

# Deseret News

# CONNECT 1 2 3

Your Family • Community • World



## Trees

A RENEWABLE RESOURCE

Trees give us beautiful fall colors. How many other things can you name that come from trees?

Match the tree to a leaf in column A and its seed in column B

APPLE \_\_\_\_\_

MAPLE \_\_\_\_\_

OAK \_\_\_\_\_

PINE \_\_\_\_\_

A.

B.



ANSWERS ON PAGE 4

Environment

# Changing seasons

We all know that the Earth goes around the sun during one year. But can you explain why it gets cooler when summer turns into fall? The seasons change as the amount of sunlight changes. The Earth doesn't face the sun exactly the same way as it travels its path through space. The Earth tilts slightly so that the sun shines more directly on one part of the planet than the other.

SEASONS PAGE 2

ILLUSTRATION BY CHRISTIE JACKSON



**MOUNTAIN AMERICA**  
CREDIT UNION



## Avoid spending regret

Have you ever regretted buying something? Spending money on things that don't matter is like losing money. Here are some good questions to ask before you open your wallet.

### Do I need it?

Before you spend, ask yourself if you need it. If you don't, either walk away or ask yourself the next question.

### How badly do I want it?

We sometimes buy things out of desire, not necessity. Just because we want it doesn't mean it's the best decision, though. Think about the item and consider how long it will last, how much you will be able to enjoy it and if there is a better way to spend your money.

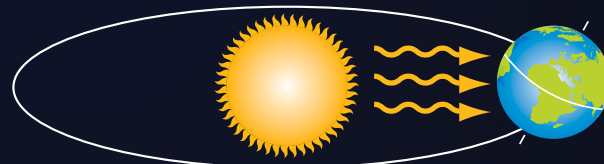
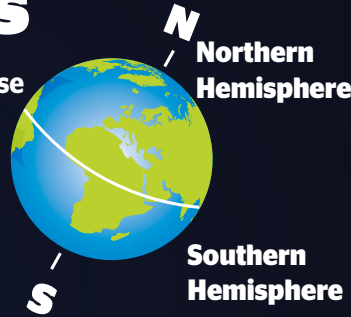
### Can I make do with something else?

There will always be a deal somewhere. While you wait, ask yourself if you can make do with what you have now. If you do this, you may find that what you have is enough. If it's not, you can look for a good deal on something you like without overspending.

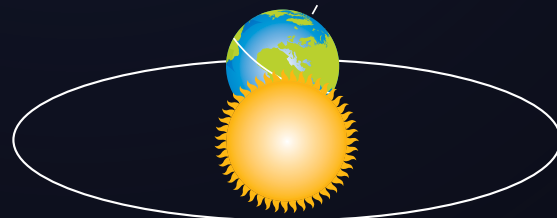
Ask yourself these questions to become more confident in how you spend and manage your money.

# Seasons

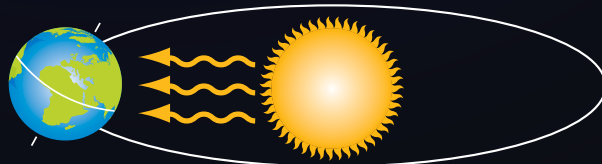
Earth has seasons because its axis is tilted. Earth rotates on its axis as it orbits the Sun, but the axis always points in the same direction.



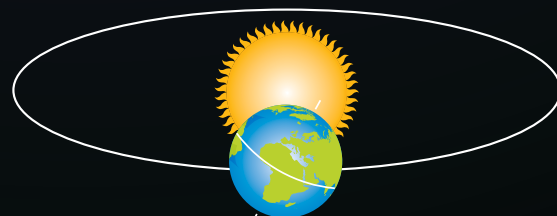
**December:** Summer south of the equator, winter north of the equator. The Sun shines directly on the Southern Hemisphere and indirectly on the Northern Hemisphere.



**March:** Fall south of the equator, spring north of the equator. The Sun shines equally on the Southern and Northern Hemispheres.



**June:** Winter south of the equator, summer north of the equator. The Sun shines directly on the Northern Hemisphere and indirectly on the Southern Hemisphere.



**September:** Spring south of the equator, fall north of the equator. The Sun shines equally on the Southern and Northern Hemispheres.

SOURCE: NASA

## SEASONS

FROM 1

As the Earth travels in its big circle, the angle of the rays of the sun slowly change. Right now it is fall in North America, but in South America it is spring. Then, as our winter changes into spring, it will be turning to fall in the southern half of the Earth.

In our part of the world it gets colder the farther north we travel. Another good question is why it is always cold and icy at the North and South poles. They stay colder because they are never tilted directly toward the sun. The hottest part of the Earth is the equator. You might think of it as the belt around the middle of the Earth. The equator is most often facing directly toward the Earth.

In the tropical countries closer to the equator, the seasons do not change in the same way. In the tropics the temperature does not change much during the year. Some lands have just two seasons, one that is very rainy and one that is dry. In other places people divide the year into hot, rainy and cool seasons.

