Tuesday, Oct 16, 2018

Pick up: notes pg 57

/article pg 56

Be sure to check 1st quarter grades!

- ❖ If you were missing an assessment (DIA, test, quiz) or want to retake last test you have until Oct. 26 to do so to change your grade!!

Today you will:

- Ocean video
- Notes part 2

HOMEWORK: Get planners out, USE IT!

Finish duckies if necessary

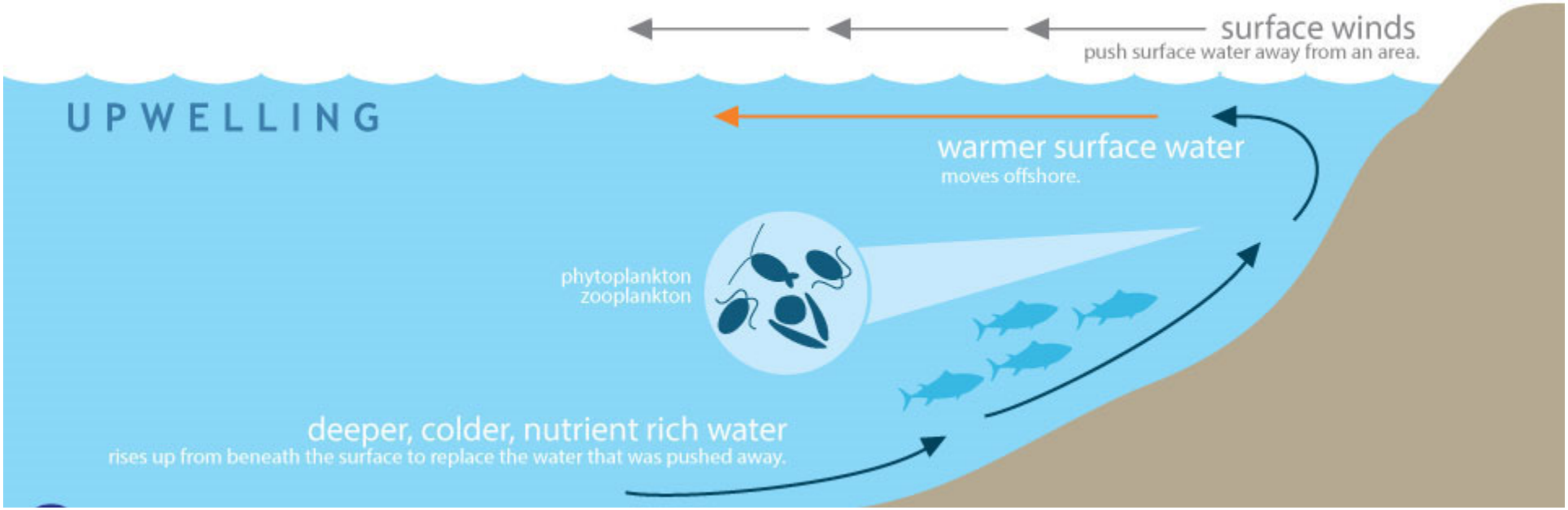
Quiz Thursday! DIA Friday!

- When does a density current form?
  - when a mass of dense seawater sinks beneath less dense water.
- Example: Iceland water freezes pure and leaves behind cold, salty water that is dense. It sinks and the water of the gulf stream moves up to replace it.

What would happen if density currents stopped?

1. decrease of temperature in some areas
2. increase of temperature in some areas
3. changing rainfall patterns

