

Name _____

Period _____

Date _____

Warm-Up: Quantitative vs Qualitative Data

Qualitative observations use your senses to observe the results. (Sight, smell, touch, taste and hear.)

Quantitative observations are made with instruments such as rulers, balances, graduated cylinders, beakers, and thermometers. These results are measurable.

Read the following examples and then decide if the example is qualitative or quantitative. Write the word on the blank space provided.

1. _____ The cup had a mass of 454 grams.
2. _____ The temperature outside is 250 C.
3. _____ It is warm outside.
4. _____ The tree is 30 feet tall.
5. _____ The building has 25 stories.
6. _____ The building is taller than the tree.
7. _____ The sidewalk is long.
8. _____ The sidewalk is 100 meters long.
9. _____ The race was over quickly.
10. _____ The race was over in 10 minutes.
11. _____ It makes a loud pop sound.
12. _____ The veins are 3 mm wide.
13. _____ It gets darker over a period of time.
14. _____ The mass of the computer is 1 ½ kg.
15. _____ You have three sisters.

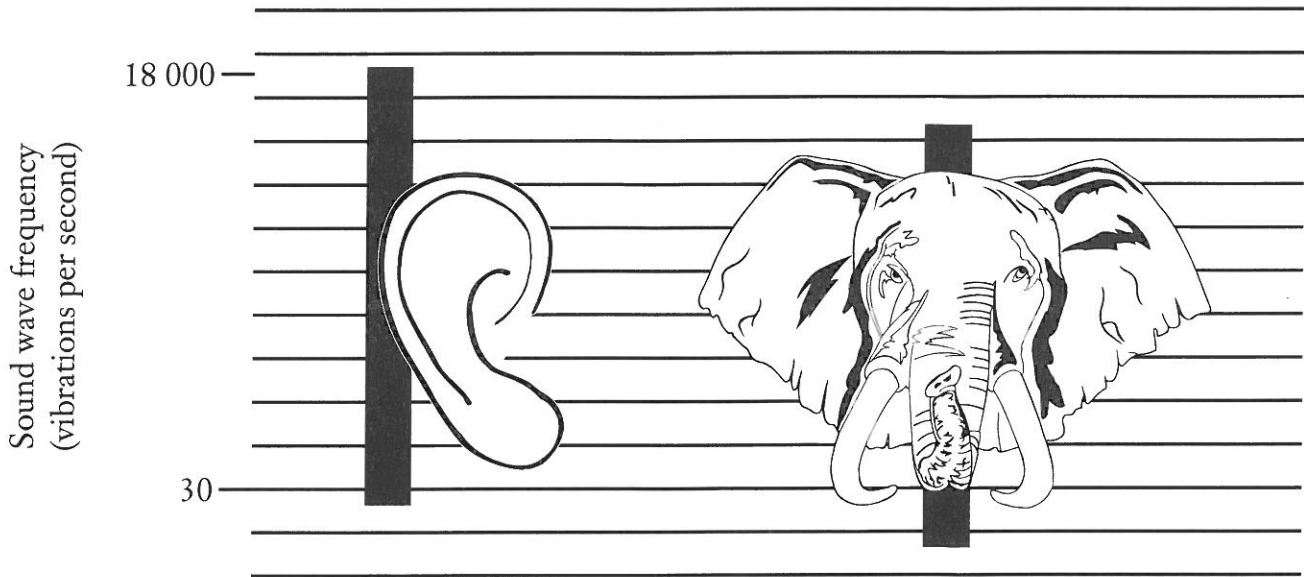
Write your own **quantitative** example:

Write your own **qualitative** example:

What type of observation do you think is more scientific? Why?

CHAPTER 2 SCIENTIFIC METHODS IN BIOLOGY

Study the Graph



Hearing Range of Humans and Range of Sounds Elephants Make

The graph above shows the results of a quantitative study. A quantitative study uses information that can be counted or measured. Use the graph to answer the questions.

2. What is being measured in the graph? _____

3. According to the graph, what is the normal hearing range for humans? _____

4. Can a human hear all the sounds an elephant makes? Explain. _____

