

Student Activity Sheet 6A Name _____

Earth's Ocean

Date:

Earth's oceans are actually one big body of water, but they have been divided into five named oceans. Label the map to identify Earth's oceans.

(Note: You will write some names in more than one place.)

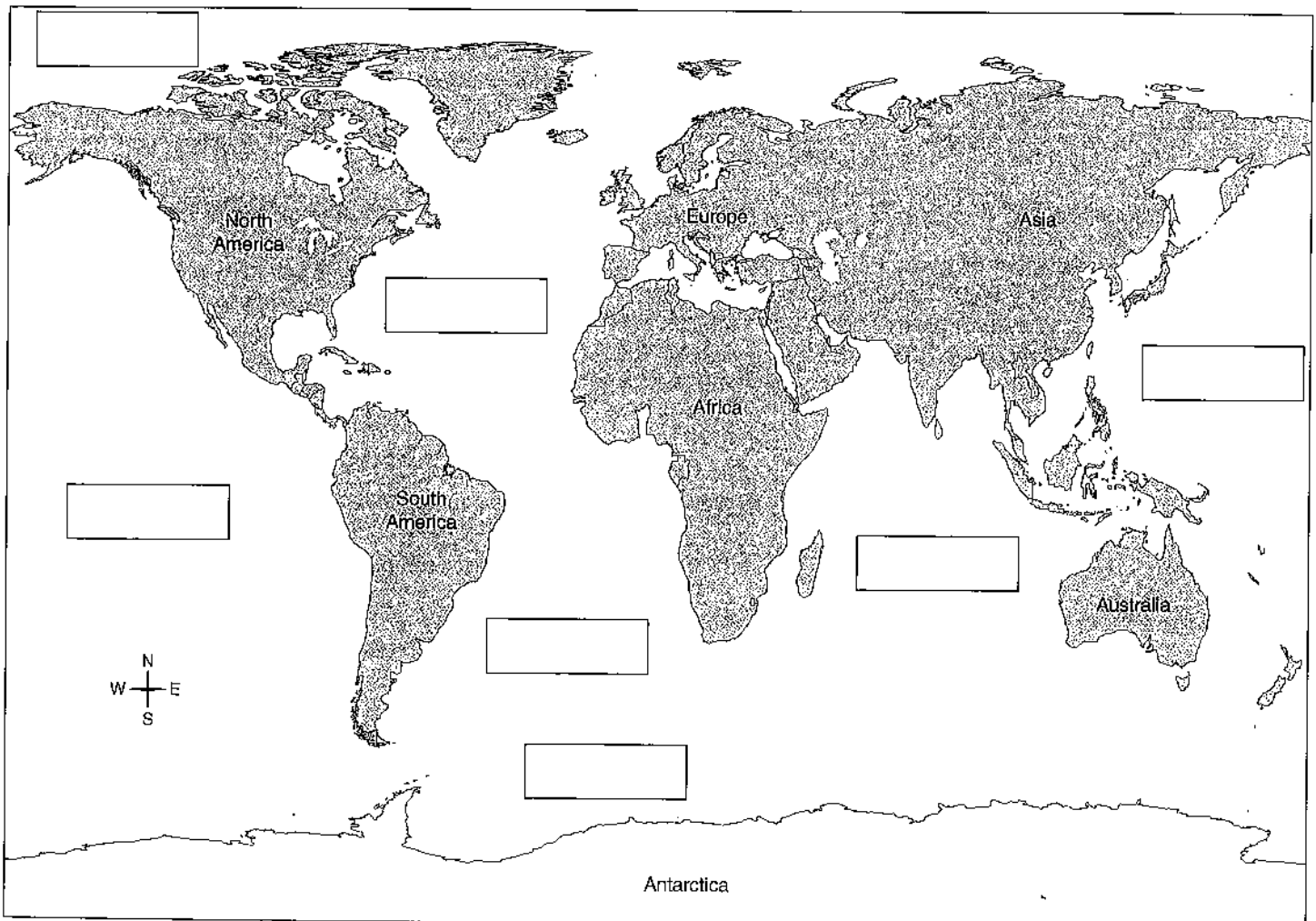
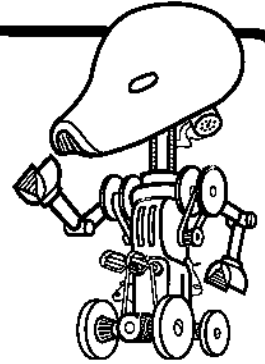
The Oceans: Indian Ocean

