Supplemental Materials

Names: _____

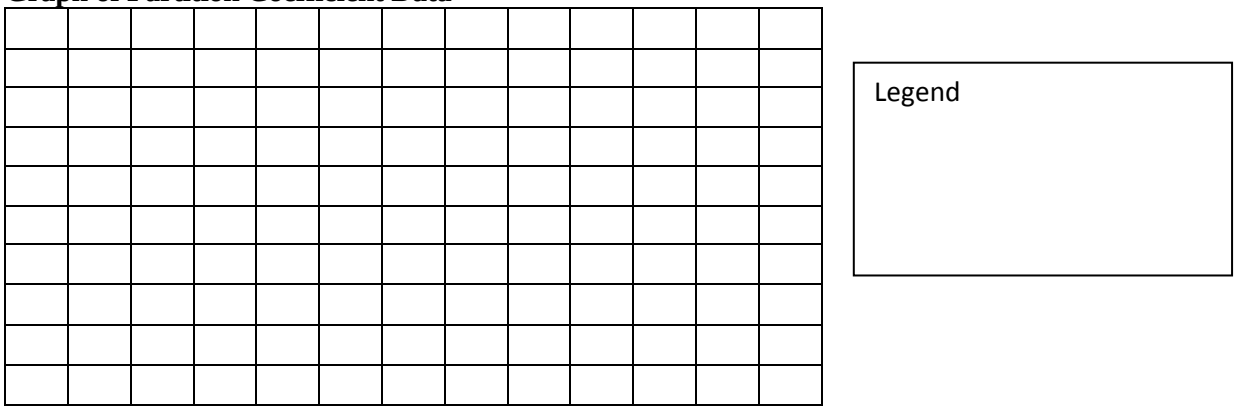
Experimental Observations - Describe initial colors and solutions. (i.e. cup B is darker red than cup C)

Red Gatorade dissolved in the water, but clumped in the oil.
In order of increasing darkness, A<B<C, where A is the lightest and C is the darkest
Oil formed pinker solutions, while water formed solutions more red.

Record your voltage readings in the following table, in mV

	Cup A	Cup B	Cup C
In Water			
In Oil			
In Oil and Water Bottom layer			
In Oil and Water Top layer			

Graph of Partition Coefficient Data



Experiment Discussions

Describe lines observed in graph above. (i.e. voltages in oil followed an upward/downward/flat trend)

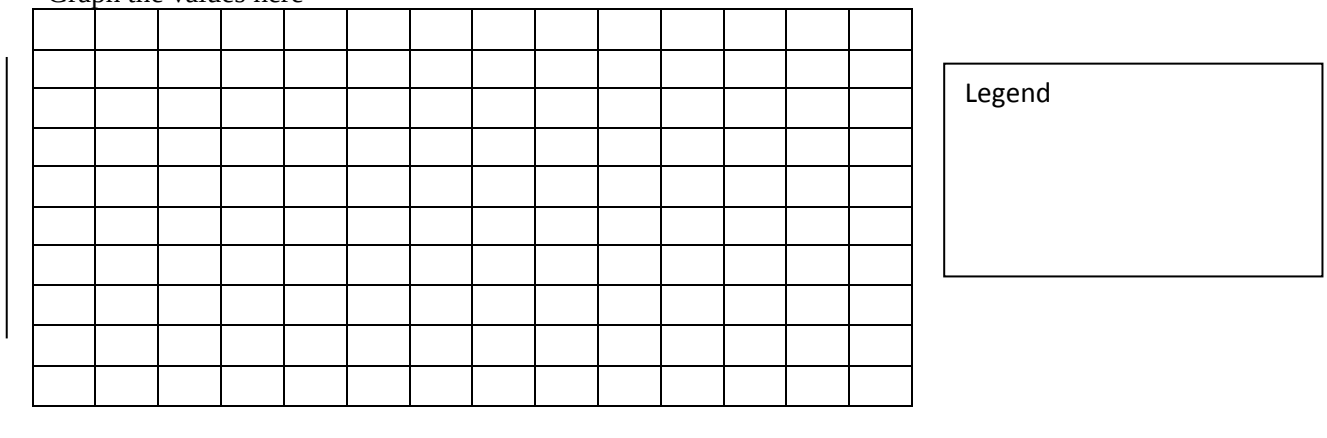
Does Gatorade dissolve in water or oil? What is the term for this property? (Hint: Which voltage readings were consistently higher?)

Names:__Sample Worksheet_____

Record your voltage readings in the following table, in mV.

	Cup A	Cup B	Cup C
In Water	*3.4 mV*	*4.5 mV*	*5.7 mV*
In Oil	*2.8 mV*	*2.7 mV*	*2.9 mV*
In Oil and Water top layer (oil)	*2.6 mV*	*2.8 mV*	*2.8 mV*
In Oil and Water Bottom layer (water)	*2.8 mV*	*4.7 mV*	*5.8 mV*

Graph the values here



Experiment Discussions

Describe lines observed in graph above (i.e. voltages in oil followed an upward/downward/flat trend)

The voltages of oil followed a straight line no matter how much Gatorade was added. Water followed an upward trend, more voltage to more Gatorade added.

Does Gatorade dissolve in water or oil? What is the term for this property? (Hint: Which voltage readings were consistently higher?)

Gatorade likes water more, and must be hydrophilic.

PRE-POSTTEST

Directions: Read each question then select or supply the most appropriate answer.

1. Oil and water will separate when mixed together.

   True or False (circle your answer)

2. Explain why or why not.

_____

_____

3. Why is oil harmful to the environment?
   A. It is deadly to animals.
   B. It is toxic when ingested.
   C. Contaminated fish are harmful for humans.
   D. All of the above.
4. A student was frying French Fries in the kitchen and a fire has started. Which of the following should she use to put it out? (circle your answer)
   A. Water
   B. More oil
   C. Baking Soda
   D. Milk
5. A substance that dissolves in water is: (circle your answer)
   A. Hydrophobic
   B. Hydrophilic
   C. Hydrogenic
   D. Hippophobia