**Ch 3 Review Game Q’s**

**Single:**

Q. On the ocean floor map, label:

1. Continental shelf

2. continental slope

3. ocean trench

4. mid-ocean ridge

5. seamounts

6. volcanic islands

Q. What is the primary way in which waves form?

A. Wind

Q. What colors are most fish in the mesopelagic zone?

A. Black or red

Q. Name the zone that matches the description given:

1. Also called “twilight zone” – Mid-water/Mesopelagic

2. The upper 200 m of the ocean – Photic/Epipelagic

3. Food is scarce in this area – Bathypelagic/Aphotic

4. Also called the “midnight zone” –Bathypelagic/Aphotic

5. An area with lots of sunlight – Photic/Epipelagic

6. An area with reduced sunlight – Mid-water/Mesopelagic

7. The area between 200m and 1000m – Mid-water/Mesopelagic

8. An area of eternal darkness – Bathypelagic/Aphotic

9. Contains a lot of phytoplankton and/or algae – Photic/Epipelagic

10. An area with low mineral levels – Photic/Epipelagic

11. An area with high mineral levels – Bathypelagic/Aphotic

Q. Why does warm water stay at the ocean surface?

A. It is less dense than cold water

Q. Describe the relationship between temperature and depth

A. warmest at the surface, temp drops and the depth increases

Q. T/F Waves transport water and energy

A. F – only energy

Q. T/F Tides cause the amount of water in the Earth’s global ocean to increase and decrease

A. F

Q. In the ocean, where is the water more dense? Why?

A. Bottom – cold

Q. How do animals use bioluminescence?

A. Attract prey/mate, find food, escape/scare tactic

Q. What are 2 obstacles to human exploration of the ocean floor?

A. Darkness, pressure, etc

**Double:**

Q. What type of water do surface currents carry away from the equator?

A. Warm water

Q. What types of water do surface currents carry away from the poles?

A. Cold water

Q. T/F Things float better in water with high salinity (more salt)

A. True

Q. What is the connection between salinity and density?

A. higher the salinity, the higher the density

Q. How do water particles move as a wave passes?

A. in small circles up and down

Q. How can you survive being caught in a rip current?

A. swim parallel to shore, out of the current, then swim to shore

Q. Name the 3 main zones of the ocean?

A. Photic/Epipelagic, Mid-water/Mesopelagic, Bathypelagic/Aphot

(Q. name the other name for each zone)

Q. What has the greatest effect on the tides and why?

A. Moon – it’s closer

Q. How do the nutrients from the bottom of the ocean get to the surface?

A. Upwelling

Q. All the colors of the rainbow combine to appear as what color?

A. White

Q. T/F Water absorbs light

A. T

Q. How long is a lunar day?

A. 24 hrs 50 min

Q. How long is a solar day?

A. 24 hours

Q. How many high and low tides occur each day?

A. 2 high tides and 2 low tides

Q. How long does it take for high tide to occur?

A. 12 hrs 25 min

Q. How long is the time between high and low tide?

A. 6 hrs 12.5 min

**Triple:**

Q. What causes surface currents?

A. Wind

Q. Explain upwelling and downwelling

A. The way that the nutrients in the ocean mix around. (upwelling = nutrients going up; downwelling = nutrients going down)

Q. What causes deep currents?

A. Differences in density

Q. What current could you use to sail WEST across the Pacific Ocean?

A. N or S Equitorial

Q. Which direction do currents in the Northern hemisphere rotate?

A. Clockwise

Q. Which direction do currents in the Southern hemisphere rotate?

A. Counterclockwise

Q. What currents could be used for sailing EAST across the Atlantic Ocean? (Name 1)

A. Gulf Stream, N. Atlantic, Guinea

Q. Explain bioluminescence

A. Animal’s ability to produce it’s own light

Q. During what types of moons do spring tides occur?

A. New and Full moons

Q. During what types of moons do neap tides occur?

A. 1st and 3rd quarter moons

Q. What are the 4 ways in which waves form in the ocean?

A. wind, earthquakes, landslides, underwater volcanic eruptions

Q. Where do tidal waves originate, and where do they end?

A. ocean, shore

Q. What is the tidal range?

A. the difference between the height of high and low tides

Q. What is an ebb current?

A. outgoing tide

Q. What is a flood current?

A. Incoming tide

Q. Which type of tide causes extreme high and low tides? Why?

A. Spring tides; more gravitational pull

Q. Draw a picture that shows a neap tide

A. Neap tide: sun, earth, and moon at right angle;

Q. Draw a picture that shows a neap tide

A. Spring tide: sun, earth, and moon all in alignment

Q. Draw a picture of a wave and label all 4 important parts

Q. What divides the global ocean?

A. Continents

Q. Which has more oxygen in it – cold or warm ocean water?

A. Cold

Q. Why do people need to come out of the water slowly instead of quickly when diving in the ocean?

A. Gases come out of body andn poison the body

Q. What is counter-illumination?

A. producing light to blend in with zone (protect from predators)

Q. What is “fetch”?

A. distance over water that the wind blows in a single direction

Q. How are longshore currents and rip currents different?

A. Longshore – parallel to shore; Rip – drains back out to sea

Q. What 3 things affect tides?

A. gravity of sun, gravity of moon, inertia

Q. What is Newton’s law of gravitation state?

A. greater the mass of the objects and closer they are = the greater the gravitational pull

**Vocabulary**

Salinity current density continental shelf sonar upwelling

Downwelling rip current tide tidal range longshore current spring tide

Neap tide continental slope seamounts mid-ocean ridge ocean trenches

Volcanic islands irrigation aquaculture dam lock concentration

Sewage system septic system point-source pollution nonpoint-source pollution

Drought desalination fresh water salt water water cycle

Evaporation Condensation precipitation divide drainage basin turnover

eutrophication Iceberg groundwater permeable impermeable water table

aquifer Spring artesian well