

# Environmental Science Institute

## Hot Science – Cool Talks

### The Striking Behavior of Rattlesnakes

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## Snake Facts

What is the first thing you think of when you think of a snake? Why?

This is information on snakes that shows how interesting and cool they really are.



- A. Snakes are reptiles with no legs. They move by using their muscles to push their **scales** against the ground or other objects.
- B. They are also **exothermic**.

1. This means they depend on the temperature of their surrounding environment to regulate their body temperature.
  2. If it is cool they use the sun or a warm rock or even pavement to warm them up.
  3. If they get too hot - they have to cool down - so they will move into the shade.
  4. This is called **thermoregulation**
- C. When the weather begins to cool, snakes will go into hibernation.
1. When it gets too cold snakes cannot move fast enough to catch or **digest** their prey.
  2. This is actually a **semi-hibernation** state when the snake sleeps most of the time and doesn't eat very much.
  3. When the weather warms up they begin to wake up. They may come out of **semi-hibernation** several times in the winter as it warms and cools.
- D. Some snakes lay eggs.
1. Snake eggs are soft and leathery not like hard easily breakable chicken eggs.
- E. Some have live babies.
1. Some snakes take care of their **offspring** for a week or so.
  2. Other snakes have the offspring and leave.
  3. The young (or **juveniles**) begin to take care of themselves very soon after they are born.
- F. Some snakes are venomous.
1. **Venom** is a toxin secreted by some animals and is transmitted in some way to stun or kill **prey** or to an enemy for protection.
  2. There are other **venomous** animals such as scorpions and bees.
  3. Most snakes are not venomous, but do not touch a snake without an adult present!
- G. Snakes **shed** their skin as they grow.

1. Their outermost, **external** layer of skin does not grow with the snake - so the snake just rubs it off.
  2. Even the skin over their eyes comes off. Snakes do not have eyelids, so the skin over their eye acts to protect their eye.
  3. Their skin usually comes off as one piece and inside out (like when you take off your sock).
- H. Snakes can live on the land, in the trees or in the water. But how often do you see them?
1. Snakes are hard to see because they are the same color as where they live.
  2. This is called **camouflage**.
  3. If they are hard to see - it is hard for their prey to see them and hard for their **predators** to see them.
  4. Where do you think a green snake might live? How about a grayish-brown snake?
  5. Some snakes that are brightly colored.
  6. This bright color serves as a warning to predators to beware: this animal could be dangerous.
  7. But there are some **non-venomous** snakes that "**mimic**" or look like the venomous snakes.
  8. How do you think this might help the mimic snake?
- I. Snakes come in all sizes. The small ones can be as small as 6 inches and the big ones can be as long as 9 feet.
- J. Snakes "taste" the air with their tongues. They have a forked tongue.
1. This forked tongue helps the snake to determine which way the prey went.
  2. If they receive more "taste" on the right fork, the prey probably went to the right direction.
- K. Some snakes, like the rattlesnake, can find **endothermic** prey (for example: a mammal) using heat sensing pits in their heads. This adaptation helps them to hunt more effectively.
- L. Snakes have no **external** ear openings!
1. So they may not be able to hear you talking.

2. But they can feel your **vibrations** when you are walking or stomping.
- M. All snakes have teeth.
1. Some snakes have small teeth and some have bigger teeth.
  2. Some even have long teeth at the front of their mouth called **fangs**.
  3. Different teeth are used for different reasons.
  4. Snakes with fangs use those fangs to inject **venom** into their prey.
  5. The venom usually kills the prey. It is also used in defense against predators.
- N. If a snake feels threatened it may bite even if it is not a venomous snake. Other things snakes do when they are threatened are: roll over and play dead, puff up to look bigger, try to get away, strike, **vibrate** their tail (sounds like a rattle snake), hiss, **defecate** or musk (make a stinky smell).
- O. Snakes are important because they eat mice, rats and bugs. They also eat frogs, lizards, birds, bird eggs and rabbits. Some snakes like the kingsnake, even eat other snakes including rattlesnakes.

*Source: working document by PhD Student, N. Caskey, of Science Education at the University of Texas at Austin*