



JUNIOR SAILOR

DRAW A NAUTICAL CHART!

A **nautical chart** is one of the most fundamental tools available to a sailor. It is a map that shows the layout of the shoreline and seafloor.

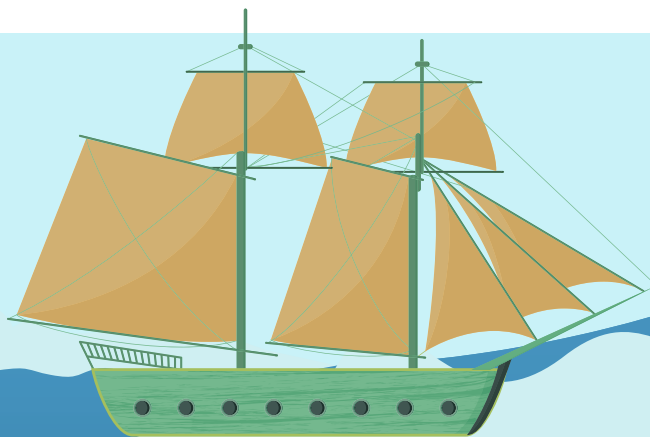
Nautical charts provide a visual picture of the water environment including the layout of the sea bottom, water depths, currents, locations of dangers to navigation (e.g., wrecks, rocks, sandbars), and information about aids to navigation (such as buoys, beacons, and dangerous objects).

These charts are essential for safe navigation!

Sailors use nautical charts to plan voyages and navigate ships safely.

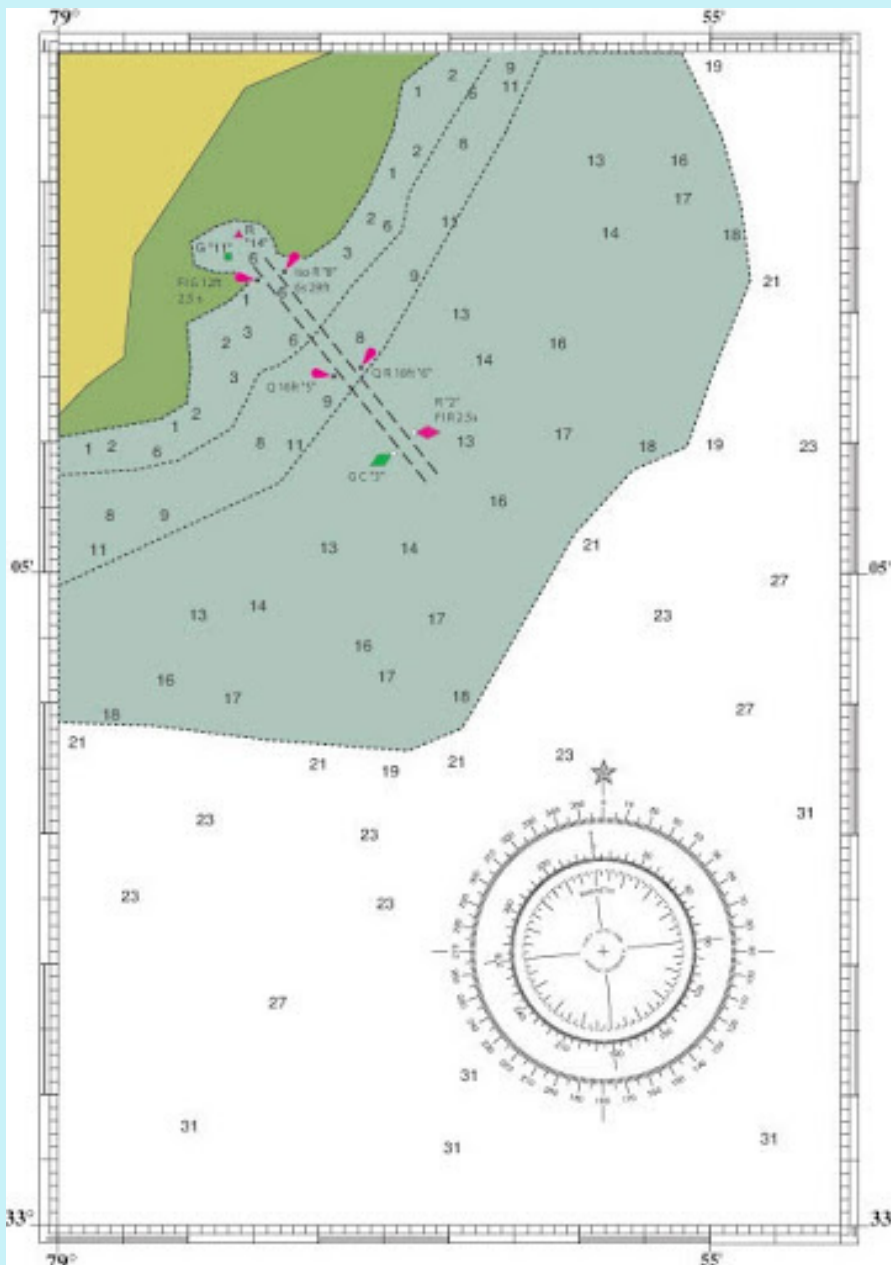
Since the mid-1830s, the U.S. Coast Survey has been the nation's nautical chart-maker. The National Oceanic and Atmospheric Administration (NOAA) Office of Coast Survey is still responsible for creating and maintaining all charts of U.S. coastal waters, the Great Lakes, and waters surrounding U.S. territories!

