THE ABIOTICOFE

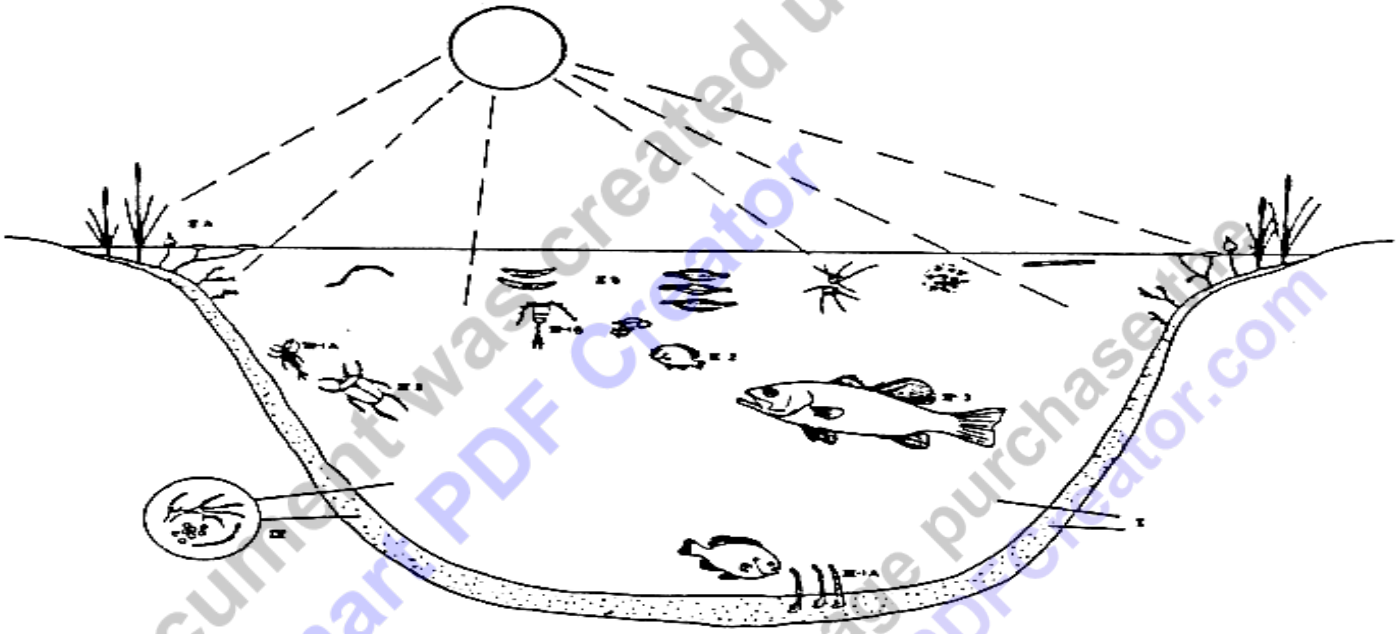
(Opportunity For Excellence)

Name:

Due:

EVERYTHING IS CONNECTED TO THE NON-LIVING ENVIRONMENT

Please put red colored circles around all of the biotic components, and blue colored squares around the abiotic components of the picture below.



Please describe a factor that might affect the amount of light in the environment based on the picture below. Also describe how light affects organisms such as the sunflowers below.

Why is this turtle sitting on a log? Explain using some terms discussed in class.

