Lizards and Snakes

Snakes are close relatives of lizards; both reptiles evolved millions of years ago from an ancestor with legs. **Because lizards and snakes share a common ancestor, they have many features in common, including periodic molting and a jaw that is only loosely attached to the skull. This jaw allows the mouth to open wide enough to accommodate large prey.**

Lizards Common lizards include iguanas, geckos, anoles, and horned lizards (often mistakenly called *horny toads*). A few species of lizards are herbivores, but most are carnivores. Lizards are found in tropical forests and deserts. Some are fast runners, whereas others, such as the chameleon in **Figure 7,** are good climbers. Most lizards are small—less than 30 cm (1 ft) in length. The tail of some species of lizards breaks off easily, allowing the lizard to escape when attacked by a predator. Lizards can generate a new tail, but the new tail does not have any vertebrae in it. Some lizards are legless like snakes are. But unlike snakes, lizards have external ears and eyelids.

Snakes Snakes swallow their prey whole, but they still eat very large prey. The snake's jaw is very flexible because the jaw has five points of movement. (Your jaw has only one movement point.) In a snake, one of these points is the chin, where the halves of the lower jaw are connected by an elastic ligament. This ligament allows the lower jaw to spread apart when a large meal is being swallowed.

Many large snakes, such as boas and pythons, are constrictors. Some smaller species, such as king snakes, are also constrictors. **Constrictors** wrap their body around their prey, gradually squeezing tighter until the prey suffocates. The snakes then swallow their prey whole. Like all snakes' teeth, constrictors' teeth are not suited for cutting and chewing. Other snakes, such as cobras, vipers, and copperheads, kill their prey with venom. In most venomous snakes, modified salivary glands produce venom that is injected into the victim through grooved or hollow teeth.

Most snakes lay eggs. The mother may stay with the eggs until they hatch. Other snakes, such as the timber rattlesnake, featured in the UpClose feature, are ovoviviparous and give birth to live young.

Reading Check ***Describe the ways that snakes kill their prey.***

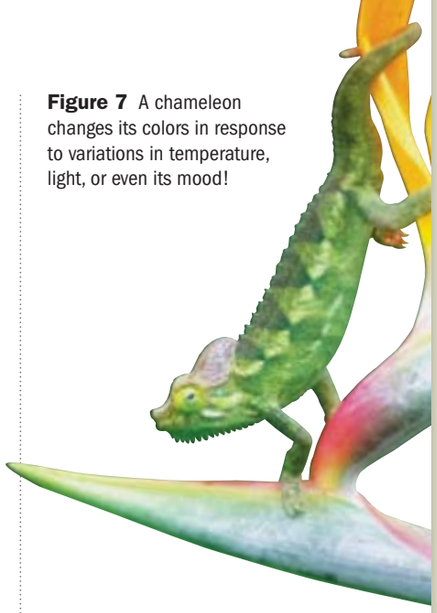


Figure 7 A chameleon changes its colors in response to variations in temperature, light, or even its mood!

constrictor a snake that kills its prey by crushing and suffocating it

ACADEMIC VOCABULARY

modify to change or make different

Section 2 Review

KEY IDEAS

1. **Summarize** the ways turtles and tortoises differ from other reptiles.
2. **Compare** tuataras with lizards.
3. **Contrast** the parental care shown by alligators with that shown by most other reptiles.
4. **Describe** the characteristics shared by lizards and snakes.

CRITICAL THINKING

5. **Recognizing Relationships** How does a crocodile's nostril and eye position relate to its lifestyle?
6. **Making Inferences** When a lizard's tail breaks off, the tail may wiggle by itself. How is this adaptation advantageous for the lizard?

MATH SKILLS

7. **Problem Solving** About 8,000 snake bites occur in the United States each year. Around 0.15% of these bites are fatal. Approximately how many people die from snake bites in this country every year?

Teaching Key Ideas

Skinks Obtain a picture of a skink, and cover its body so that only its head shows. Ask students if the animal is a lizard or a snake. Then, reveal the rest of the animal, pointing out how similar some lizards are to snakes. Ask students how to tell a lizard from a snake. (Most lizards have legs and external ears, a pectoral girdle, and movable eyelids. Snakes lack these features.) LS Visual

Close

Formative Assessment

Which reptile order cares for its young after they hatch?

A. lizards (Incorrect. Lizards leave after laying eggs in ground burrows.)

B. turtles (Incorrect. Turtles leave their eggs in nests on sandy shores.)

C. crocodilians (Correct. They will guard their eggs while in the nest and protect the babies for up to a year.)

D. snakes (Incorrect. Even when snakes give birth to live young, they do not remain to protect them.)

Answers to Section Review

1. Their bodies are encased in a protective shell, and they lack teeth.
2. Tuataras and lizards have four legs, a tail, and scaly skin. Tuataras are most active at low temperatures, while lizards are most active at high temperatures. Unlike tuataras, lizards molt and have jaws that are attached loosely to their skulls.
3. Alligators and other crocodilians are the only reptiles to care for their young. Some alligators build nests for their young and care for them for up to a year after they hatch.
4. Snakes and lizards both have scaly skin and molt periodically. Their jaws are loosely connected to their skulls.
5. The crocodile is able to keep most of its body submerged and hidden while still being able to breathe and look for prey.
6. Predators are distracted by the wiggling tail part, which gives the lizard time to escape.
7. about 12