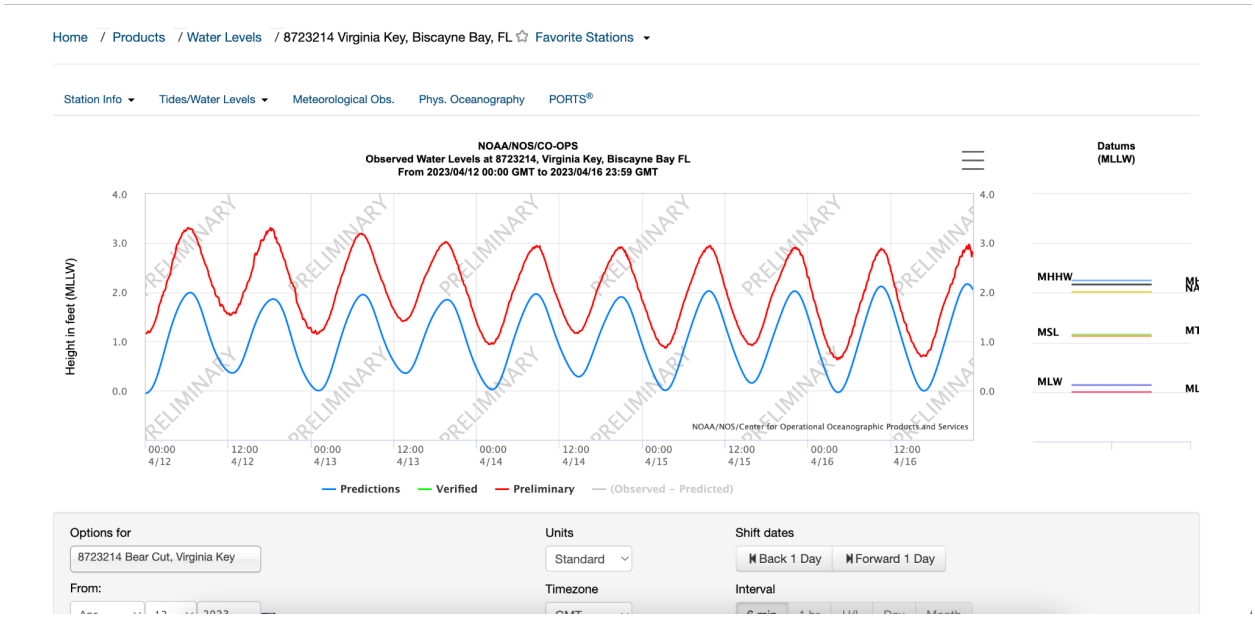
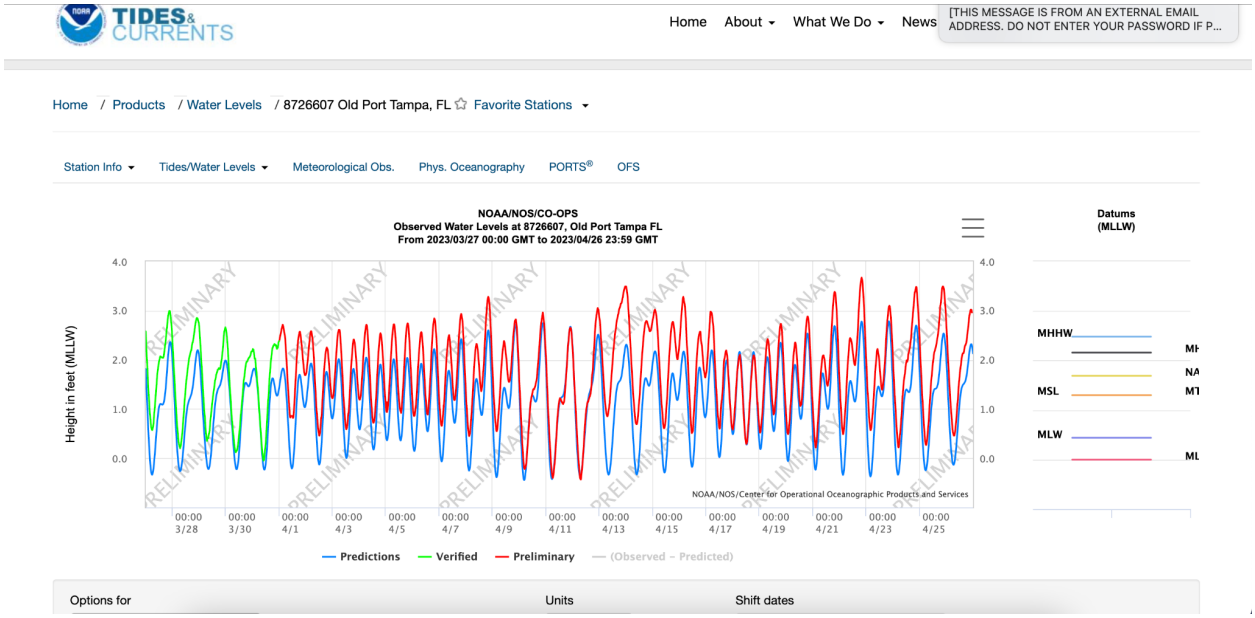
I chose to do one of the NOAA Data In the Classroom Modules titled “Sea Level”. This module was designed around the global sea level rise and how water levels are monitored and measured. I found this online mini lab to be very entertaining and engaging with content ranging from graph interpretation, plotting information, and even parts where students can develop their own data investigations. One of the most engaging parts of this module was the interactive charts and data visuals. What I enjoyed most about NOAA’s module on sea level rise was the fact that each level begins with teaching the student about a concept, then asking the student to apply that knowledge via questions, graphs, or map interpretations. For example, on level 2, students are taught about sea surface height deviation. Since SSHD is calculated via satellites, students are then able to see satellite imagery of mapping of sea surface height deviation and are asked to interpret results. On Level 3, students are taught about tides and their relationship to local sea level. To drive home the concept, the lab provides a chart with visual representation of the rise and fall of tides during each moon phase. However, the most impactful level for me was Level 5, where students are able to design their own investigation. This level begins by allowing students to select a place near the coast that they have a connection to (i.e. somewhere they visited on a trip, somewhere close to home, somewhere they would