**Ship’s Log**

**Cape Cod Catboat Crew Challenge: NAVIGATION**

Sailor’s name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

After exploring the websites and completing the Investigations in the Catboat Crew CATegory: NAVIGATION, answer the following. You can use words or diagrams.

**TOTAL POINTS:**

\_\_\_\_\_\_\_\_\_ out of 100

85-100pts 1st Mate

70-85pts Helmsman

55-70pts Deckhand

**WEBSITE, PODCAST, VIDEO**

1. List 3 examples of hazards or dangers to navigation. (5pts)

2. List 3 examples of aids to navigation (things that help keep mariners safe). (5pts)

3. On a nautical chart, shallow water is colored \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. Deep water is colored \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. The numbers on nautical charts are called sounding numbers. A sounding tells you\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_. (5pts)

4. Why would sound signals like fog horns, bells, gongs, and whistles be important to mariners? (10pts)

5. Draw the symbols for the following features on a nautical chart. (Hint: Answers can be found in the Scavenger Hunt in the Message in a Bottle website or U.S. Chart No. 1-link in Investigation for Navigation CATegory.) (10pts)

|  |  |
| --- | --- |
| Nautical Chart Feature | Draw It! |
| lighthouse |  |
| tower (can indicate a tower, spire, cupola) |  |
| buoy marks |  |
| submerged shipwreck |  |

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6. Dive Deeper! Choose one of the following ways that nautical charts can help people (besides navigating safely in a boat) and explain how they can be helpful. (15pts)

* Plan where to put oyster beds.
* Know where it is safe to anchor for the night.
* Where a harbor master should place a mooring (a mooring is a buoy fixed to the bottom of a body of water for the purpose of keeping a boat or other object from floating away).
* Know whether or not a large pier or dock should be built in a certain place.

**Ship’s Log : NAVIGATION page 3**

**INVESTIGATION**

Use NOAA Nautical Chart No. 13229/Side B for this Investigation. The link is on the Amazing Cape Cod Regatta website under the Catboat Crew CATegory: Navigation. Use the “+” button on the chart navigation on the left of the screen to zoom in to Hyannis Harbor and Lewis Bay (1st chart at top of page).

1. How many towers can you find? (A tower can be a tower, spire, or cupola.) \_\_\_\_\_\_\_\_\_ (5 pts)

2. Why would mariners want to know where these obvious landmarks are when they are travelling on the water? (10pts)

Submerged rocks that pose a threat to navigation are labeled “Rk” or “Rks” and are sometimes

named. Find the entrance to Hyannis Harbor and Lewis Bay. The shipping lane is shown by a

white strip.

3. How is the entrance to the harbor and the boundaries of the shipping lane marked? (5pts)

A) Sand bar B) Buoys C) Large signs

4. Name 4 large rocks that are hidden or exposed near the harbor entrance. (10pts)

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5. What do you think “The Spindle” is? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (10pts)

 What does the number 2 inside of The Spindle tell us? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (5pts)

6. Where is the submerged shipwreck located? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ (5pts)