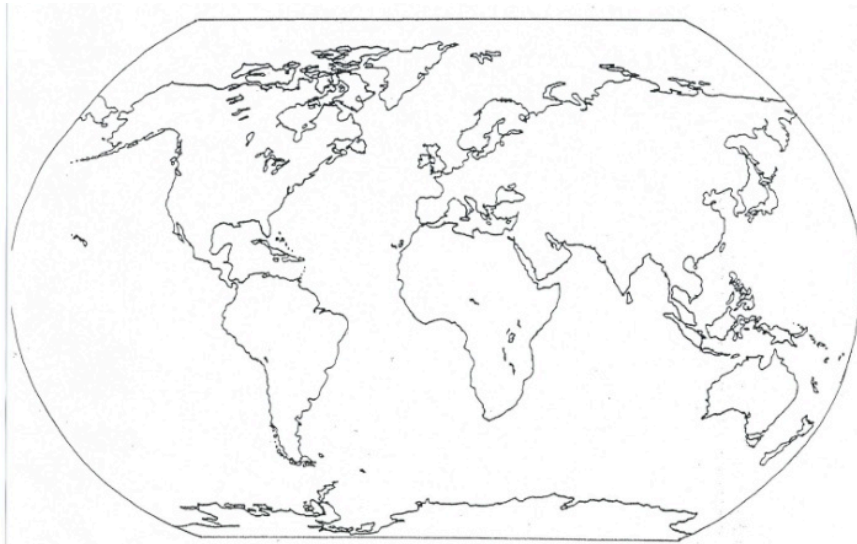


Name: _____ Date: _____ Pd: _____

Unit 5 Formative Assessment – Oceans

1. What factors determine the density of sea water? List **two (2)** things.
2. What is the energy that drives **surface** currents?
3. What are the factors that drive **deep water** currents?
4. On the map below, **LABEL** the direction of the ocean currents in the Northern and Southern hemispheres.



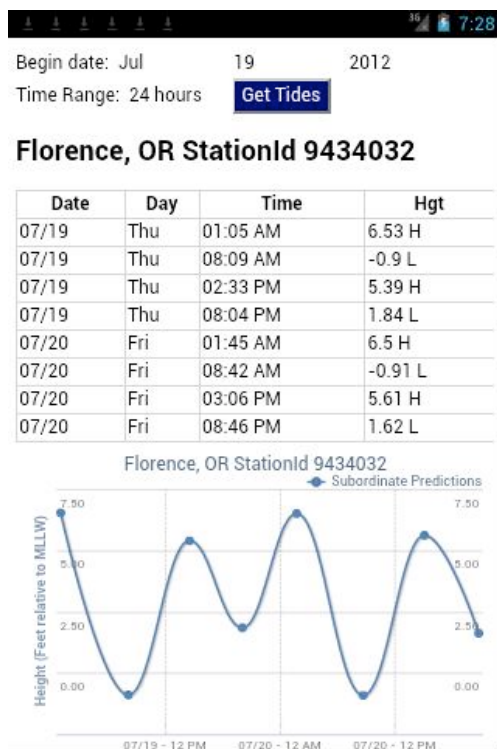
5. What is the name of the effect that causes Earth's currents and winds to turn? What causes this effect to occur?
6. Define **upwelling**. Why is upwelling important for the health of the oceans along the continental shelf?
7. What processes can **increase** the salinity of water?
8. What factors can cause an **increase** in the density of ocean water?

9. Draw a picture of the sun, moon and Earth for a spring tide and for a neap tide. Show the tidal bulges.

10. When do we have the **smallest** daily tidal range? During a spring tide or with a neap tide?

11. When do we have the **greatest** daily tidal range? During a spring tide or with a neap tide?

12.



12a. On July 19, how many high tides occurred in Florence, Oregon? How many low tides occurred?

12b. On July 20, what time did the first high tide occur? What time did the last low tide occur?

12c. Is this a diurnal, semi-diurnal or mixed tide? How can you tell?

13. What is the force that causes the ocean tides?

14. Why does the Moon have a greater impact on the Earth's tides than the Sun?

15. How often does a diurnal tide and a semi-diurnal tide occur each day?

16. What is salt water intrusion? Why is it a threat to the coastal ground water?

17. How are surface temperatures and carbon dioxide concentration related? What do they impact?

18. How do higher carbon dioxide levels impact the acidity of the ocean?

19. What factors cause rising sea levels?

20. Why do we care about rising sea levels?

21. In the deep ocean convention shown in the picture, explain why parts of the “conveyor belt” are warm and why parts are cold.



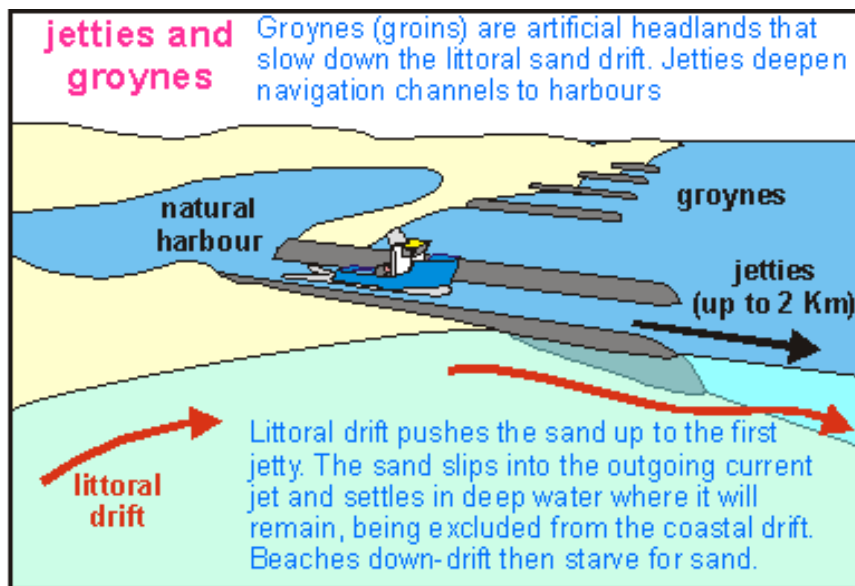
22. **Describe** several ways to prevent shoreline erosion. What are the costs and benefits of each?

23. There are Great Garbage Patches in the oceans around the world. Why has the trash accumulated in patches in the ocean?

24. How can we remove microorganisms in the final stages of waste water treatment? Name **three (3)** ways.

25. How can we get fresh drinking water from ocean water?

26. Describe the importance of a **jetty** and a **groin** as shown in the picture below.



27. How do barrier island beaches form?

28. Why should a community consider building a sea wall?