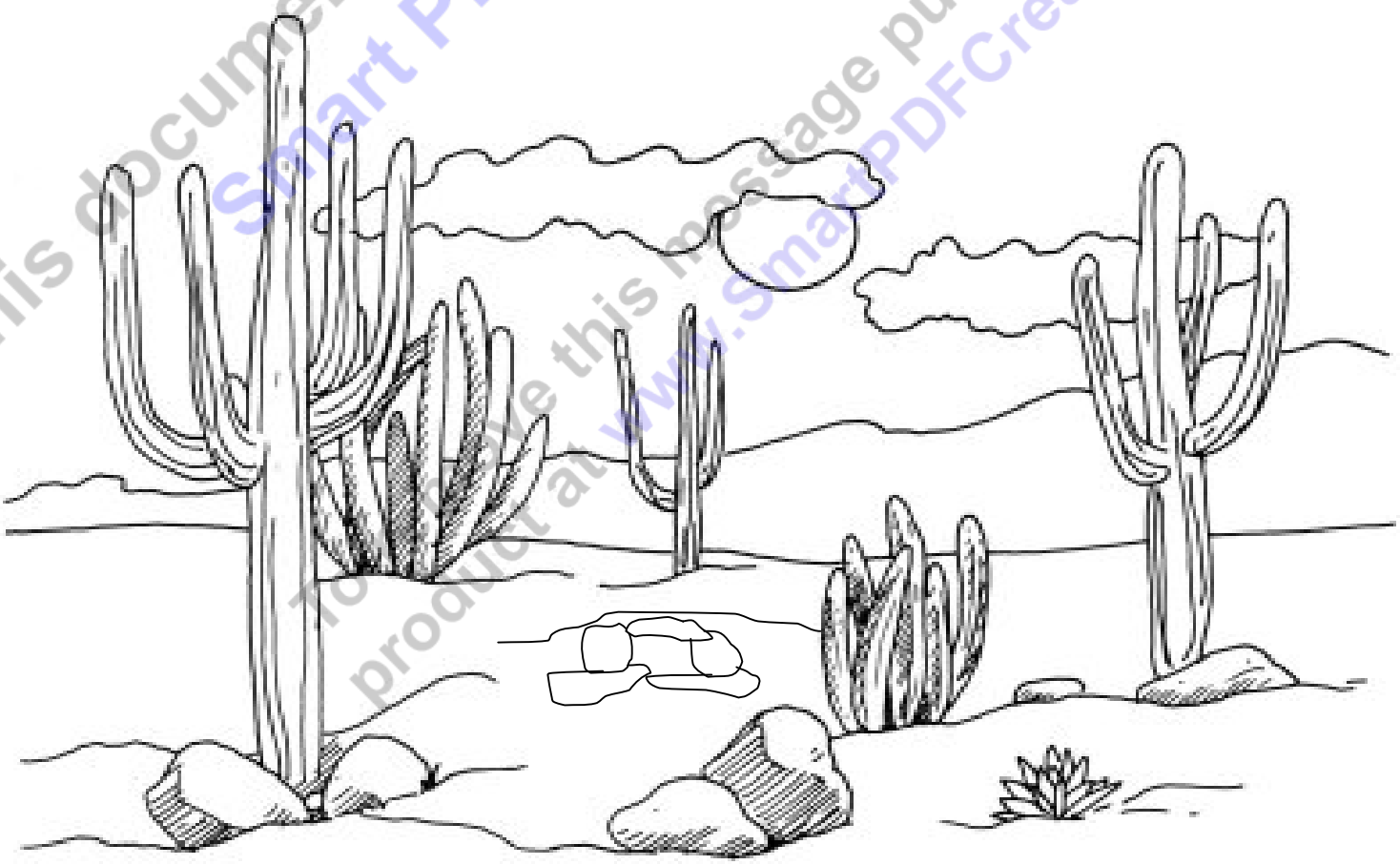
Use the picture below to describe some of the advantages and disadvantages to having warm and cold bloodedness?

Please describe the difference between a physical and behavioral adaptation based on how you thermo-regulate on a cold winters day.

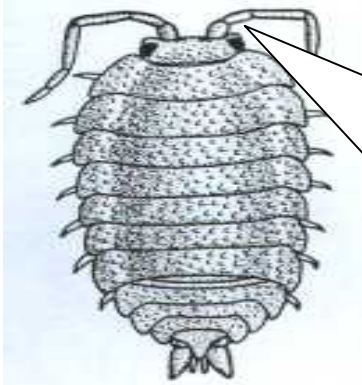
Describe how you have a range of tolerance when it comes to temperature. Please use the words below in your discussion of this topic.

