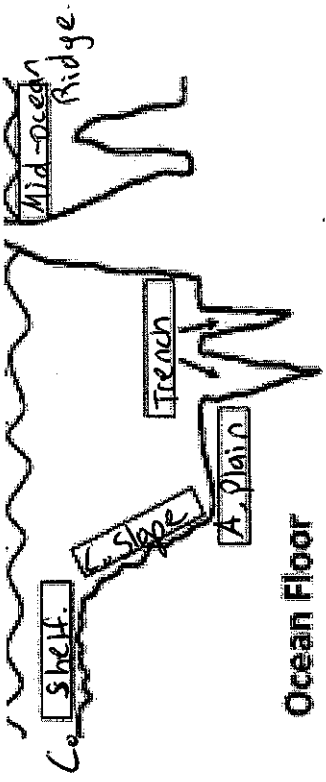


AST

Unit 6: Oceanography Test Review Sheet

Ocean Floor Questions: Label the diagram of the ocean floor and answer the questions.

Word Bank: Trenches, Abyssal Plain, Mid-Ocean Ridge, Continental Slope, and Continental Shelf

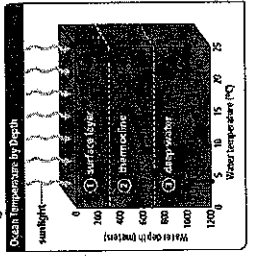


Ocean Floor

1. What tectonic plate movement creates trenches?
convergent → subduction
2. What tectonic plate movement creates a mid-ocean ridge?
Divergent

Water Density & Currents Questions: Circle the best answer choice or answer the questions.

1. Which type of water is denser? (warm salty, cool salty)
2. Using the chart below answer the questions.



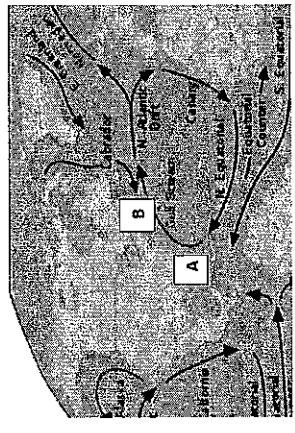
a. What is the layer in which the temperature changes rapidly with depth?
thermocline

b. When water gets cooler it sinks (rises) because it gets denser (less dense)

3. Surface currents are caused by the wind.
4. Deep or Density Currents are caused by Density + Gravity.
5. What is the term for the uneven rotation of the Earth? It causes the wind and ocean currents to move in a circular pattern.
Coriolis
6. What is the global conveyor belt?
constantly moving system of deep ocean water driven by temperature + salinity.



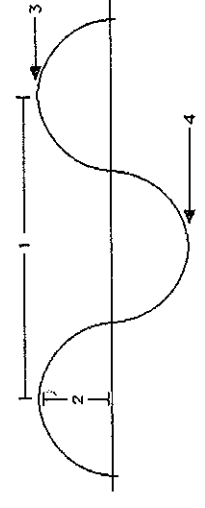
7. Use the map to answer the questions about ocean currents.



- a. Which of the following currents are cold water currents? (Gulf Stream, Norwegian, Labrador)
- b. If you wanted to get from point A to point B, what current would you take?
Gulf Stream

Ocean Waves & Parts of a Wave: Label the diagram & answer the questions.

Word Bank: Crest, Trough, Wavelength, Wave Height (Amplitude)



1. wavelength
2. wave Height
3. Crest
4. Trough

1. The size of ocean waves are affected by which three things:

- a. wind speed
- b. length of wind time
- c. fetch

2. What is a longshore current? How does it cause erosion?
Current moves parallel to shore - moves sand off the beach (creates sandbars)
3. What is a rip current? How are you supposed to swim out of a rip current?
A strong series of waves that pulls you out to the ocean - swim parallel to shore

Differential Heating Questions

1. Objects that have a high specific heat warm up slowly/quickly and cool down slowly/quickly. water
2. Objects that have a low specific heat warm up slowly/quickly and cool down slowly/quickly. land.
3. Land heats up slowly/quickly and water heats up slowly/quickly.

4. How are coastal climates and inland climates impacted by differential heating of land versus water? (low variation)
 coastal climates → H₂O has ↑SH, climates are mild
 Land → ↓SH, climates are extremes (high variation).

