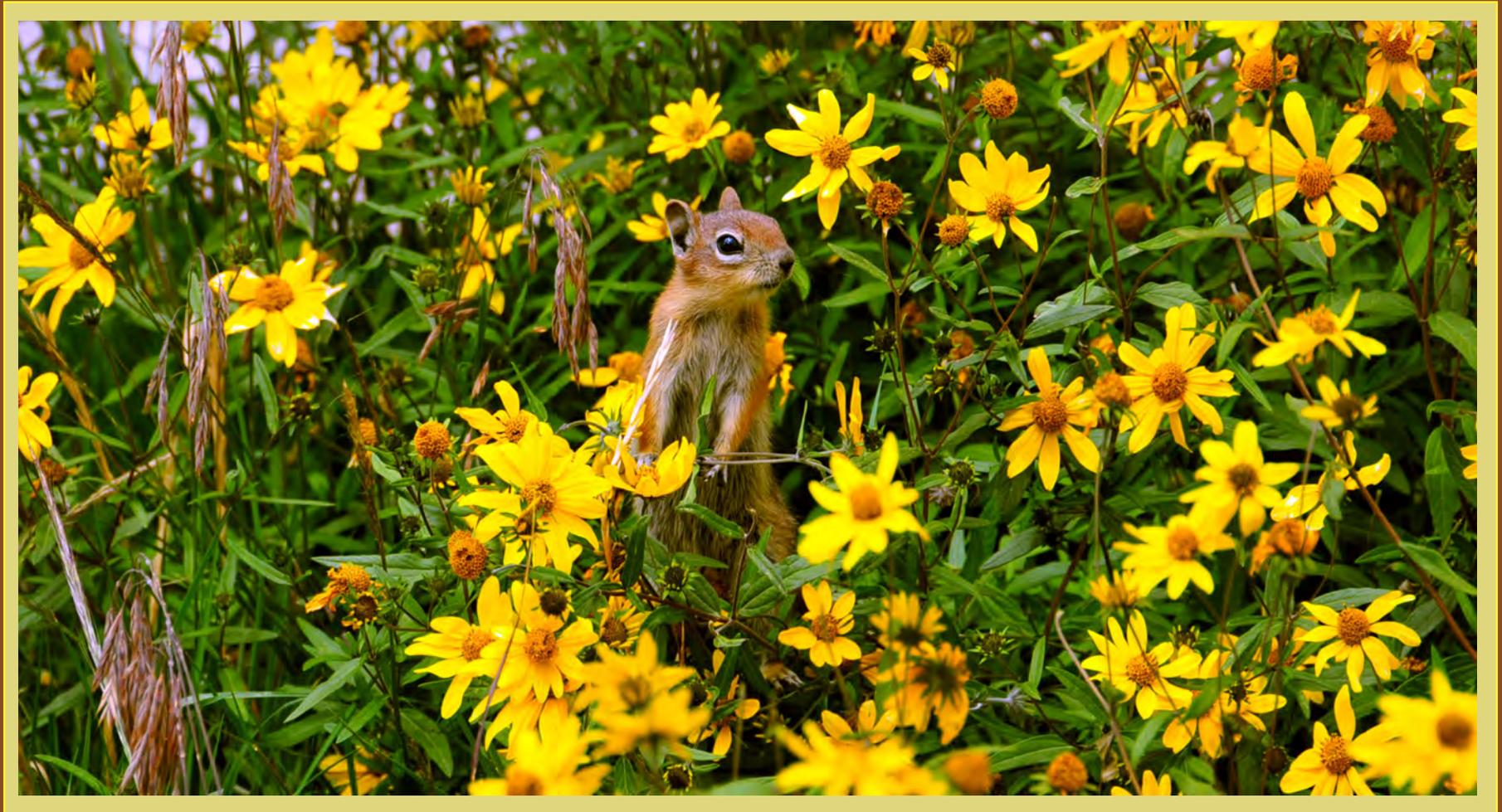




Junior Ranger Activity Booklet



Cedar Breaks National Monument



Become a Junior Ranger!

Junior Rangers are important to Cedar Breaks National Monument and to the National Park Service. Junior Rangers explore, discover, and enjoy our national parks. They help take care of plants, animals, and their homes, so that Cedar Breaks remains a special place for visitors to enjoy for many years to come.

How to Become a Junior Ranger

Step 1. Circle your age group below and the number of activities that you will complete.

