

Mapping Sea Level Rise

NAME: _____

DATE: _____

DIRECTIONS:

1. Sculpt a model island using a softball size amount of clay. Make sure your island has relief - differences between high and low elevations.
2. Place your island in the clear plastic tub.
3. Place transparency on top of tub. Tape transparency sheet to tub, Leaving room on one edge of tub to add water.
4. Draw a line on the transparency sheet marking the corner of the tub. You will be able to refer to this line to check that your transparency remains in the same place for each trial.
5. Measuring up from the bottom of the tub, mark six lines on the outside of the tub in 1 cm increments. Label each line 1-6.
6. Now you are ready for your first trial. Pour the colored water, which represents melted land ice around the island until the water level reaches the 1 cm mark. Take care not to get water on top of your island.
7. Check that the line drawn on the transparency is lined up with the corner of the container. Looking straight down into the container trace around the island on the transparency sheet where the water meets the island. Label this line 1.
8. Next, repeat this sequence by adding water until it reaches the 2 cm line. To ensure your line drawings are consistent, make sure your marker line on the transparency lines up with the corner of the tub. Trace the new outline of the island. Label this line 2.
9. Continue to map the sea level rise by repeating this sequence of adding water and tracing where the water meets the island at the 3 cm, 4 cm, 5 cm, and 6 cm marks. Label each line on your transparency 1-6.
10. After the sixth trial, remove the transparency. You have created a topographic map that represents sea level rise on your island with contour lines! You can use this map to make predictions about the effects of sea level rise. Turn this sheet over to page 2.

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Use your topographic map to investigate and make predictions about the effects of sea level rise.

1. What line (1-6) represents the highest sea level? Where is it located on your island?

2. Why would sea level rise be a concern for your island?

3. How could sea level rise affect communities that live far from the coast?

4. How would you use a topographic map to decide where to live?

Mapping Sea Level Rise: Test Yourself

DRAW YOUR OWN TOPOGRAPHIC MAP OF AN ISLAND.



1. Write "HIGH" on the layer with the highest elevation.
2. Write "LOW" on the layer with the lowest elevation.
3. Draw waves on the layer that would first be affected by sea level rise.
4. Draw a house on the layer on which you would choose to live.