Arctic Ocean

Pacific Ocean

Southern Ocean

Atlantic Ocean



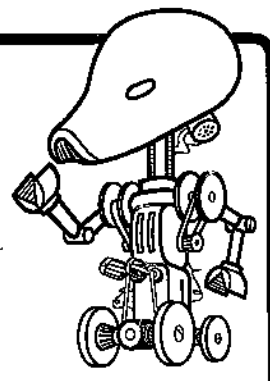
Making Waves

Date: _____

Team of Scientists: _____

A) _____ **B)** _____

| | | | |
|-------------------|-------------------|-----------------------|----------------|
| Equipment: | 1 plastic tank | 1 piece of cardboard, | 2 straws |
| | 1 gallon of water | approximately | 1 ruler, 30 cm |
| | 1 cork | 5 x 5 in | Paper towels |



A. Predict

How can you use the materials provided to make waves of different sizes?

I think _____

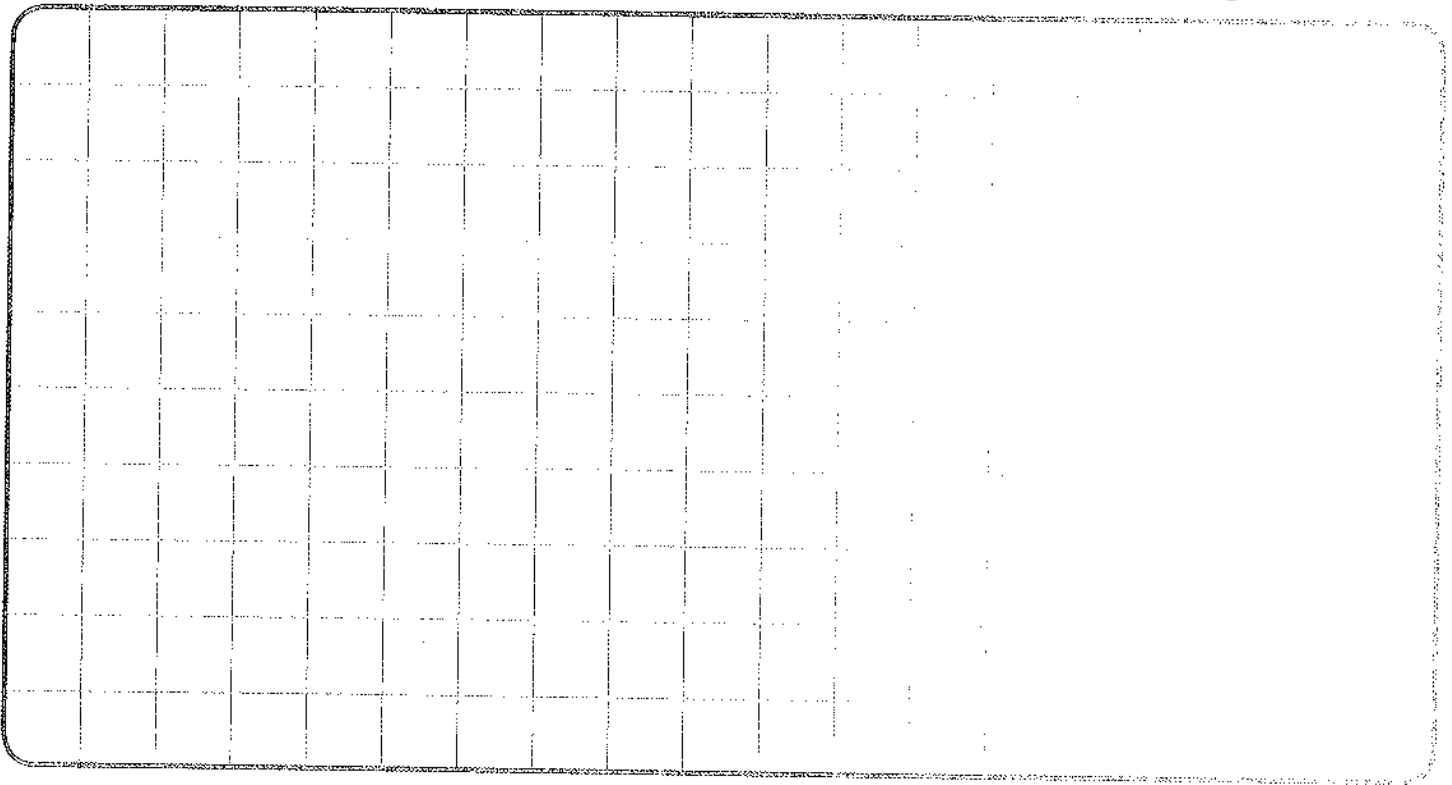
because _____

B. Experiment, Observe, and Record

1. Fill the tank about halfway with water. Use the materials to model how ocean waves form. Draw what you observe below.
2. Experiment to see if you can make waves that are different heights. Measure the wave heights. Draw your observations and label your drawings with the wave heights.

