

OKLAHOMA ROCKS! State Parks 2.0

Oklahoma is currently home to 39 state parks. These parks are located across Oklahoma and showcase a vast array of geological features. In this issue of Oklahoma Rocks! we will visit 5 of these state parks and learn about the specific landscape of each.

Roman Nose State Park

Roman Nose is home to some gypsum caves. At Big Spring, rain water falling in the area above the spring seeps into the ground and dissolves some of the underlying gypsum to form caves. The caves are sources for springs which emerge on hillsides and form springs; at Big Spring, hundreds of gallons per minute of highly gypsiferous water flows to the surface 24-7.

Less than 100 miles to the northwest of Roman Nose is Alabaster Caverns State Park where visitors can tour the only developed gypsum cave in the world. At a cool 46 to 60°F, Alabaster Cavern is a welcome respite in the summer.

There are five species of bats that have made Alabaster Caverns their home. The Cave Myotis, Western Big-Eared Bat, Eastern Pipistrelle, Western Big Brown Bat and the Mexican Free-Tailed Bat all live in the caverns at some point throughout the year. They use the caverns as their daytime shelter and during the winter they hibernate in the caverns.

Bats navigate using reflected sound waves. This process, known as echolocation, allows these animals to “see” in the dark. To uncover objects, bats must first emit a series of sound pulses. These pulses travel outward and strike objects. The pulses are then reflected off the objects and return back to the bats. Detected by their large ears, the sounds are quickly analyzed by the brain’s echolocation center. This analysis is so precise that the bat can locate moving fish through a critical analysis of the ripples produced at the water’s surface.

Sight or Sound

Submarines also depend upon sound for accurate navigation and “observation” of unseen objects. Like the chirping bats, subs use active sonar. They also use something called passive sonar. Using library and online references, determine the similarities and differences in these techniques. Then, present a sound-full presentation to your classmates that distinguish the two types of sonar.

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