like to go) and notice how global and local sea level rise could potentially affect these areas. This is such a difficult topic to teach children because it is frightening to think about losing your home/school/city to flooding, especially teaching in a coastal city in Florida where this phenomenon is very real. I do feel like a student being able to see a sea level rise simulation of a place that they have a connection to creates a personal connection, which is what I feel NOAA was attempting to do with this lab.

Overall, I would highly recommend this online lab to my students and others. The value of having lessons alongside hands-on labs would make this an ideal addition to a curriculum.


Home / Products / Water Levels / 8723214 Virginia Key, Biscayne Bay, FL Favorite Stations
Station Info
Tides/Water Levels
Meteorological Obs.
Phys. Oceanography
PORTS®
NOAA/NOS/CO-OPS
Observed Water Levels at 8723214, Virginia Key, Biscayne Bay FL
From 2023/04/12 00:00 GMT to 2023/04/16 23:59 GMT
Height in feet (MLLW)
PRELIMINARY
NOAA/NOS/Center for Operational Oceanographic Products and Services
Datums (MLLW)
MHHW
MSL
MLW
Predictions
Verified
Preliminary
(Observed – Predicted)
Options for
8723214 Bear Cut, Virginia Key
From:
Units
Standard
Timezone
Shift dates
Back 1 Day
Forward 1 Day
Interval


Station Info
Tides/Water Levels
Meteorological Obs.
Phys. Oceanography
PORTS®
OFS
NOAA/NOS/CO-OPS
Observed Water Levels at 8536110, Cape May NJ
From 2016/05/01 00:00 GMT to 2016/05/31 23:59 GMT
Height in feet (MLLW)
Monday, May 30 2016, 21:18 GMT
Verified: 4.79ft.