Ages 5-7, complete 4 activities

Ages 10-12, complete 7 activities

Ages 8-9, complete 5 activities

Ages 13 and older, complete all activities

Step 2. Check off the activities as you complete them. Don't forget to try the "Up to the Challenge" section in each activity, too!

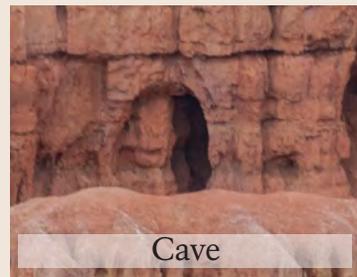
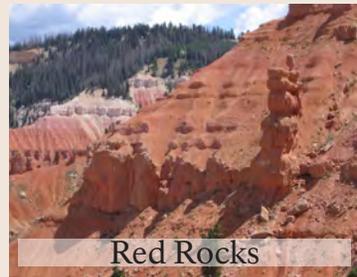
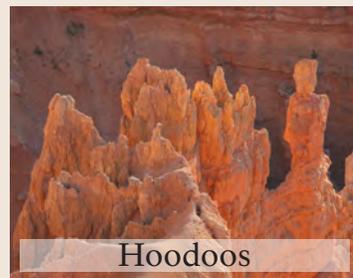
- Activity #1: Cedar Breaks Bingo
- Activity #2: Geology Crossword
- Activity #3: Geologist's Notebook
- Activity #4: Dot-to-Dot Wildflowers
- Activity #5: Web of Wildlife in Winter
- Activity #6: Look for Cedar Breaks Wildlife

- Activity #7: Yesterday and Today
- Activity #8: Lightning Safety
- Activity #9: ID a Tree
- Activity #10: Exploring with Your Senses
- Activity #11: Let a Park Ranger Be Your Guide
- Activity #12: Lights Off Stars On

Step 3. When you have finished your activities, bring your booklet to the Visitor Center. A ranger will review your work and award you an official Cedar Breaks Junior Ranger badge.

Activity #1: Cedar Breaks Bingo

Your Mission: Draw a circle around the item when you find it. Try to find four in a row (up and down, across, or diagonally).



Up to the Challenge? Try to find as many items as you can.

Activity #2: Geology Crossword

Cedar Breaks became a national monument because of its amazing geologic amphitheater.

Your Mission: Learn about the geology of Cedar Breaks by completing this crossword puzzle.

