STATION 1
DEFINITIONS

Matching: Match the descriptor with the BEST term

Definition	Term
G 1. Living things that break down dead organic material to get the energy they need.	a. Energy pyramid
C 2. A model that describes how food energy is passed from one living thing to another in an ecosystem.	b. Producer
A 3. A model that shows the amount of energy available in each level of a food chain.	c. Food web
F 4. Process that absorbs the outgoing solar energy in Earth's atmosphere	d. Primary consumer
E 5. Gases that absorb solar energy in Earth's atmosphere	e. Greenhouse gas
	f. Greenhouse effect
	g. Decomposer
	h. Biomagnification

Sentence Completion: Complete the following sentence with the BEST term.

Biomagnification is the increase in concentration of pollutants in tissues of organisms that are at successively higher levels in a food chain or food web.

The process by which pollutants collect in the cells and tissues of organisms is known as Bioaccumulation.

The term Climate Change is used to describe a long-term change in Earth's climate.

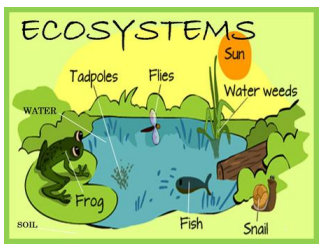
Process by which water is absorbed by the roots of plants, carried throughout the plant, and lost as water vapour through the leaves is known as transpiration.

The term global warming is used to describe when there is an increase in the average temperature of Earth's surface.

Word Bank:
abiotic, biotic, food web, point-source pollution, non-point source pollution, global warming, global climate change, carbon cycle, nitrogen cycle, phosphorus cycle, water cycle, biomagnification, bioaccumulation, geosphere, biosphere, atmosphere, hydrosphere, transpiration

STATION 2
BIOTIC AND ABIOTIC

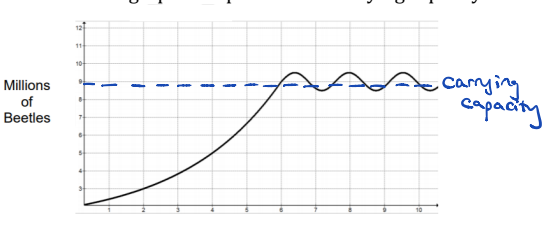
1. In the following diagram, find 3 abiotic and 3 biotic factors in the ecosystem:



Abiotic	Biotic	
Sun	Tadpoles	fish
Water	Flies	snail
Soil	Water weeds	frog

2. How are limiting factors related to carrying capacity?
Limiting factors often prevent a population from reaching its carrying capacity

3. Draw a line in the graph to represent the carrying capacity.



a. What is the carrying capacity in this population of beetles?
9 million

b. If the population continues to exceed the carrying capacity, what may happen over time?
The carrying capacity may degrade over time. Resources will get used up and the population and carrying capacity will decrease.

STATION 3
FOOD CHAIN AND FOOD WEBS

Use the following food chain:

lettuce	greenfly	ladybug	thrush	cat
1000 kg	100 kg	10 kg	1 kg	0.1 kg

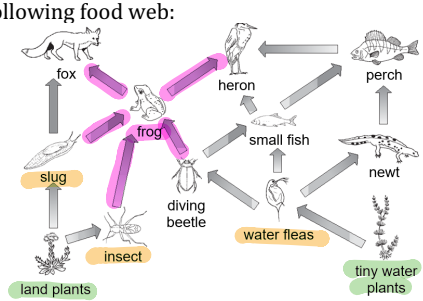
1. What does the arrow mean in a food chain?

The arrow represents the flow of energy from one organism to another

2. Name the producer in the food chain: lettuce
3. Name the 3rd trophic level in the food chain: ladybug
4. Name the apex consumer in the food chain: cat
5. If there is 1000 kg of lettuce in the environment, how many ladybugs would you expect to have?

