

All About Reptiles

Investigation Data Sheet



How Does Temperature Affect a Lizard's Speed and Movement?

Lizards and other reptiles are cold-blooded. They cannot control the temperature of their own bodies or make their own heat. Because of this, their bodies are very sensitive to changes in temperature. This, in turn, affects their speed and movement.

Objective

Determine how temperature affects a lizard's speed and movement.

Materials

- a very long, narrow cardboard box
- scissors
- heavy duty tape
- a stopwatch
- a lizard (Recommended: American chameleon, also called the anole)
- a secure container for holding the lizard
- an adult helper

Safety Notice: All applicable laboratory safety rules must be followed. Students should not perform any experimental activity without the teacher's supervision and express permission. Students must follow safety guidelines and wear appropriate protective gear.

Procedure

1. The cardboard box will serve as the track to monitor the lizard's speed and movement. Cut off one of the long sides of the box to expose the inside. Cut one end off of that piece to use as your starting gate. Place this starting gate about twenty centimeters away from one end of the track, so that you can easily lift and lower the small piece.
2. See how your lizard moves when it is in a warm environment. Place the lizard in a hot, sunny area and let it sit there for about twenty minutes.

3. After the lizard has soaked in enough of the sun's heat, place it on the track behind the starting gate. Have someone start the timer as you lift the gate. Your lizard may need a light push to get it going, but when it does, observe how it moves down the track. When the lizard reaches the end of the track, stop the stopwatch and record the time it took. Repeat this two more times to get a range of times to compare later.
4. Place your lizard in a secure container and move it into a shaded area or indoors, where it's cooler. Let it sit in the shade for twenty minutes before returning the lizard to the track.
5. Again, place the lizard behind the starting line and lift the gate while starting the timer. Now that its body temperature is cooler, observe how your lizard moves down the track and record the time it takes. As before, repeat this two more times to get a good range of times.

Conclusions

- Under which conditions did the lizard move the fastest? Why did this happen?

- Why do you think most reptiles live in warm places?

| Lizard | Time to reach the end of the track | Observations |
|-------------------------|------------------------------------|--------------|
| in sun for 20 minutes | | |
| | | |
| | | |
| in shade for 20 minutes | | |
| | | |
| | | |