Another change that we always notice is the length of our days and nights. Summer days stay light longer and nighttime is shorter. In winter the days are shorter and the nights are longer. The short winter days mean the sun does not have as much time to warm us up. Then in the summer, the longer days give the sun more time to heat up the Earth.

IN THE NORTHERN HEMISPHERE THE LONGEST DAY IS ON JUNE 21ST WHILE THE LONGEST NIGHT IS ON DECEMBER 21ST.

**FAST FACT**

## Word list

**Equator:** the imaginary line that goes exactly around the middle of the Earth; the hottest part of the Earth.

**Hemispheres:** The two halves of the Earth; we live in the Northern Hemisphere, and people in Australia live in the Southern Hemisphere.

**Orbit:** The path that an object takes around another; the Earth follows an orbit around the sun, and the moon orbits around the Earth.

**Tropics:** the areas of the Earth near the equator that have a very warm climate.

**FAST FACT**

THE EARTH RECEIVES ONLY ONE-BILLIONTH OF THE SUN'S TOTAL ENERGY.

NEWSPAPER ACTIVITY



- Look at your newspaper's weather report for symbols used to illustrate common types of weather. Then design your own symbols for the following weather conditions: sunny, cloudy, partly cloudy, showers, thunderstorms and snow.
- Check the newspaper's weather report for areas with precipitation. Find out how many types of precipitation have fallen. Then do some research on each. Extend the activity by explaining how various forms of precipitation fit into the water cycle.
- Clip newspaper ads for businesses that are affected by weather. Based on the extended forecast in your newspaper, what kind of sales can these businesses expect in the coming days? Discuss.
- Find pictures, stories and advertisements that illustrate your area's climate. In small groups, talk about how the climate shapes your way of life. Now, pick a city or country with a totally different climate. Do research on that city or country, and find out how life might be different there as a result of the climate.
- Using your weather knowledge, try to predict the day's weather from conditions you observe when you get up in the morning. Do this every day for a week or two. Compare your forecast with the daily newspaper forecast. How similar are the two? Which forecast is more accurate? Record your observations in a notebook or journal.

## Weather's effects on history

Weather affects many of the events in your life, so it's not surprising that it affects world affairs, too. Many of the events in history might have been different had the weather been different.

For instance, many people think a violent storm, perhaps a hurricane, caused the Mayflower to land in New England instead of Virginia, its destination. Some historians blame bad weather for Napoleon's defeat at Waterloo and the defeat of the Spanish Armada by England.

Weather sense has been an important advantage throughout history. It was superior knowledge of the winds that allowed Christopher Columbus to sail to the New World and back. George Washington used his weather knowledge to plan artillery movements during the Revolutionary War.

In World War II, both the Germans and the Allies took advantage of favorable weather. The Allies made use of calm weather on the day of the Normandy invasion. Likewise, the Germans knew a week of stormy weather in December 1944 would keep Allied planes on the ground, giving them a chance to attack. Bad weather hampered the Allies more than once that year. If it hadn't, the war might have ended sooner than it did.



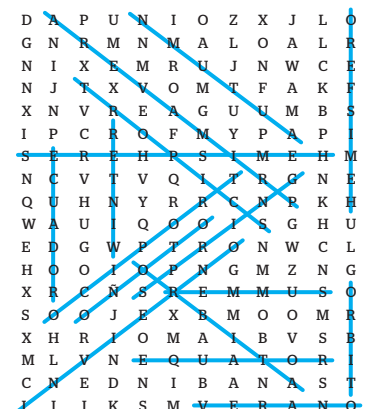
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WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE
75	79	83	85	80	79	74	93	95	95	93	91	85	84
46	48	54	61	61	59	55	62	62	61	62	62	58	57



