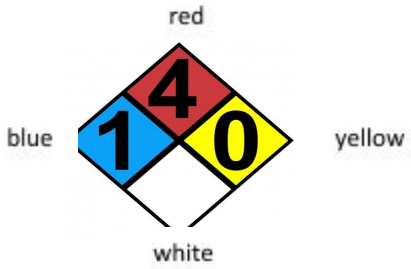
KEY DA # 1 Review **Name_____**

Safety:

1. What is the first thing you must do if something spills or breaks during a lab experiment?
   Tell the teacher
2. What personal protective equipment (PPE) should you use in the lab when working with chemicals?
   goggles, apron, gloves
3. On a NFPA (Hazcom) label,



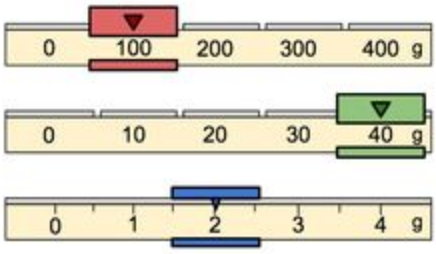
✓ What does the red quadrant stand for?___**flammability**___
✓ What does the blue quadrant stand for?__**health**____
✓ What does the yellow quadrant stand for?___**reactivity**___
✓ What does the white quadrant stand for?___**special concerns**____

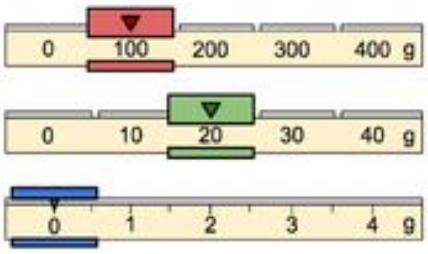
Equipment and Measurement:

4. Fill in the missing information in the table:

Tool	Used for	Units
Triple beam balance	**mass**	**g (grams)**
graduated cylinder	Liquid volume	**mL (milliliters)**
meter stick, metric ruler	**length, distance**	cm

5. What is the measurement on the triple beam balance below. Don't forget the units!

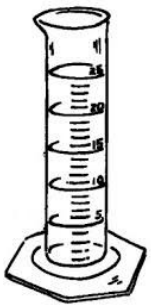




___**142 grams**_ _**120 grams**_

Volume of an irregular shaped object:

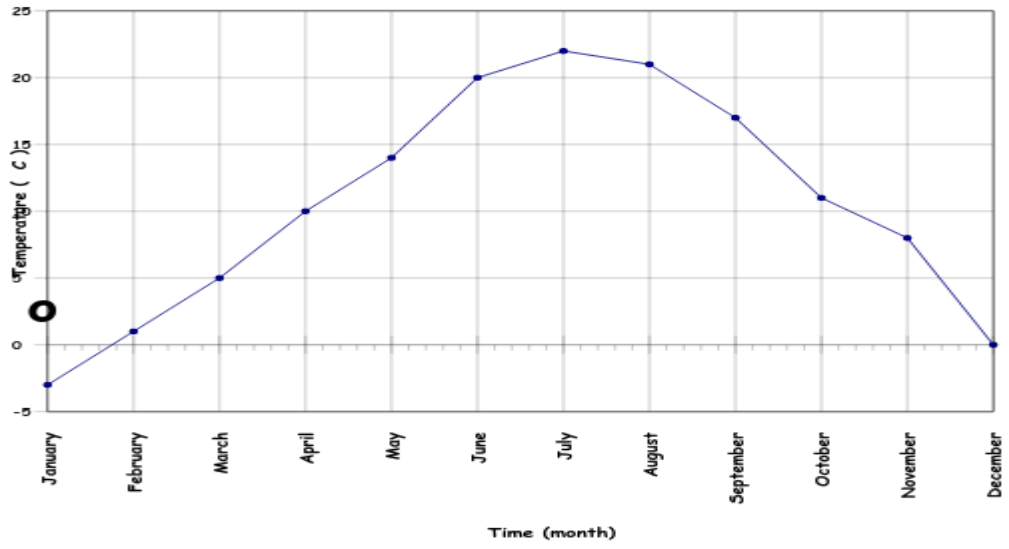
6. How do you determine the volume of a small rock using a graduated cylinder?



1. fill graduated water with cylinder until it is about half full-measure initial volume
2. drop in rock-measure new volume
3. subtract the initial volume from the new volume to get the volume of the rock

Graphing:

7. Use the graph to answer the following questions.



What is the independent variable? **time (month) because it is on the x-axis**

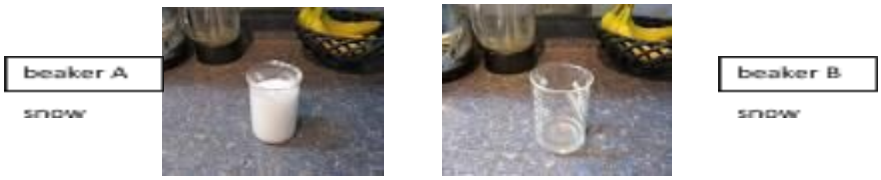
What is the dependent variable? **temperature (ºC) because it is on the y-axis**

What month is the temperature the highest? **July**

8. Complete the data table below using the information from the graph above.

Time (month)	**Temperature (degrees Celsius)**
January	**-3**
February	1.5
March	**5**
April	10

Experimental Design/ Scientific method:



9. There is 3 cm of snow in beaker A and 3 mL of water in beaker B. The beakers were observed for 15 minutes at room temperature.

What would be a qualitative observation that could be made?

examples: the snow is white; the snow is cold; there is less water than snow

What would be a quantitative observation that could be made?

examples: 3 cm of snow is in beaker A; 3 mL of water is in beaker B

10. Sally painted the toes on her right foot with 4 different kinds of red nail polish. Her 5th toe was left unpainted. She wore the polishes for 1 week and recorded the amount of chipping on each nail. The data is in the table below.

Nail polish brand	Amount of chipping (area in cm^3)
1	1.4
2	1.0
3	0.8
4	2.0
No polish	0

What is the independent variable? **the kind of red nail polish because it is being tested**

What is the dependent variable? **the amount of chipping because it is being measured**

What are some constants (2)? **the polish was checked in one week for all; used the right foot**

What is the control? **the nail that was unpainted because the other nails were compared to that**

Cells, Genes and DNA:

11. What are the 3 parts of Cell Theory?
    a. **all cells come from preexisting cells**
    b. **cells are the basic unit of structure and organization of living things**
    c. **all living things are made of one or more cells**

12. Put the following terms in order from **smallest to largest.**

Nucleus Cell Gene DNA Chromosome

Gene → DNA → Chromosome → Nucleus → Cell

cell -> tissue -> organ -> organ system -> organism

Cell Organelles

13. Match the structure with its function using the corresponding letter from the bank.

__**R**_ Nucleus	P. storage
__**S**___Cell Wall	Q. create ATP from glucose
__**T**_ Cell Membrane	R. control center
__**Y**_ Cytoplasm	S. Strong outer boundary made of cellulose-rigid
__**Q**_ Mitochondria	T. Surrounds both plant and animal cells; inside cell wall of plant cells
__**U**_ Chloroplast	U. makes glucose: photosynthesis occurs there
_ **V**_ Ribosome	V. makes proteins
__**P**_Vacuole	Y. Jelly-like cell filling

14. What are the differences between plant and animal cell organelles?

ONLY PLANT CELLS HAVE:

chloroplasts cell wall large central vacuole