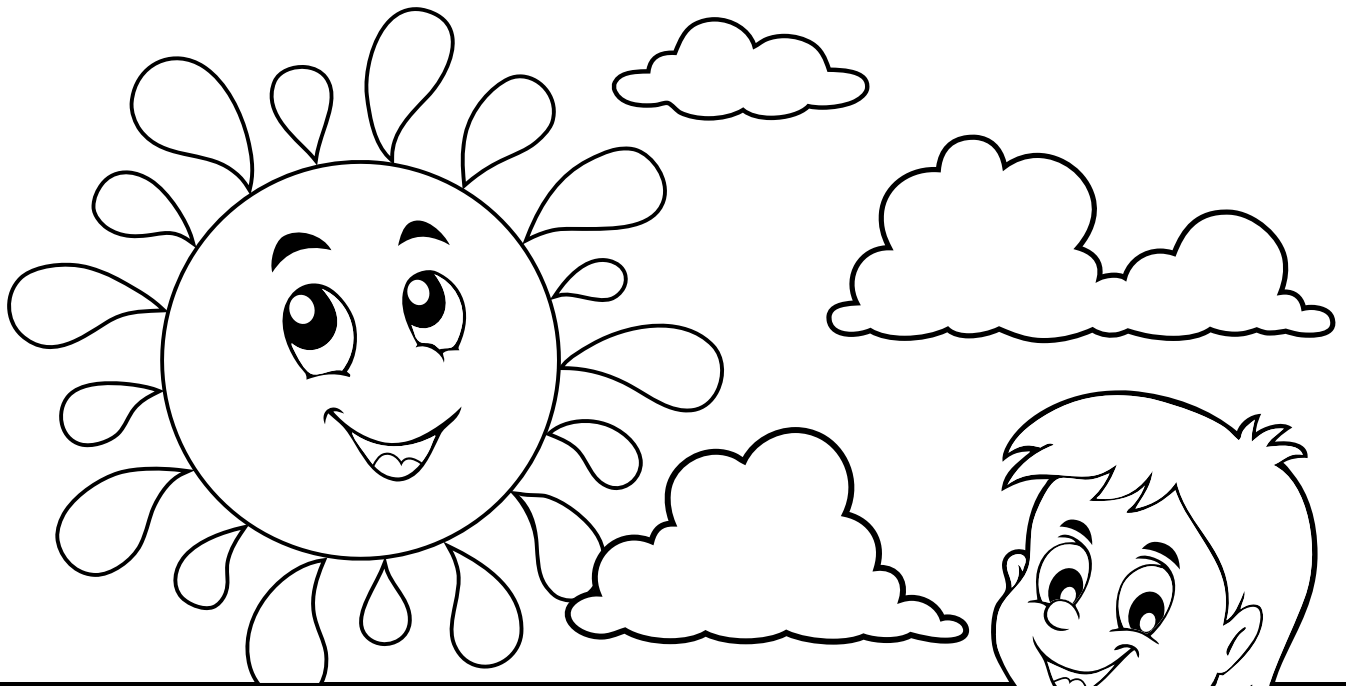
It is an intense whirlwind, spinning down in a funnel from the base of a large thundercloud. It is often accompanied by rain or hail and lightning.

WHAT IS A HURRICANE?

These are revolving systems of very low pressure which form only over tropical seas. Warm water is the fuel for a hurricane. A tropical storm becomes a hurricane when wind speeds reach 74 mph.

HAVE YOU EVER BEEN IN A TORNADO OR A HURRICANE?

No, but I’ve been in a tropical storm where wind gusts measured between 39 and 73 mph. We were **SOAKED**. We were on Martha’s Vineyard which is an island in the Atlantic Ocean near Massachusetts.





Curious Kids Ask...?

HOW MUCH WATER IS THERE IN AN INCH OF SNOW?

On average, 10 inches of snow is equal to an inch of water.

HOW DO YOU KNOW HOW LONG IT WILL TAKE A STORM TO GET TO CHICAGO?

By studying observations in other areas of the country and determining how quickly the storm is moving. That's why it's important to have access to satellite and radar pictures to analyze the movement of storms.

HOW DO RAIN AND SNOW BEGIN TO FORM?

Snow starts high in the frozen tops of large thick clouds. If the temperature from the top of the cloud all the way down to the ground is below 32 degrees, the snowflakes reach the ground intact.

Rain falling from nimbostratus and cumulonimbus clouds actually starts as snowflakes. These snowflakes melt as they drop through the warmer cloud layers.

WHY IS THUNDER SOMETIMES LOUD AND SOMETIMES SOFT?

It all depends on how close the storm is to you. When you see the lightning, count how long it is until you hear the thunder. When there are fewer numbers between the flash of lightning and the sound of thunder, you know that the storm is getting closer.

WHAT CAUSES A RAINBOW?

When the sun comes out after a shower, you may see a rainbow. The sunlight is reflected from millions of raindrops which separate the light rays into the colors of the rainbow spectrum.

WHAT SHAPE IS A RAINDROP?

A raindrop is actually shaped like a hamburger bun.

WHAT SHAPE IS A SNOWFLAKE?

Snowflakes are based on the shape of a hexagon. No two snowflakes are **EXACTLY** alike, molecule for molecule.

WHICH MONTH GETS THE LEAST AND WHICH MONTH GETS THE MOST RAIN IN CHICAGO?

February has the least amount of rain because we're more likely to get snow in February. August is actually the rainiest month with an average of 4.9" of rain.



Curious Kids Ask...?

WHERE IS THE RAINIEST SPOT IN THE WORLD?