NOAA/NOS/Center for Operational Oceanographic Products and Services
Datums (MLLW)
MHHW
MSL
MLW
Predictions
Verified
Preliminary
(Observed – Predicted)
Options for
8536110 Cape May, ferry ter…
From:
May
1
2016
To:
Units
Standard
Timezone
GMT
Datum
Shift dates
Back 1 Day
Forward 1 Day
Interval
6 min
1 hr
H/L
Day
Month
Update


TIDES & CURRENTS
Home
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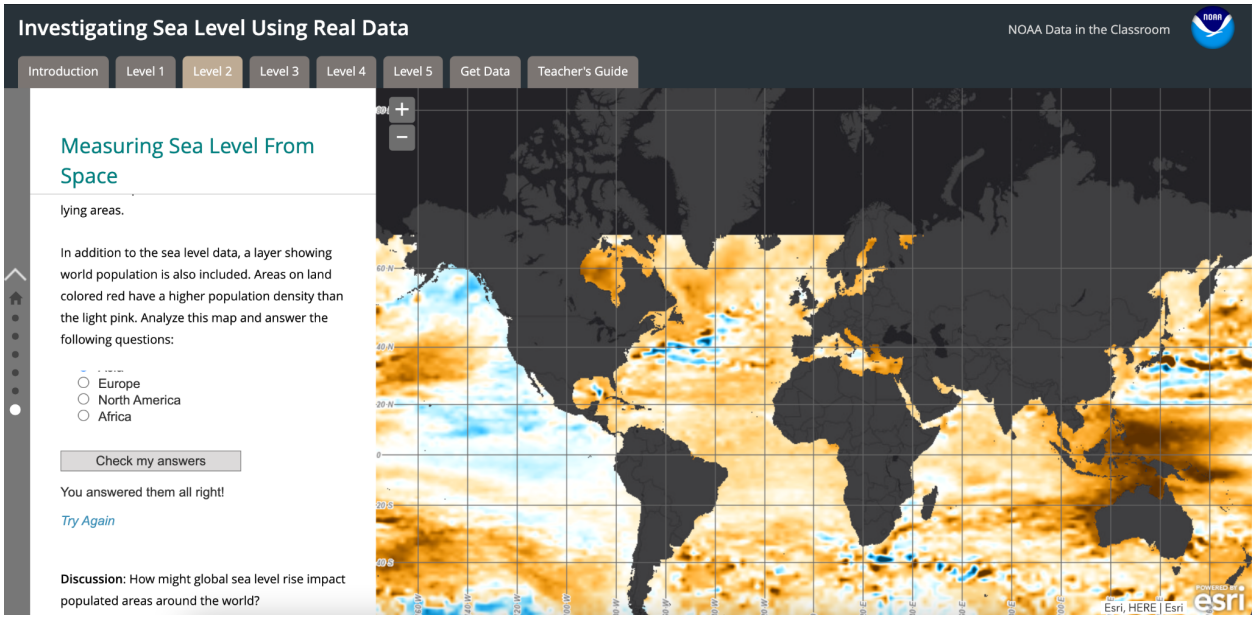
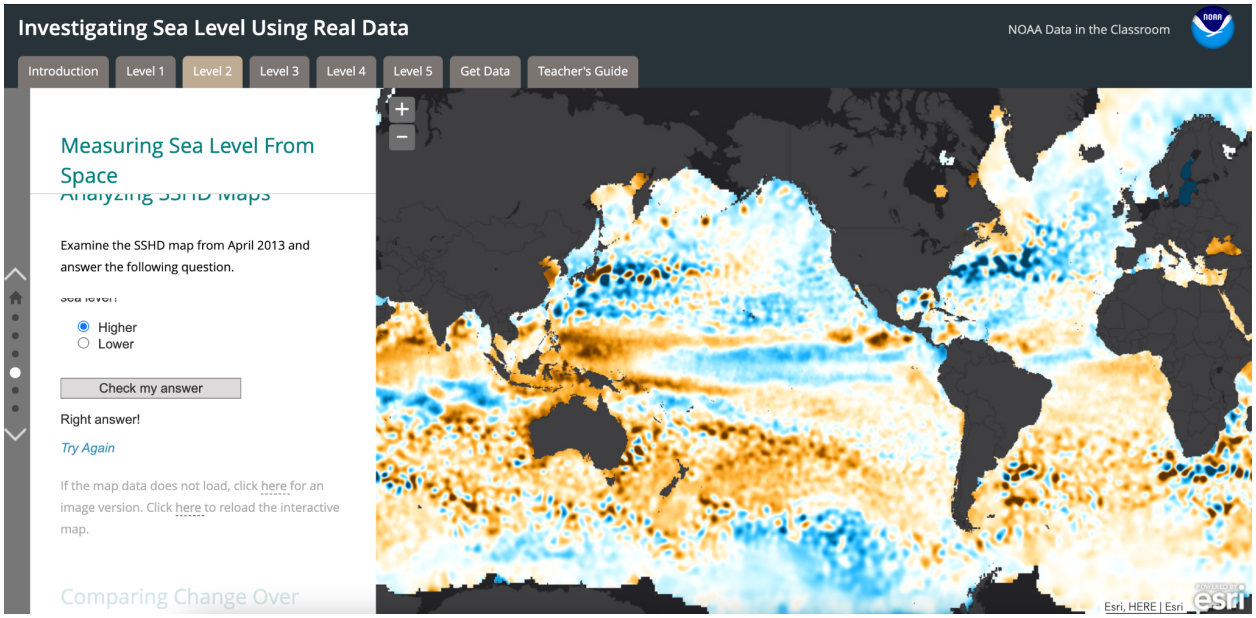
[THIS MESSAGE IS FROM AN EXTERNAL EMAIL ADDRESS. DO NOT ENTER YOUR PASSWORD IF P...