A large grid for drawing and recording observations. The grid consists of 15 columns and 20 rows of squares. The grid is intended for students to draw their observations of ocean waves and label them with wave heights.

3. Experiment to see if you can make waves that are different lengths from crest to crest. Measure the wavelengths. Draw your observations and label your drawings with the wavelengths.



C. Conclude

1. How is your model like and not like real ocean waves? _____

2. How did you make your waves higher? _____

3. Were you able to make your waves longer? If so, how? _____

4. Why do you think ocean waves vary in wavelength and height? _____

Student Activity Sheet 6C

Name _____

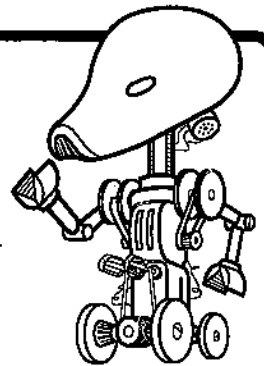
The Ocean Floor

Date:

Team of Scientists:

A) _____ **B)** _____

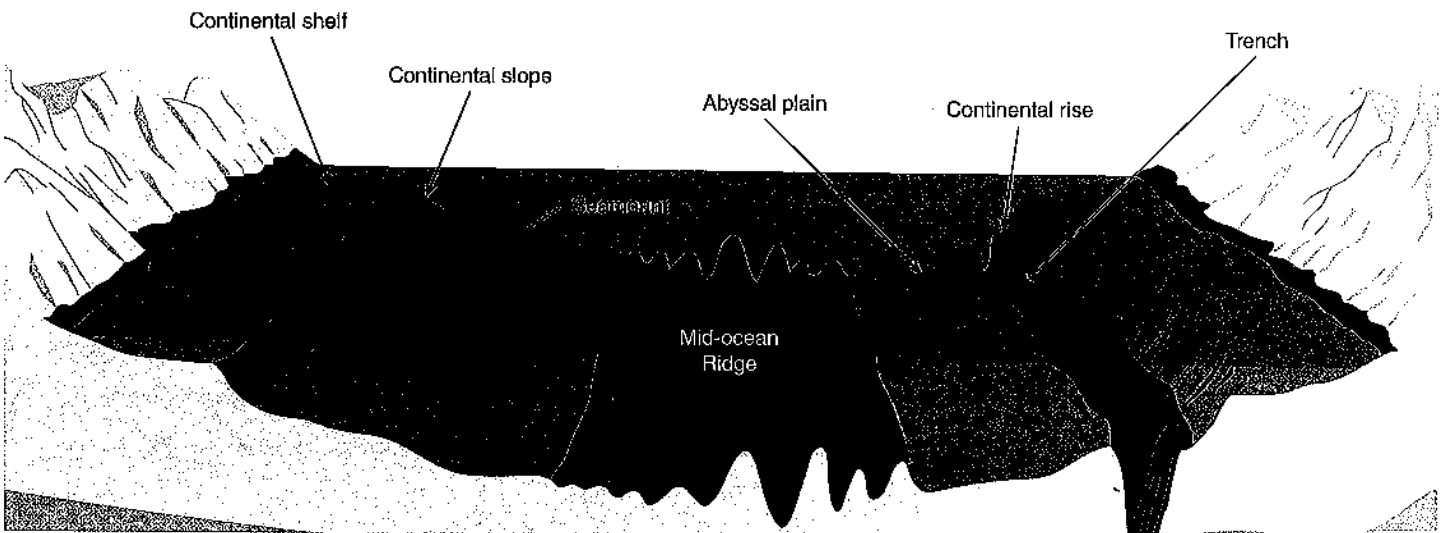
Equipment: 1 prepared shoebox 1 ruler, 30 cm Art supplies
1 unsharpened pencil 1 marker



