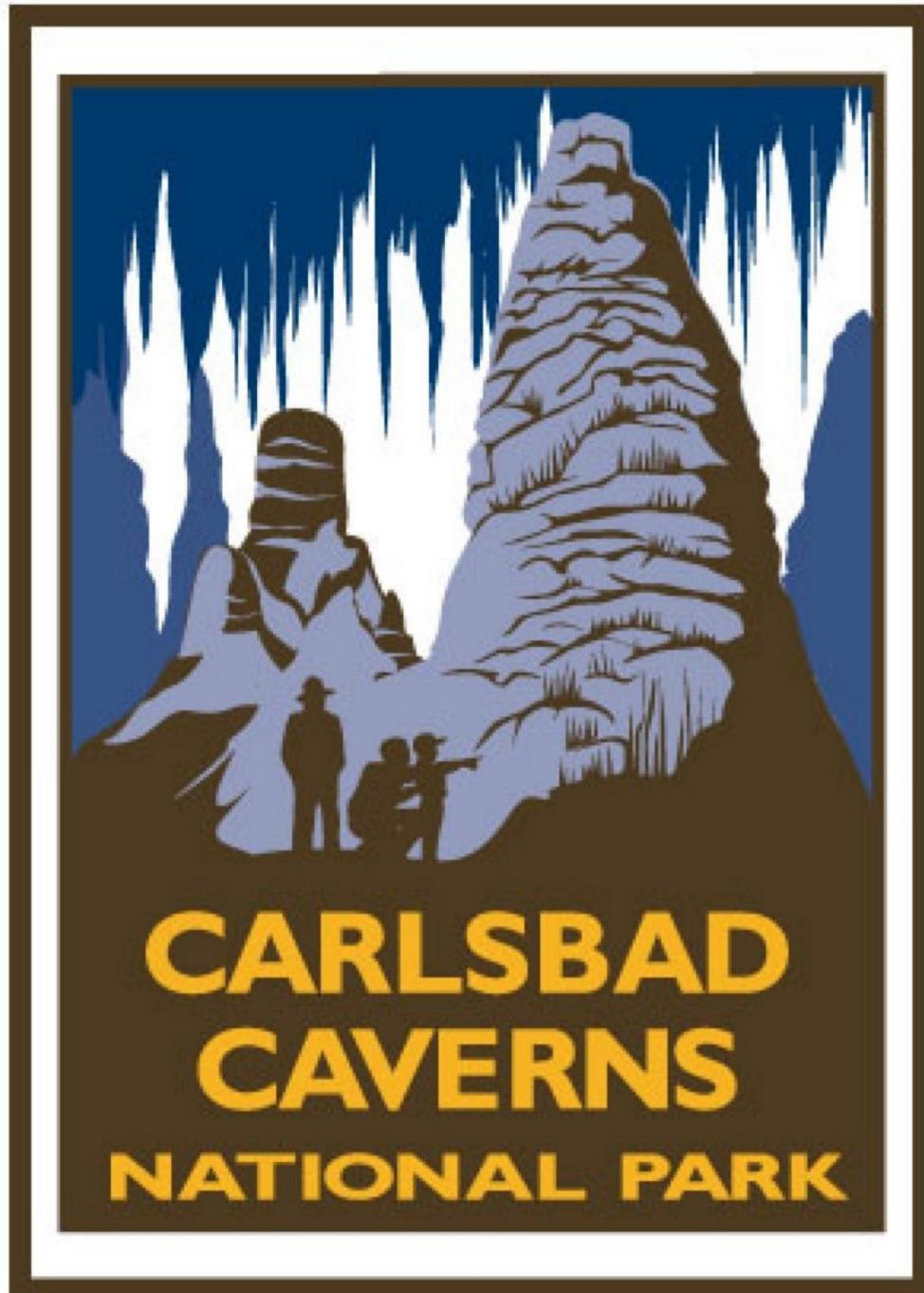


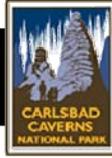
About Bats, Caves, & Deserts

A curriculum and activity guide for Carlsbad Caverns National Park



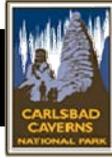
Elementary School





Section 10 – Bus Activities

- Bumpy Bus Coloring
- Road Kill Cafe
- When I Went to Carlsbad Caverns
- Colors in the Desert
- What am I?



