## Ship's Log

## Cape Cod Catboat Crew Challenge: NAVIGATION

	Sailor's name:		
	exploring the websites and completing the Inv GATION, answer the following. You can use wo	-	ry:
WE	BSITE, PODCAST, VIDEO		
1.	List 3 examples of hazards or dangers to nav	igation.	
2.	List 3 examples of aids to navigation (things	that help keep mariners safe).	
3.	On a nautical chart, shallow water is colored	Deep wate	r is
	numbers. A sounding tells you		ling
4.	Why would sound signals like fog horns, bell mariners?	s, gongs, and whistles be important to	
5.	Draw the symbols for the following features found in the Scavenger Hunt in the Message i Investigation for Navigation CATegory.)	•	
	Nautical Chart Feature	Draw It!	
	lighthouse		
	tower (can indicate a tower, spire, cupola)		
	buoy marks		
	submerged shipwreck		

- 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.
  - 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.

## **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 ( $1^{st}$  chart at top of page).

1.	How many towers can you find? (A tower can be a tower, spire, or cupola.)	
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2.	Why would mariners want to know where these obvious landmarks are when they are travelling on the water?	
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?  A) Sand bar  B) Buoys  C) Large signs	
4.	Name 4 large rocks that are hidden or exposed near the harbor entrance.	
5.	What do you think "The Spindle" is?	
	What does the number 2 inside of The Spindle tell us?	
6.	Where is the submerged shipwreck located?	