Top honors go to Mt. Waialeale on the Hawaiian Island of Kauai. This area averages 460" of rain a year.

WHERE IS THE DRIEST PLACE IN THE WORLD?

Arica, Chile in the area of the Andes Mountains on the continent of South America. The average amount of rainfall is .03".

WHAT IS THE RECORD FOR SNOWFALL IN CHICAGO?

A record snowfall of 23" fell during the period of Thursday, January 26 through Friday, January 27 in 1967. Your family may remember the blizzard of 2011. On January 31, 2011 the snow started falling and had accumulated 21.2" by February 2, 2011.

WHAT IS THE BEST WAY TO MEASURE SNOW?

Take a ruler or a yardstick. Take it out in your yard and measure in at least three to six spots. Then take the average of those measurements.

HOW DO YOU CONVERT FAHRENHEIT TO CELSIUS?

Fahrenheit and Celsius are the two most common temperature scales used in the world.

To convert Fahrenheit to Celsius, start by subtracting 32 and then multiply that number by five. Proceed by dividing that number by nine and you have Celsius

HOW DO YOU CONVERT CELSIUS TO FAHRENHEIT?

Start by dividing five into nine. Multiply that by your Celsius temperature. Add 32 and you have your Fahrenheit answer.

WHY IS THE SKY BLUE?

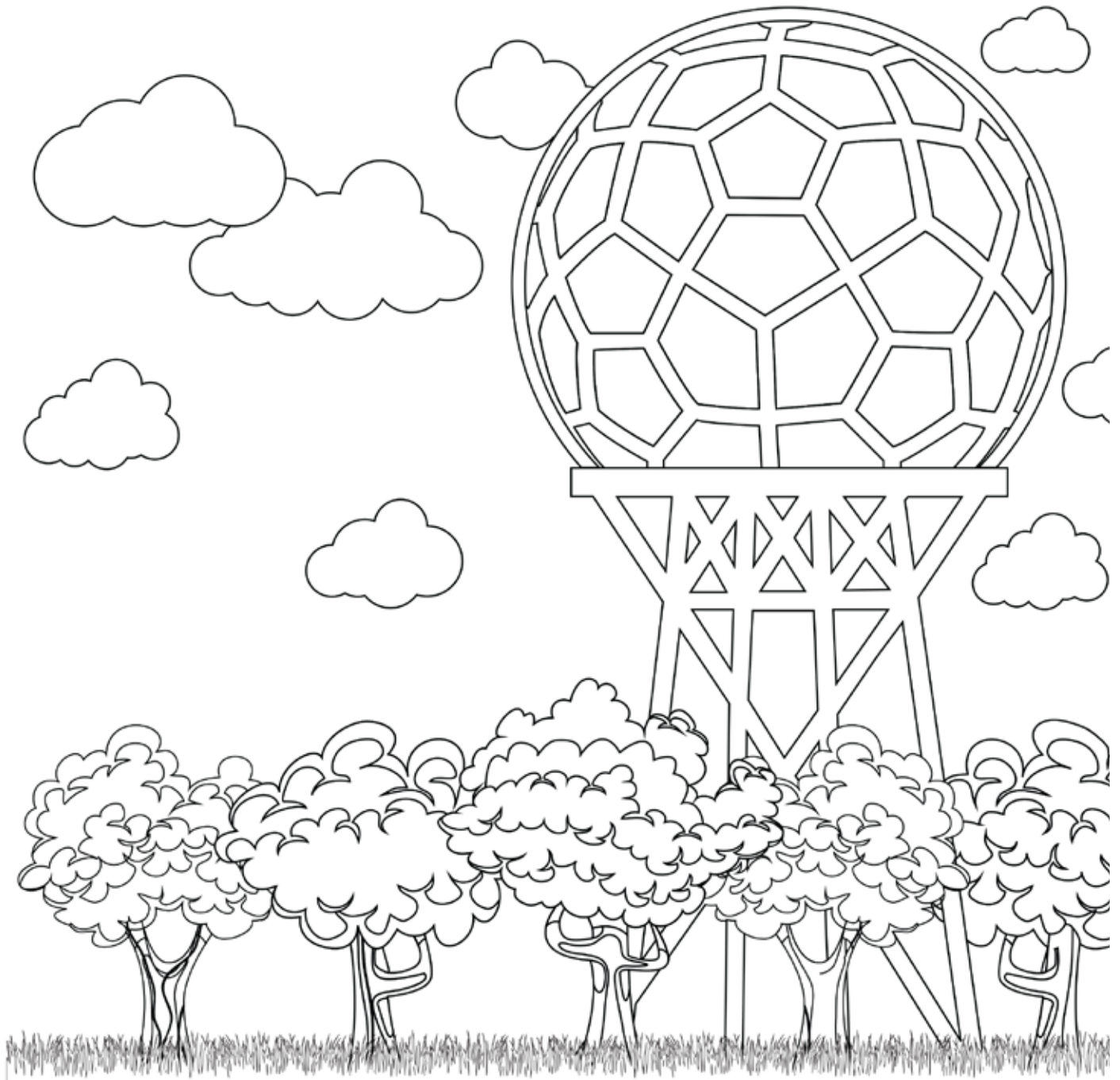
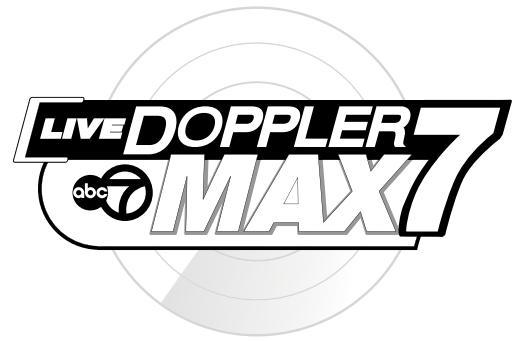
The sky appears blue because light from the sun is scattered by the molecules of the gases that make up the air and by tiny particles in the atmosphere.

