**Oceans 11: Structure and Motion Test 2 Review**

You should be able to accurately describe/label/explain the following concepts:

**Ocean Currents:**

* Define Current, gyre
* Surface and deep ocean currents (differences)
  + How wind affects surface current
  + Coriolis effect
* Describe affects surface currents
* Ocean Conveyor Belt – how it works
  + What are the effects if the conveyor belt stops working?
* Gyres
* Oceans effect on Climate

**Tides:**

* Causes of tides
* How do tides work?
  + Effect of the moon and sun
* Spring tides and Neap tides
  + Lunar cycle
  + Tidal cycle (how many days between each, why?)
* Diurnal, semidiurnal and mixed tides
  + What causes irregularity in tidal patterns?
* Tidal Wave – Tidal Bore
  + What causes it?
* Tidal Energy

**Waves:**

* What is a wave?
* How are they formed?
* Types of waves
* Wave terminology: Fetch, Crest, Trough, Amplitude, wave height, wavelength, Frequency, Period, Still water level, wave base
* Orbital motion
* How waves are generated
* Wave refraction and wave reflection
* What happens to the wave as it approaches the shore?
* Rogue waves
* Types of breakers
* Measuring waves (I will give you the formulas)

**Tsunamis**:

* What is a tsunami
* How are tsunamis created
* Characteristics of Tsunamis
* Major Tsunamis
* Warning signs of Tsunamis
* How to warn people of a Tsunami

**The Water molecule:**

* Chemical composition of water
* Chemical bonds (within a water molecule and between water molecules)
* Properties of water (Cohesion and Adhesion)
* How water breaks down other substances.
* Salinity
* Types of salt water (brackish, brine)
* Describe the effect of latitude on salinity
* Open ocean salinity vs. salinity in coastal areas
* Processes affecting salinity
* Causes of Haloclines
  + Low latitudes, high latitudes
* Three clines of seawater
* Explain how thermoclines and haloclines are related and why they are opposite.
* Isothermal/Isopycnal
* Effects of latitudes and seasons on thermocline
* Density Zones
* Why does solid ice (water) float on liquid water?
  + Why is this important?