Tides & Currents Webquest

Instructions. Read these instructions carefully before proceeding. Connect to Log on to the NOAA site at: http://oceanservice.noaa.gov/education/kits/currents/welcome.html. Download the Tutorial located in the upper right margin of the pages. Create a folder for this titled "Tides Currents". In this way, if you get disconnected from the Internet, you still have some reference information to work with.

Next, carefully read through each section of this resource, answering the items below as you proceed. Be certain to play all animations, and enlarge and study all diagrams. And yes, I expect you to read the whole thing and to answer all the items. You will need to print your assignment so that you can put it into your notebook.

Tidal Currents

1. What is an ocean current? _____

2. What are the three main factors driving ocean currents? _____
_____

3. How are tidal currents different from other types of currents? _____
_____

4. What is a rectilinear tidal current, and where are they usually found? _____
_____

5. What is the difference between spring, neap, perigean, and apogean currents? _____
_____

6. The sun is much more massive than the moon. Why is the moon's effect on tidal currents so much stronger than that of the sun? _____
_____

Coastal Currents

7. Draw (neatly by hand) a wave, label the wave height, crest, trough, and length.

8. What three factors contribute the most to the formation of coastal currents? _____
_____

9. What factors affect wave height? _____

10. What effect does wave angle and wave velocity have on longshore currents? _____
_____

11. How do rip currents form, and why are they potentially dangerous? _____
_____

Surface Currents

12. What drives surface currents? _____

13. Explain the influence of the Coriolis effect on wind and water currents. _____
_____

14. How do ocean gyres form? _____
_____

15. What are the five major ocean gyres? _____
_____

The Global Conveyor Belt

16. What drives deep ocean currents? _____

17. How might global climate change affect the global conveyor belt? _____
_____

18. What do you think might happen if global climate change affected the global conveyor belt? _____

How Are Currents Measured?

19. Briefly describe the various ways ocean currents are measured. _____
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