A. Plan

Look at the diagram below. Decide which features of the ocean floor you will include in your model. List those features below. Your model should include a range of elevations.

Features to model: _____



B. Predict

How could you infer the shape of landforms deep below the ocean's surface?

I think _____

because _____

C. Model, Observe, and Record

1. Use the materials provided to make a model of part of the ocean floor inside a shoebox. Make sure your model represents a range of elevations.
2. Draw your model below. Label the types of landforms in your model.

A large grid for drawing a model of the ocean floor. The grid is 18 columns wide and 12 rows high, with rounded corners. It is intended for students to draw and label various ocean floor landforms.

3. Put the lid on the shoebox to cover your model. On the side of the box, write the names of your group members.

D. Observe and Record

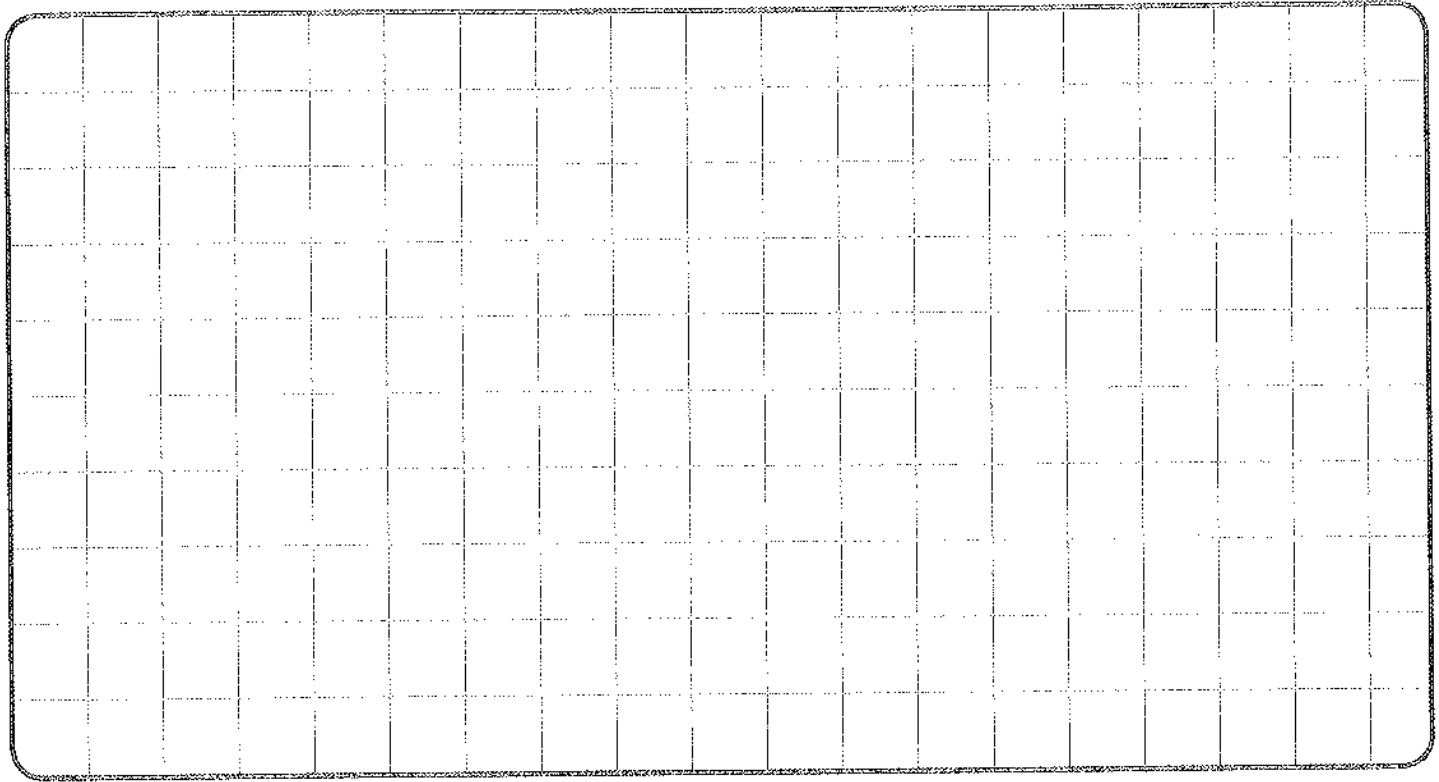
1. Switch shoeboxes with another group. Do not remove the lid.
2. Start at one end of the box. Gently poke the pencil through the slots in the box until you touch the ocean floor. You want only to detect where the model floor is, not to change it. Measure and record data in the table below.
3. Repeat Step 2 across all the slots in the box lid until you have collected data across the full length of each row.