Let's look at an example of a nautical chart on the next page.



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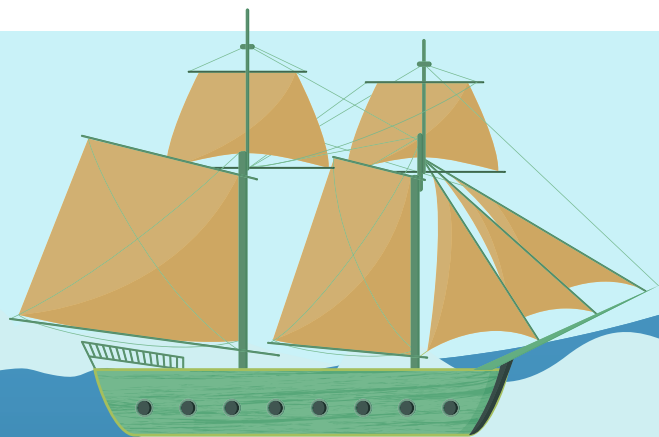


We can see from the chart, the small numbers in the water show the **water depth**, so ships know how deep the water is to be able to sail safely.

We can also see red and green shapes, which are **beacons** that help the sailors navigate into the harbor.

As you head towards the shore, **green beacons** are on the left side of the "road" and **red beacons** are on the right side of the "road."

Now, you get to make your OWN simple island nautical chart!



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MATERIALS:

- piece of paper
- pencil or pen
- crayons
- imagination!

STEP 1:

Give your nautical chart a name at the top, such as “Treasure Island” or “Pirate’s Hideaway”.

STEP 2:

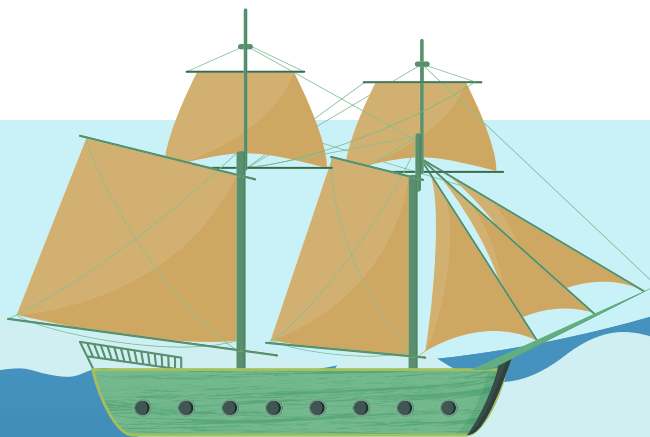
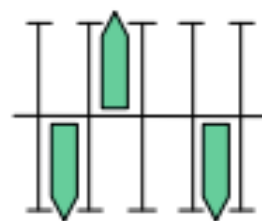
Draw an island somewhere on your chart. Do not make it too big; leave a large amount of sea around it to navigate through.

STEP 3:

Give your chart some water depths. Write down the depth of the sea at various locations. Make sure you do not make it too shallow (at least 5 meters!) or boats will not be able to sail through.

STEP 4:

Draw a harbor and a marina on the shore of the island. A harbor is a sheltered part of a body of water deep enough for ships to dock. In a harbor, boats are often parked at a marina or a pier, just like cars are parked in a parking lot.



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STEP 5:

Now that you have an island and harbors, indicate some obstacles (for example, stakes, large rocks, a shipwreck). Indicate the location of each obstacle by drawing a small empty circle, with a short label right next to it on the chart (for example, “rock pile”).

STEP 6:

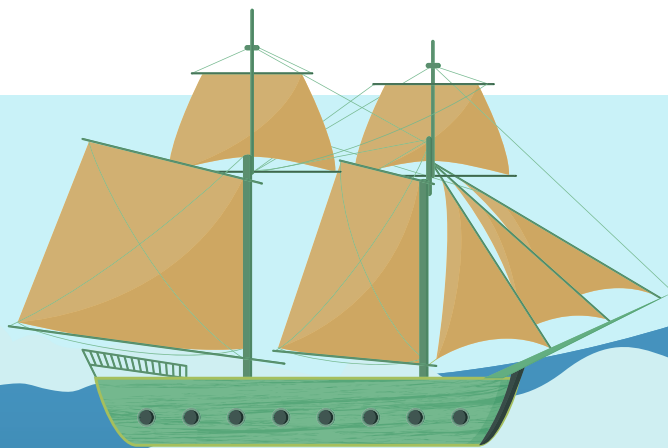
Find a path that a boat could safely travel to go to the harbor and marina. Do not put any obstacles in the path. Plan a safe path for a boat that sits 4 meters below the water surface by finding a path that is always at least 5 meters in depth.

STEP 7:

How will the sailor of your boat find its way to its marina? Use your green and red pencils to draw in the locations of beacons to help the sailor navigate into the harbor.

Remember, as you head towards the shore, green beacons are on the left side of the “road” and red beacons are on the right side of the “road.”

Did your ship make it safely into your island harbor?



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