WEATHER FACTS	PRECIPITATION	ALMANAC	AIR QUALITY:																												
September 2018 will go down as one of the driest Septembers on record. 1951, 1943, 1899 and 1890 also had only a trace of rain for the month. Also interesting, a dry September doesn't necessarily correlate to a wet October, but there usually is a good chance of at least normal rain for October.	<table border="1"> <tr> <th>MONTH TO DATE</th> <th>NORMAL</th> <th>PERCENT OF NORMAL</th> </tr> <tr> <td>T</td> <td>0.98"</td> <td>0%</td> </tr> <tr> <th>YEAR TO DATE</th> <th>NORMAL</th> <th>PERCENT OF NORMAL</th> </tr> <tr> <td></td> <td>10.50"</td> <td>15.87"</td> <td>66.2%</td> </tr> </table> <p><b>RECORD/24 HOURS</b> 0.95" Set in 1986</p>	MONTH TO DATE	NORMAL	PERCENT OF NORMAL	T	0.98"	0%	YEAR TO DATE	NORMAL	PERCENT OF NORMAL		10.50"	15.87"	66.2%	<table border="1"> <tr> <th>SUNRISE</th> <th>SUNSET</th> <th>MOONRISE</th> </tr> <tr> <td>7:19AM</td> <td>7:18PM</td> <td>8:33PM</td> </tr> <tr> <th colspan="3">NORMAL RECORD YEAR</th> </tr> <tr> <td>HIGH 74°F</td> <td>90°F</td> <td>2015</td> </tr> <tr> <td>LOW 49°F</td> <td>31°F</td> <td>1970</td> </tr> </table>	SUNRISE	SUNSET	MOONRISE	7:19AM	7:18PM	8:33PM	NORMAL RECORD YEAR			HIGH 74°F	90°F	2015	LOW 49°F	31°F	1970	<p><a href="http://www.airquality.utah.gov">www.airquality.utah.gov</a> Hotline: 1-800-228-5434</p> <p>● Salt Lake/Davis counties ● Utah County ● Cache County ● Weber County</p> <p><b>Pollen Count:</b> <a href="http://www.intermountainallergy.com">www.intermountainallergy.com</a> Murray - 266-4115 Salt Lake City - 363-4071 Draper - 553-1900</p>
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American troops in a snow-filled trench during the Battle of the Bulge.



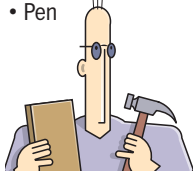
APPLE: C, H; MAPLE: B, E; OAK: A, G; PINE: D, F

# A moisture meter

Measuring the amount of moisture, or humidity, in the air can tell you if precipitation is likely. Hygrometers measure relative humidity, the amount of moisture in the air compared with the maximum amount it can hold. Here's how to make your own hygrometer.

### You'll need

- Wood or Styrofoam block
- Piece of thin plastic the size of a credit card
- Two small nails
- Three 8-inch human hairs
- Small coin
- Glue
- Hammer
- Strong scissors
- Tape
- Pen

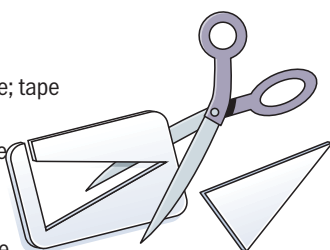


**1** Cut plastic into a triangle; tape coin to its point

Nail it to the board; make sure it turns easily on the nail

Tap other nail into board

Tie hairs to upper nail, then tie them to pointer and glue them to it



**2** Stand board up and mark at tip of pointer

Take it to each of these places for a few hours and check the pointer



• Outdoors on a clear day



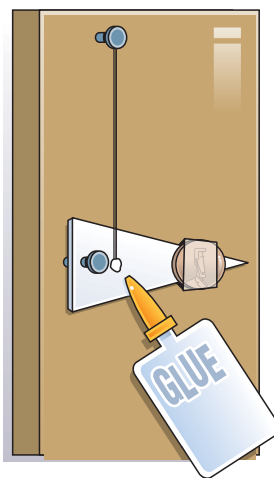
• Outdoors when it's raining



• In bathroom after someone has taken a shower or bath



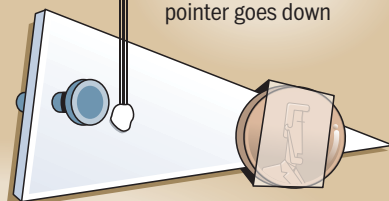
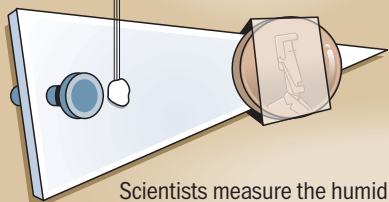
• In room with a fireplace, heater or air conditioner



### What happened?

In dry air, the hairs get shorter and pull the pointer upward

In a "humid" place with damp air, the hairs stretch, and the pointer goes down



Scientists measure the humidity with accurate hygrometers to help them predict the weather

Graphic: Helen Lee McComas, Paul Trap

Source: Franklin Institute

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## English/Spanish

Find both the English and Spanish words in the puzzle below. Answers on page 3

- SUMMER — VERANO
- AUTUMN — OTOÑO
- WINTER — INVIERNO
- SPRING — PRIMAVERA
- EQUATOR — ECUADOR
- HEMISPHERES — HEMISFERO
- ORBIT — ORBITA
- TROPICS — TROPICO

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



Read Today  
POWERED BY  
Deseret News

## Fairytale Festival at CenterPoint Legacy Theatre

Read Today had a magical time at the Fairytale Festival at CenterPoint Legacy Theatre. This year's festival was bigger than ever! There was even a storytelling train that traveled to different realms where you met characters and heard their stories. Another new addition to the festival was Bibbity Bobby Books where families donated books. Read Today gave everyone that donated a little gift for their generosity. We also had a candy station that was so awesome it would make Willy Wonka proud. More kids and families attended the festival this year than ever before. A lot of kids came dressed as their favorite characters. There were pirate games, tea parties with princesses, crafts, a wizardry school, a balloon artist & the most heavenly cotton candy. All our favorite princesses were there and even Batman! If you didn't make it to join us this year we hope to see you at the Festival next year.

