

# REVIEW – THE OCEAN

/140

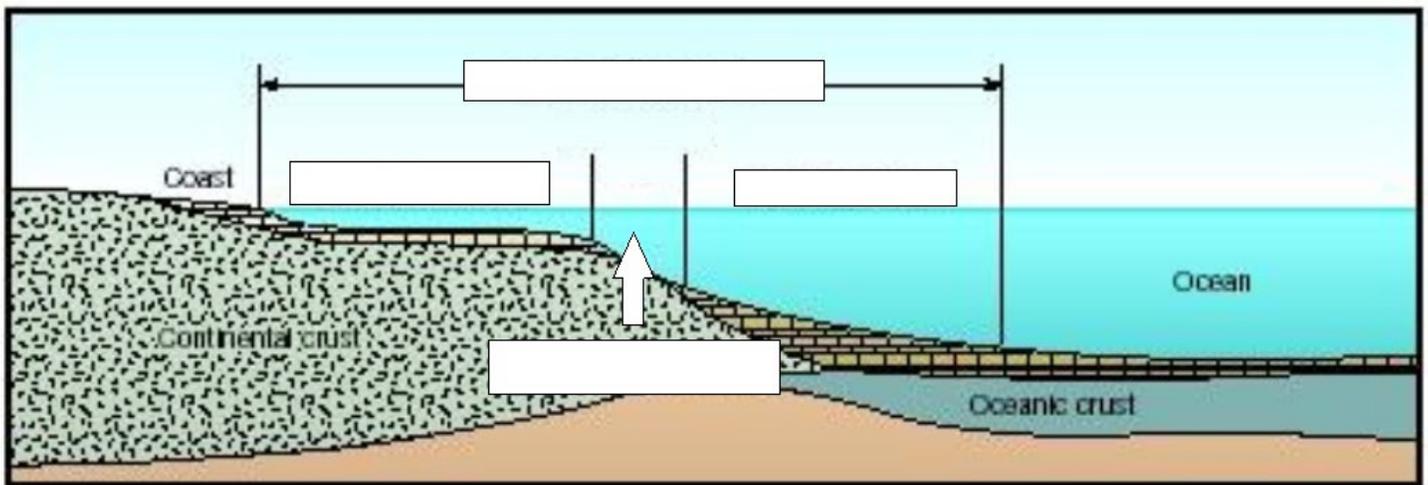
NAME \_\_\_\_\_ Hr\_\_

## OCEAN FLOOR FEATURES & SEDIMENTS CH 14 /24 points

match:

OCEANOGRAPHY	the study of the ocean's depths and topography
TOPOGRAPHY	the study of ALL aspects of the ocean
BATHYMETRY	the study of the shape and landforms of the land

label:



- Where does most ocean fishing occur? \_\_\_\_\_
- Which part of the Continental margin is the steepest? \_\_\_\_\_
- Which part contains sediments from submarine canyons? \_\_\_\_\_
- Which section does sunlight completely penetrate? \_\_\_\_\_
- What zone starts at the end of the continental rise? \_\_\_\_\_
- How is an ocean trench different from an Abyssal plain? \_\_\_\_\_
- What is the difference between a seamount and a guyot? \_\_\_\_\_
- Why are there many ocean creatures living in the water above seamounts? \_\_\_\_\_
- How long is the mid-ocean ridge? \_\_\_\_\_
- How are Islands formed? \_\_\_\_\_
- What comes out of a hydrothermal vent? \_\_\_\_\_

12. What do bacteria eat at a hydrothermal vent? \_\_\_\_\_
13. What is the bottom of the food chain at a hydrothermal vent? \_\_\_\_\_
14. What is sediment? \_\_\_\_\_
15. What do we call sediments that originate from land? \_\_\_\_\_
16. What do we call sediments that come from living things? \_\_\_\_\_
17. What parts of living things can be turned into sediment? (6) \_\_\_\_\_  
 \_\_\_\_\_

**OCEAN WATER PROPERTIES CHAPTER 15-1 28 points**

1. What types of things can be dissolved in ocean water?  
 1 \_\_\_\_\_  
 2 \_\_\_\_\_
2. How do gases get dissolved in ocean water (4 pts)  
 1 \_\_\_\_\_  
 2 \_\_\_\_\_  
 3 \_\_\_\_\_  
 4 \_\_\_\_\_
3. How does temperature affect how much gas can dissolve in water?  
 \_\_\_\_\_
4. Why is ocean water considered a CARBON SINK?  
 \_\_\_\_\_
5. What are the sources of the dissolved solids?  
 1 \_\_\_\_\_  
 2 \_\_\_\_\_  
 3 \_\_\_\_\_  
 4 \_\_\_\_\_
6. What word do we use to describe the amount of dissolved solids in water?  
 \_\_\_\_\_
7. Which has a greater salinity, fresh or ocean water? What are the percentages? (3pts)  
 1 \_\_\_\_\_ 2 \_\_\_\_\_ 3 \_\_\_\_\_
8. What 2 processes can increase the salinity of water? Explain each (4pts)

