Name(s) \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Period \_\_\_\_\_\_\_\_\_\_ Date \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**How Does Sea Level in the Past Compare to Sea Level in the Present and Future?**

**Exploration 2: Projected Sea Level Rise**

The projections for temperature are based on the Representative Concentration Pathways. These same scenarios were used to predict future sea level rise. Use the figure below to complete the table.

*Image Credit:* [*IPCC*](http://www.climatechange2013.org/images/figures/WGI_AR5_Fig13-27.jpg)

**Projected Sea Level (m) for Difference Scenarios**

|  |  |  |  |
| --- | --- | --- | --- |
|  | **2030** | **2060** | **2100** |
|  | **Meters** | **Feet** | **Meters** | **Feet** | **Meters** | **Feet** |
| **Low Scenario** |  |  |  |  |  |  |
| **High Scenario** |  |  |  |  |  |  |

Use the figure and table to answer the following questions.

1. Compare the two sea level rise projections.
	1. At approximately what year do the two scenarios diverge?
	2. Approximately how old will you be when this happens?
2. Compare the rate of sea level rise before 2000 to the projected rate of rise.
3. Do you think that sea level rise is the same all over the world? Go to the link at <http://tidesandcurrents.noaa.gov/sltrends/> and answer the following questions.
	1. What do the different colors of arrows indicate?
	2. What areas of North America show falling sea levels? Explain why you think this may be happening.
	3. What part of the United States has seen the greatest rise in sea level?
	4. Compare the rate of rise between Miami, Florida and Portsmouth, Virginia (near Norfolk, Virginia). Explain why you think there is a difference between these two places. (Hint: it is the opposite of what is occurring in Question b. above.)