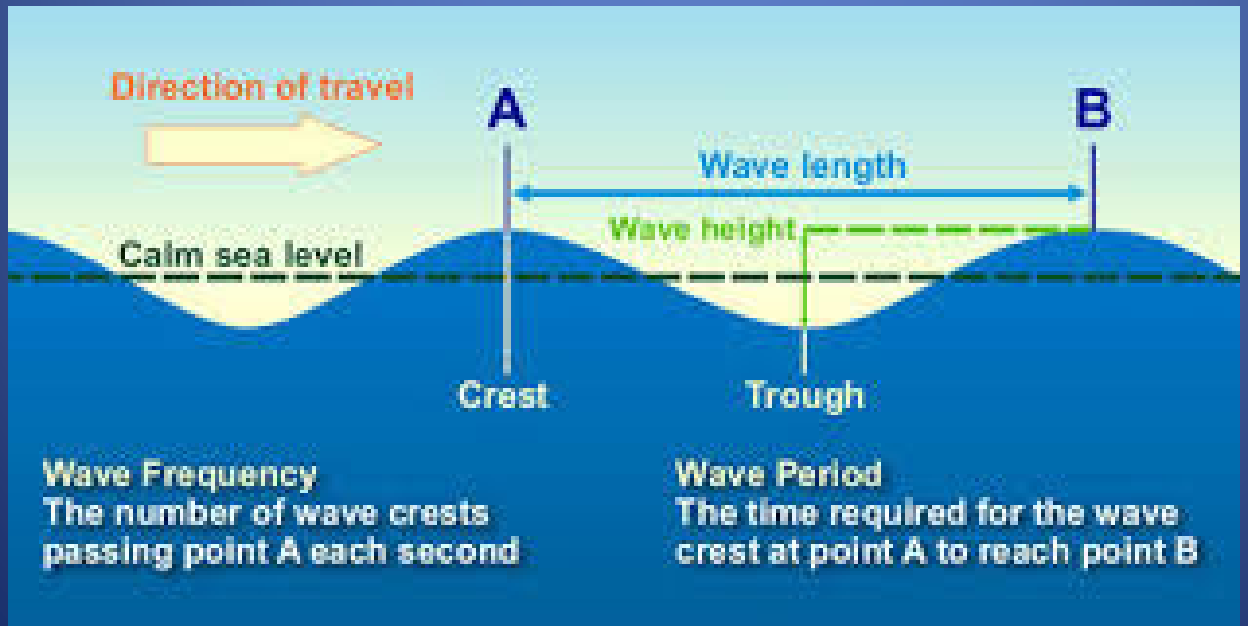
- What is upwelling?
  - current bringing deep, cold, nutrient-filled water to the surface. This is caused by coastal water being pushed away and replaced by cold water. Fish come to eat nutrients



Waves: the longer that wind blows from a given direction, the more energy is transferred from wind to water and the larger the wave becomes.

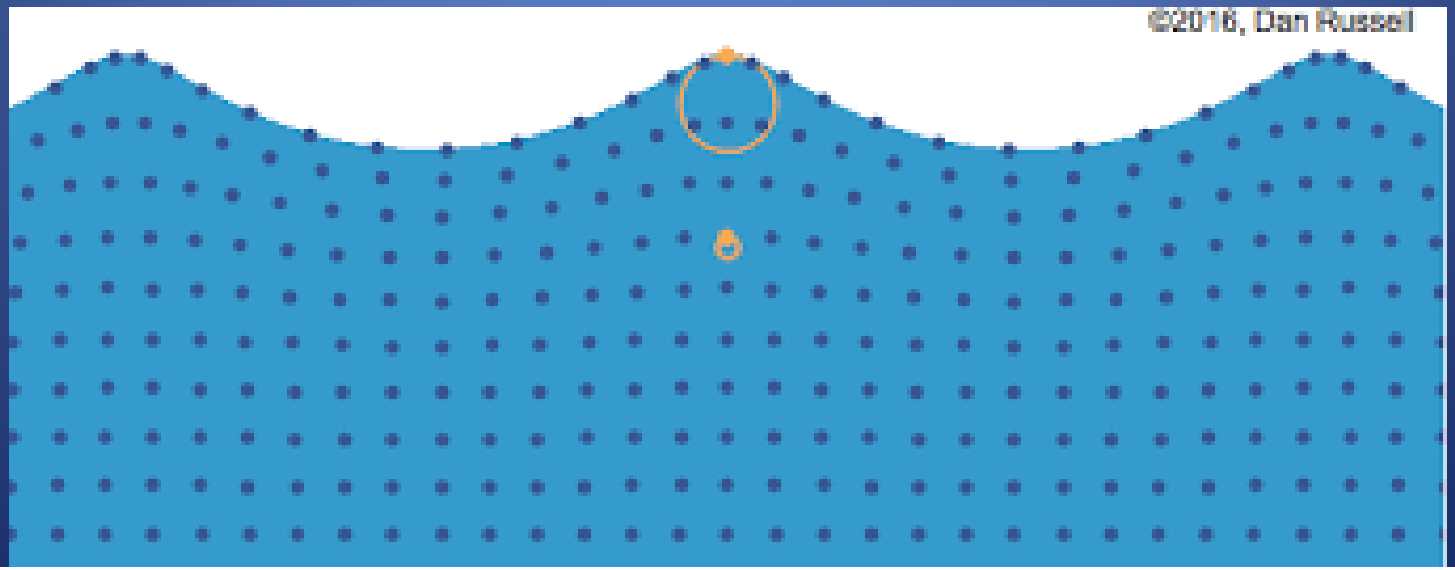
What does a wave's height depend on?