Hypothermia	Hyperthermia

Warning! Two Part Question. Please add desert plants and animals to the scene below. Provide text to around your sketches that describe how these organisms are adapted to survive this deserts high <u>temperature</u>, and low <u>moisture</u>.

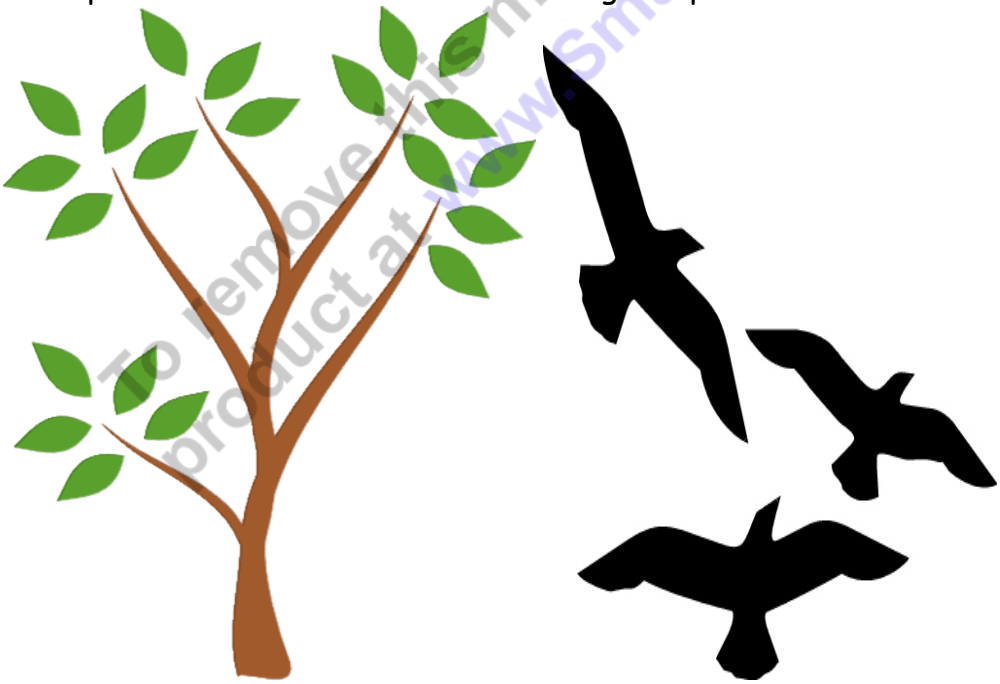


Please tell me about this organisms and its relationship to the non-living environment.

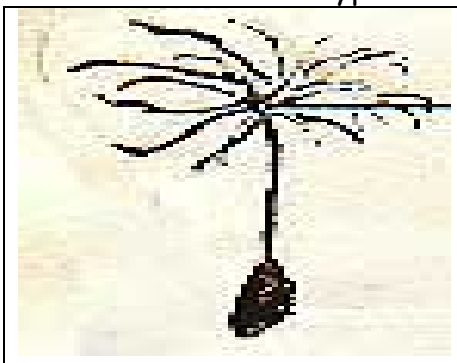


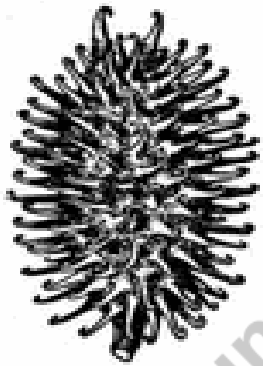
What are the positives and negatives of wind? Please write a short paragraph explaining your answer.

Please describe how plants and animals utilize wind using the pictures below.