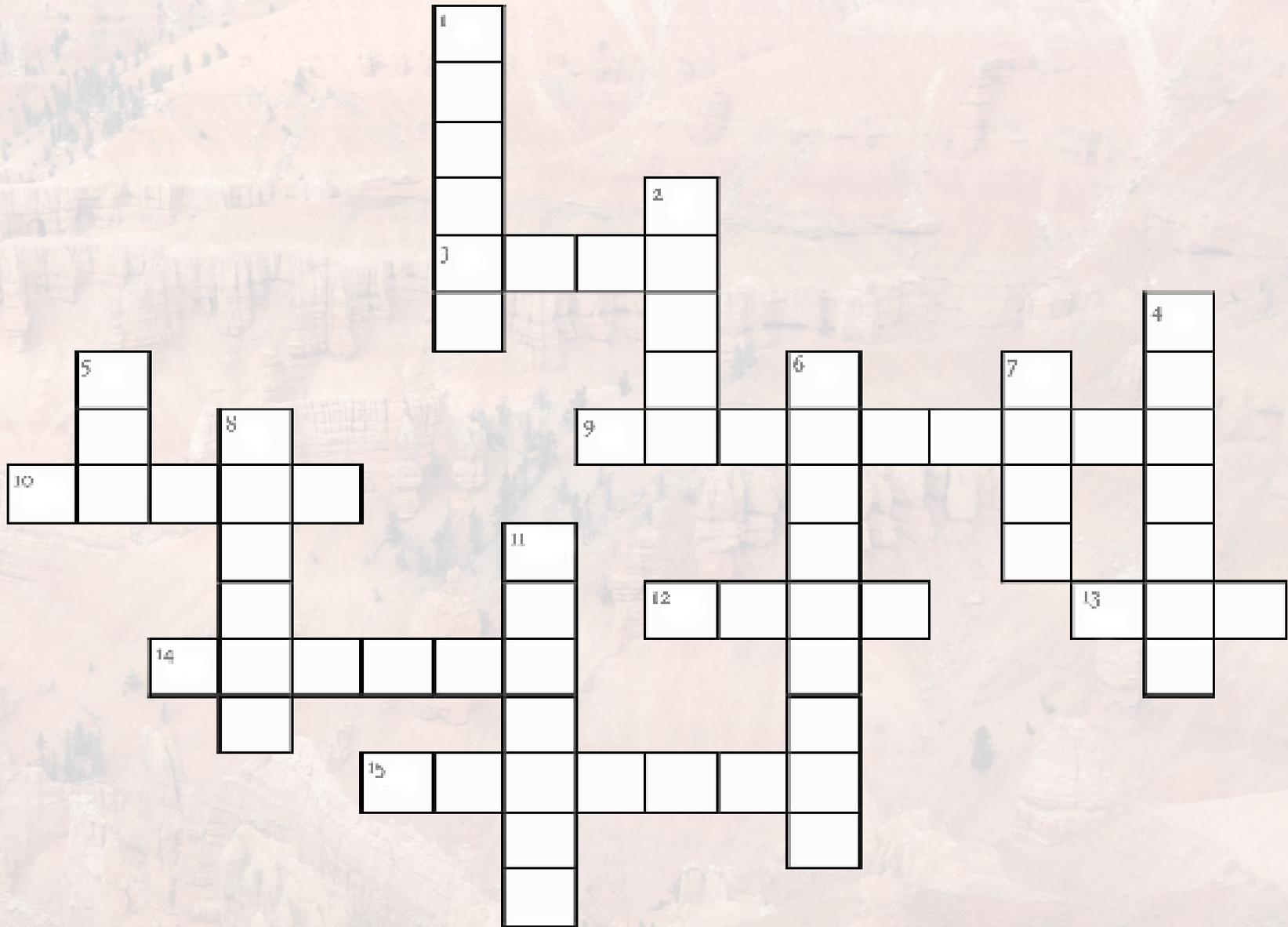
ACROSS

3. The porous, black rocks are from _____ flows.
9. Cedar Breaks is located on the top step of the Grand _____.
10. What type of fossil is sometimes found at Cedar Breaks?
12. Another name for iron oxide.
13. When iron oxidizes, or rusts, the rock turns what color?
14. A tall thin spire or tower of rock is called a _____.
15. The process of moving soil and rock that has been worn away or broken into smaller pieces.

DOWN

1. When manganese oxidizes, the rocks turn what color?
2. A break in the earth's surface along which motion has occurred.
4. "Ice wedging" occurs when water _____ in cracks, breaking the rock apart.
5. A narrow ridge that has been worn by erosion.
6. The type of sedimentary rock that makes up most of the Cedar Breaks amphitheater.
7. Approximately 60 million years ago, a body of water existed here called _____ Claron.
8. A delicate geologic feature where an opening or hole is framed in rock.
11. The study of rocks.

Up to the Challenge? Find the interpretive panel about the Grand Staircase outside the Visitor Center. What other park lies on the top step with Cedar Breaks? What national park lies on the bottom step?