WHICH IS YOUR FAVORITE WEATHER SEASON AND WHY?

I really love summer in Chicago. Yes, it does get hot but I do like warm and sunny weather. Just like you probably like to play outside, so do I. I do love to study all kinds of weather. There is something exciting about the first snowstorm of the season.

The latest equipment in the **ABC 7** Weather Department is **LIVE Doppler 7 Max**. It is our very own radar which gives us even more opportunities to get weather information to you as soon as possible.

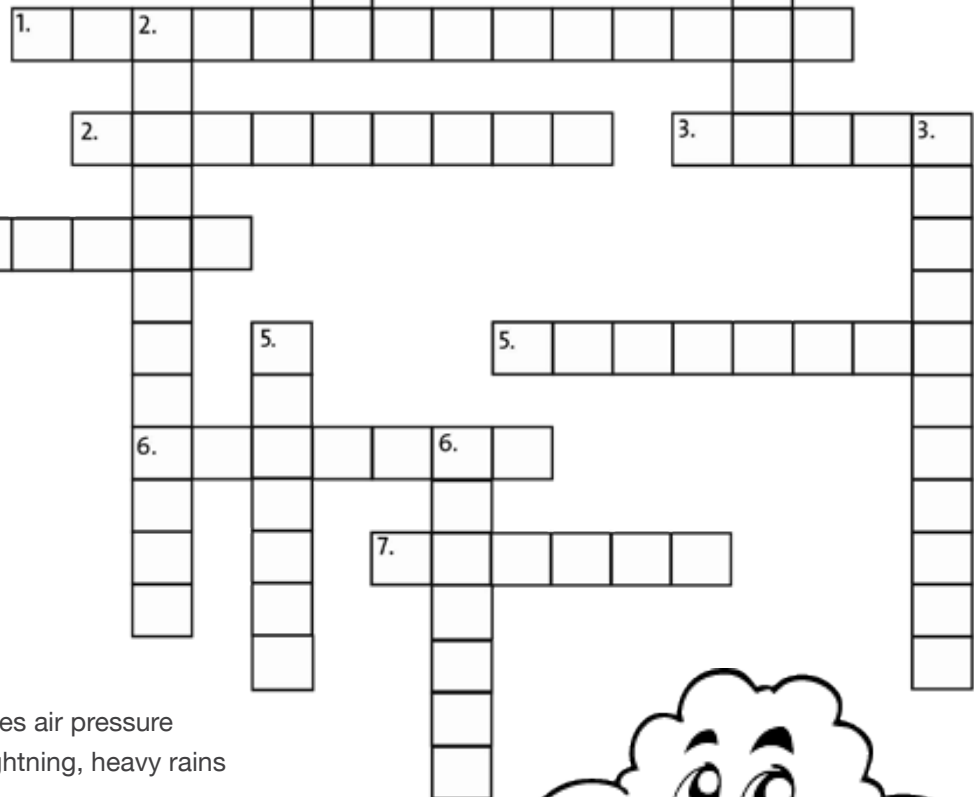
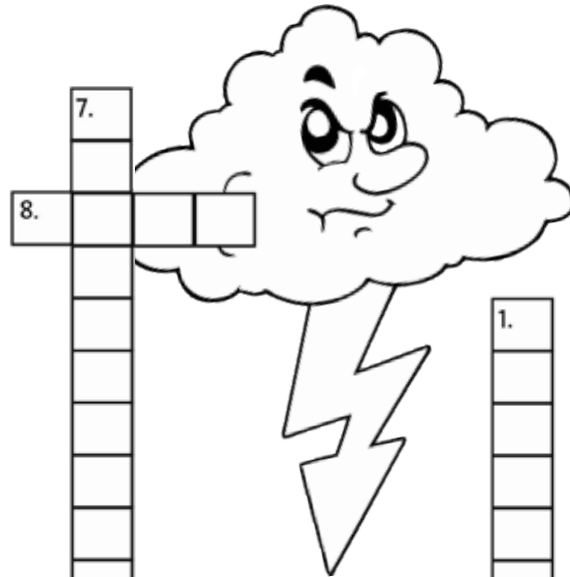
The powerful new radar's 5-Band, dual pole system helps to better track and forecast weather from farther out, and can punch through existing storms to see what's coming next and when. **LIVE Doppler 7 Max** is able to sweep the entire Chicago area in a minute or less giving the **ABC 7 First Alert** weather team the ability to provide the most accurate forecasts possible.



Weather Crossword Puzzle

ACROSS:

1. Scientists who study weather
2. A storm that forms near the equator over warm oceans
3. Place where cold and warm air meet
4. Air which has condensed into moisture
5. Force
6. Storm produced by a spinning, funnel-shaped cloud
7. High-level clouds that look like feathers
8. Moisture that falls from the sky



DOWN:

1. An instrument that measures air pressure
2. A storm having thunder, lightning, heavy rains & strong winds
3. This tells how hot or cold it is
4. Puffy, white cloud
5. Low, flat sheets of grey clouds
6. Very small drops of slowly falling rain
7. Name this female ABC 7 Meteorologist



See **LAST PAGE** for **ANSWERS!**



Severe Weather Wisdom

Keep a **WATCH** out for **WARNINGS!**

In Chicago, severe weather season runs from March through June! But it's important to remember that severe weather can occur at any time of the year. On December 1, 2018, over two dozen tornadoes were reported in Central Illinois. Here are some things to keep in mind during severe weather season...