Home / Products / Water Levels / 8726607 Old Port Tampa, FL Favorite Stations
Station Info
Tides/Water Levels
Meteorological Obs.
Phys. Oceanography
PORTS®
OFS
NOAA/NOS/CO-OPS
Observed Water Levels at 8726607, Old Port Tampa FL
From 2023/03/27 00:00 GMT to 2023/04/26 23:59 GMT
Height in feet (MLLW)
NOAA/NOS/Center for Operational Oceanographic Products and Services
Datums (MLLW)
MHHW
MSL
MLW
Predictions
Verified
Preliminary
(Observed – Predicted)
Options for
Units
Shift dates


Investigating Sea Level Using Real Data
NOAA Data in the Classroom
Introduction
Level 1
Level 2
Level 3
Level 4
Level 5
Get Data
Teacher's Guide
Measuring Sea Level From Space
lying areas.
In addition to the sea level data, a layer showing world population is also included. Areas on land colored red have a higher population density than the light pink. Analyze this map and answer the following questions:
Europe
North America
Africa
Check my answers
You answered them all right!
Try Again
Discussion: How might global sea level rise impact populated areas around the world?
Esri, HERE | Esri


Investigating Sea Level Using Real Data
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Level 5
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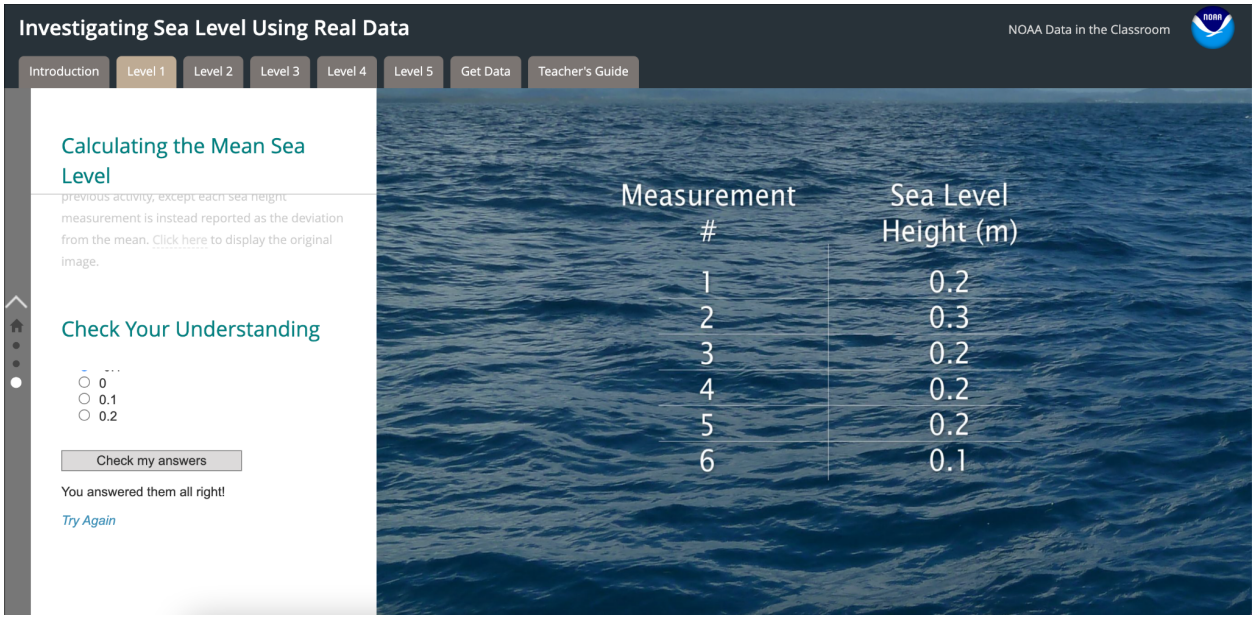
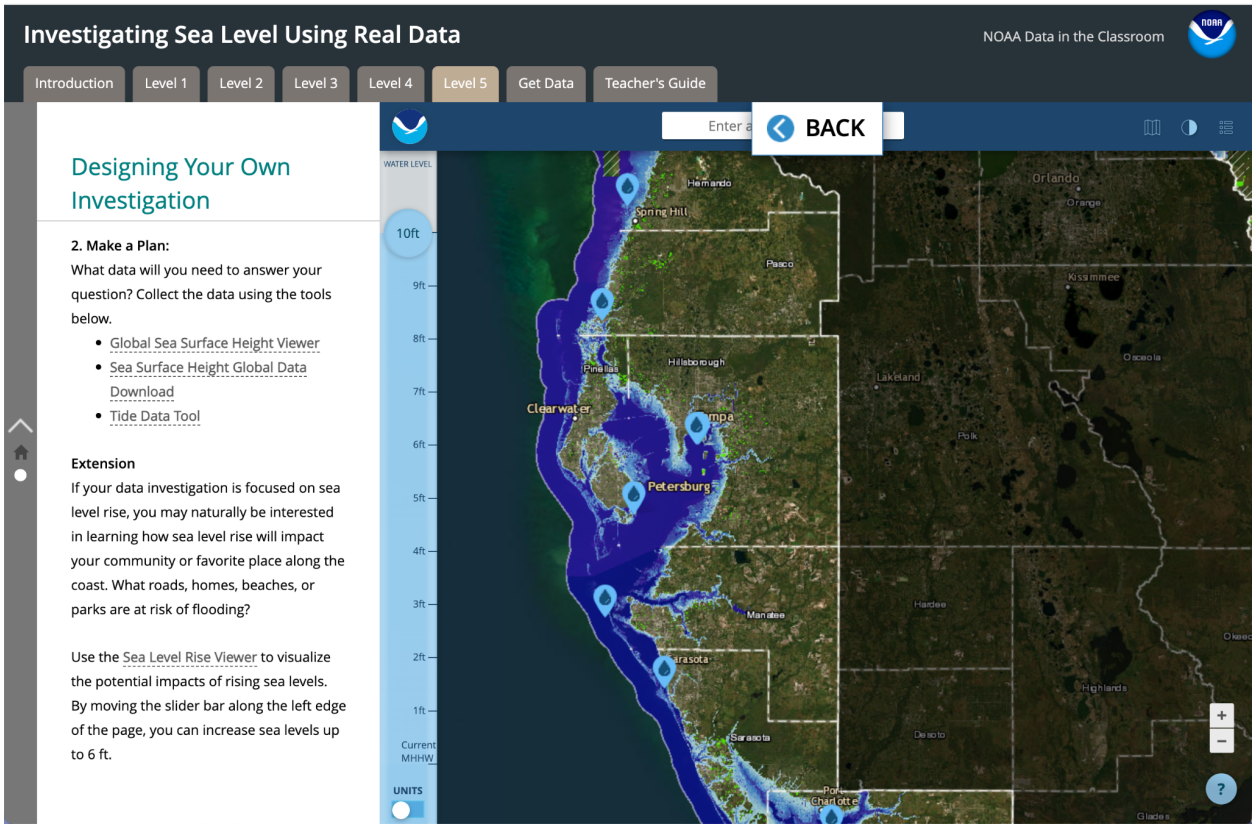
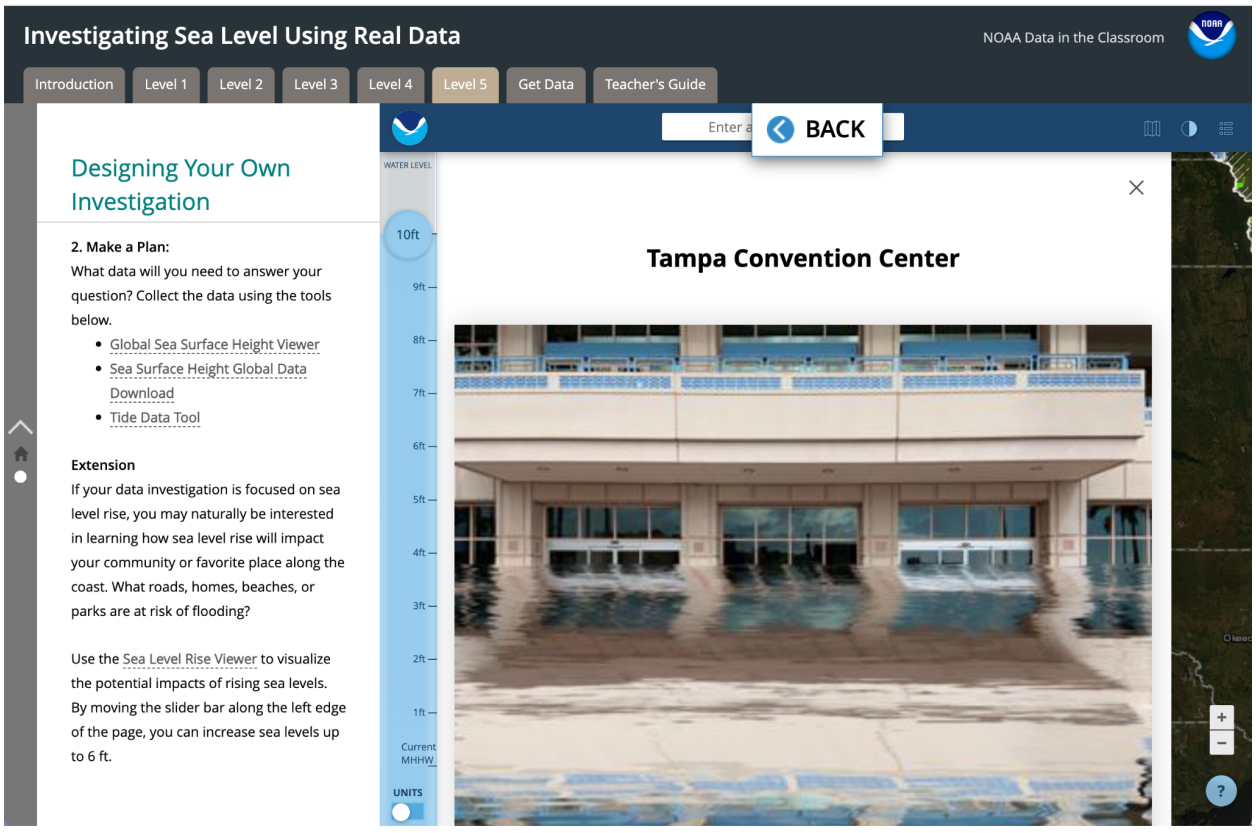
Teacher's Guide
Measuring Sea Level From Space
Examine the SSHD map from April 2013 and answer the following question.
Higher
Lower
Check my answer
Right answer!
Try Again
If the map data does not load, click here for an image version. Click here to reload the interactive map.
Comparing Change Over
Esri, HERE | Esri


Investigating Sea Level Using Real Data
NOAA Data in the Classroom
Introduction
Level 1
Level 2
Level 3
Level 4
Level 5
Get Data
Teacher's Guide
Calculating the Mean Sea Level
Click here to display the original image.
Check Your Understanding
0
0.1
0.2
Check my answers
You answered them all right!
Try Again
Measurement #
Sea Level Height (m)
1 0.2
2 0.3
3 0.2
4 0.2
5 0.2
6 0.1


Investigating Sea Level Using Real Data
NOAA Data in the Classroom
Introduction
Level 1
Level 2
Level 3
Level 4
Level 5
Get Data
Teacher's Guide
Designing Your Own Investigation
2. Make a Plan:
What data will you need to answer your question? Collect the data using the tools below.
Global Sea Surface Height Viewer
Sea Surface Height Global Data Download
Tide Data Tool
Extension
If your data investigation is focused on sea level rise, you may naturally be interested in learning how sea level rise will impact your community or favorite place along the coast. What roads, homes, beaches, or parks are at risk of flooding?
Use the Sea Level Rise Viewer to visualize the potential impacts of rising sea levels. By moving the slider bar along the left edge of the page, you can increase sea levels up to 6 ft.
BACK
WATER LEVEL
10ft
9ft
8ft
7ft
6ft
5ft
4ft
3ft
2ft
1ft
Current MHHW
UNITS
Hernando
Spring Hill
Pasco
Pinellas
Hillsborough
Clearwater
Petersburg
Manatee
Sarasota
Orlando
Orange
Kissimmee
Lakeland
Polk
Hardee
Highlands
Desoto
Glades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BACK
Tampa Convention Center
WATER LEVEL
10ft
9ft
8ft
7ft
6ft
5ft
4ft
3ft
2ft
1ft
Current MHHW
UNITS