

# Scientific Data – Student Activity

We love our sunburnt country but droughts and flooding rains affect our landscape. When we discuss changes in climate we cannot just give general statements such as “I think it is getting drier” or “This must be a drought”. We need to give information and measurements in a way that can be understood the same way by everyone across the world.

Science requires data (information and measurements) that can be:

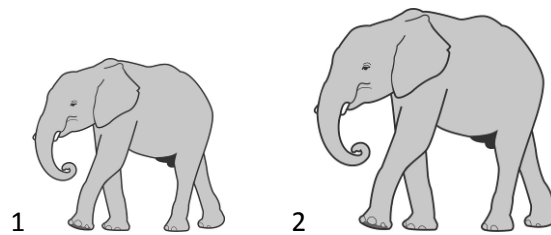
**OBSERVED** using four of your five senses.

Which four senses do we use? \_\_\_\_\_

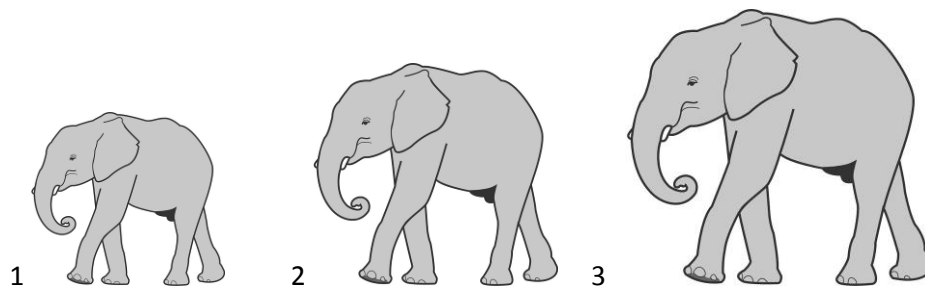
Which sense do we not use and why? \_\_\_\_\_

**MEASURED** using objective measurements and not subjective measurements.

Subjective measurements describe the feelings and ideas of each particular person. They aren't necessarily the same for everyone. E.g. big and small, nice and nasty or hot and cold.

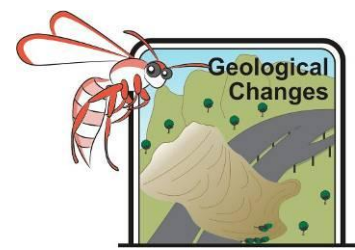


Which elephant is big and which elephant is small? \_\_\_\_\_

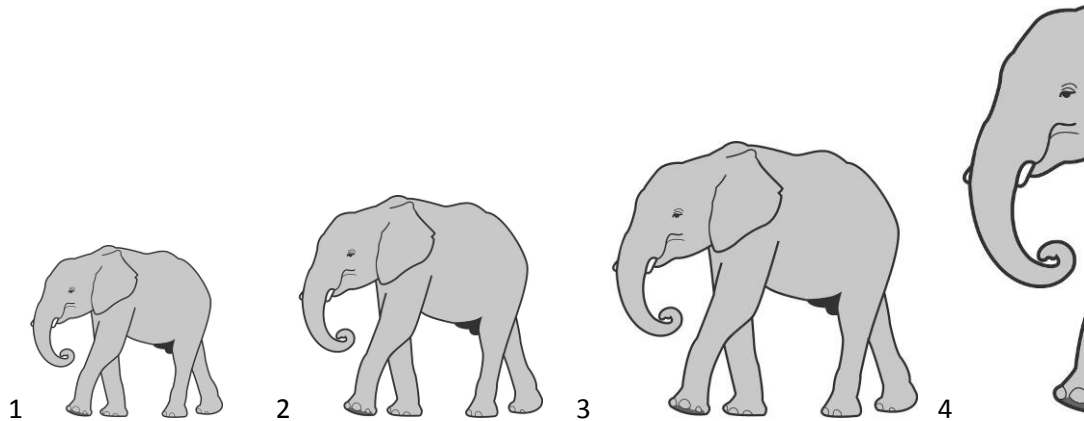


Which elephant is big and which is small this time? \_\_\_\_\_

\_\_\_\_\_



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Which elephant is big and which elephant is small now? \_\_\_\_\_

Objective measurements use International standard measurements such as metres, degrees Celsius, kilograms and seconds.

If we have a standard measurement for the first elephant of 1 metre, what could we estimate as the height of elephant 2? \_\_\_\_\_

What could we estimate as the height of elephant 3? \_\_\_\_\_

What could we estimate as the height of elephant 4? \_\_\_\_\_

Ancient Egyptians used the length of their arm from the tip of their fingers to their elbow as the standard measurement of **1 cubit** and the standard width of one finger as **1 digit**. Measure the length of the side of your classroom in cubits using your arms (to give readings in cubits and digits)

The length of the classroom was \_\_\_\_\_ cubits and \_\_\_\_\_ digits.

Our class readings ranged from \_\_\_\_\_ to \_\_\_\_\_.

Now measure it again using measuring tape or rulers.

The length of the classroom is \_\_\_\_\_ metres and \_\_\_\_\_ cm

Class readings ranged from \_\_\_\_\_ to \_\_\_\_\_

Which method of measurement is most accurate and precise?

\_\_\_\_\_