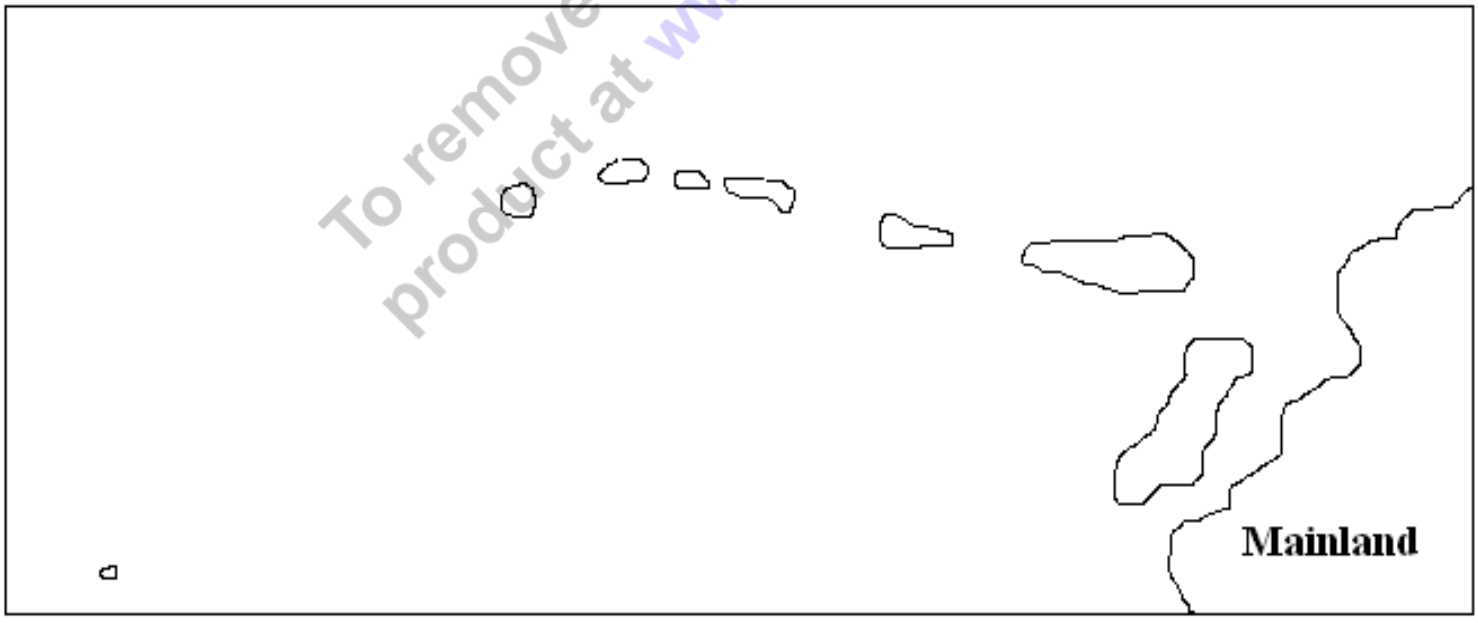


Please describe the type of seed dispersal below.





Please describe Island Biogeography theory based on the map below. Please describe using text which Island will most likely exhibit the following. 1) Most migrations and fewest extinctions. 2) Fewest migrations and most extinctions, 3) Describing using multiple arrows were island hopping may occur.



Are forest fires good? Please answer this question in the space below._____

In the space below, please label the hydrologic (water) cycle. A strong answer will contain most of the word bank below.

•Condensation •Evaporation •Precipitation •Percolation •Evapotranspiration •Sublimation •Infiltration •Ocean Storage •Ground Water Storage •Freshwater discharge •Surface run-off.