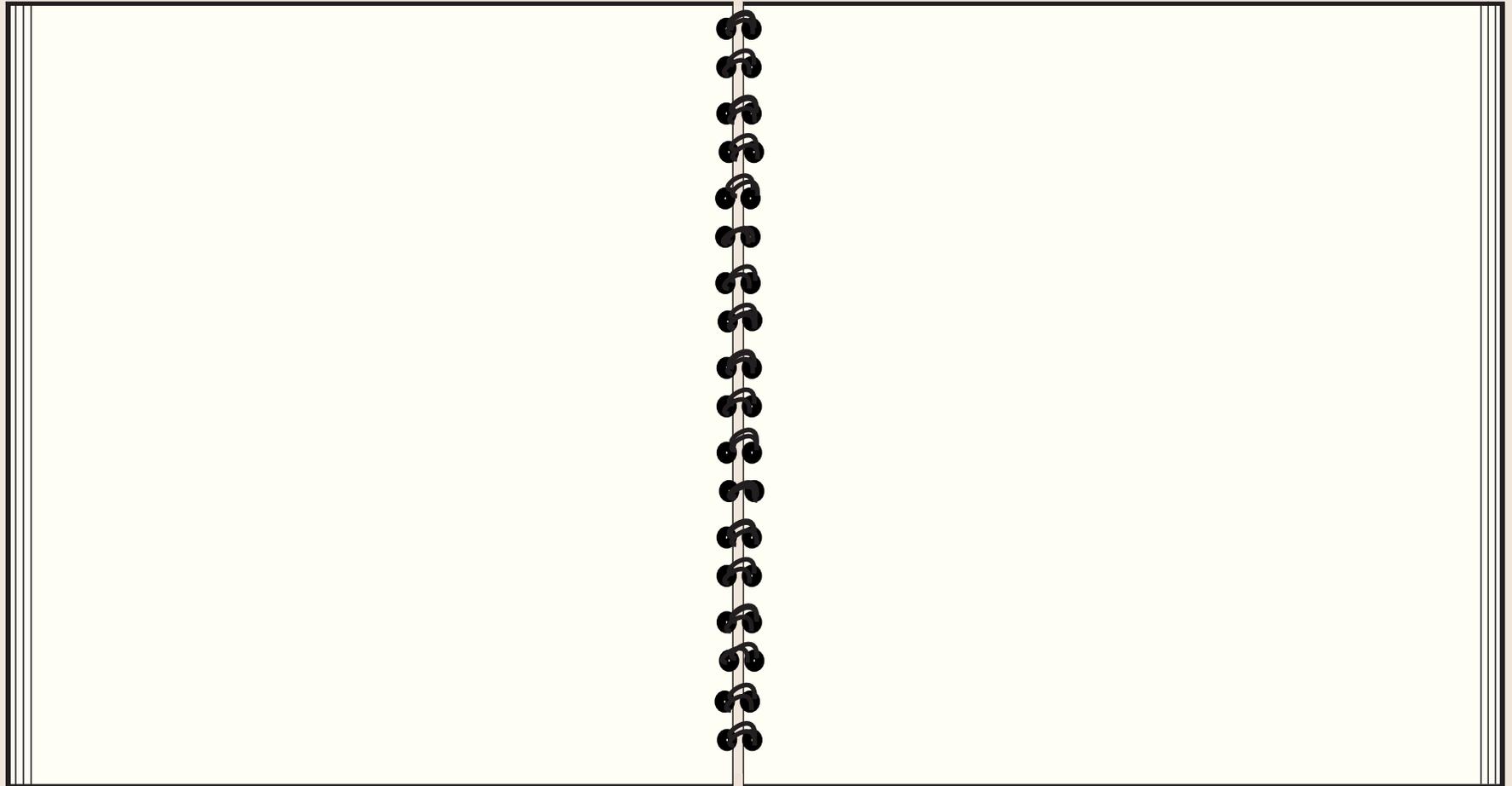




Activity #3: Geologist's Notebook

Geologists carry a small notebook with them when they go out to look at rocks and landforms. They draw pictures and take notes about what they see. Drawing helps them see more details so they don't miss anything.

Your Mission: Use this page as your geologist's notebook and draw two formations that you see.

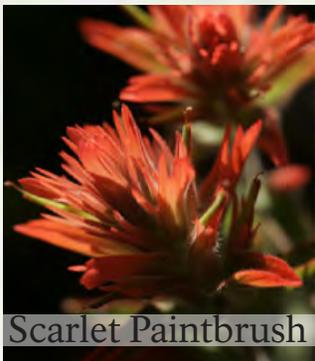
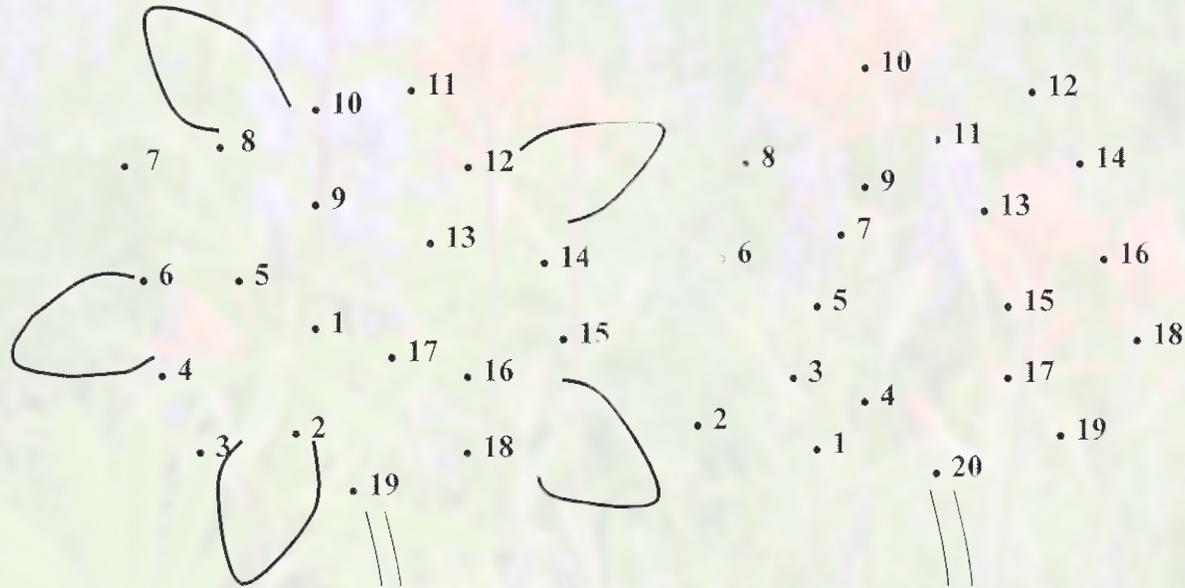