1. wind speed
2. length of time wind blows
3. wind velocity



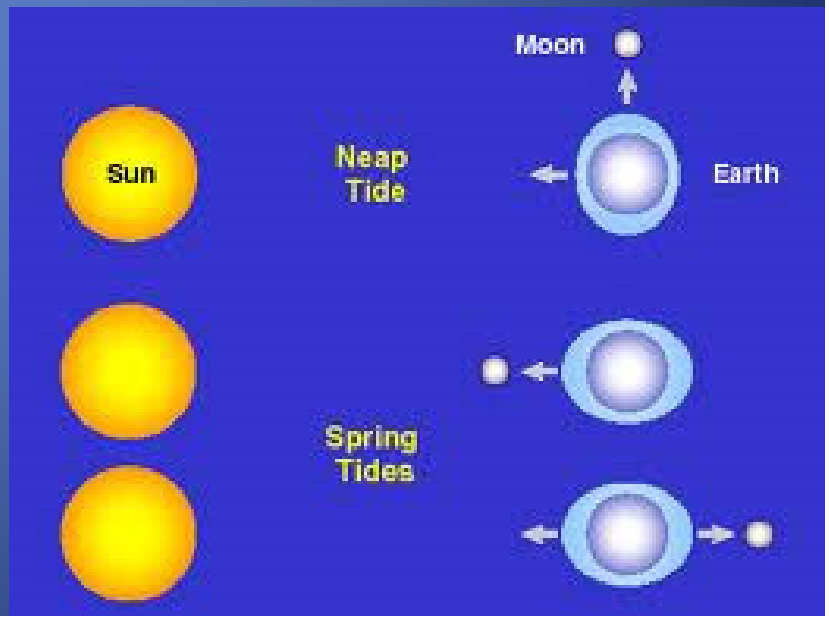
- Describe wave motion.
  - Floating objects and water molecules do not move forward with a wave. They only rise and fall. The energy moves forward.

https://www.youtube.com/watch?v=7yPTa8qi5X8



Tides

- **tides** the periodic rise and fall of the water level in the oceans and other large bodies of water
  - *High tide* is when the water level is highest.
  - *Low tide* is when the water level is lowest.



- How are tides created?
  - by the gravitational attraction of Earth and the moon and the Sun.
- Spring tide?
  - a perfect line is formed between the Earth, moon, and sun causing higher high tides and lower low tides.
- Neap tide?
  - a 90 degree angle is formed between the Earth, sun, and moon.