Process	How it works:

9. Describe the 3 temperature layers of the ocean (6pts)

Name of layer	What it is like

10. How does cold water affect its density? Warm? (2 pts)

1 \_\_\_\_\_ 2 \_\_\_\_\_

**OCEAN ECOLOGY AND ENERGY TRANSFER IS-2 & IS-3 54 points**

1. What is the name of the study of how organisms interact with each other and the environment?

\_\_\_\_\_

2. What does biotic mean?

\_\_\_\_\_

3. What does abiotic mean?

\_\_\_\_\_

4. Define ecosystem

\_\_\_\_\_

5. Creatures that do either photosynthesis or chemosynthesis are both filling which niche in an ecosystem? \_\_\_\_\_

(10pts)	Who does it in the ocean?	Where in the ocean does it happen?	What is the energy source?	What is being produced?	In the light or darkness?
Photosynthesis					
chemosynthesis					

6. What does it mean to be a producer? \_\_\_\_\_

7. What is a consumer? \_\_\_\_\_

8. Compare and contrast carnivore and consumer. (how are they alike, how are they different?)

1 \_\_\_\_\_

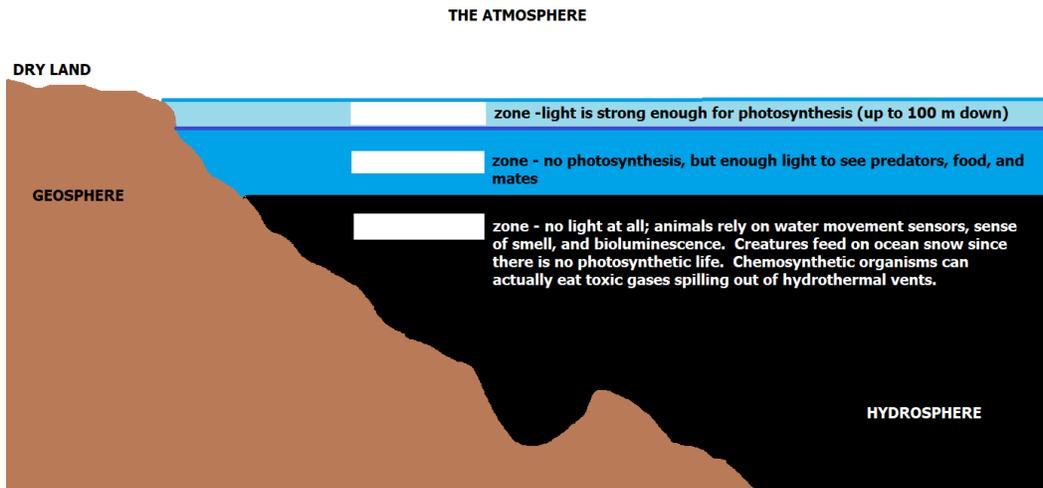
2 \_\_\_\_\_

9. If you were to count all the calories in all of the vent octopuses and all the calories in the vent mussels at a hydrothermal vent, which would have more calories?

\_\_\_\_\_

10. Which would have the greater population?

\_\_\_\_\_



11. The sunlight is found in which ocean zones (categorized by sunlight)?

- 1 \_\_\_\_\_
- 2 \_\_\_\_\_

12. Which zone is fully lit for photosynthesis? \_\_\_\_\_

13. Which zone is only dimly lit and is nicknamed The Twilight Zone?  
\_\_\_\_\_

14. Which ocean zones have phytoplankton?  
\_\_\_\_\_

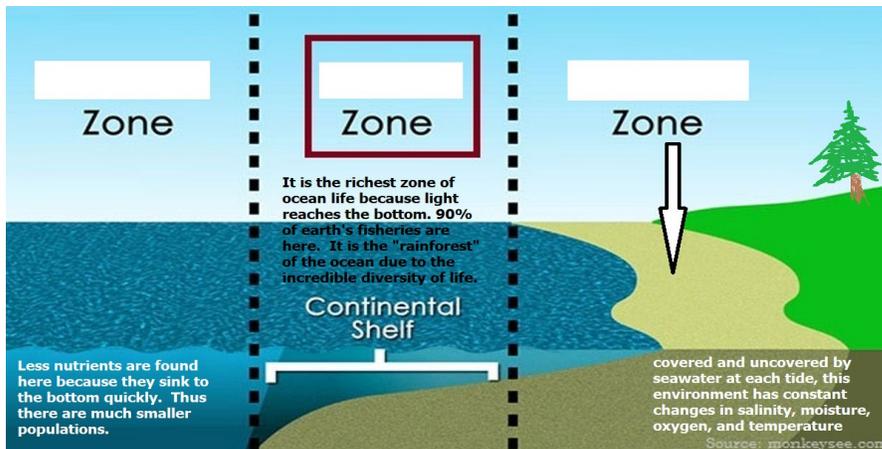
15. Which ocean zones have zooplankton?  
\_\_\_\_\_

