

Name: \_\_\_\_\_

Hr: \_\_\_\_\_

## Qualitative vs. Quantitative Lab

For this lab you need to pick 4 objects from around the room and collect 3 qualitative and 3 quantitative observations on it. Be sure that your qualitative observations are looking at the quality of the object and use your senses. Your quantitative observations should use numbers and involved some type of measurement of the object such as length, width, mass or volume.

Take a walk or look around your house and find 4 objects

Object # 1 = \_\_\_\_\_

Qualitative

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_

Quantitative

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_

Object # 2 = \_\_\_\_\_

Qualitative

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_

Quantitative

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_

Object # 3 = \_\_\_\_\_

Qualitative

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_

Quantitative

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_

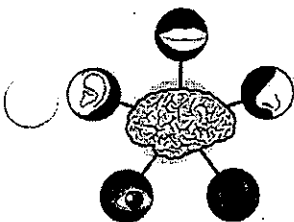
Object # 4 = \_\_\_\_\_

Qualitative

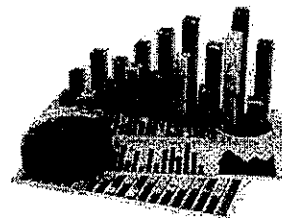
1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_

Quantitative

1. \_\_\_\_\_
2. \_\_\_\_\_
3. \_\_\_\_\_



Qualitative - description  
Quantitative - numbers



Name: \_\_\_\_\_

## Cell Study Guide

1. Gary was designing an experiment for his science fair project on how much water grows the tallest plant. He will be using different amounts of water to determine which plant will grow the tallest. In designing his experiment to receive accurate results, which variable will be constant?
  - a. Amount of water
  - b. Plant height
  - c. Color of pot
  - d. Type of plant
2. How does a bacterial cell (prokaryotic cell) differ from a plant or animal cell (eukaryotic cell)?
  - a. It has no organelles
  - b. It is larger
  - c. It has no cytoplasm
  - d. It does not have a nucleus
3. List the 3 parts of the cell theory
  - a. \_\_\_\_\_
  - b. \_\_\_\_\_
  - c. \_\_\_\_\_
4. Scientist Redi and Pasteur disproved Spontaneous generation. What is Spontaneous generation?  
\_\_\_\_\_  
\_\_\_\_\_
5. In an experiment, the factor being changed on purpose is called the -
  - a. Constant
  - b. Dependent variable
  - c. Independent variable
  - d. Experimental error

11. Photosynthesis takes place in the \_\_\_\_\_.
12. Write the chemical formula for Photosynthesis:
13. Respiration takes place in the \_\_\_\_\_.
14. Write the chemical formula for Respiration:
15. Unicellular organisms have \_\_\_\_\_ cell.
16. Multicellular organisms have \_\_\_\_\_ cell(s).
17. (Circle one) Autotrophs/Heterotrophs make their own food.
18. (Circle one) Autotrophs/Heterotrophs cannot make their own food.

Use the following word bank to complete the next two slides.

Organelle Word Bank

Cell Wall	Cell Membrane	Cytoplasm	Mitochondria
Chloroplast	Vacuoles	Nucleus	Chromatin
Ribosomes	Endoplasmic Reticulum	Golgi Bodies	Lysosomes

Organelle	Function
	It regulates and controls cell activities
	Jelly-like substance in the cell
	Passageways that carry materials around the cell
	It controls what can come into and out of the cell
	It stores food, water and chemicals in the cell
	Produces proteins for the cell
	Produces most of the energy for the cell
	Receives materials from ER and moves them around the cell
	It shapes and protects the plant cell
	Green food making structures within plant cells
	Contains chemicals that break down food particles and worn-out cells
	Complex of DNA, forms chromosomes



# Zork Genetics



Characteristic	Dominate Gene	Recessive Gene
Height	Tall (T)	Short (t)
Eye Number	One (E)	Three (e)
Lip Color	Purple (L)	Green (l)
Fang Number	One (F)	Two (f)

USE YOUR KNOWLEDGE OF GENETICS TO COMPLETE THIS WORKSHEET.

1. Use the information for a Zork's traits to write the **phenotype** (physical appearance) for each item.

a) TT \_\_\_\_\_

c) ee \_\_\_\_\_

b) Ll \_\_\_\_\_

d) Ee \_\_\_\_\_

2. Use the information in the chart to write the **genotype(s)** for each trait below.

a) One eye \_\_\_\_\_

c) Two Fangs \_\_\_\_\_

b) Short \_\_\_\_\_

d) Purple Lips \_\_\_\_\_

3. Determine the **genotypes** for each using the information in the chart.

a) Heterozygous purple lips \_\_\_\_\_

c) Homozygous one eye \_\_\_\_\_

b) Hybrid one fang \_\_\_\_\_

d) Purebred tall \_\_\_\_\_

4. A tall Zork named George met and fell in love with a tall Zork named Marge. Use your knowledge of genetics to answer the questions below.

a. If Marge's father is a heterozygous tall Zork and her mother is a short Zork, what is Marge's genotype? Complete the Punnett square to show the possible genotypes that would result to help you determine Marge's genotype.

What is Marge's genotype? \_\_\_\_\_


b. George is heterozygous for this height. What is his genotype?  
\_\_\_\_\_

c. Complete the Punnett square to show the possibilities that would result if George and Marge had offspring.

d. List the possible **genotypes** and **phenotypes** for the kids.


e. What is the probability of tall Zork kids? \_\_\_\_\_%

f. What is the probability of short Zork kids? \_\_\_\_\_%