Up to the Challenge? If you have crayons or colored pencils, add color to your drawings above.

Activity #4: Dot-to-Dot Wildflowers

Cedar Breaks is famous for its wildflowers. There are over 250 different kinds of flowers that can be found here.

Your Mission: Complete the dot-to-dots below by drawing lines between the dots. Start at number 1 and count up. When you're done, draw a line from your flower to its matching picture.



Scarlet Paintbrush



Colorado Columbine



Elkweed



Aspen Bluebells

Up to the Challenge? Find at least one of the wildflowers shown above. Which one did you find? (Remember, don't pick the wildflowers.)

Activity #5: Web of Wildlife in Winter

Some animals live in Cedar Breaks only during the summer. They spend the winter in other places where they can find plentiful food and shelter. Other animals stay here year-round, even during the long, cold winters. How do they survive?



Yellow-bellied Marmot



Mountain Lion



Long-tailed Weasel



Porcupine



American Pika

Your Mission: Match the animal photo to its description of how it survives the winter.

My large paws help me spring over deep snow after deer and elk. I also hunt porcupines and other small mammals.

In the summer, I'm often seen out on the rocks and in the meadows. From October to April, I hibernate in burrows. During hibernation, my heart slows to about 4 beats per minute, and I use up half of my body fat.

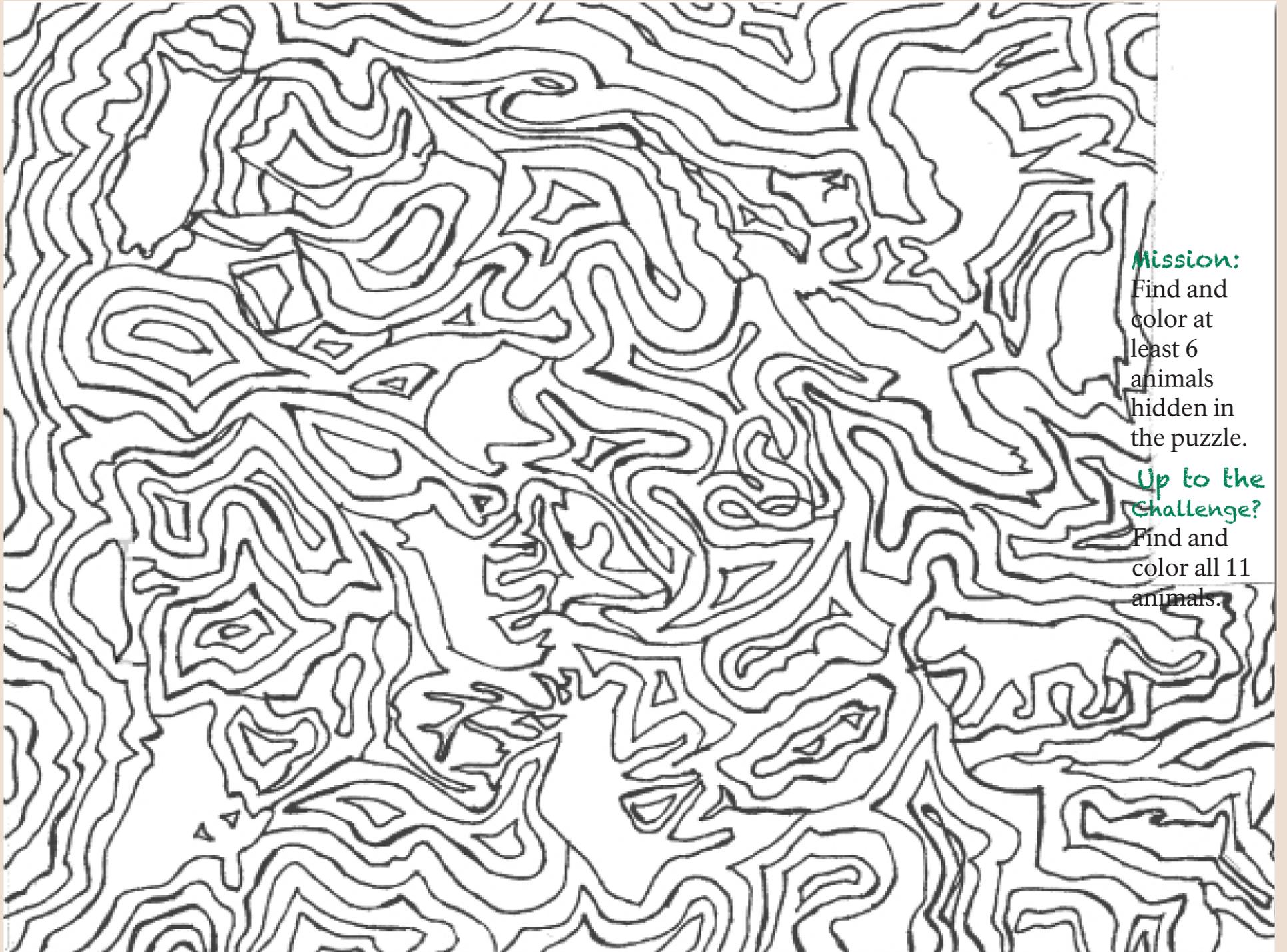
I'm small, and I'm active all winter long. I travel in tunnels under the rocks and snow. I eat dried plants that I've gathered and stored during the summer and fall.

My fur is brown in the summer and changes to white in the winter. Therefore I'm well camouflaged in the snow. I hunt for small rodents.

Since there aren't a lot of green plants and roots to eat in the winter, I change my diet and eat tree bark, twigs, and needles. I often stay up in the trees to be out of the snow. This helps to protect me from predators.

Up to the Challenge?

Find out what bats do during the winter at Cedar Breaks.



