Earth Science Unit C – Chapter 3 Review Answers

1. Changes in currents in Pacific; winds not as strong; every 3-7 years; global weather event
2. Moves water parallel to shore; waves hit shore at angle; zigzag motion piles sand on end of beach
3. Narrow streams of water; break through sandbars; go back to sea
4. A
5. C
6. B
7. B
8. D
9. B
10. B
11. The higher the salinity, the higher the density
12. The continents divide Earth’s oceans into sections, but the sections are all connected
13. The ocean is warmest at the surface. Then the temperature drops quickly with depth at the thermocline. Below the thermocline, in the deep ocean, the water is barely above freezing.
14. A: Wave height; B: Wavelength; C: Crest; D: trough
15. Evaporate the water from both and see if any salt remains. Or, put a drop of food coloring in each cup and see if it floats or sinks.
16. Echoes would return faster as the ship began to cross the ridge, then slower as the ship went over the descending slope on the other side.
17. Pressure and breathing are obstacles in both. Pressure is high in the ocean but low in space. Water prevents breathing in the ocean. Lack of oxygen prevents breathing in space.
18. Sample answer: it could make the weather cooler if a warm current changed direction.
19. Surface currents, waves, upwelling, rip currents.
20. Waves only affect the water at the surface. Below a certain depth, waves don’t affect the water at all.
21. Waves: caused by wind. Both: ocean motion. Tides: caused by gravity of Moon and Sun. Summary: Ocean waves and tides are both ocean motions. Waves are caused by gravity of Moon and Sun.
22. That the tide is extra low at spring tides, when Earth, Moon, and Sun are aligned. Spring tides happen twice a month.
23. Wind is causing the waves in the photograph. Near the shore, the wavelength gets shorter and the wave height gets taller until the wave breaks. Tides could cause the water level to rise.
24. The gravitational pull of Moon and Sun causes tides.