| Front Slot (1) | | Middle Slot (2) | | Back Slot (3) | |
|---|---------------------------------|---|---------------------------------|---|---------------------------------|
| Distance From Right Edge of Box (cm) | Depth Below Surface (cm) | Distance From Right Edge of Box (cm) | Depth Below Surface (cm) | Distance From Right Edge of Box (cm) | Depth Below Surface (cm) |
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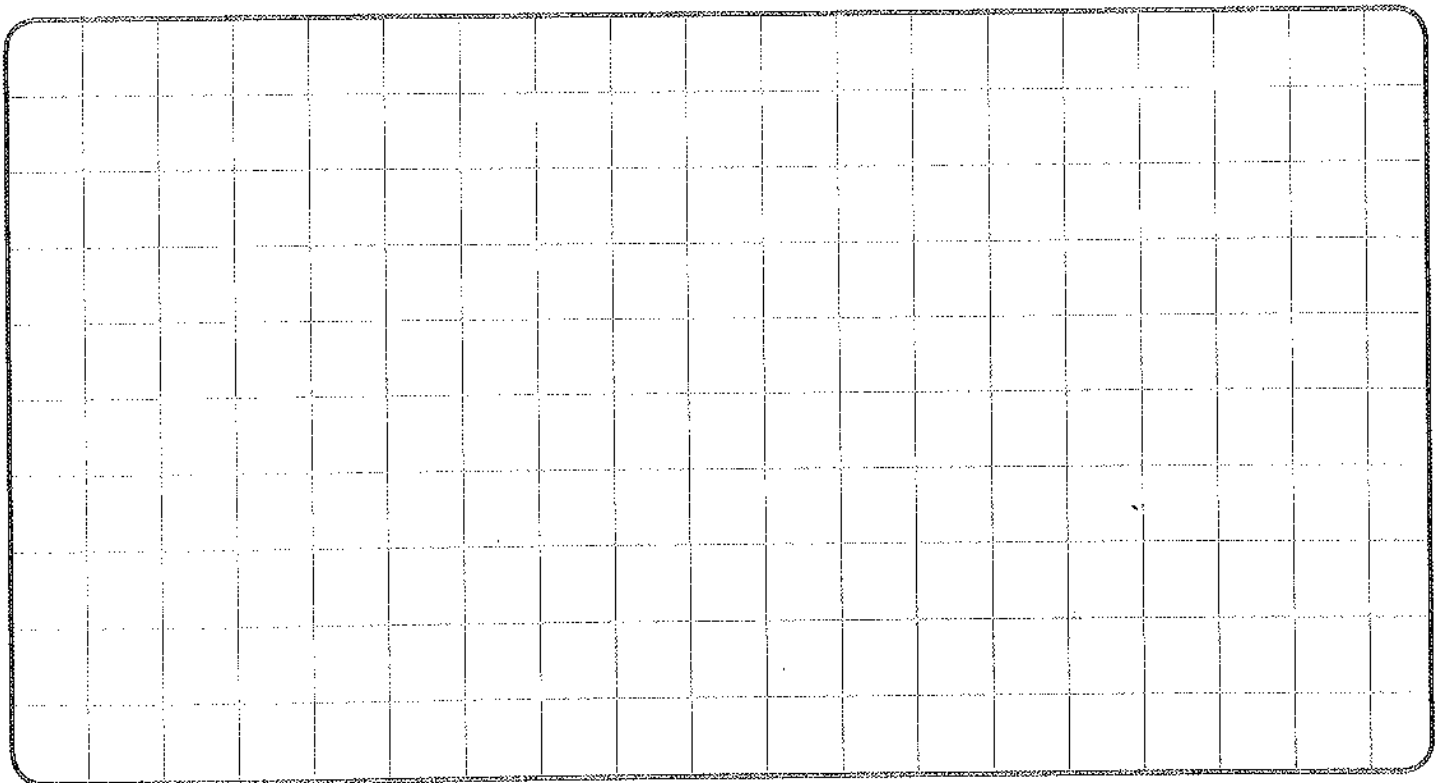
E. Graph and Interpret