Mission:
Find and color at least 6 animals hidden in the puzzle.

Up to the Challenge?
Find and color all 11 animals.



Activity #7: Yesterday and Today

Long ago, the Southern Paiutes lived in the Cedar Breaks area during the summer months. They hunted, fished, and gathered plants for food and medicine. They did not have grocery stores, running water, or houses like we do today.

Your Mission: Draw a line to connect each item from our lives today with a similar item from the lives of the Paiutes in earlier times.



Up to the Challenge? Learn more about the Paiute culture by reading the interpretive panel outside the Visitor Center. Write down one thing you learned about the Paiutes.

Activity #8: Lightning Safety

Cedar Breaks is located at a high elevation. Lightning strikes often here, especially around the overlooks. The safest place to be during a thunderstorm is in a building.

Your Mission: Draw a path through the maze to the Visitor Center. If your path takes you to a dead end, you'll find something that you would want to avoid during a thunderstorm.



Up to the Challenge?

What does this lightning "rule" mean to you? *If you see it, flee it. If you hear it, clear it.*

Activity #9: ID a Tree

The trees that live here at 10,000 feet elevation are well adapted to surviving harsh winter conditions and a short growing season.

Your Mission: Find a nearby tree that has low hanging branches.
Use the key below to identify it and circle the name of the tree.

Start here.

1. Does your tree have needles? If yes, go to #2.

OR

Does your tree have broad leaves? If yes, it is a **QUAKING ASPEN**.



Quaking Aspen

2. Is each needle directly attached to the twig by itself? If yes, go to #3.

OR

Are the needles in clusters or bundles? If yes, go to #4.



Subalpine Fir

3. Are the needles flat without pointed, sharp ends? If yes, it is a **SUBALPINE FIR**.

You can make sure it's a fir by "shaking hands" with a branch. If it doesn't poke you with sharp needles, then it's a "flat, friendly fir!"