TORNADO WARNING:

A tornado has been sighted or indicated by weather radar.

TORNADO WATCH:

This means that tornadoes are possible in the watch area. Remain alert for approaching storms!

SEVERE THUNDERSTORM:

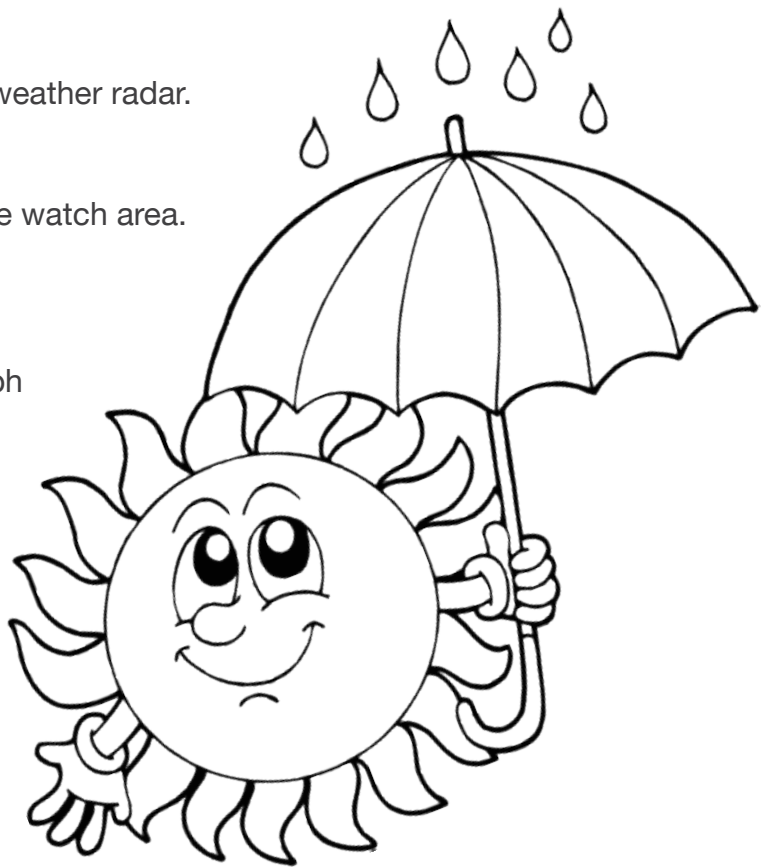
This is a storm which contains at least 58 mph winds and/or hail at least $\frac{3}{4}$ " in diameter.

SEVERE THUNDERSTORM WARNING:

This is issued when severe weather has been reported by spotters or indicated by radar.

SEVERE THUNDERSTORM WATCH:

This lets you know that severe thunderstorms are possible in the area.





Tornado Safety Rules



- ☛ In a home or building, move to a pre-designated shelter, such as a basement.
- ☛ If an underground shelter is not available, move to a small interior room or hallway on the lowest floor and get under a sturdy piece of furniture. Put as many walls as possible between you and the outside.
- ☛ Stay away from windows.
- ☛ Do not try to outrun a tornado in your car. Leave it immediately for shelter.
- ☛ If caught outside your vehicle, lie flat in a nearby ditch or depression and cover your head with your hands.
- ☛ Be aware of flying debris!

AVERAGE NUMBER OF TORNADOES PER YEAR:



Illinois

54



Indiana

22



Wisconsin

24



Michigan

16



Weather Word Search

Air
Barometer
Cirrus
Clouds
Cold

Condensation
Cumulus
Drizzle
Evaporation
Forecast

Front
Hot
Meteorologist
Moisture
Precipitation
Pressure

Rain
Storms
Stratus
Temperature
Thermometer

Thunderstorm
Tracy Butler
Warm
Weather
Wind

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

See **LAST PAGE** for **ANSWERS!**



Jubilee Weather Jumbles

1. owns



2. eoooitmteslrg



3. oaorntd



4. ggiinnhtl



5. nari



6. rriaehcn



7. nmtsuai



8. dernuhtwons



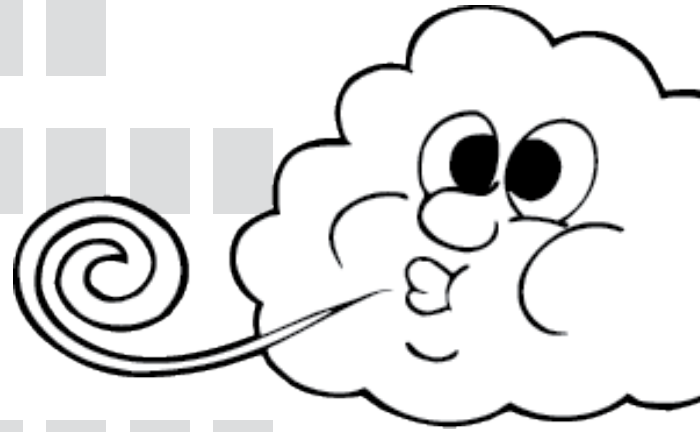
9. ueothstrmnr



10. duolc



11. eaetrwh





Winter Weather in Chicago



Part of the fun of forecasting in Chicago is forecasting winter weather. Unfortunately, it can cause a lot of problems! Here is some terminology for you to remember during the winter!

WINTER STORM WATCH:

Conditions are favorable for hazardous winter weather conditions including heavy snow, blizzard conditions, or significant accumulations of freezing rain or sleet. These watches are usually issued 12 to 48 hours in advance of the event.