What are types of ocean life

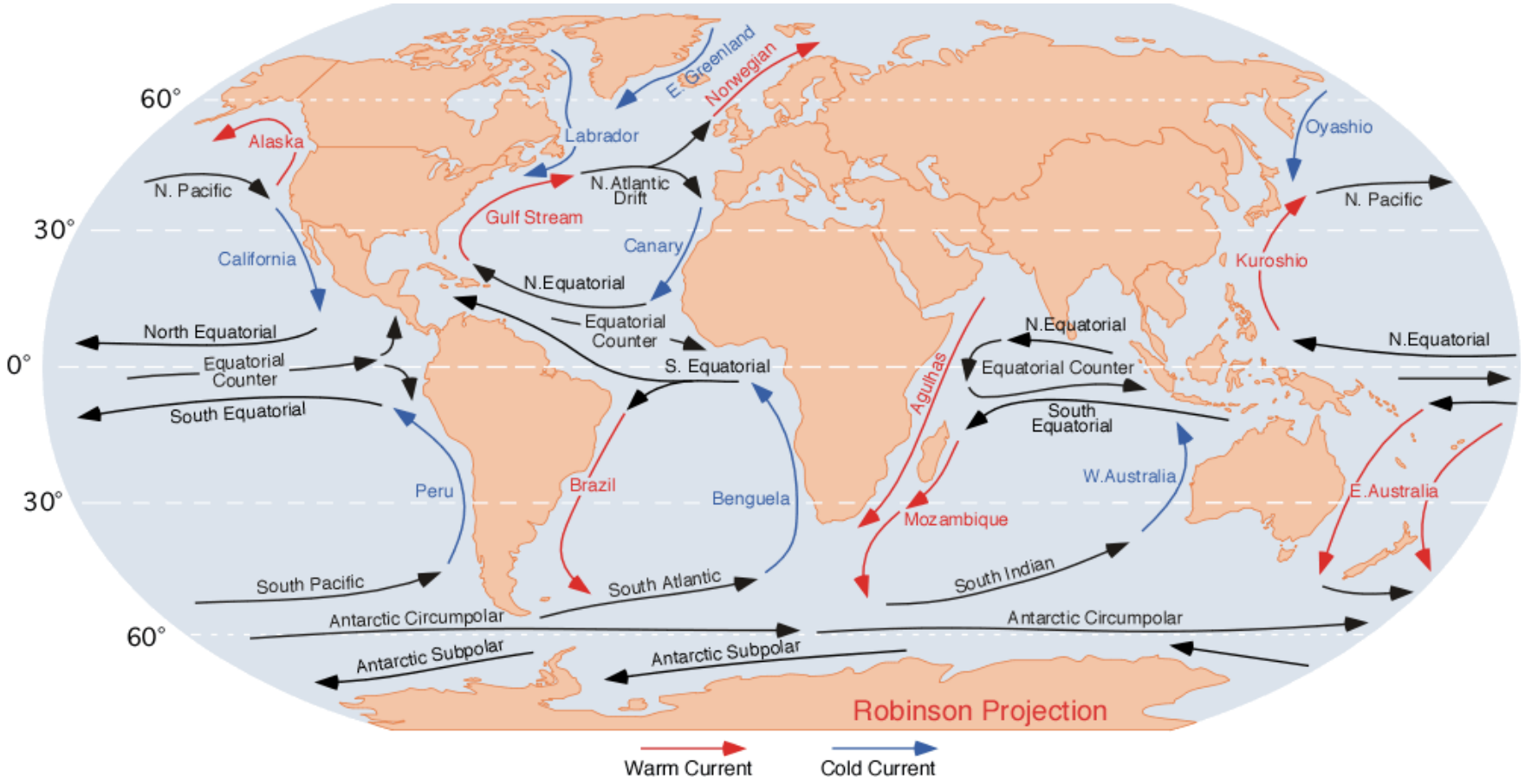
- 1. plankton – one celled organisms (producers)
- 2. Nekton – swimming animals (fish, whales, turtle, shark, dolphin)
- 3. bottom dwellers – crabs, snails, and sea urchins.
  - Get food by eating other dwellers, eating decomposing matter, filtering particles

- How is energy is transferred from organism to organism?
  - through food chains.
- What are producers, consumers, and decomposers?
  - Producers (make own food), consumers (eat other organisms), and decomposers (eat decaying stuff) make up the chain.
- What do all food chains begin with?
  - producers!