# CONNECT 123

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## “The Raven”

EXCERPT BY EDGAR ALLAN POE

Once upon a midnight dreary, while  
I pondered, weak and weary,

Over many a quaint and curious  
volume of forgotten lore —

While I nodded, nearly napping,  
suddenly there came a tapping,

As of some one gently rapping,  
rapping at my chamber door.

“ ’Tis some visitor,” I muttered,  
“tapping at my chamber door —

Only this and nothing more.”





## Saving and harvesting

This is the time of year we get to enjoy fresh fruits and vegetables. Fall harvest is the payoff for time invested to grow these plants over the summer. It's also a great reminder that when we work, we get rewarded.

Saving money is similar. When we start, we have some disciplined work ahead of us. But as we stay patient and continue putting money away, like a plant, our money grows.

With so many things to spend money on, it can sometimes be hard to focus on saving. To maintain focus, try the following ideas:

- Have a savings goal.
- Tell someone what you are saving for.
- Name your savings account or put a label on your savings jar.
- Put money in as often as you can.
- Each time you are tempted to spend money, ask yourself if it will help you reach your goal.

To enjoy the harvest, be patient, work hard and stay focused. If you do the same with your money, you can achieve your goal!

## TRIVIA AND FOLKLORE

The ravens of the Tower of London are a group of captive common ravens that live in the Lonon landmark. The group of ravens at the Tower comprises at least seven individuals (six required, with a seventh in reserve). The presence of the ravens is traditionally believed to protect the Crown and the tower; a superstition holds that “If the Tower of London ravens are lost or fly away, the Crown will fall and Britain with it.”

According to folklore, wild ravens are thought to have inhabited the tower for many centuries, supposedly first attracted there by the smell of the corpses of the executed enemies of the Crown. Allegedly, at the execution of Anne Boleyn in 1535, “Even the ravens of the Tower sat silent and immovable on the battlements and gazed eerily at the strange scene. A Queen about to die!” The ravens of the tower supposedly behaved much worse during the execution of Lady Jane Grey in 1554, allegedly “pecking the eyes from the severed head” of the queen.



Raven at the Tower of London.

SHUTTERSTOCK

## THE POEM

“The Raven” is a narrative poem by American writer Edgar Allan Poe. First published in January 1845, the poem tells of a talking raven’s mysterious visit to a distraught lover, tracing the man’s slow descent into madness. The lover, often identified as being a student, is lamenting the loss of his love, Lenore. Sitting on a bust of Pallas, the raven seems to further instigate his distress with its constant repetition of the word “Nevermore.”

Publication of “The Raven” made Poe widely popular in his lifetime, although it did not bring him much financial success. Soon reprinted, parodied and illustrated, critical opinion is divided as to the poem’s status, but it nevertheless remains one of the most famous poems ever written.

SOURCE: Wikipedia

**There are many references to ravens in legends and literature. Most of these refer to the widespread common raven. Because of its black plumage, croaking call, and diet of carrion, the raven has long been considered a bird of ill omen and of interest to creators of myths and legends.**

[www.squidoo.com](http://www.squidoo.com)

**Carrion (from the Latin “caro,” meaning “meat”) refers to the dead and decaying flesh of an animal.**

## WHO IS Edgar Allan Poe?



In 1835, he married Virginia Clemm, his 13-year-old cousin. She died of tuberculosis.

The Baltimore Ravens football team is named after Poe's poem "The Raven," which he wrote in Baltimore.

As a student at West Point, Poe used to tell fellow cadets that his grandfather was the infamous traitor Benedict Arnold. Great story, not true.

**T**he name Edgar Allan Poe brings to mind images of murderers and madmen, premature burials and mysterious women who return from the dead. His tales of terror make him a popular read at Halloween.

He is widely acknowledged as the inventor of the modern detective story and an innovator in the science-fiction genre, but he made his living as America's first great literary critic.

Just as the bizarre characters in Poe's stories have captured the public imagination, so, too, has Poe himself. He is seen as a morbid, mysterious figure lurking in the shadows of moonlit cemeteries or crumbling castles. But much of what we know about Poe is wrong, the product of a biography written by one of his enemies in an attempt to defame the author's name.

The real Poe was born to traveling actors in Boston. Edgar was the second of three children. His other brother, William Henry Leonard Poe, would also become a poet. Within three years of Poe's birth, both of his parents died, and he was taken in by the wealthy tobacco merchant John Allan while Poe's siblings went to live with other families. Allan would rear Poe to be a businessman, but Poe had dreams of being a writer. By the age of 13, Poe had compiled enough poetry to publish a book.

