Name_____ Period _____ Date _____

Simulated Mesocosm

A mesocosm is an experimental tool that is used to simulate the complex interrelationships between organisms in the natural world, in a smaller, more controlled situation.

A simple type of mesocosm, the Winogradsky column, can be found at the following website:
www.sumanasinc.com/webcontent/animations/content/winogradsky.html
If time allows look into this simulated experiment.

Virtual Ecosphere (a simulated mesocosm) will allow you to experiment with many factors that are important in an simulated ecosystem. Visit the simulation at: educypedia.karadimov.info/library/virtual_ecosphere.swf

1. Complete the virtual lab **at least** four times.
2. Each time, make note of the precise conditions you used in your simulation. A table maybe helpful in organizing the information about the volume and soil types; number and types of plants, and number and types of animals that you stated with
3. Record the results of your simulation by noting the **trends** (increase, decrease or no change) in carbon dioxide levels, oxygen levels, amount of sunlight, and biomass.

Simulation Questions:

1. Were you able to create a viable ecosystem in the four trials? Outline what relative amounts of each factor were needed in you most successful mesocosm.
2. Were your plant and animals survive the twelve-week simulation? Outline the two most important factors in the survival of your plants and animals.
3. Describe how observing the trends in the environmental conditions (CO_2, O_2, sunlight and biomass) help to show the stability of your mesocosm.