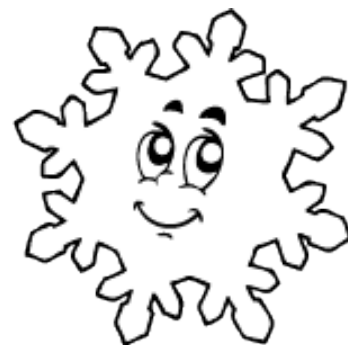
WINTER STORM WARNING:

Hazardous winter weather conditions that pose a threat to life and/or property are occurring, imminent or likely. The generic term, winter storm warning, is used for a combination of two or more of the following winter weather events; heavy snow, freezing rain, sleet and strong winds. The following event-specific warnings are issued for a single weather hazard:

BLIZZARD WARNING:

Sustained winds or frequent gusts of 35 mph or greater, considerable falling and/or blowing snow reducing visibility frequently to $\frac{1}{4}$ mile or less for a period of three hours or more. There are no temperature criteria in the definition of a blizzard but freezing temperatures and 35 mph winds will create single digit wind chills.

Winter Storm Warning:	(Snow) $\geq 6''$ in ≤ 12 hours / $\geq 8''$ in ≤ 24 hours
Ice Storm Warning:	Ice Accumulation $\geq \frac{1}{4}''$
Winter Storm Warning:	Sleet Accumulation $\geq \frac{1}{2}''$
Wind Chill Warning:	WC $\leq -30^{\circ}\text{F}$
Freeze Warning:	Widespread temperatures $\leq 32^{\circ}\text{F}$ during growing season
High Wind Warning:	Sustained winds ≥ 40 mph gusts ≥ 58 mph



WINTER WEATHER ADVISORY:

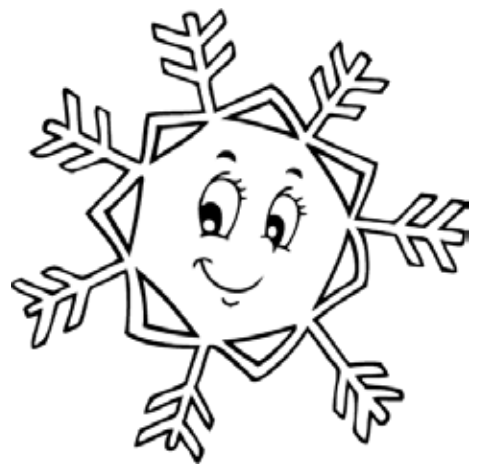
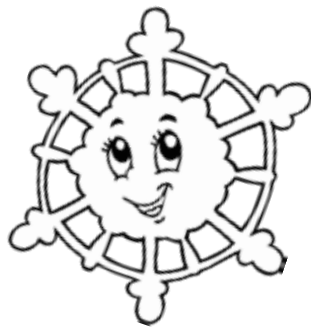
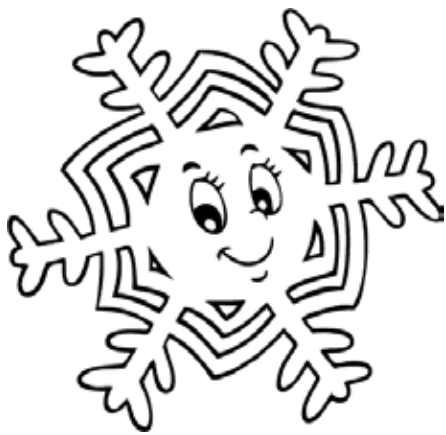
Hazardous winter weather conditions are occurring, imminent or likely. Conditions will cause a significant inconvenience and if caution is not exercised, will result in a potential threat to life and/or property. The generic term 'winter weather advisory' is used for a combination of two or more of the following events: snow, freezing rain or drizzle, sleet, blowing snow.

MONTHLY SNOWFALL NORMALS FOR O'HARE IN INCHES

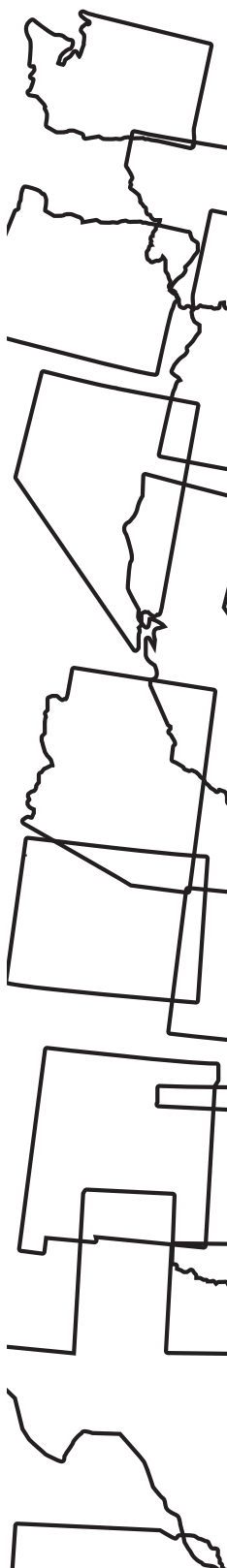
Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Annual
10.8	9.1	5.6	1.2	T	0	0	0	0	0.3	1.2	8.2	36.4

WIND CHILL ADVISORY:

Dangerous wind chills of -20°F to -30°F . A wind chill advisory will be issued when the wind chill is less than or equal to -20°F and the winds are greater than or equal to 10mph.