16. What is the difference between zooplankton and phytoplankton?  
\_\_\_\_\_

17. What is the base of the food chain at the surface of the ocean?  
\_\_\_\_\_

18. What is the base of the food chain at the bottom of the ocean?  
\_\_\_\_\_

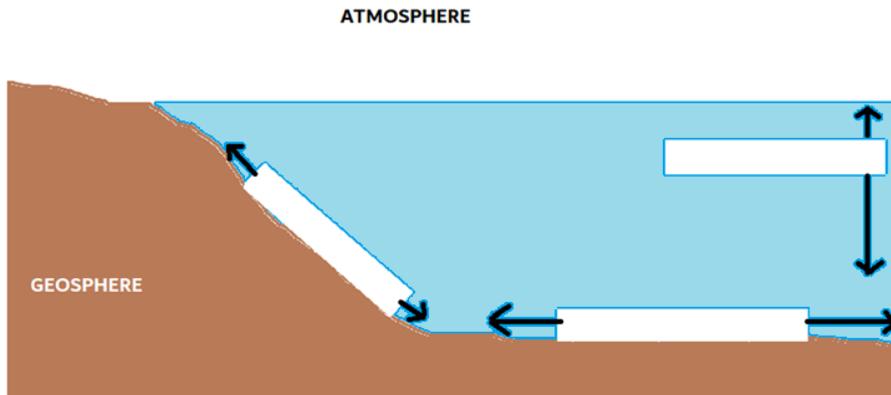
19. What is chemosynthesis? \_\_\_\_\_



20. Which zone gets covered and uncovered by Tidewater? \_\_\_\_\_

21. Which zone is the most biodiverse? \_\_\_\_\_

22. Which zone has low amounts of nutrients therefore less life? \_\_\_\_\_



23. If you are categorizing marine life by water depth, which two zones are at the bottom?

24. What is the meaning of ocean snow?

25. What types of creatures use ocean snow?

26. What term is given to organisms which can swim independent of ocean currents?

27. What term is given to organisms that live on or in the ocean bottom?

28. What term is given to organisms that simply float ?

29. Draw a food chain for the hydrothermal vent ecosystem

30. How is a food chain different from a food web?

31. What organisms go at the bottom of an energy pyramid?

32. Why is the bottom fatter?(give 2 reasons)

- 1 \_\_\_\_\_
- 2 \_\_\_\_\_

33. What happens every time you move up a trophic level?

34. Why does there have to be a greater population at the bottom of an energy pyramid?

**OCEAN CURRENTS    CHAPTER 16-1    34 points**

1. Define Ocean current – \_\_\_\_\_

2. What are the 2 kinds of ocean currents?

- 1 \_\_\_\_\_
- 2 \_\_\_\_\_

3. What 3 things cause the surface currents?

- 1 \_\_\_\_\_
- 2 \_\_\_\_\_
- 3 \_\_\_\_\_

4. In general, low pressure air \_\_\_\_\_ and high pressure air \_\_\_\_\_

5. Wind always moves from \_\_\_\_\_ pressure to \_\_\_\_\_ pressure areas

6. Why doesn't the wind flow in straight lines from the north pole to the equator?

Describe what the air is doing

7. Polar easterlies, northern hemisphere	
8. Westerlies, northern hemisphere	
9. Horse latitudes, northern hemisphere	
10. Trade winds, northern hemisphere	
11. Equatorial doldrums	
12. Trade winds, southern hemisphere	
13. Horse latitudes, southern hemisphere	
14. Westerlies, southern hemisphere	
15. Polar Easterlies, southern hemisphere	

16. What makes an ocean current deflect?

17. How does a northern hemisphere gyre move?

18. How does a southern hemisphere gyre move?

19. In general, ocean currents at the equator move what direction and are what temperature?

20. The California and canary currents are moving south (and one would think be getting warmer), and yet they become cold currents. Why?

21. What causes an upwelling?

22. How does the water current flow in an upwelling?

23. What factors control the DEEP currents of the ocean? How does it affect the current? (6pts)

Factors	How is affects the ocean current

24. What is a turbidity current? Explain.

25. How does the equatorial current change during an El Nino year, and what are the consequences?

26. How does the equatorial current change during an La Nina year, and what are the consequences?