Science Second Semester Study Pack

January- February 2020

Biology Vocabulary

_____- a process where carbon dioxide, water, and salts are converted into carbohydrates by plants using sunlight and chlorophyll.

_____- organ of plant that typically lies below surface.

_____- transports water, minerals, and foods to other parts of plants.

_____- flat green part from the stem, where photosynthesis takes place.

_____- provides protection for plant.

_____- tissue made of many chloroplasts.

_____- lower layer of tissue with fewer chloroplasts.

_____- microscopic openings in leaves, site of exchange of gases.

_____- control excessive water loss.

_____- the practice of farming or growing crops or raising animals.

_____- a destructive insect or animal that attacks crops.

_____- a substance used for destroying pests.

_____- a substance added to the soil to increase fertility.

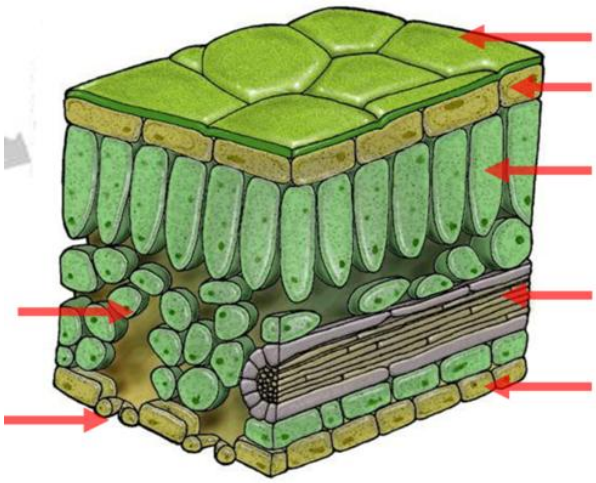
_____- a substance added needed by plants to increase fertility.

_____- choosing parents with particular characteristics to breed together and produce offspring with more desirable characteristics.

_____**(GMO)**- food produced from plants or animals whose DNA has been altered through genetic engineering.

Biology Review

1. Using the vocabulary words above, label the parts of the leaf:



2. Write the **Word Equation** and **Chemical Equation** for photosynthesis.

    a. **Word Equation**: _____

    b. **Chemical Equation**: _____

3. On the lines below, discuss some the benefits of using pesticides and fertilizers on crops:

_____

_____

_____

4. What possible negative effects might there be from using pesticides and fertilizers on crops?

_____

_____

_____

5. What are the four main mineral salts needed for healthy functioning of a plant?

_____

_____

Electricity Vocabulary

_____- the flow or presence of electric charge.

_____- a basic property of subatomic particles such as Protons and Electrons. Electric Charge can be positive or negative.

_____- the difference between the electrical potential (possibility) between two points.

_____- a flow of negative charges (Electrons) from one place to another.

_____ (DC)- an electric current which travels only in one direction.

_____ (AC)- an electric current which alternates (changes) directions periodically (every once in a while).

_____- an arrangement of electrical components.

_____- a circuit in which the current flows in one direction with one continuous current.

_____- a circuit with branches where electric current splits along different, parallel, paths.

_____- are electrons that are not attached to any one particular molecule.

Units of Measurement

Hertz (Hz)- a unit of measurement for frequency.

Amperes(Amps)- a unit of measurement (A) for electric current.

Voltage (Volts)- the push that moves the electrons from one point to another. Without voltage, there is no electricity because there is no flow of electrons.

Electricity Review

1. In your own words, what is electricity?

_____
_____
_____

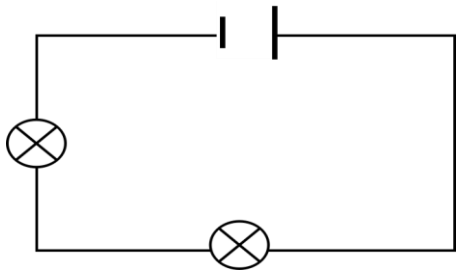
2. Describe one way in which a person interacts with electricity on a daily basis.

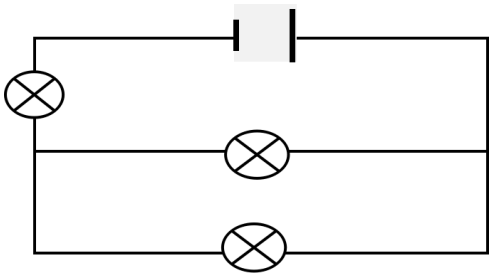
_____
_____
_____

3. **Use your notes from class to fill in the following Diagram**

Symbol	Symbol Name	Purpose
	Cell	
	Two-Cell Battery	
	Switch	
	Fuse	
	Resistor	
	Variable Resister	
	Bulb	
	Buzzer	
	Motor	
	Voltmeter	
	Ammeter	

4. Identify the circuits and label the parts of the diagram.





_____ _____

5. Give three examples of Magnetic and Non-Magnetic Elements.

Magnetic	Non-Magnetic

Acids and Alkalis Vocabulary

Acid - pH less than 7.

Alkali - (Base) pH greater than 7.

Neutral - pH of 7.

pH - Tells how acidic or alkaline a substance is.

Litmus- a test which is used to identify whether a solution is acidic or basic. Blue litmus paper turns red under acidic conditions and red litmus paper turns blue under basic or alkaline conditions.

Universal Indicator - Used to show the acidity of alkalinity of solutions.

Solution - A liquid mixture.

Corrosive - Causing damage to metal or other materials through a chemical process.

Irritant - A substance that causes slight inflammation or other discomfort to the body.

Acids and Alkalis Questions

Use Pages 82-86 to answer the following questions

6. Complete the following sentences:
   All solutions in water are either _____, _____, or _____. We can tell them apart by using special _____, which change colour depending on the type of solution. Often the indicator is one colour in an _____ and a different colour in an alkali.
7. Strong acids which can cause damage to metal or other materials are called _____.
8. What do we call the scale that measures how acidic or alkaline a solution is? _____
9. Give one reason that we might want to know the acidity or alkalinity of a solution.

_____
_____
_____