Bumpy Bus Coloring

Pre-Visit and Post-Visit Bus & Classroom Activities

Primary/Elementary Level

Science (Physical, Life), **Language Arts** (Expressive Language, Aesthetics),

Art (Visual)

20-Minute Pre-Visit Session, Two 30-Minute Post-Visit Sessions

Objective(s). Through awareness and the safe use of coloring pencils, students will demonstrate their abilities to describe and/or categorize the things they perceive using their senses.

Related NM Content Standards with Benchmarks. SC7-E1, SC10-E1, LA9-E1, AE1-E15

Method. Students color worksheets to describe what they see and experience. Students participate in a *show and tell*.

Materials. Each Student: copy of bat coloring sheet, copy of turtle coloring sheet, 9" X 12" piece of cardboard, rubberband, coloring pencils (Do not use crayons as they will melt on a hot bus.)

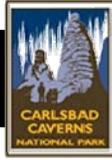
CAUTION: This activity should not be attempted with students who may not use coloring pencils in a safe manner. Sharp pencil points and a bumpy bus don't mix!

Suggested Pre-Visit Procedure

1. Give each student a bat coloring sheet, a poster board, a rubber band and a small box of coloring pencils. Have the student put the rubber band around the cardboard on the narrowest side. He/She can then put the coloring sheet onto the board under the rubberband. Now each student has his/her own clipboard.
2. Ask students to color the bat. On the back of the sheet, have students predict what sites, sounds, smells and sensations they might expect to experience during their field trip.

Suggested Post-Visit Activities

1. On the return trip, give each student a copy of the turtle coloring sheet. Have students reflect upon all the things they saw throughout the day. Instruct students to color only the sections of the turtle that describes what they saw or experienced.
2. Upon their return to the classroom, allow students to use their coloring sheets as visuals for a field trip show and tell. Encourage students to talk about the things they learned during the field trip—what they smelled, what they saw, what they felt, what they heard and/or what they tasted.



Road Kill Cafe
Pre-Visit Bus Activity
Primary/Elementary Level
Science (Life)
Length of Bus Trip

Objective(s). Students will identify animals and the reasons animals come near the roads.

Related NM Content Standards with Benchmarks. SC10-E1, SC11-E2

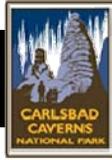
Method. By observing living and dead animals near the road, students will draw conclusions as to why animals are found alive and dead near the road.

Materials. paper and pencil for each student

Background. Animals come to the roads and highways for many reasons. The land a few feet from the highway has often been disturbed, so there may be new, young plants for animals to eat. Some animals have large home ranges, and the highways go through that range. For these reasons, many animals are killed while trying to cross the road. These roadkills are not all bad, however. Many scavenger animals such as, turkey, vultures, coyotes and ravens, feed off the dead animal carcasses.

Suggested Procedure

1. On your trip to Carlsbad Caverns National Park, ask students to watch for animals—dead or alive, it does not matter. Instruct them to write the names of the animals they see along the highway.
2. When close to the park, ask students to share with the class what animals they saw. What might be some reasons these animals were near the road? Why would these animals like to eat the plants on the side of the road rather than the ones in a safer location? What is a positive result from roadkills?
3. Facilitate a class discussion comparing and contrasting the amount and type of plant life near the road versus away from the road. Is there a difference? Why or why not? What effect does the amount of vegetation have on the animals that are killed along the road?



When I Went to Carlsbad Caverns

Post-Visit Bus Activity

Primary/Elementary and Intermediate Levels

Language Arts (Unifying Concepts, Receptive Language)

20 Minutes

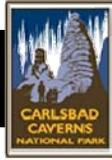
Objective(s). Students will recall things they observed while visiting the park.