The publication of "The Raven" in 1845 made Poe a household name. He was now famous enough to draw large crowds to his lectures. He published two books that year and briefly ran his own magazine. The failure of the venture, his wife's deteriorating health and rumors about Poe drove him out of New York City in 1846. In 1847, Virginia died at the age of 24. Poe was devastated and was unable to write for months. His critics assumed he would soon be dead. They were right. Poe only lived another two years.



## WORD SCRAMBLE

How many three- and four-letter words can you think of using the letters in RAVEN?

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

## POE VOCABULARY

Find a copy of "The Raven" from your library or online. Then see if you can match the meaning to the words taken from the poem.

- |               |   |
|---------------|---|
| 1. pondered   | a. sad songs                            |
| 2. lore       | b. cowardly, mean-spirited              |
| 3. rapping    | c. liquid that eases pain               |
| 4. bleak      | d. head                                 |
| 5. ember      | e. thought                              |
| 6. entreating | f. burning piece of wood glowing orange |
| 7. flutter    | g. speech                               |
| 8. beguiling  | h. story                                |
| 9. crest      | i. pale                                 |
| 10. craven    | j. horrible person                      |
| 11. ungainly  | k. knocking                             |
| 12. fowl      | l. ugly                                 |
| 13. discourse | m. type of feather                      |
| 14. placid    | n. peaceful                             |
| 15. aptly     | o. sad, black and cold                  |
| 16. dirges    | p. asking for                           |
| 17. diving    | q. guessing                             |
| 18. wretch    | r. storm                                |
| 19. respite   | s. charming                             |
| 20. tempest   | t. movement of wings, noise             |
| 21. balm      | u. rest from                            |
| 22. plume     | v. bird                                 |
| 23. pallid    | w. well                                 |

### RAVEN FACTS

**Most ravens are between 2 to 3 feet in length and weigh between 2 to 4 pounds.**

**The raven is the largest bird of the crow family.**

**Ravens can live 40 years in the wild and 70 in captivity.**

**Ravens are known to steal the food of many birds and mammals, even from dogs. They can act in pairs: one captures a dog's attention while the other steals its food.**

**Chinese, Egyptian, Greek, Semitic and Siberian legends depict the raven as a messenger of storms or bad weather. In African, Asian and European legends, the raven forecasts death.**

**A raven's calls can express tenderness, happiness, surprise or rage. Ravens can imitate birds with the same vocal note, mimicking perfectly the crows.**

**They are considered among the most intelligent of all birds. Ravens have even been taught to count.**

**Ravens are very playful. In Canada, ravens perched on the roofs of supermarkets waited for people to pass so that they could push snow on them.**

**Ravens are called wolf birds because they are known to lead wolves to prey and then feed alongside them.**

**Raven pairs mate for life and use the same nest each year.**

**POE VOCABULARY ANSWERS: 1. e, 2. h, 3. k, 4. o, 5. f, 6. p, 7. t, 8. s, 9. d, 10. b, 11. l, 12. v, 13. g, 14. n, 15. w, 16. a, 17. q, 18. j, 19. u, 20. r, 21. c, 22. m, 23. i**

**ANSWERS: POSSIBLE SCRAMBLE: 14. g, 13. v, 12. l, 11. b, 10. d, 9. s, 8. a, 7. p, 6. w, 5. n, 4. e, 3. k, 2. h, 1. o**



### Literacy Lay-up Challenge with the Harlem Globetrotters

Can you spin a basketball on one finger? Can you dribble a basketball while on your knees? Can you slam dunk a basketball and then hang from the hoop? I can't but do you know who can? The Harlem Globetrotters! Would you like to see what other tricks they can do? The Harlem Globetrotters are coming to town and they are teaming up with Read Today for a fun literacy challenge. E-mail us at [ksreadytoday@gmail.com](mailto:ksreadytoday@gmail.com) between October 22nd and October 26th and tell us who your favorite character in a book is and why in a paragraph. Also, be sure to include your full name, age and your mailing address. All winners will be contacted by e-mail by October 29th. If chosen, you will receive three tickets to see the Harlem Globetrotters play on November 3rd at Vivint Smart Home Arena and you may even see your answer published in the next **Connect 123!** The Harlem Globetrotters sure know how to have fun so you won't want to miss this opportunity.



