

Module 3

1. Define & describe these terms related to weather. When appropriate discuss where they occur:

Weather	
Warm front	
Cold front	
Jet stream	
Air pressure	
High	
Low	
Dew point	
Tornadoes	
Tropical cyclones	
Hurricanes	
Typhoons	

2. How is climate different than weather? What are the two main factors in determining climate?

3. Describe the rain-shadow effect and its impact on local climate.

Draw the rain-shadow effect. Label the leeward and windward sides of the mountain.

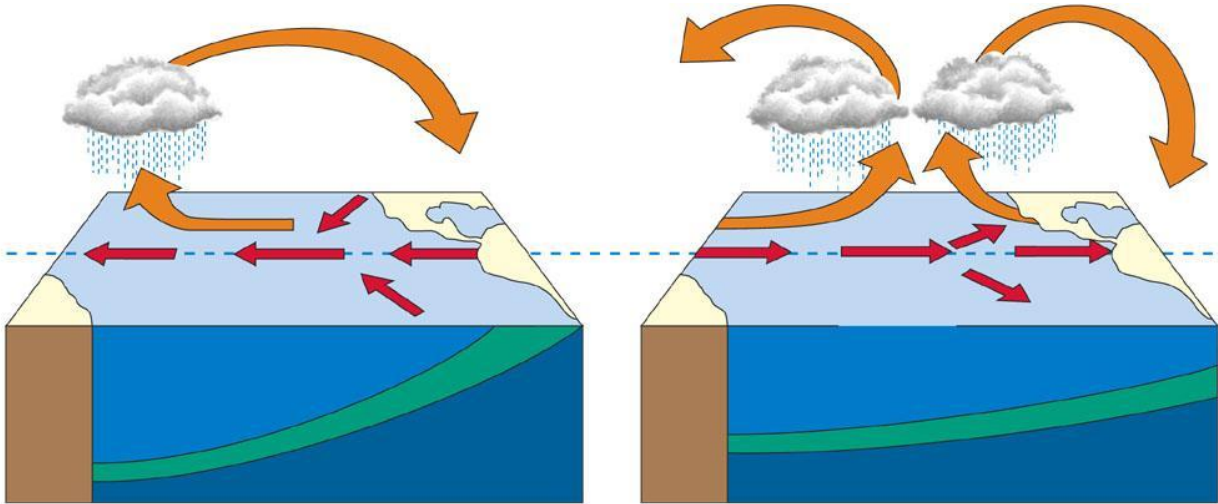
4. Describe karst topography.

5. Complete the following table about the levels of the atmosphere:

Layer	Distance from earth	Temperature range	Atmospheric pressure	Special features
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9. Surface ocean currents are driven by _____. How are landmasses affected by the surface ocean currents that pass?_____

10. El Nino. Label the figure:



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11. What is an El Nino-Southern Oscillation, where does it occur and what are its impacts on the environment?

12. How does El Nino-Southern Oscillation effect upwelling and what is the result of upwelling?

13. List and describe the 4 main factors that determine global air circulation patterns:

Human impacts	Special adaptations (animals)	Animals	Special adaptations (producers)	Producers	Location	Climate	Bioome:
							Tropical deciduous forest

							S a v a n n a
							T e m p e r a t e g r a s s l a n d
							C h a p a r r a l
Human impacts	Special adaptations (animals)	Animals	Special adaptations (producers)	Producers	Location	Climate	B i o m e :

							T u n d r a
							C o n i f e r o u s f o r e s t (t a i g a , b o r e a l)
							T e m p e r a t e d e c i d u o u s f

							o r e s t
							T r o p i c a l r a i n f o r e s t

16. Fishing Practices -

Fishing Method	How it works	Environmental Effects	Sustainability

17. What laws exist to regulate fishing?

- _____
- _____
- _____

18. List the major types of marine and freshwater ecosystems:

Marine ecosystems	
Freshwater ecosystems	

19. Describe the features of each biological zone of a lake and the organisms found in each zone:

	Description	Organisms
Littoral zone		
Limnetic zone		
Profundal zone		
Benthic zone		

20. Compare and contrast an oligotrophic, eutrophic, and mesotrophic lake.

Oligotrophic lake	Mesotrophic lake	Eutrophic lake

21. Describe the features of each zone of a river and the organisms found in each zone:

	Description	Organisms
Source zone		
Transition zone		
Floodplain zone		

22. List 3 reasons why inland wetlands are important?

- _____
- _____
- _____

23. Describe the features of each biological zone of the open ocean and the organisms found in each zone:

	Description	Organisms
Pelagic Zone		
Neritic zone		
Euphotic zone		
Bathyal zone		
Abyssal zone		

24. Why should we care about coral reefs?

3 Ecological reasons	3 Economic reasons

25. Describe each portion of the earth's structure:

	Description
Core	
Mantle	
Crust	
Asthenosphere	
Lithosphere	

26. Define the following terms:

	Definition
Convection	
Divergent plate boundary	
Convergent plate boundary	
Transform plate boundary	
Subduction	

27. Determine the type of plate boundary at each of the following geographic locations. If you're not sure where the following are located refer to a map or <http://earth.google.com/>

_____ Andes Mountain range

_____ Mid-Atlantic Ridge

_____ Iceland

_____ California

_____ Mariana Trench

_____ Himalayas

_____ Red Sea

A. Divergent plate boundary

B. Continental-continental convergent plate boundary

C. Continental-oceanic convergent plate boundary (subduction zone)

D. Oceanic-oceanic convergent plate boundary (subduction zone)

E. Transform-fault boundary

28. Define and give examples:

	Define	Examples
Mineral		
Rock		

29. Describe source material and process that forms each of the following types of rocks and give examples of each:

Rock type	Source material/s	Rock forming process	Examples
Igneous			
Sedimentary			
Metamorphic			

30. Describe 2 ways that mining companies locate mineral deposits:

- _____

- _____

31. Describe each of the following mining methods:

Open-pit mining	
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Dredging	
Area strip mining	
Contour strip mining	
Mountaintop removal	
Subsurface mining	

32. Describe the General Mining Act of 1872 and the Surface Mining Control and Reclamation Act of 1977.

33. List and describe the reactions of Acid Mine Drainage

- ---
- ---
- ---
- ---

34. Describe each of the following mining practices that increase pollution:

Hydraulic mining	
Heap leaching	

Smelting	
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35. List and describe the health effects of mining mineral resources:

- _____

- _____

- _____

- _____

36. What can be done to extend depletion time?

37. What are ecological and commercial benefits of a forest?

- _____
- _____
- _____
- _____
- _____
- _____
- _____

38. Explain the characteristics and properties of each

Even-Aged Forest	Uneven-aged Forest

38. Compare the different tree harvesting

Technique	Description	Impacts

39. Compare and contrast the sustainable Forestry Initiative (SFI) and the Forest Stewardship Council (FSC).

40. What act created a national wilderness preservation system?
How does the Roadless Rule work to protect undeveloped nation forest lands?