1. Use your data to make three graphs. The graph lines should show the shape of the ocean floor in the slots 1, 2, and 3 of the box. Remember to label the axes and give your graphs titles.

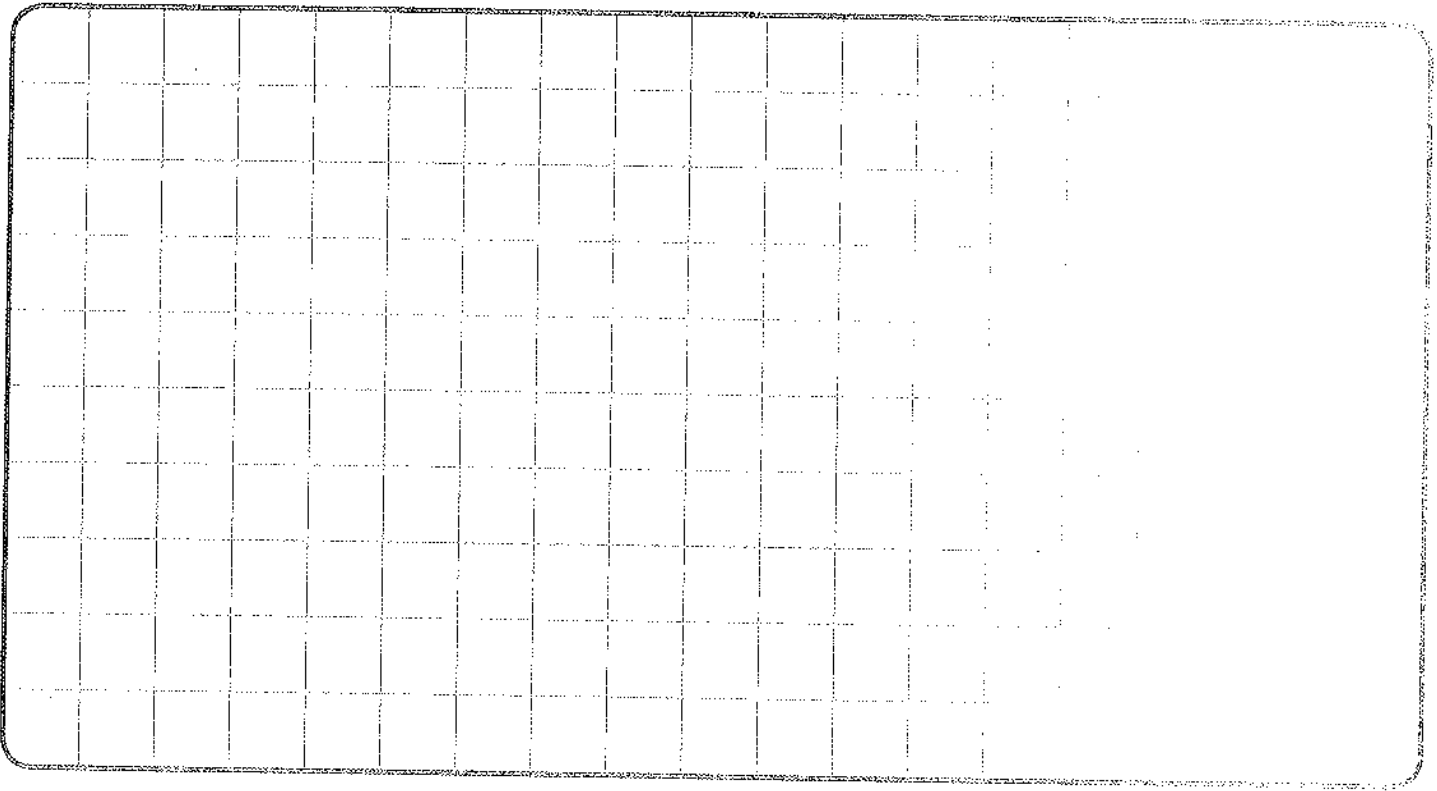
Title: _____



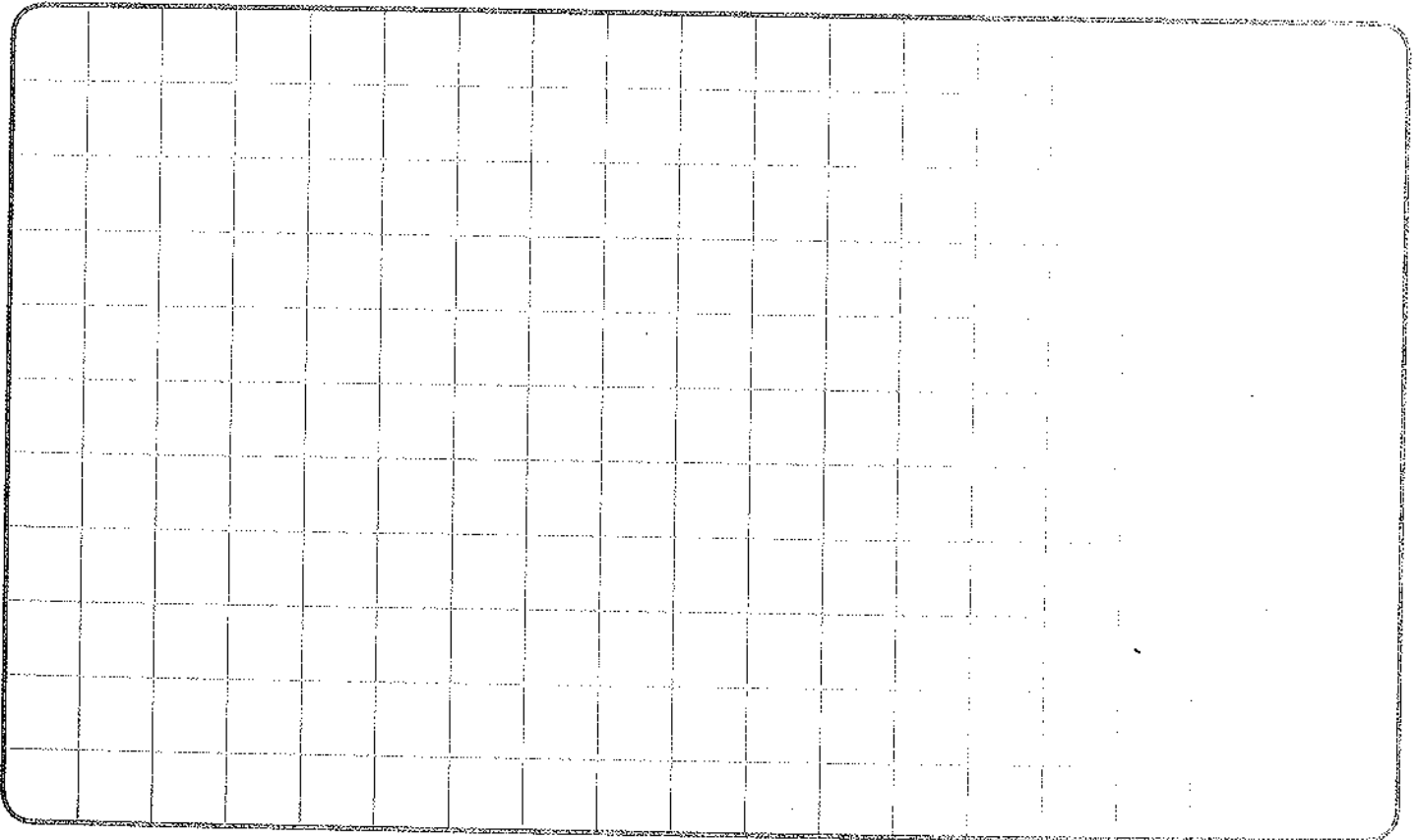
Title: _____



Title: _____



2. Using the information in your graphs, draw and label the types of landforms you think are represented in the model. Then remove the lid to see if you were correct.



F. Conclude

1. In your model, what do the clay and the box lid represent? _____

2. Compare your inferences about the other group's model with what you observed inside the box. Explain any differences. _____

3. How do you think early investigators gathered data about the shape of the ocean floor? Explain why they would or would not have been able to produce accurate maps. _____