# CONNECT 1 2 3

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# BATS



**B**ats are the only mammal capable of true flight. Utah is home to 18 varieties of bats, which eat mostly insects. The largest Utah bat, the big free-tailed, has a wingspan of 17 inches but weighs less than 29 grams. The smallest, the western pipistrelle, is the size of a hummingbird and weighs 2.8 grams. Bats are shy animals that use echolocation to find flying insects. Bats benefit humans by eating about 30–100% of their body weight in insects each night. Most Utah bat species are year-

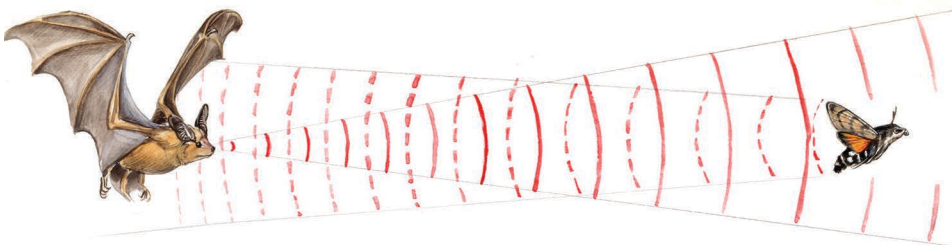
round residents of the state and hibernate during the winter. Some bat species migrate south and remain active all year. Migrating bat species breed in the spring. Hibernating bat species usually breed in the fall. In the late spring, female bats gather in large nursery colonies where the young are born in May or June. Natural enemies of bats include bobcats, hawks, house cats, owls, raccoons, ringtails, snakes and weasels.

Did you know one bat could eat up to 1,000 mosquitos an hour?

— wildawareutah.org

A baby bat is known as a “pup.”

Utah law protects all bat species.



## WHAT IS ECHOLOCATION?

Echolocation is the use of sound waves and echoes to determine where objects are in space. Bats use echolocation to navigate and find food in the dark. To echolocate, bats send out sound waves from their mouth or nose. When the sound waves hit an object they produce echoes. The echo bounces off the object and returns to the bat's ears. Bats listen to the echoes to figure out where the object is, how big it is, and its shape.

Using echolocation, bats can detect objects as thin as a human hair in complete darkness. Echolocation allows bats to find insects the size of mosquitoes, which many bats like to eat. Bats aren't blind, but they can use echolocation to find their way around very quickly in total darkness.

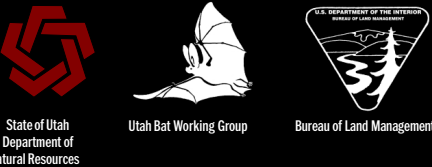
— <https://askbiologist.asu.edu>



UNCREDITED PHOTOS SUPPLIED BY J. SCOTT ALTENBACH



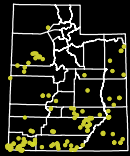
# Bats OF UTAH



Key To Symbols		
Food Types	Habitat Types	Roost Types
Flying Insects Ground-dwelling Arthropods	Pinyon Juniper Pine, Oak & Aspen Desert Shrubs Riparian All Habitats	Mines & Caves Trees Crevices Cliff Bridges Buildings



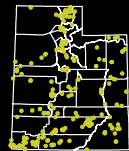
*Antrozous pallidus*  
**Pallid Bat**  
Avg. mass: 19 grams  
Avg. wingspan: 380 mm  
Young per year: 1-2 (generally twins)



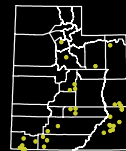
SHUTTERSTOCK



*Eptesicus fuscus*  
**Big Brown Bat**  
Avg. mass: 17 grams  
Avg. wingspan: 340 mm  
Young per year: 1 (twins in eastern US)



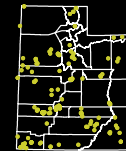
*Euderma maculatum*  
**Spotted Bat**  
Avg. mass: 14 grams  
Avg. wingspan: 345 mm  
Young per year: 1



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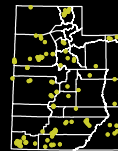
*Corynorhinus townsendii*  
**Townsend's Big-eared Bat**  
Avg. mass: 11 grams  
Avg. wingspan: 280 mm  
Young per year: 1



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*Myotis ciliolabrum*  
**Western Small-footed Myotis**  
Avg. mass: 4 grams  
Avg. wingspan: 220 mm  
Young per year: 1

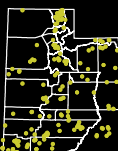


**B**ats are the most maligned and misunderstood of all mammals. Negative misconceptions surround bats despite the fact that most people know them only as mysterious fluttering objects observed at dusk on summer evenings. Mysteries aside, bats are fairly innocuous to humans. Bats don't attack people to entangle themselves in their hair; they really aren't interested in people at all. As mammals, they have hair, regulate their body temperatures internally, and nurse their young. Bats are the only mammals that fly, and although they have eyes and see very well, they also have the ability to navigate in the absence of sufficient light by using sonar. This sensory system is known as echolocation. It is this constant reaction to incoming echoes that makes a bat in flight appear to stutter or falter, when in reality bats are superb fliers. At latest count, there are 925 bat species worldwide, 44 species in North America, and 18 species that reside in Utah. All 18 of Utah's bats eat insects. In fact, these bats are perhaps the most significant predators of night flying insects, giving them an important function in the ecosystem. During the day some bats roost in caverns such as caves and