How does recycling in an ecosystem occur?

1. food chain
2. excretion – getting rid of wastes
3. respiration (breathing)

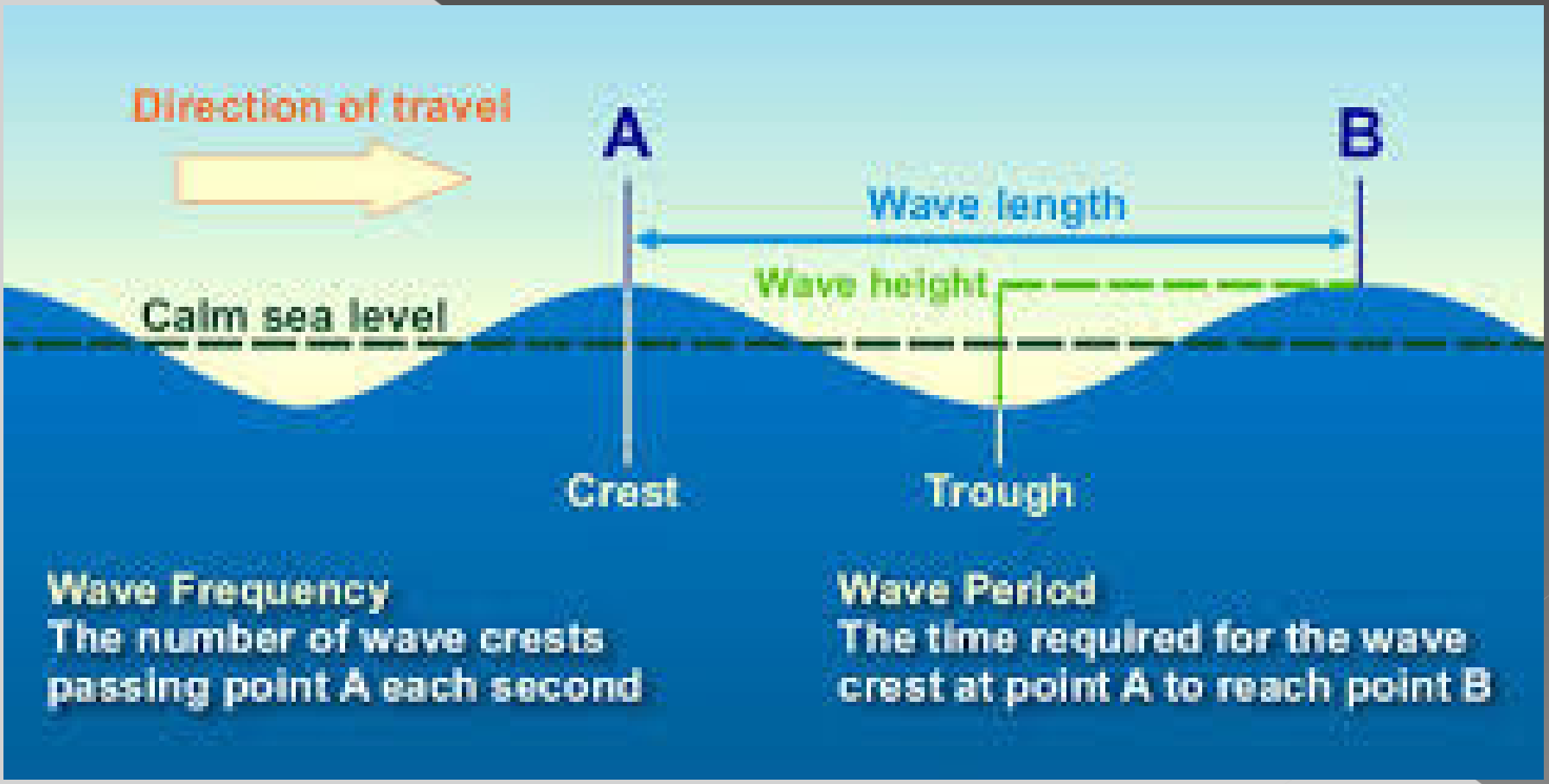
Ocean Currents



Waves

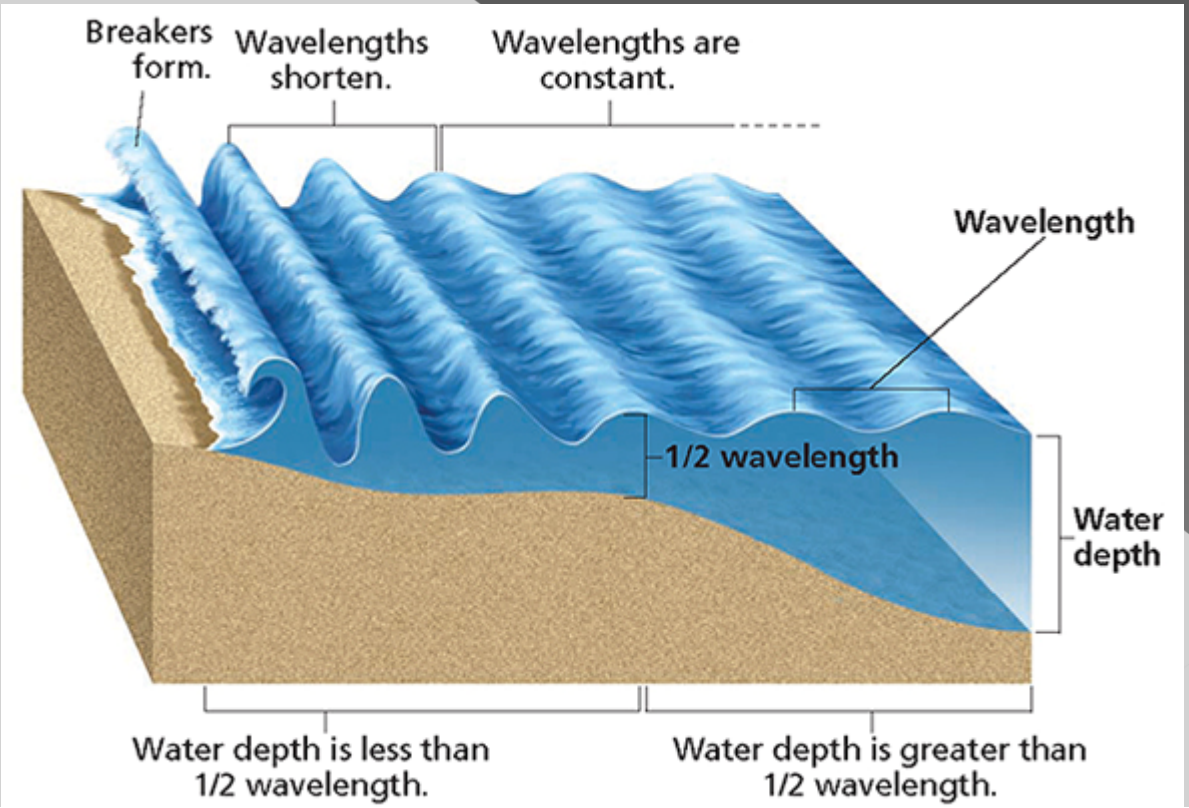
- **wave -** a periodic disturbance in a solid, liquid, or gas as energy is transmitted through a medium
  - One kind of wave is described as the periodic up-and-down movement of water.
  - Such a wave has two basic parts—a *crest* and a *trough*.
    - The **crest** is the highest point of a wave.
    - The **trough** is the lowest point between two crests.