10 kg

Use the following food web:



1. Name two producers in the food web.

land plants, tiny water plants

2. Name the primary consumers in this community.

slug, insect, water fleas

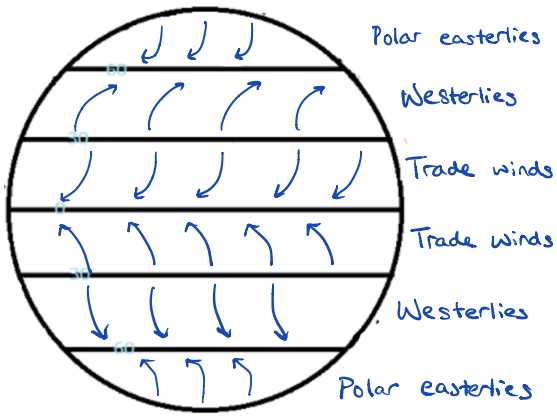
3. What would happen to this community if all of the frogs died suddenly?

The population of insects, diving beetles, and slugs would increase. Foxes and herons would have one less food source to survive on; may cause the population to decrease

STATION 4
WIND AND OCEAN CURRENTS

N W E S

Identify and label the major wind systems that are on Earth:



What causes the direction and motion of the winds to occur?

1. Convection currents - rising & falling of air as it warms & cools
2. Coriolis effect - earth rotating faster at the equator than at the poles

How are ocean currents and winds related?

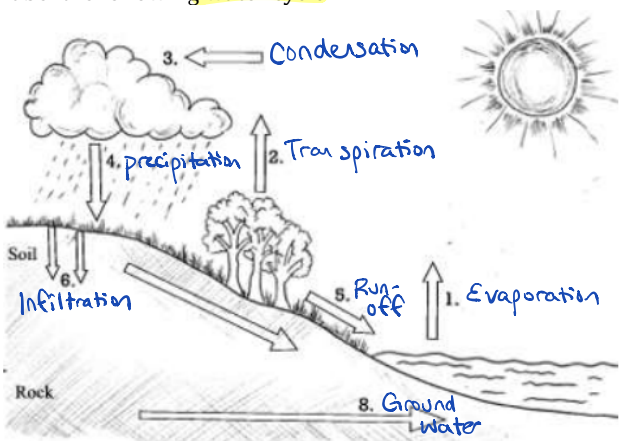
Winds cause surface currents to form → move by convection currents

What major things does the Great Ocean Conveyer Belt transport around the Earth?

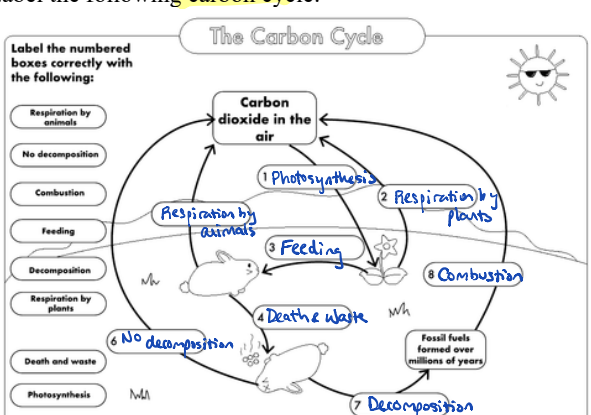
- thermal energy
- nutrients
- deep water

STATION 5
WATER AND CARBON CYCLE

Label the following water cycle:

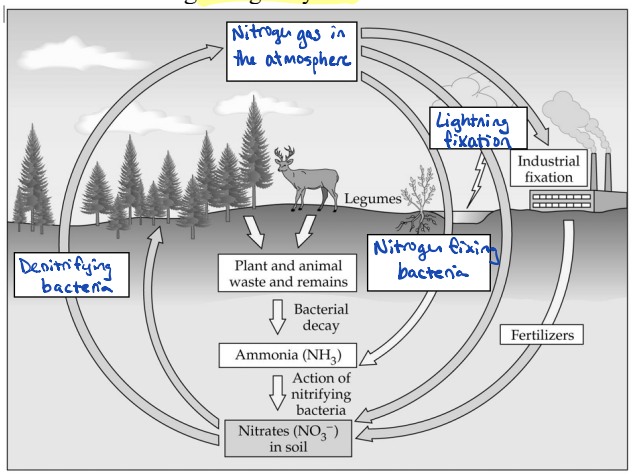


Label the following carbon cycle:



STATION 6
NITROGEN AND PHOSPHORUS CYCLE

Label the following nitrogen cycle:



Label the following phosphorus cycle: