

## Lab Sheet: Investigating Rising Sea Levels

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#### Materials needed

- modeling clay, or homemade modeling dough
- two identical clear plastic containers that can hold three cups of liquid
- cold tap water
- 15-17 similar size and shape ice cubes
- permanent marker
- measuring cups
- ruler with millimeter measurements
- lab notebook
- data sheet for making a line graph

Hypothesis – What do you think will happen?

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### Procedure

1. Press equal amounts of modelling clay into one side of each plastic container, making a smooth, flat surface representing land rising out of the ocean. It should not cover more than one-third of the bottom of the container.
2. In one container, place ice cubes on top of the clay to represent land ice. Make sure that the water will be able to drain into the rest of the container and is not trapped in the clay.
3. In the other container, place the same amount of ice cubes in the bottom of the container. This represents sea ice. Fill the container with cold water up to the level of clay, but not over it.
4. In the land ice container, pour water into the container, so that both containers have an equal depth of water.

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<p>Procedure</p>	<p>5. Record the depth of water in each container using a ruler; also record the time. You can also mark the water level with a permanent marker on the outside of the container.</p> <p>6. At regular time intervals, measure the water level in both containers and record it on your data sheet. Compare the water level with the marked line in the clay. Allow the ice in both tubs to melt completely. This may take some time.</p> <p>7. Once the ice has melted, create a line graph for both tubs.</p>
<p>Observations</p> <p>*Remember observations can be recorded with pictures, numbers and/or words!</p>	

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Conclusions	
Questions	<p>Answer the following questions to analyse the data and record your conclusions in the space provided.</p> <ul style="list-style-type: none"><li>· In which container did the water level rise more: sea ice or land ice?</li><li>· How does this compare to your prediction?</li></ul>

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Questions

- Why do you think this occurred?
- In what way is this related to global sea-level rise?
- Does the melting of Earth's glaciers contribute to sea-level rise? How about the melting of icebergs?