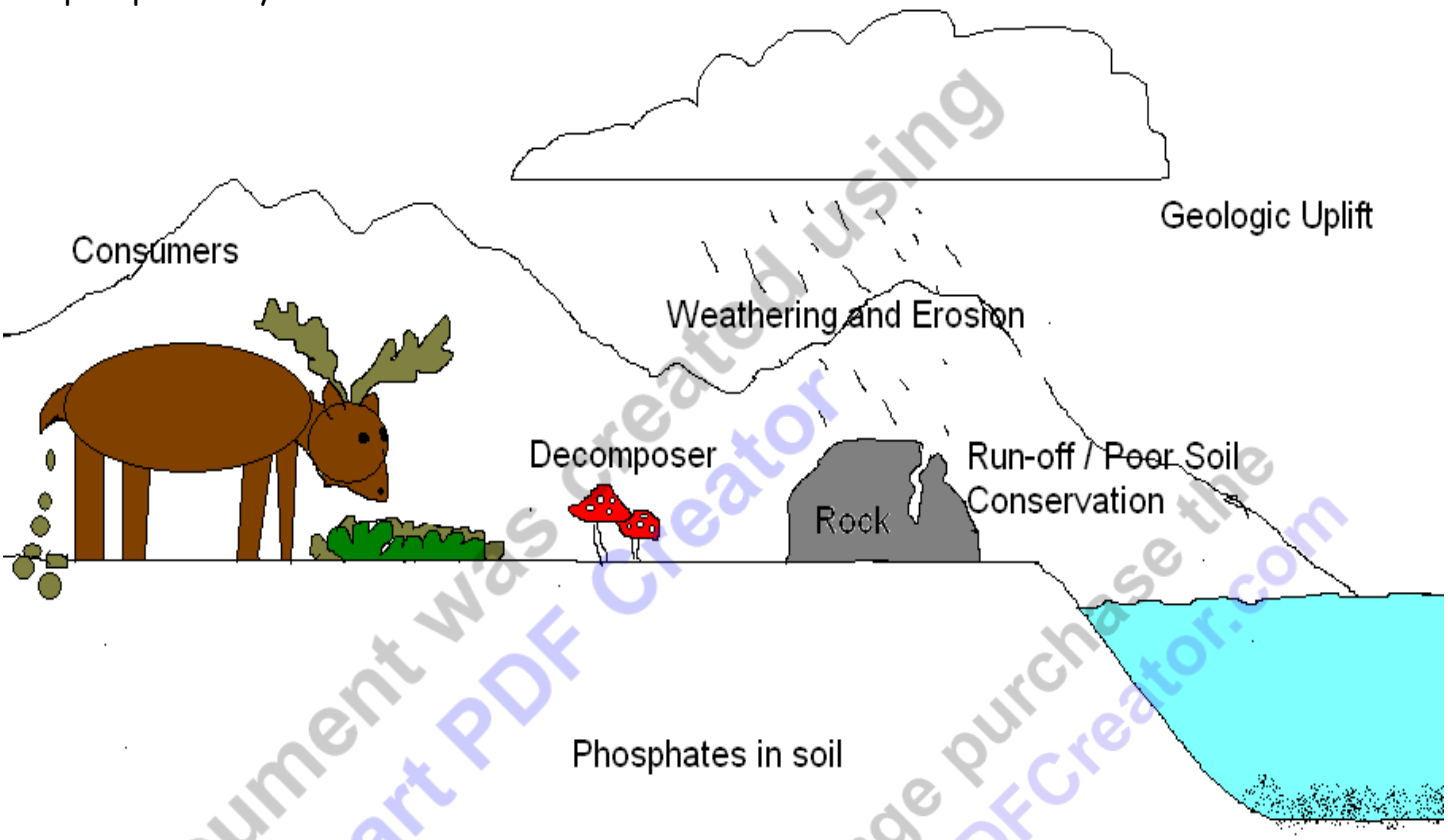
Please describe the oxygen carbon dioxide balance based on the picture of your bio-dome in the space below. Be very specific, using the equations for both photosynthesis and cellular respiration.

Describe how humans are interfering with the natural balance of the carbon and nitrogen cycle?

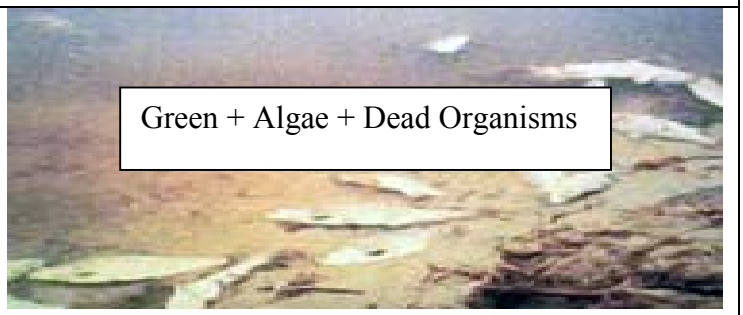
Describe how nitrogen is fixed and then broken down as part of the nitrogen cycle below.