Related NM Content Standards with Benchmarks. LA2-E1, LA3-E3, LA3-M3, LA4-E1, LA4-M1

Method. Students play a memory game.

Suggested Procedure

1. Explain the game to students.
2. Student #1 will start off the game by saying, When I went to Carlsbad Caverns National Park, I observed . . . He/She will fill in a word that starts with "A" (example: agave).
3. Next, Student #2 repeats the sentence and then add his/her own observation, starting with a "B" (example: bat). Student #2 sentence would be—When I went to Carlsbad Caverns National Park, I observed an agave and a bat.
4. Then, Student #3 says the sentence and adds another observation that begins with "C."
5. Continue until all letters have been used.



Colors in the Desert

Bus Activity

Primary/Elementary Level

Science (Physical)

15 Minutes

Objective(s). Student will describe the desert in terms of color.

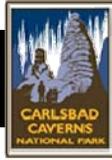
Related NM Content Standard with Benchmark. SC7-E1

Method. Students play a game of "I Spy."

Background. Many colors can be seen in the desert. The green from the chlorophyll in the plants, the red/orange from the iron oxide in rocks, and the black from the magnesium dioxide in the rocks.

Suggested Procedure

1. Explain that there are lots of different colors, not just brown and green. As you drive down the highway, when you see an interesting color say, "I spy something (state the color.)"
2. Have students guess the object.



What am I?

Post-Visit Bus Activity

Primary/Elementary and Intermediate Levels

Science (Physical, Life), **Language Arts** (Receptive Language)

20 Minutes

Objective(s). Students will list facts about a variety of objects found at Carlsbad Caverns National Park.

Related NM Content Standards with Benchmarks. SC7-E1, SC10-M2, LA3-E3, LA3-M3

Method. Using clues they have been given, students recall things they learned during the field trip.

Materials. list of clues

Suggested Procedure. Read these clues (and others you may have prepared), allowing your students to guess what object you are describing.

Clues

1. I hang around in cool dark places. I must have water to grow. Some people think I look like an icicle, but I'm made of rock. (Stalactite)
2. Green and grey are the colors I wear. I keep a lot of information under my hat. (A National Park Ranger)
3. Some people say I look good enough to eat. But don't take me to the movies, I'd probably break your teeth. (Cave Popcorn)
4. Although my tail looks like a raccoon, my face looks like a cat. (Ringtail)
5. I build my nest of mud and straw high on rock walls away from danger. Visit me in the summer; I'm gone in the winter. (Cave Swallow)
6. I am a part of the past, now I'm part of the rock. (Fossil)
7. Look in the sky and you may see me soar. Sometimes I go to the cave entrance in evening to catch a free meal of bats as they exit the cave. Watch for my red tail as I fly by. (Red-tailed hawk)
8. Without me there would be no cave. Drop by drop I made the speleothems to grow. (Water)
9. Water takes too much credit! Without me, the water would have nothing to dissolve. (Limestone)
10. Don't use me to sip your drink! I'd rather stay on the ceiling of the cave. (Soda straw)

11. I prefer the cave, but sometimes I will venture out to the surface, never making a sound. I use my long antennae to find my way around in the dark. (Cave cricket)
12. Some people say I'm rare in the desert, but lots of times I'm there, you just have to look. Animals come from far away just to get a drink from me. (Spring)
13. I am very versatile. My roots, flower stalk, buds, core and fruit are all edible. My roots can be mashed to use for soap. Some people use my leaf fibers to make ropes, mats and sandals. (Yucca)
14. In the early morning or at evening time, be careful driving because I am often near the road. I'm one of the largest animals in the park. I may be cute, but remember, I'm still a wild animal. (Mule deer)
15. We grow at weird angles and look like spaghetti when we bunch together. Some say we are formed when water under great pressure is forced through small holes. (Helictites)