Name _____
Hr ___

Island Biogeography Virtual lab

Use the link below to access the virtual lab.

http://virtualbiologylab.org/ModelsHTML5/IslandBiogeography/IslandBiogeography.html

Background:

1) What are three factors that will determine how many different species are present on an island?

2) What type of climate would you expect to support more species on an island? Why?

3) Which types of organisms would most easily migrate to the island? How might an animal that cannot fly or swim very well get to the island?

Tutorial:

Become familiar with the tools to adjust your two islands. Make sure you know where to find the data tables.

Control: Create two identical islands and let the simulation run for 10 seconds. Pause and compare the results from the two islands

4) Are the numbers of organisms on each island identical? If not, what is your hypothesis as to why?

5) What happens if you allow it run for a longer period of time? What limits the total amount of individuals and species present on the island?

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Experiment 1: Which variable do you think will have the greatest impact on the number of organisms? Design your own series of experiments to investigate this.

- You can control the following variables:
  - Island size
  - Island distance
  - Habitat/climate
  - Taxon
  - Migration rate
  - Mortality rate
  - Time
- If you want to know the effect of one of these factors, how many variables should you change each time you run the experiment?

- What is your initial hypothesis? How do you intend to investigate it?

- Run your experiments and describe your results. Give hard data to support your conclusions.

- How could you ensure that your results were not just "lucky?" What would you need to do to convince skeptics?