Upwelling, El Niño, and La Niña Questions

1. What is an upwelling?
 wind pushes away warm water & cold water rises

2. Compare and contrast El Niño and La Niña.

El Niño
 - warming of ocean
 - weakening & shift of trade winds

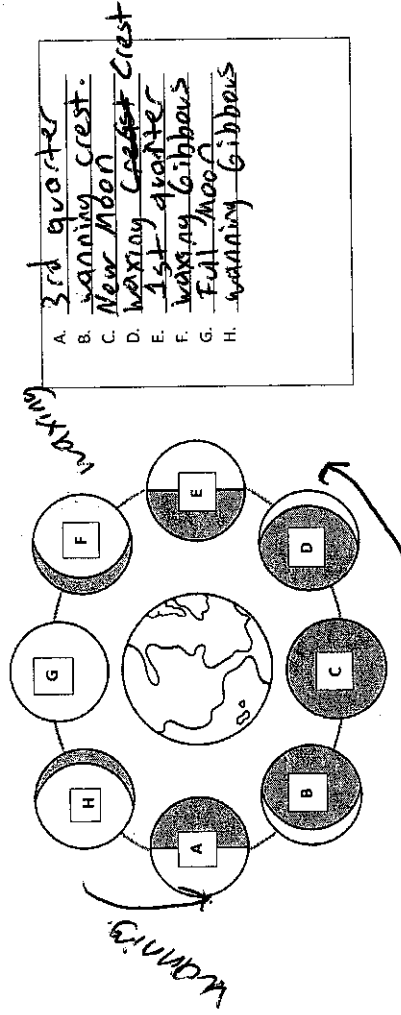
La Niña
 - cooling of ocean
 - strengthening of trade winds.

3. How does El Niño and La Niña affect the climate?

El Niño → droughts, flooding, warm weather.
 La Niña → cold winters in North & warms in South.

Moons & Tides Questions

1. Draw where the sun would be located. Fill out the diagram of the moon phases.



2. What is responsible for tides?
 gravity between Earth & Moon.

3. Compare and contrast neap and spring tides.

Neap Tide
 - lowest tidal range
 - occurs 1/2 & 3/4 quarter

Spring Tide
 - highest tidal range
 - occurs New + Full Moon.

Breach Erosion & Erosion Control Questions: Fill out the chart and answer the questions.

1. What is beach erosion?
 loss of sand on beach

2. What factors cause beach erosion?
 - wind, waves, & storms.

Definition	Advantages	Disadvantages
Jetty Building to stick out in ocean	protects one side of jetty	-erodes other side
Seawall built to protect land	-protects land from storms	-erodes beach in front of wall
Beach Renourishment Sand from ocean added to beach	-no erosion caused	-not long term.

Ocean Acidification & Coral Bleaching Questions

1. What is ocean acidification?
 ↑ of CO₂ in ocean, which ↓s the pH.

2. What compound is responsible for ocean acidification?
 CO₂

3. What is coral bleaching?
 The death of algae, that leads to starvation of coral

4. Coral becomes bleached when it is stressed, what are some of those stressors?
 - temp.
 - pH

5. What are some negative effects of coral bleaching?

* Coral starve + eventually die.
organisms that live in coral die off as well.

Ocean Zone and Ocean Organisms Questions

1. What are the zones of the ocean? Describe each one.

Intertidal, Neritic, Open ocean → Euphotic
→ Bathyal
→ Abyssal

2. Draw a quick diagram to represent those zones.



3. Which ocean zone has the most biodiversity?

Neritic b/c that is where coral lives.

4. Name the organisms are microscopic and float? Give an example.

Plankton Ex. phytoplankton or zooplankton

5. Name the organisms that can range in size from small to large and swim? Give an example.

Nekton Ex. small fish up to whale

6. Name the organism that are bottom feeders and live at the bottom of the ocean? Give an example.

Benthos Ex. starfish, oysters, sea cucumbers

Other Important Ocean Questions

1. What is sonar and when is it used in the ocean?

A system to detect objects underwater works by emitting sound pulses

2. What is aquaculture?

Growing of aquatic animals (fish) in a controlled environment; fish farming.