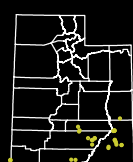
abandoned mines, while others prefer to roost in crevices and hollows of trees. Recent bat research indicates that numbers of some bat species in Utah may be declining, most likely from the loss of their natural roosting habitat. In light of this information, it is important to note that timber harvesting practices and abandoned mine closures can be undertaken in ways that benefit bats. Old and dead trees can be spared on logged sites to allow them to be used as bat roosts, and abandoned mines can be gated to keep people out while allowing bats continued access. Bats should be admired rather than feared. They are capable of truly acrobatic displays as they forage for insects each night. With a minimum of effort, we can watch bats maneuvering around and over trees in the neighborhood, diving at moths under street lamps, or passing to and fro in the back yard. The emergence of a group of bats from a roost is truly a spectacular sight, with bats flying in close proximity to each other while avoiding collisions with other bats as well as objects in the landscape.



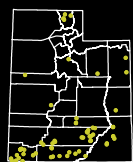
*Lasionycteris noctivagans*  
**Silver-haired Bat**  
Avg. mass: 12 grams  
Avg. wingspan: 290 mm  
Young per year: 2



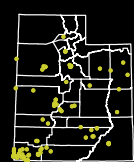
*Idionycteris phyllotis*  
**Allen's Lappet-browed Bat**  
Avg. mass: 11 grams  
Avg. wingspan: 330 mm  
Young per year: 1



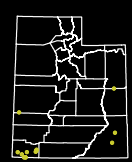
*Myotis thysanodes*  
**Fringed Myotis**  
Avg. mass: 6 grams  
Avg. wingspan: 270-300 mm  
Young per year: 1



*Tadarida brasiliensis*  
**Brazilian Free-tailed Bat**  
Avg. mass: 10 grams  
Avg. wingspan: 300 mm  
Young per year: 1



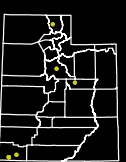
*Nyctinomops macrotis*  
**Big Free-tailed Bat**  
Avg. mass: 26 grams  
Avg. wingspan: 425 mm  
Young per year: 1



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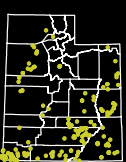
*Lasiurus blossevillei*  
**Western Red Bat**  
Avg. mass: 12 grams  
Avg. wingspan: 280 mm  
Young per year: 1-4 (3-4 is typical)



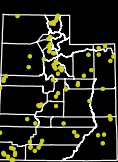
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*Pipistrellus hesperus*  
**Western Pipistrelle**  
Avg. mass: 4 grams  
Avg. wingspan: 200 mm  
Young per year: 2

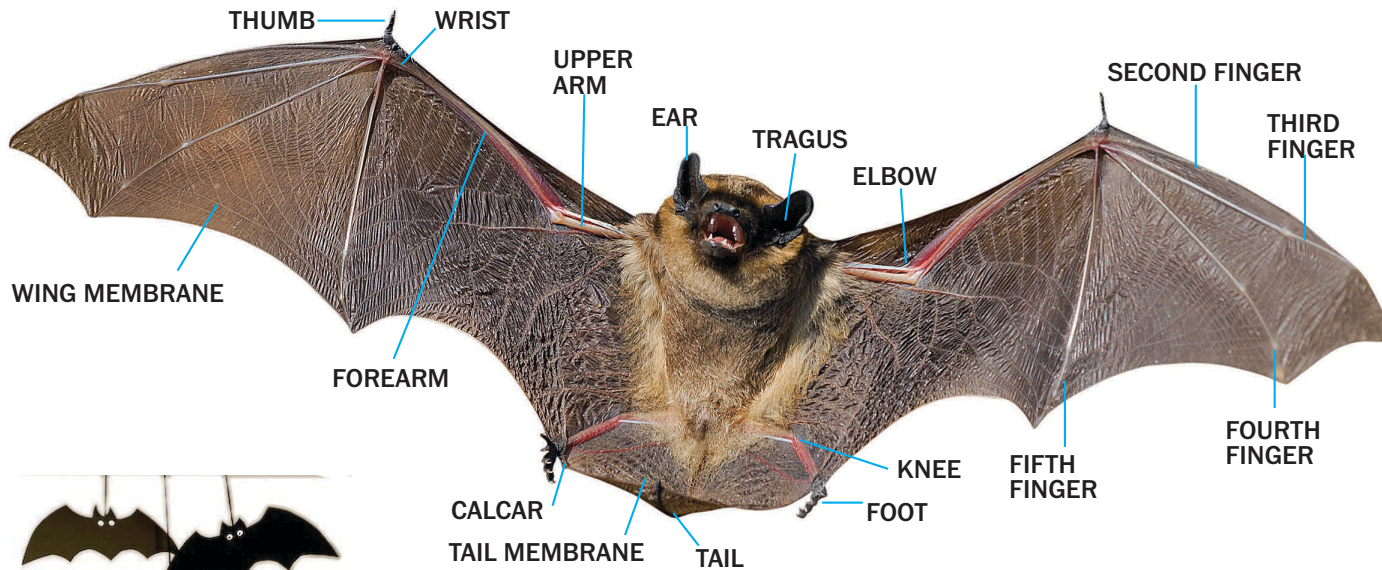


*Lasiurus cinereus*  
**Hoary Bat**  
Avg. mass: 25 grams  
Avg. wingspan: 400 mm  
Young per year: 2



