

COLD-BLOODED ANIMALS

Cold-blooded animals do not have cold blood. Instead, their body temperature changes as the temperature around them changes. Fish, amphibians and reptiles are all cold-blooded. Scientists call this trait *ectothermy*, from *ecto* which means outside, and *therm*, which means heat.

To change their body temperature, cold-blooded animals move to different places in their habitat. They may burrow under the ground, crawl under a log or a rock, or climb out onto a sunny branch.

All animals use their muscles to move their bodies. Muscles must be warm to be able to move quickly and smoothly. Cold-blooded animals must warm their bodies (and their muscles) to be able to move quickly enough to hunt for food, digest their meal, and to escape from predators. To have the best chance to see lizards and snakes, go for a walk through the desert or in the hills in the early morning and late afternoon. Then you will see these animals out basking in the sun, getting warm or digesting their food.

All animals have a temperature range that they prefer. For reptiles in much of California, that range is somewhere between 55-95 degrees Fahrenheit.

Reptiles and amphibians can become too hot: temperatures over 105 degrees Fahrenheit can kill them. They can tolerate colder temperatures for a short time, just so long as they are warmed up slowly. Kept cold for too long or warmed up too quickly can also kill a reptile or amphibian.

Animals that live in the deserts sleep under rocks or underground during the hottest part of the summer days, coming out early in the morning and just before sunset to hunt for food. During the cooler winter months, they are active throughout the day.

THERMOMETER REPTILE

To find out how a reptile changes its body temperature, use some simple materials to make a few experiments on a warm sunny day.

THINGS YOU NEED FOR THIS ACTIVITY

Outdoor thermometer
Digging tool, like a shovel or trowel
Pail of water
Watch
A patch of soil to dig into
Permission to dig a hole in the soil

ACTIVITY

1. Dig a hole in the ground about five inches deep. Place the thermometer in the hole. Wait 5 minutes, then take it out and read the temperature. Write it down in this box:	
2. Locate a rock or a fallen branch or log lying on the ground. Place the thermometer under the rock or branch. Wait 5 minutes, then take it out and read the temperature. Write it down in this box:	
3. Place the thermometer on the surface of the ground in a shady place. Wait 5 minutes, then take it out and read the temperature. Write it down in this box:	
4. Place the thermometer in the fork of a tree branch or on a bush at least five feet above the ground. Wait 5 minutes, then take it out and read the temperature. Write it down in this box:	
5. Place the thermometer in a bucket of water. Wait 5 minutes, then take it out and read the temperature. Write it down in this box:	
6. Finally, go back to the hole you dug. Dig it out wide enough so that you can easily lay the thermometer down in the bottom of the hole. Cover up the thermometer with the dirt. Wait 5 minutes, then carefully dig it up and take it out. Read the temperature and write it down in this box:	

QUESTIONS

What kinds of conclusions can you make about the places that ectothermic animals choose to change their body temperature?

A. Why do some animals burrow in the ground during the heat of the day?

B. Why do some animals go into the water during the heat of the day?

C. Why do some animals climb trees or bushes during the heat of the day?

D. Why do some animals seek shade during the heat of the day?

E. Why are desert animals active around dawn and dusk during the hottest summer days?
