

Reptiles

Investigation Data Sheet



Chameleon Camouflage

Different species have different adaptations to help them survive. For many who must deal with hungry predators, defensive adaptations, such as the ability to camouflage, are important.

Objective

Test whether chameleons change color instinctively, or whether they need to see the color of their surroundings before they can camouflage themselves.

Materials

- 1 medium-sized chameleon (available at most pet stores)
- some tree bark
- some large green leaves
- a medium-sized towel
- a timer
- a box large enough to hold the chameleon

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. Fill the box with tree bark and place the green chameleon inside. Start the timer and wait for five minutes. After five minutes, look at the chameleon. Has its color changed? If so, describe its appearance.

2. Now see if a chameleon will change color in darkness. Place the green chameleon in the box lined with tree bark. Cover the top of the box with a towel to make the inside dark. Be sure to leave a small air hole or two so the chameleon can breathe. Start the timer and wait five minutes. After five minutes, check on the chameleon. Has its color changed? If so, describe its appearance. Was it affected by the darkness?

3. Double-check your results using a different colored background. Empty the bark from the box. Cover the bottom of the box with green leaves. Place the chameleon inside the box and quickly cover it with a towel. Wait five minutes before removing the towel to check on the chameleon. Has its color changed? If so, describe its appearance. Was it affected by the darkness?

Conclusions

- Why is camouflage an important adaptation for chameleons? What do you think triggers this physical response?

- What role, if any, does light or darkness play in how a chameleon interacts with its environment?
