Lost At Sea

Background:

After graduating, you and two of your classmates decide to embark on a sailing voyage. Being novices at long-distance sailing, you and your friends decide to tackle something that appears relatively simple. You decide that a round-trip across the Atlantic, starting in North America, is just the thing. You decide to leave from North Carolina, where your boat is being built.

As you embark on your journey, you also sign up to compete for the coveted Global Explorer's Prize (5 extra credit points for each team member). You will be competing against other teams of Buffalo State College sailors for this prestigious prize. The winning team will be the one that most accurately completes the journey, which will involve identifying your location, winds, currents, etc. at various waypoints during the voyage. You decide to prepare by digging out your old physical geography textbook and notes, a map of ocean currents, and a globe to help you out.

1. **How do you plan your route there and back, so that the prevailing ocean currents provide the most help? Which currents are these? Draw them and label them on the map on the last page of this handout.**

2. **You know that currents are driven by winds. What are the two major *winds* that drive the currents you will use in part 1?**

Getting across to England is a breeze – you can't believe how easy the trip was, and how quickly it all went by. Now you are ready to head back. You know the trip home will take longer…

You are back at sea, just entering the warmer climates to the south, when disaster strikes. Off the Canary Islands, your boat capsizes in a storm. Before she sinks, you have just enough time to grab the emergency kit

and jump into the inflatable lifeboat. Whew! But…now what??? The current is flowing westward; try as you might, you can't make the boat go east as you have no sail. So, you're off across the Atlantic again, although not exactly as you'd planned. This WILL be educational!

A few days later…you've been drifting rapidly, and you realize that you no longer know exactly where you are. You need to figure this out so that you can plan your food and water supplies, and so that you can know if you are likely to see land anytime soon. You'll have to rely on those rusty navigational skills.

3. **The Sun is directly overhead and your watch says that it's June 21. What's your approximate latitude? How do you know?**

4. **Now calculate your longitude. Your watch is still on London time, but you notice that when the Sun is directly overhead at your current position, your watch reads 1:30 p.m. You realize you can calculate your longitude. What is it?**

5. **From your map, you can see now that you are north of a group of islands at about 15ºN, 25ºW. If you miss these islands, your map of Atlantic Ocean currents suggests you might have a long trip ahead. What's the name of the island group?**

With a stiff breeze from the NE, you drift for another 2 weeks, but then the wind dies back. You start to experience frequent rain showers that help you capture fresh water. You seem to be moving west, although there's no strong wind. Oh @#%&!!, did you miss your islands? You bet…

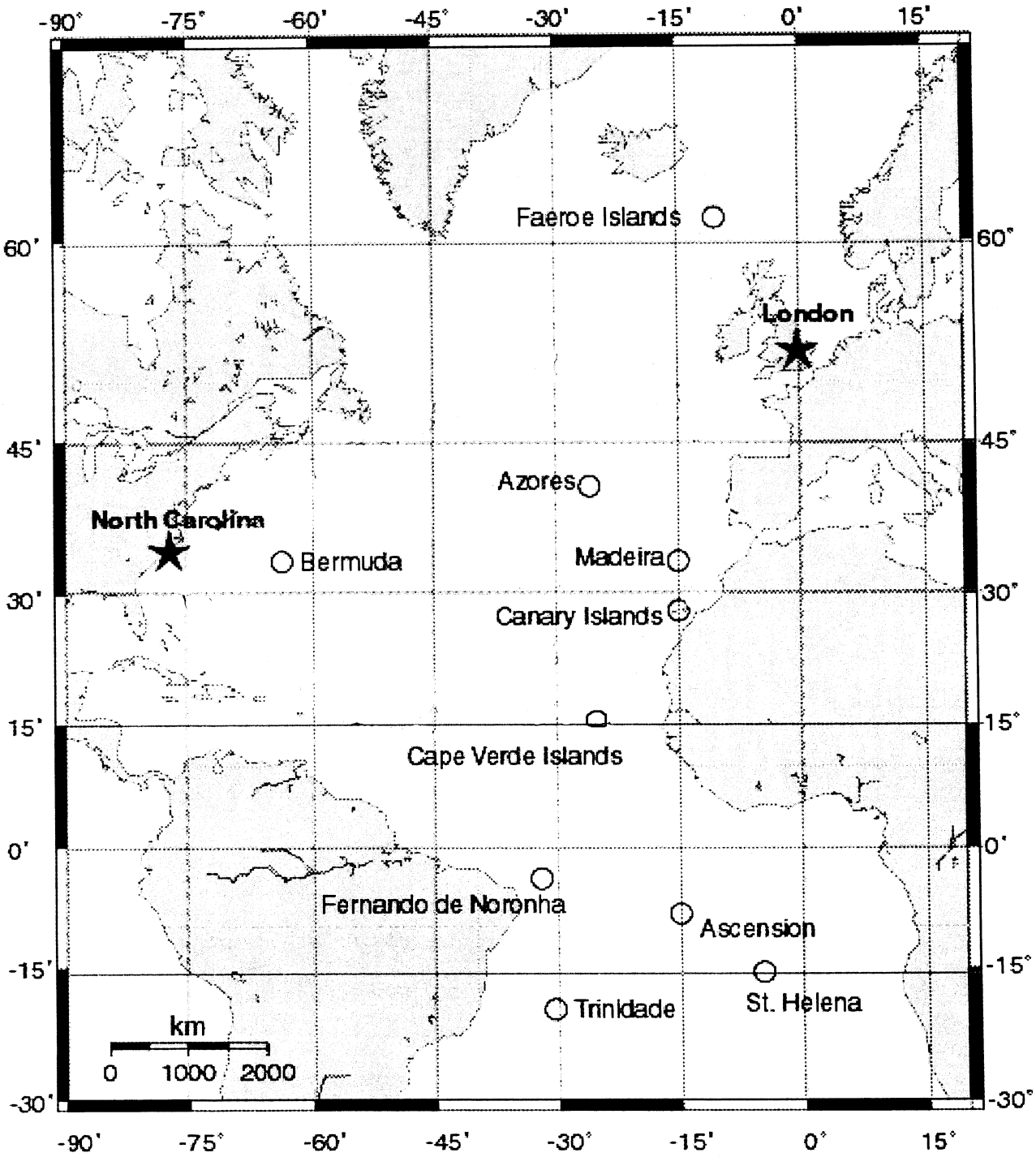
6. **What current is taking you west, and what's the name given to the region (or wind system) you have encountered?**

7. **Your map shows several islands further south. What are your chances of reaching them, given what you know about winds and currents? Explain.**

8. **You recall a real-life story of a similar situation-one man spent 76 days adrift at sea before drifting ashore. He survived (but was very skinny by the end). You've been at sea 21 days and you guess you are 4000 km from land and traveling 1 m/sec. How much longer will you be drifting? Be sure to show your work**

9. **Eventually you make it safely back to land in the Caribbean where you take a well-deserved break. While recuperating on the beach, a reporter asks to hear about your epic journey for a news story. A. Briefly summarize how your journey proceeded for the reporter and explain how and why it deviated from your planned route. Also, include anything you would do differently if you made this journey again and any other materials you'd bring with you.**

Modified from an exercise developed by oceanography faculty at the University of Arizona, and based on the book Adrift: Seventy-six Days Lost at Sea by Steven Callahan.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