

## Exploring Water Bodies with Google Earth Assessment

Ocean tides are caused by the gravitational attraction of the moon and to a lesser extent the sun during Earth's orbital motions. In this activity, you will use Google Earth to analyze the shapes of four water bodies to examine if these would be good places to locate a tidal power plant.

Read **all** instructions on your handout and answer **each** question.

**Water Bodies Data Chart**

<b>Name of Water Body</b>	<b>Tidal Range (meters)</b>	<b>Sketch/Drawing of the Water Body</b>	<b>Shape of the Water Body</b> (for example, funnel-like, elongated, elliptical, hour-glass, circular, large and open)
Bay of Fundy	<b>17</b>		<b>Funnel-like and elongated</b>
Severn Bay	<b>15</b>		<b>Funnel-like</b>
Baltic Sea	<b>&lt;0.2</b>		<b>Large and open</b>
Gulf of Mexico	<b>&lt;1</b>		<b>Circular, large and open</b>

1. Which **two** water bodies are **good** locations for tidal power plants?

*Bay of Fundy and Severn Bay*

Why?

*They have high tidal ranges and are funnel-shaped.*

2. Which **two** water bodies are **not good** locations for tidal power plants?

*Baltic Sea and Gulf of Mexico*

Why?

*They have low tidal ranges and are not funnel-shaped.*

3. What is the relationship between tidal ranges and the shape of a water body?

*Tidal ranges are high in funnel-shaped water bodies and low in large and open water bodies.*

4. What features would the **best location** for placing a tidal power plant need?

*A location that has a high tidal range and a funnel-like shape.*