Fun Facts with the 50 States

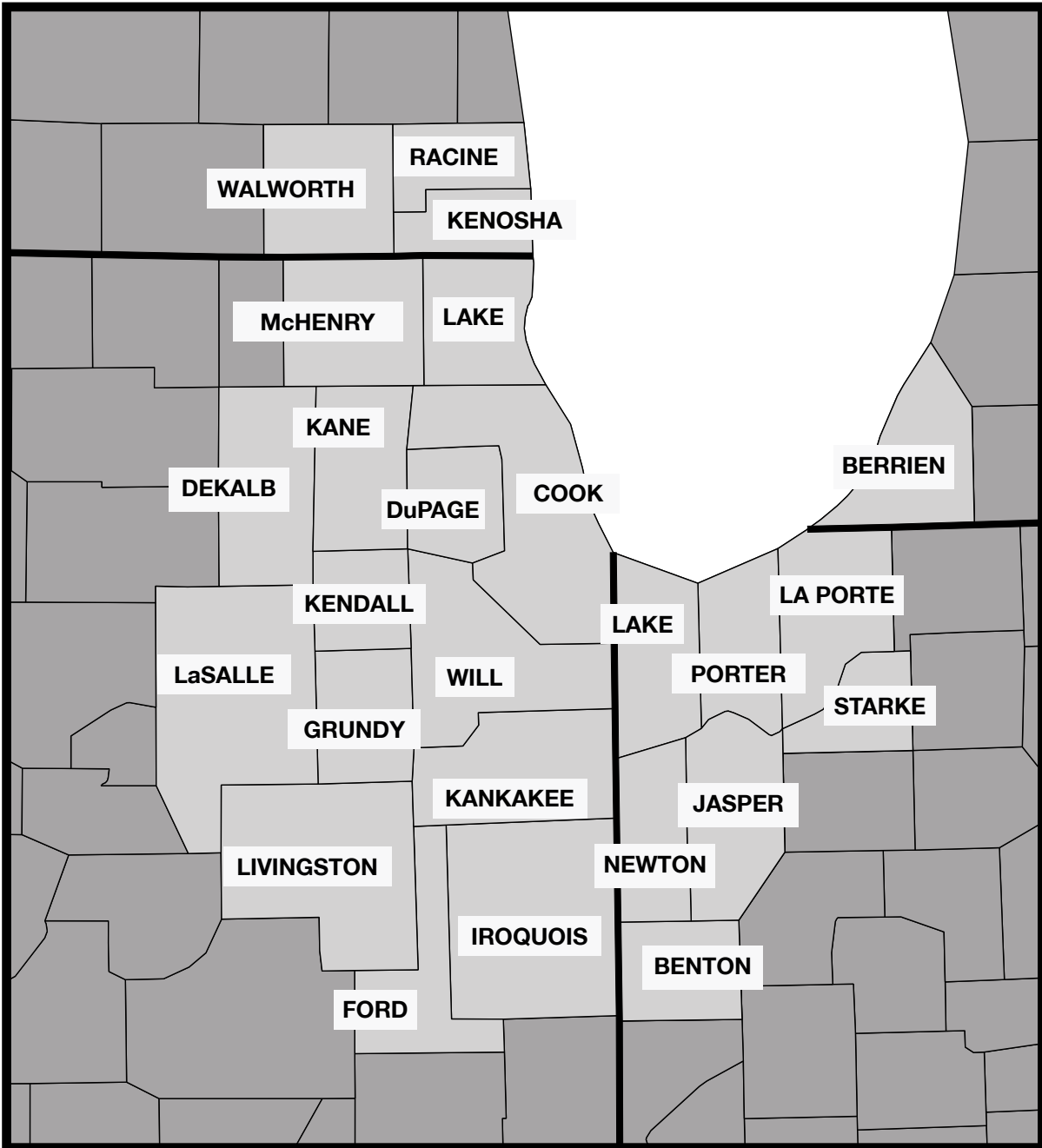


	STATE CAPITAL	STATE NICKNAME
ALABAMA	Montgomery	Yellowhammer state
ALASKA	Juneau	Last Frontier
ARIZONA	Phoenix	Grand Canyon state
ARKANSAS	Little Rock	Natural state
CALIFORNIA	Sacramento	Golden state
COLORADO	Denver	Centennial state
CONNECTICUT	Hartford	Constitution state
DELAWARE	Dover	Diamond state
FLORIDA	Tallahassee	Sunshine state
GEORGIA	Atlanta	Peach state
HAWAII	Honolulu	Aloha state
IDAHO	Boise	Gem state
ILLINOIS	Springfield	Prairie state
INDIANA	Indianapolis	Hoosier state
IOWA	Des Moines	Hawkeye state
KANSAS	Topeka	Sunflower state
KENTUCKY	Frankfort	Bluegrass state
LOUISIANA	Baton Rouge	Pelican state
MAINE	Augusta	Pine Tree state
MARYLAND	Annapolis	Free state
MASSACHUSETTS	Boston	Bay state
MICHIGAN	Lansing	Wolverine state
MINNESOTA	St. Paul	North Star state
MISSISSIPPI	Jackson	Magnolia state
MISSOURI	Jefferson City	Show-me state
MONTANA	Helena	Treasure state
NEBRASKA	Lincoln	Cornhusker state
NEVADA	Carson City	Sagebrush state
NEW HAMPSHIRE	Concord	Granite state
NEW JERSEY	Trenton	Garden state
NEW MEXICO	Santa Fe	Land of Enchantment
NEW YORK	Albany	Empire state
NORTH CAROLINA	Raleigh	Tar Heel state
NORTH DAKOTA	Bismarck	Sioux state
OHIO	Columbus	Buckeye state
OKLAHOMA	Oklahoma City	Sooner state
OREGON	Salem	Beaver state
PENNSYLVANIA	Harrisburg	Keystone state
RHODE ISLAND	Providence	Ocean state
SOUTH CAROLINA	Columbia	Palmetto state
SOUTH DAKOTA	Pierre	Mount Rushmore state
TENNESSEE	Nashville	Volunteer state
TEXAS	Austin	Lone Star state
UTAH	Salt Lake City	Beehive state
VERMONT	Montpelier	Green Mountain state
VIRGINIA	Richmond	The Old Dominion
WASHINGTON	Olympia	Evergreen state
WEST VIRGINIA	Charleston	Mountain state
WISCONSIN	Madison	Badger state
WYOMING	Cheyenne	Equality state

Know Where You Are!