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# Anatomy of a bat



## Make a bat

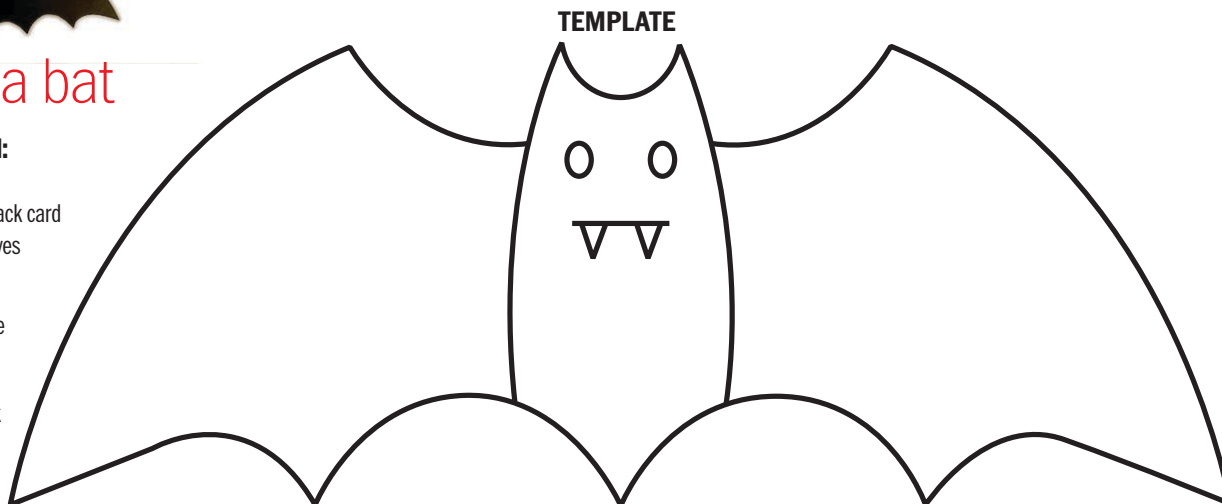
### What you need:

- Template at right
- 1 x A4 sheet of black card
- 2 x googly craft eyes

### Activity:

Color the template in with pencils or crayons or trace it onto black card and cut out.

Make a slightly more detailed bat by adding googly craft eyes and white fangs.



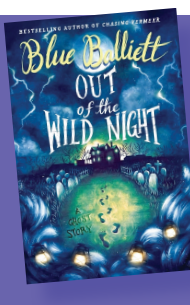
For best effect, make lots of bats and then string them from your front porch on Halloween.

To add a hanging string, just staple, glue or tape a piece of string to the back of the bat's head.

SOURCE: www.kidspot.com.au

## CHECK IT OUT

Check out these spooky recommendations by the staff of the Salt Lake City Public Library:



**"Out of the Wild Night,"** by Blue Balliett. Ghosts are alive on the island of Nantucket. They want to be remembered. And, even more, they want to protect what was once theirs.  
**"A Properly Unhaunted Place,"** by William Alexander. Mist is building in the hills, and



something otherworldly is about to be unleashed.  
**"Shadow Weaver,"** by MarcyKate Connolly. Shadows, danger, magic!  
**"Spirit Hunters,"** by Ellen Oh. A riveting ghost



story and captivating adventure will have you guessing at every turn.  
**"City of Ghosts,"** by Victoria Schwab. Ever since Cass almost drowned she can pull back the Veil that separates the living from the dead . . . and enter the world of spirits.



## Have a fun and safe Halloween

Halloween is almost here! While we all want to enjoy the fun that comes along with this spooky holiday, doing so safely is the best plan. Here are some ways to stay safe while haunting the neighborhood this year.

### If you are trick-or-treating:

- Make sure your costume has reflective tape or other material so passing drivers can see you.
- Walk on the sidewalk, not in the road.
- Don't enter a stranger's home or car.
- Make sure your costume doesn't restrict the way you walk or see.
- Use nontoxic makeup and test on skin before applying all over.
- If your parent doesn't go with you, make sure they know the route you plan to take and what time you'll be back.
- Don't eat candy in unsealed packaging.

### If you are carving pumpkins:

- Always get an adult's help.
- Don't use big knives.
- Use pumpkin carving kits with small, safe blades that can cut the pumpkin but not hurt you.
- Use battery-powered tea light candles instead of traditional candles to avoid contact with fire.
- To be really safe, paint or draw on your pumpkin instead of carving it.

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