Fixed **Broken Down**

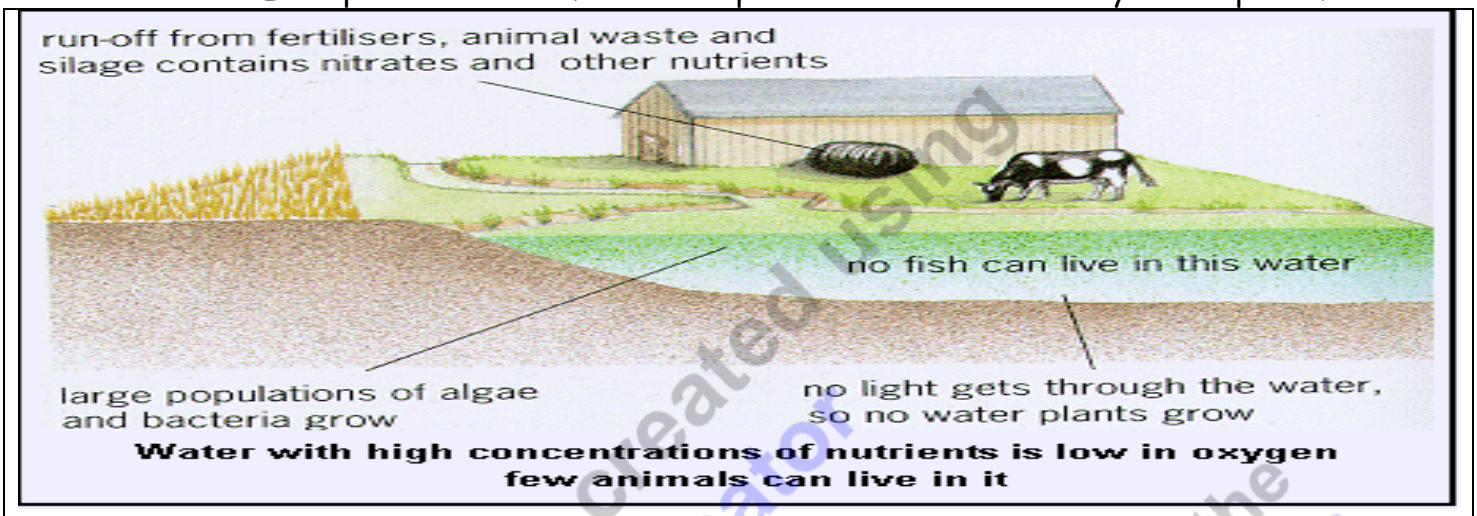
Please draw arrows showing how phosphorus travels through the living and non-living world in the phosphorus cycle.



Please label the following pictures as olgiotrophic, mesotrophic, eutrophic, or eutrophication

 Green + Algae	 Emergent vegetation and some free floating aquatic
 Crystal Clear High Mountain	 Green + Algae + Dead Organisms

Please describe Eutrophication below. Use the pictures as a resource in your response.



Make a reference about something learned during any of the video shorts described during this OFE. Write down some information in the boxes below.

Video -	Video -
Video -	Video -

Please describe how the concept everything is connected to the non-living environment relates to your bio-dome. Please make a reference to the following and check off the box when you have completed that part. **Be specific to your bio-dome!**

- ◊ Light
- ◊ Water Cycle
- ◊ Temperature
- ◊ Thermoregulation
- ◊ Nitrogen Cycle
- ◊ Phosphorus Cycle
- ◊ Photosynthesis
- ◊ Cellular Respiration
- ◊ Carbon Dioxide / Oxygen Balance