When **WATCHES OR WARNINGS** are issued by the National Weather Service, that information states the counties to be impacted.

So, study this map, and when severe weather hits, you will be more prepared because you “**Know Where you Are**”.





MY FAVORITE SEASON IS...

I LIKE WHEN THE SKY IS...

I THINK CHICAGO AREA WEATHER IS...

I LIKE WHEN THE TEMPERATURE IS AROUND _____ DEGREES.

MY FAVORITE SUBJECT IN SCHOOL IS...

MY FAVORITE COLOR IS...

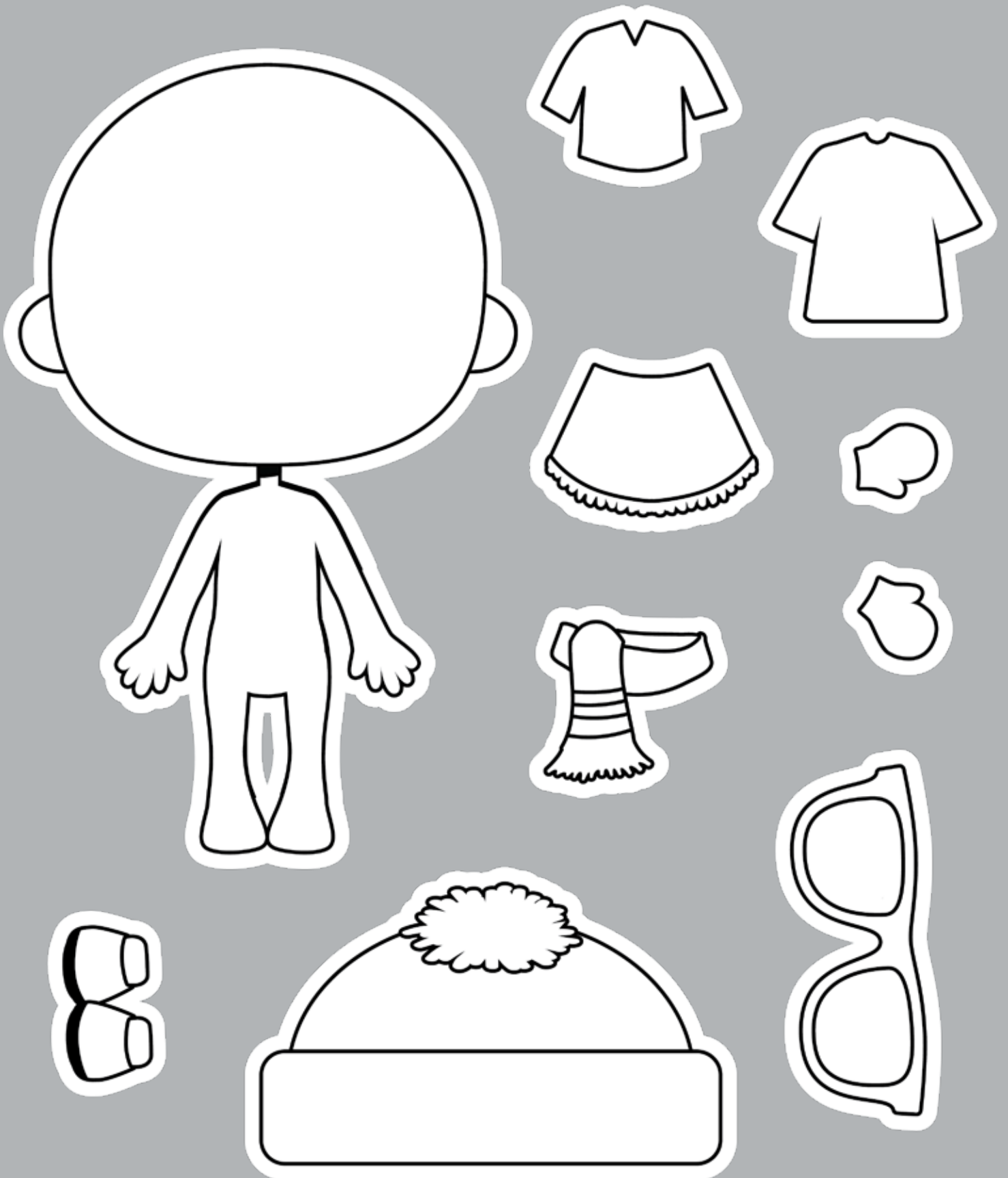
MY FAVORITE THING TO DO IS...