OR

Are the needles square, easy to roll between your fingers, and do they have pointed, sharp ends? If yes, it is an **ENGELMANN SPRUCE**. You can make sure it's a spruce by "shaking hands" with a branch. If it pokes you and makes you say "ouch," then it's a "sharp spruce!"



Engelmann Spruce

4. Are the needles shorter than this line _____ and attached in bundles that grow on all sides of the branch as well as up and down the branch? This makes the branch look like a bottlebrush. If yes, it is a **BRISTLECONE PINE**.

OR

Are the needles longer than this line _____ and attached in bundles that grow only towards the end a branch? If yes, it is a **LIMBER PINE**.



Bristlecone Pine



Limber Pine

Up to the Challenge? Bristlecone trees are the oldest living things on earth – they can live to be 5000 years old! In 1978, scientists discovered that the oldest tree on Spectra Point was 1,642 years old. How old is it this year? _____

Activity #10: Exploring With Your Senses

Sometimes, we forget to use all of our senses to enjoy or experience what's around us.

Your Mission: Use your senses to explore Cedar Breaks and make the following observations.

Nature's Songs

Find a quiet area. Close your eyes and listen to the sounds around you.

What do you hear?

Nature's Colors

Pick a color you are wearing and try to find it in the landscape around you.

What color did you choose?

Where do you see it?

Nature's Smells

Walk up carefully to a tree or a flower (check for bees first!) and put your nose close enough to sniff deeply.

What does it smell like to you?

Nature's Textures

Write down three things that you find around you and describe their textures. Are they soft, hard, rough, smooth? Can you think of other words to describe them?

What did you find? What did each texture feel like?

- 1.
- 2.
- 3.

Up to the Challenge?

Add to your lists. Pick another color and find it in the landscape. Can you hear new sounds? Touch the needles or a cone from an evergreen tree and describe how it feels. Smell another flower and write down what it smells like to you.



Activity #11: Let a Park Ranger Be Your Guide

The Rangers at Cedar Breaks give geology talks, campfire programs, and guided walks to help visitors learn about Cedar Breaks.

Your Mission: 1) Attend a Ranger Program and see what you can learn, OR 2) Interview a park ranger.

I attended the following Ranger program:

One thing I learned:

Ranger's signature and date: _____

Find a Ranger at the Visitor Center and interview him or her. Here are some questions you might want to ask:

Why did you decide to become a park ranger?

In what other parks have you worked?

Why are rules important for the parks?

Why can't I pick the flowers?

Make up your own question:

Ranger's signature and date: _____

Activity #12: Lights Off Stars On

When the sun sets at Cedar Breaks, we can see thousands of bright stars! Cedar Breaks wants to keep a dark night sky so we don't lose this incredible view. That's why we have been working to reduce sources of light pollution in our park. Light pollution occurs when too much light brightens the night sky and makes it hard to see stars and other night sky objects like planets and nebulae.

Your mission: Fill out the chart below and evaluate the methods we have used at Cedar Breaks to reduce light pollution.

Directions: Walk to each location listed on the chart. Look for outside lights and for inside lighting that may escape through windows. Remember, for sky viewing it's best to have as little lighting as possible. Where lights are necessary, it's best that they light up only the essential area.

| Location | Are there outside lights? | If yes, does the light shine downward? | If yes, will it only light the area where it's necessary? | Are there inside lights? | If yes, can the light shine outside the building? |
|--|---------------------------|--|---|--------------------------|---|
| Point Supreme | | | | | |
| Walkway between Point Supreme and Visitor Center | | | | | |
| Visitor Center | | | | | |
| Walkway between Visitor Center and Fee Station | | | | | |
| Fee Station | | | | | |
| Visitor Center Restrooms | | | | | |

How did we do?

Suggest a way we can further improve our lighting in this area.

Up to the Challenge? Ask your parents to help you evaluate the outside lighting in your community, neighborhood, and at your house. How can the lighting be improved in those areas?

Cedar Breaks National Monument Junior Ranger Certificate

This certifies that

has earned the title of

Junior Ranger

at

Cedar Breaks National Monument



The Junior Ranger Oath

I promise:

I will have fun exploring the national parks.

I will not feed wildlife, pick plants, or disturb any living thing in the national parks.

I will be a good example to others and share what I have learned.

Name: _____

Date: _____

Witness: _____

Park Ranger Signature

Cedar Breaks Junior Ranger Program
Funded by Zion Natural History Association