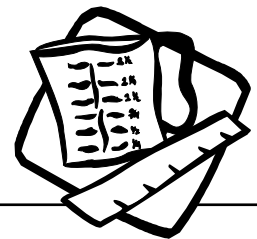


# Animals are Amazing!



**Make models of what your body parts might look if you were a snake (mouth opening) or a chameleon (length of tongue).**

## What you need

String or yarn      Adding machine tape      Calculator  
Paper and pencil      2 meter sticks or yardsticks

## What to do

### I. Mouth of a Snake:

In this activity you will see what your mouth would be like if you were a snake. Some snakes (vipers) can open their mouths twice the width of their head. For instance, if a snake's head is 1 inch wide it can open its mouth 2 inches.

1. Measure the width of your head. Do this by holding a ruler on top of your head and approximating the width from ear to ear.
2. Double that amount.
3. Cut out a piece of string showing this distance as the length across a circle (diameter) – this is how far you could open your mouth if you were a snake!

### II. Tongue of a Lizard

If you were a lizard (chameleon) you could flick your tongue out half the length of your body.

1. Using a meter stick, measure your height.
2. Now halve that amount. That is how long your tongue would be.
3. Using some adding machine tape, cut a piece that length. Color it red or pink, so it looks like a tongue.
4. Roll it tightly and hold it in front of your mouth. Now flick it! (roll it out quickly).

## What to ask

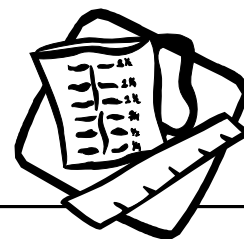
- How many inches (centimeters) wide is your head?
- How big do you think your mom's mouth would be if she were a snake?
- How did you double your number?
- How is finding half of a number like finding the double of a number?  
How are they different?



## Did you know?

The design of the bodies of animals allows them to survive. Often the proportions are interestingly different from our own. These facts about animals can be used to develop a sense of proportion.





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## What's next?

### Neck of a Crane:

A Crane's neck is about  $\frac{1}{3}$  the length of its body, which helps it reach under water to catch food.

1. Measure your height with a measuring tape
2. Divide your height by three (or approximate  $\frac{1}{3}$ )
3. Make a straw tower that shows how long your neck would be if you were a crane

## To learn more

### What's Smaller than a Pigmy Shrew?

by Robert E. Wells

In this presentation that goes from small to infinitesimal, Wells compares the size of a tiny animal (a pygmy shrew) to an insect (a ladybug), and beyond. Readers are encouraged to try to imagine being the sizes of the creatures under discussion.

### How Tall, How Short, How Far Away?

by David Adler

This book includes a lively discussion of the history of measurement. It incorporates some hands-on activities, explains progress from Egyptian methods to the customary (or inch-pound) to the metric system. Readers are encouraged to use various systems to measure their height and think about what units they could use for distances.

## How it helps with school

### Texas Essential Knowledge and Skills (TEKS) Standards

Number, Operation, and Quantitative Reasoning: 3.3B; 4.4D-E; 5.3B-C

Measurement: 3.11A; 4.12; 5.11A

Underlying Processes and Mathematical Tools: 3.15D; 4.14D; 5.14D

### National Council of Teachers of Mathematics (NCTM) Standards

Measurement, Problem Solving, Communication