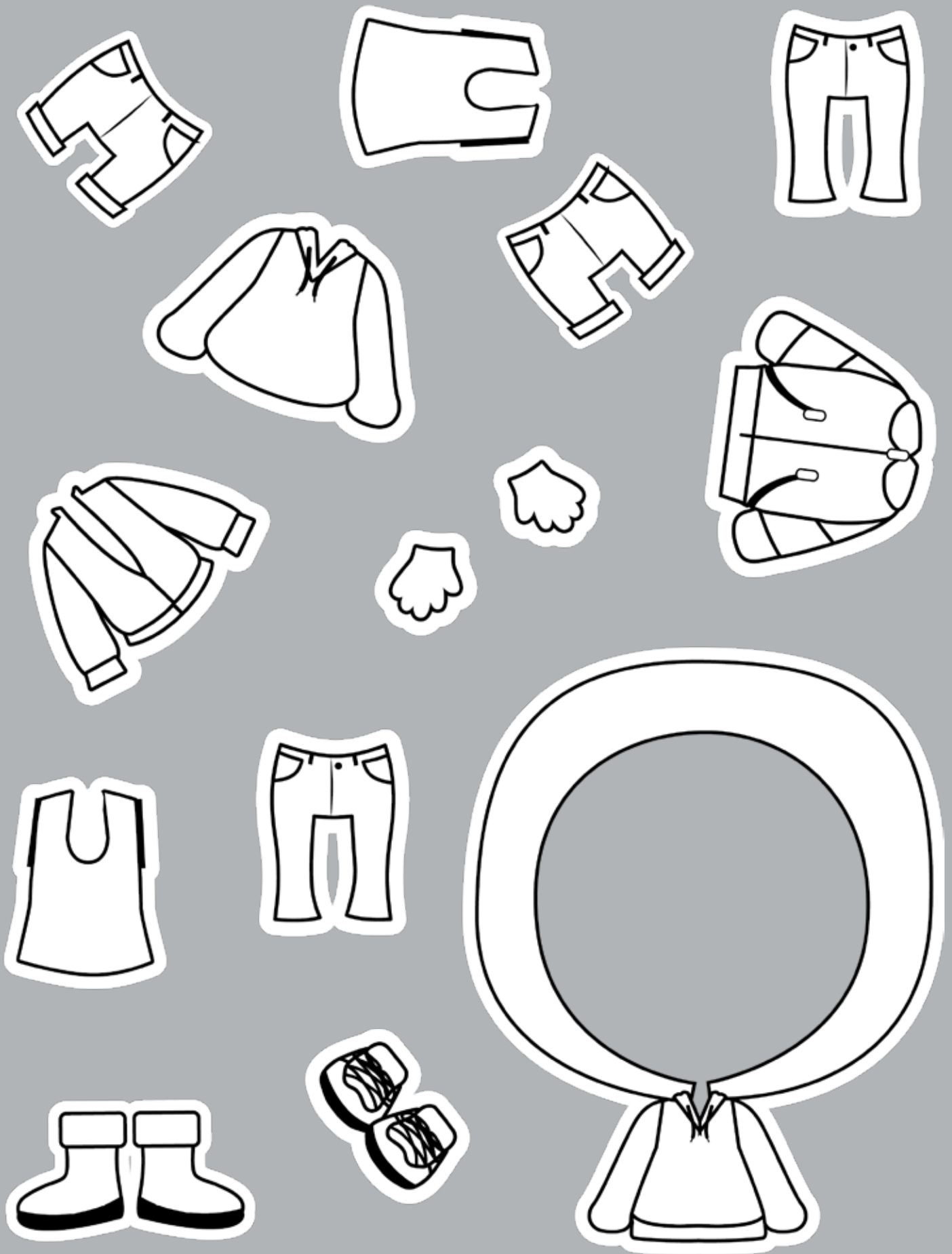
I HELP AROUND THE HOUSE WHEN I...

WHEN I GROW UP I WANT TO BE A...

MY FAVORITE PLACE IN THE WORLD IS...

Make Your Own WearCast Kid

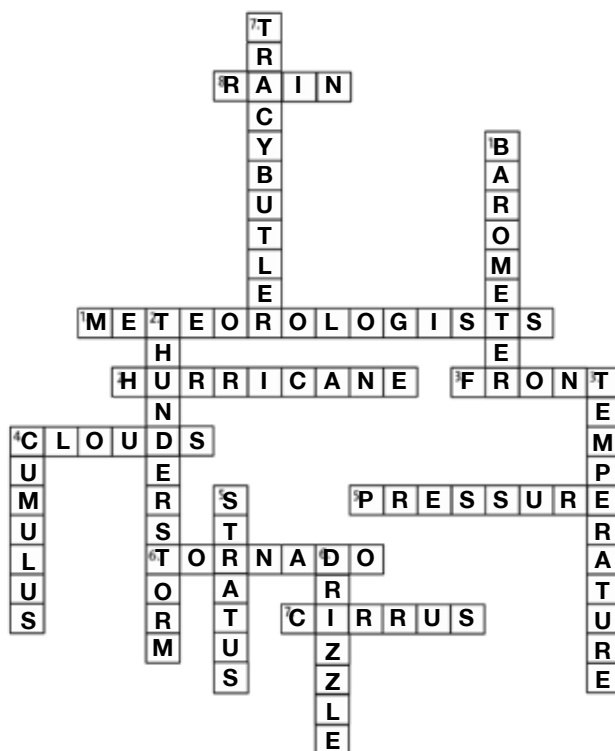





Answers

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

1. snow
2. meteorologist
3. tornado
4. lightning
5. rain
6. hurricane
7. tsunami
8. thundersnow
9. thunderstorm
10. cloud
11. weather





Thank you for your participation.
Please continue to send your Weather Sketchers!

FIND TRACY BUTLER ON



AND SHARE YOUR SKETCHES TODAY!

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Automotive Accessories