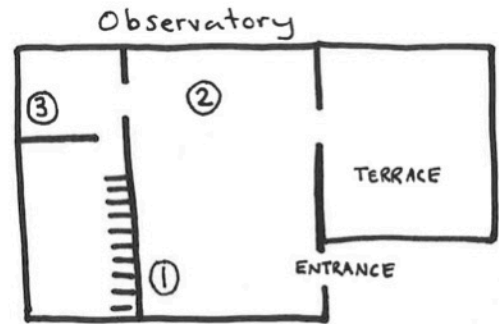


Sea Level Rise

Student Pathway

Start this journey in the Fisher Bay Observatory in Gallery 6

Explore the ways the San Francisco Bay area could be affected by sea level rise through investigating three different exhibits in the Fisher Bay Observatory.



Observatory Exhibit Map

Exhibit #1: Sea Level Rise Graph

(Located in the North West Corner of the Observatory)



This **Sea Level Rise Graph** displays changes of the mean sea level from 1897 through 2013. These measurements were taken near the Golden Gate Bridge.



To Notice

Pick two high points in one section of graph, compare them to two other high points. How do they differ?

What is the graph showing us?

Why the Rise?

Humans burning fossil fuels is increasing the amount of heat trapping gases in our atmosphere, making our planet hotter.

Our oceans are rising due to **thermal expansion** and **melting land ice**.



Going Further

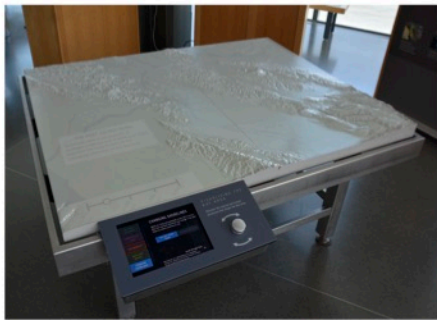
Scientists predict that the San Francisco Bay could increase up to 5 feet in the next 85 years.

Take a look outside our Observatory windows. With an extra 5 feet of water on our coast line, what do you think could be affected?

Draw your predictions:

Exhibit #2: Visualizing the Bay Area

(Located in the North East Side of the Observatory)



Visualizing the Bay Area is a 3D landscape of the San Francisco Bay Area with data images layered on the surface.

Using the touch screen, select the **Changing Shorelines** setting on the touch screen. Press “The Next 100 Years”.



To Notice

Choose a place on the model to observe while you use the knob to scroll between at 2 foot and 6 foot sea rise.

Can you find the city you live in?

Beaches you visit?

Freeways or airports you use?



Going Further

How do you imagine those places could be affected by sea level rise?

How could we protect or adapt these places to sea level rise?

Exhibit #3: Native Oyster Colony

(Located in the North East Room of the Observatory)



This **Native Oyster Colony** contains Olympia Oysters and Eelgrass, both native species to the San Francisco Bay.

As the sea level rises, flooding and coastal erosion from storm waves will be more common. Local projects are reinforcing parts of our shoreline by growing reefs of these oysters with eelgrass.

These reefs act as a physical barrier that reduces the destructive impacts of surging waves on our shorelines.



To Notice

Take a look at the photos of these oyster reefs on the information panel next to this exhibit.

Have you seen anything that looks similar to these reefs?

Imagine there is a concrete seawall to protect against waves instead of oyster reefs. What are some differences between these two options?



Going Further

Think about your day today, from when you woke up to where you are standing right now.

Throughout your day, what activities did you participate in that used fuel, electricity, or gas? Can you think of ways to minimize your usage of these fossil fuels?

Share with a partner.