

Student Activity Sheet 4A Name _____

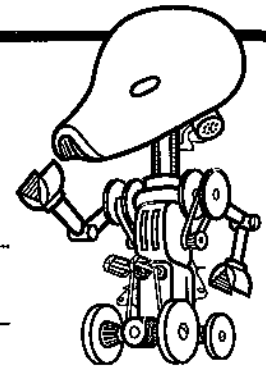
Researching Earth's Major Systems

Date: _____

Team of Scientists:

A) _____ **B)** _____

C) _____ **D)** _____



Equipment: Research materials (including science books, dictionaries, and computers)
Presentation materials (including poster board, markers, and video equipment as available)

A. Plan

Your group has been assigned one of the following Earth systems to research: the geosphere, hydrosphere, atmosphere, or biosphere. Your research tasks are to find out:

- what the parts or features of your sphere are.
- how your sphere interacts with the first of the other spheres.
- how your sphere interacts with the second of the other spheres.
- how your sphere interacts with the third of the other spheres.

Decide how you will divide these tasks so one or two different members of your group take on a different research task.

Brainstorm ways that you might combine your findings and present them to the class. Then decide how your group will present your information clearly and thoroughly so that your audience learns what the parts of your sphere are and how your sphere interacts with the three other spheres. Below, list who will research which item, and any materials you might need.

B. Research and Record

Conduct research to complete your task. Write below the facts you learn about your sphere.

F. Conclude

1. Name one feature of each of the four Earth systems. _____

2. Describe a way that two Earth systems interact. _____

3. Write one question you have about Earth's systems. _____

B. Predict

How might a terrarium model the interactions between Earth's major systems?

I think _____

because _____

C. Set Up

1. Add gravel to the bottom of the bottle to form a thin layer. Add potting soil on top of the gravel to form a thicker layer.
2. Choose plants to add to your terrarium. Use the spoon handle or your finger to make a hole in the soil. Place the roots of one plant in the hole and push soil around the roots to fill the rest of the hole. Repeat this step for the other plants you want to add.
3. Spray a small amount of water on the plants.
4. Place the top on the terrarium and tape it in place. Label the terrarium with your names.
5. Clean up your work area and wash your hands.



D. Observe and Record

Draw your terrarium. Add labels to your drawing to show the different parts and the sphere to which each part belongs. List the interactions represented by your terrarium.

When you've completed your drawing, put your terrarium in the sunny spot your teacher has selected.

A large grid for drawing and recording observations. The grid is approximately 20 columns wide and 25 rows high. The right side of the grid is partially obscured by the spiral binding of the notebook.

E. Conclude

1. Explain how the parts of your terrarium represent the four major Earth systems. _____

2. How do each of the four major Earth systems interact in your terrarium? Give specific examples.

3. What other things could you add to your terrarium to represent parts of Earth systems? _____

4. What is one question you still have about how Earth's systems interact? _____
