

Wildlife Burrows



Goal:

Students will create models of different wildlife burrows and examine and contrast the functions.

Objectives:

- Identify three species of animals that create burrows or dens for homes.
- Develop a model of the burrow or den for their species (model-scale)
- Provide a presentation and labeling of the model for classmates.

Grade Level: 6-12

Subject Areas:

science, math, geography

Materials Needed:

- Internet for research
- Variety of Materials to create a burrow
- Tape
- Scissors
- Glue

Time to Complete:

45 minutes to two class periods

Background

Wildlife use dens or burrows for many different reasons and purposes – shelter, protection, reproduction, etc. Some of the dens are temporary and others are more permanent – for the lifespan of the wildlife. Some wildlife create their own dens, like groundhogs, earthworms and other species, while others are opportunistic and borrow dens abandoned by others, such as burrowing owls.

Sampling of Wildlife that Have Dens/Burrows

Wildlife that make underground dens include rabbits, skunks, mice, woodchucks, arctic ground squirrels, chipmunks, weasels, river otters, raccoons, muskrat, mink, beavers, opossums, moles, rats, and groundhogs. Other denning animals include fox, deer, bears, wolves, spiders, snakes and desert frogs.

Here are some examples of wildlife that make dens, burrows, or other underground homes:

Ants

An ant colony is a home for ants that is usually underground and made up of several chambers connected by tunnels. They are built by the ants themselves; more specifically, the worker ants, who dig the tunnels and rooms, and then, carrying the tiny bits of dirt in their mandibles, they deposit the dirt on the surface, sometimes forming an anthill in the process.

The way an ant colony operates revolves around the function of the chambers, or rooms. Each room has a purpose: there are nurseries, rooms for storing food and even rooms specifically for mating.

Groundhogs

Groundhogs have both summer and winter dens, or burrows. The winter dens are usually built in dry, wooded areas and are two to four feet deep. It is here that the groundhog hibernates. Summer dens are built near grassy areas where food is plentiful.

Dens typically have two entrances or more, one main entrance and one “peep hole” or escape route which offers protection from predators. There are separate areas for sleeping, nursing, and potty facilities. Groundhogs line their dens with leaves and grasses and keep them clean.

Prairie Dogs

Prairie dogs are social animals that live in towns of up to 1,000 acres (400 ha) or more. Larger towns are often divided into wards by barriers such as ridges, lines of trees, and roads. Within a ward, each family or “coterie” of prairie dogs occupies a territory of about 1 acre

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(0.4 ha). A coterie usually consists of an adult male, one to four adult females, and any of their offspring less than 2 years old. Members of a coterie maintain unity through a variety of calls, postures, displays, grooming, and other forms of physical contact.

Black-tailed prairie dog towns typically have 30 to 50 burrow entrances per acre, while Gunnison's and white-tailed prairie dog towns contain less than 20 per acre. Most burrow entrances lead to a tunnel that is 3 to 6 feet (1 to 2 m) deep and about 15 feet (5 m) long. Prairie dogs construct crater- and dome-shaped mounds up to 2 feet (0.6 m) high and 10 feet (3 m) in diameter. The mounds serve as lookout stations. They also prevent water from entering the tunnels and may enhance ventilation of the tunnels.

Procedure

1. Divide the students into groups of two, three or four. Each team will research a different animal that make a burrow or den (underground). Students will research information about:
 - a. What is the species?
 - b. Where do they live – what is their habitat and range?
 - c. What type of den or burrow do they create (single hole, multiple rooms, etc.)?
 - d. How do they use the den or burrow (function)?
 - e. How are they adapted to create the burrow?

2. After completing their research the team will sketch out and create a plan on how to make a model replica of the den or burrow for their wildlife.
3. Create a scale model of the den or burrow – including different chambers and their purposes. The model should be made from recycled materials or other materials that students can gather. They should be three dimensional models.
4. Students will label the model with the research they discovered about the wildlife and how the den/burrow functions.
5. Students then will create a Powerpoint or poster-board display to provide information about the project to be presented (along with the model) to the class.

Extensions

Humans have learned many things from wildlife, from learning to fly and swim to replication of their wildlife homes. Underground homes have been used for centuries. Students can investigate why underground homes are green. How do they help a home owner with cost savings and other benefits? Students can compare what we have learn from wildlife to how underground homes or hillside homes use similar design. Students can also design their own underground or hillside home – what would they create?