4. How could you improve your method for graphing another group's ocean floor model? Describe what you could change to collect more detailed data about the features of the model ocean floor. _____

5. Write a question you have about the ocean floor. _____

Student Activity Sheet 6D

Name _____

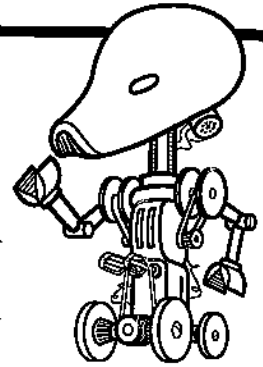
Ocean Life

Date: _____

Team of Scientists:

A) _____ **B)** _____

C) _____ **D)** _____



Equipment: 1 marker 1 sheet of chart paper Research materials

A. Plan

Circle the zone that your group was assigned:

Intertidal Zone

Neritic Zone

Open-Ocean Zone

Your research tasks are to find out:

- the physical characteristics of your ocean zone (such as location, depth, sunlight, temperature, and water pressure)
- some of the organisms that live in your ocean zone

Decide how you will divide these tasks among the members of your group. Write your ideas here.

B. Predict

What do you think you will learn in this investigation?

I think _____

because _____

C. Research and Record

Research your ocean zone to complete your task. Write what you learn below.

I am researching _____

I learned that _____

E. Communicate

As a group, present your completed zone chart to the other scientists in your class.

F. Ask Questions and Record

Listen actively to the other groups' presentations. Ask questions and take notes below or in your science notebook. Learn as much as you can about the other ocean zones.

G. Conclude

1. Contrast the physical characteristics of the three ocean zones.

2. Identify two organisms from each of the three ocean zones.

3. Write two questions you have about ocean zones or organisms.