Wave Diagram

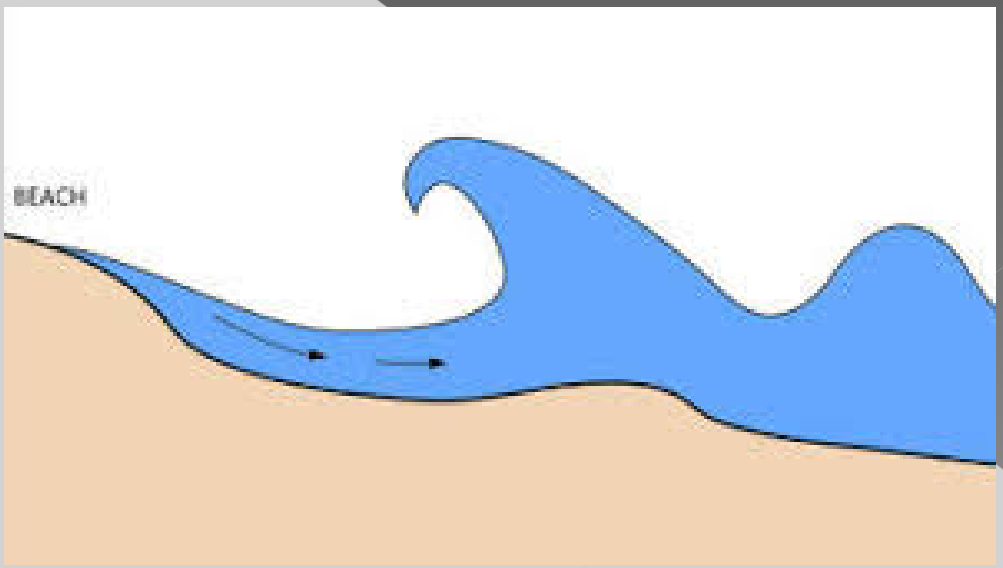


White Caps

- When winds blow the crest of a wave off, *whitecaps* form.



- **Undertow**- water carried onto a beach by breaking waves is pulled back into deeper water by gravity.



Ocean Currents

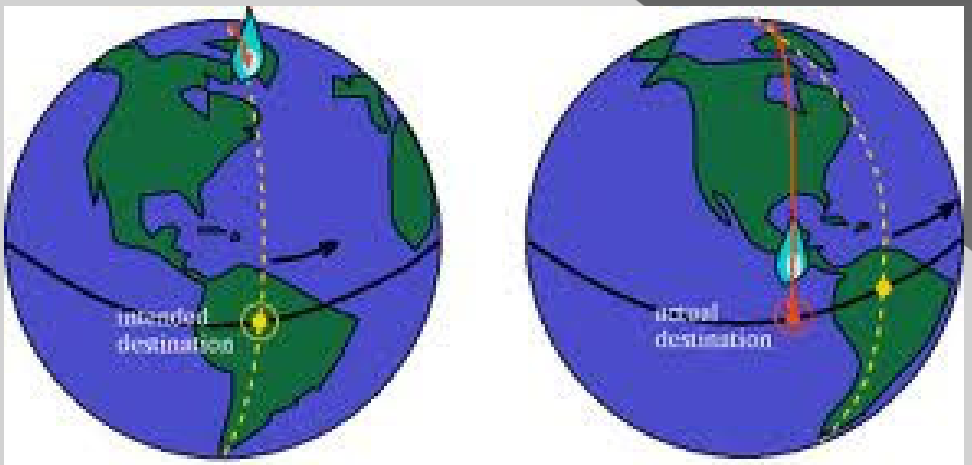
- **current -** in geology, a horizontal movement of water in a well-defined pattern, such as a river or stream
- Scientists place ocean currents into two major categories: surface currents and deep currents.
  - **surface current -** a horizontal movement of ocean water that is caused by wind and that occurs at or near the ocean's surface
  - **Deep currents - caused by differences in density of ocean water.**

- Rip Currents- form when water from large breakers returns to the ocean through channels that cut through the underwater sandbars that are parallel to the beach.

- ***Longshore Current-*** form when waves approach the beach at an angle and forms sandbars

Global Wind Belts

- **The Coriolis Effect**
  - **Coriolis effect** the apparent curving of the path of a moving object from an otherwise straight path due to Earth's rotation
  - Wind belts and ocean currents follow a curved or circular pattern that is caused by Earth's rotation.



Coriolis effect: Original path of air is deflected westward by the rotation of the planet.