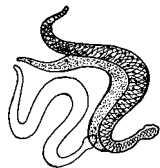


Illusions in Locomotion

Snakes have four main methods of locomotion:



Rectilinear



Sidewinding



Concertina



Serpentine

Big-bodied snakes, such as pythons, boas, and vipers, use a rectilinear motion. They press their large scales against the ground creating traction and moving their bodies in a straightforward motion.

Sidewinder snakes, such as the Namib Adder, literally lift portions of their bodies off the ground and thrust forward in a sideways motion. This form of movement keeps these snakes from falling down soft sand dunes and dusty trails.

Snakes that move with a concertina motion literally bunch themselves up and thrust themselves forward by quickly straightening their bodies.

Slender snakes, such as Rat snakes and Racers, move quickly by using a curving serpentine motion. This is accomplished when the sides of their bodies push against surface irregularities moving them forward. Visually create the serpentine movement by following these directions:

Materials

- one copy of Serpentine Locomotion Illusion (page 40)
- scissors
- one sheet of cardstock paper
- one sheet of black construction paper
- crayons or colored markers
- transparent tape
- sharp-pointed knife or razor blade
(Adult supervision is required.)

Directions

1. Using the scissors, cut apart the two Locomotion Illusion sections; discard the cut-away paper.
2. Glue the straight-stripe section onto a piece of same-size cardstock; trim edges.
3. Choose two to three colors to decorate the white stripes. (**Note:** The illusion works best when there is a pattern to the colors.)
4. Cut a 1" x 7" (2.54 cm x 18 cm) pull-tab strip from the remaining cardstock. Tape the 1" (2.54 cm) pull-tab to the center back area of the striped section. (**Note:** The pull-tab should extend beyond one of the two *shorter* sides of the striped section.)
5. Using the sharp knife or razor blade (ask an adult to do this), cut out the white, curvy lines on the black section. (Be certain no white color remains after the lines have been cut out.)
6. Using the scissors, cut out a rectangle from the black construction paper that matches the curvy-lined box. Place the colored-stripe, tabbed section on top of the cut-out black construction paper rectangle.
7. Place the curvy-lined box on top of the placed striped section. Using the transparent tape, tape the top and side edges together.
8. Gently pull the tab downward to view the serpentine locomotion illusion.

Serpentine Locomotion Illusion

