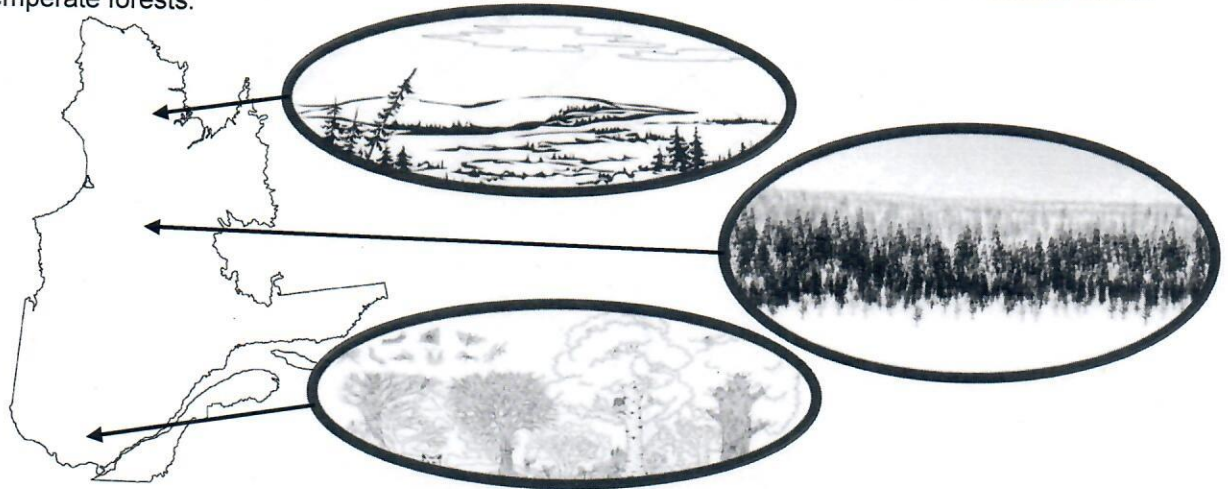


Sample Questions:

1) The province of Quebec is made up of various types of biomes. From north to south we find Arctic tundra, Boreal forests, and Temperate forests.



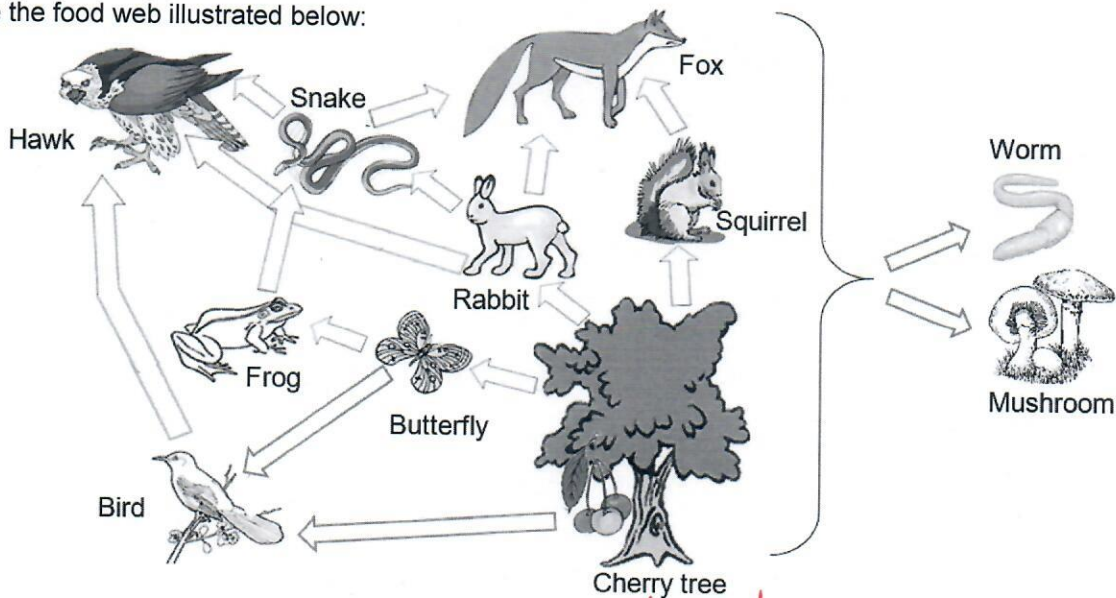
Different factors that may affect the primary productivity of ecosystems are listed:

- 1 - The amount of light available for photosynthesis.
- 2 - The amount of water available for plant growth and photosynthesis.
- 3 - Access to essential nutrients such as, carbon, nitrogen, phosphorus, and potassium.
- 4 - The temperature range a region is exposed to.

Which combination of factors described above best explains the differences in the primary productivity between the Arctic tundra and the Temperate forests?

- 1 and 4 only B) 2 and 3 only C) 1,2 and 3 only **D) 1,2,3, and 4**

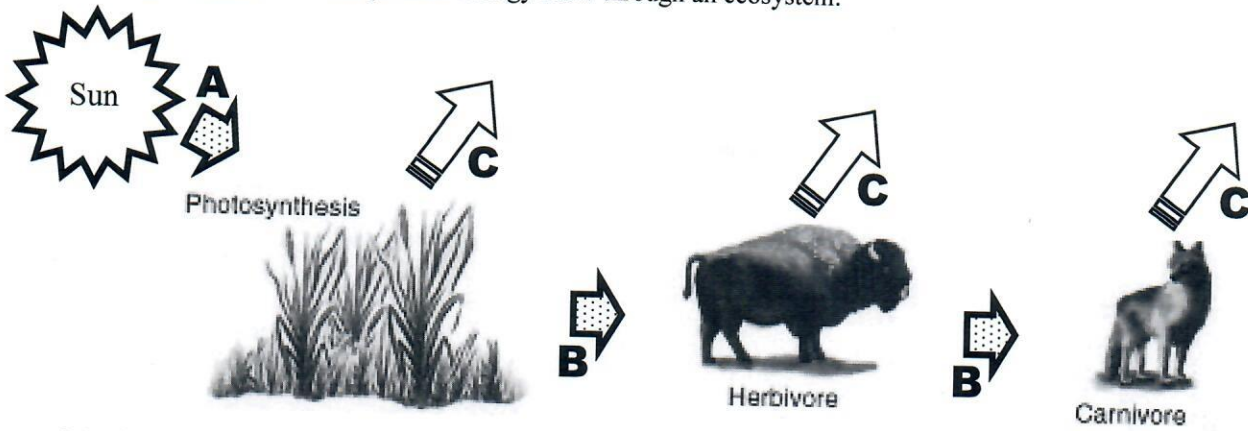
2) Observe the food web illustrated below:



- a) Name an organism that is a producer in this food web: cherry tree
- b) Name an organism that is a consumer in this food web: Anything except; Cherry tree, Mushroom,
- c) Name an organism that is a decomposer in this food web: Mushroom
- d) Explain the role of decomposers in an ecosystem. they take organic wastes and dead organisms and transform them into simple inorganic substances that are released into environment.
- e) What effect will a decreased snake population, due to disease, have on the following species? *Place a checkmark in box.*

- Frog:** Increase in Population Decrease in Population No Effect
- Bird:** Increase in Population Decrease in Population No Effect
- Butterfly:** ??? Hard to tell ??

4) The following diagram illustrates parts of Energy Flow through an ecosystem:



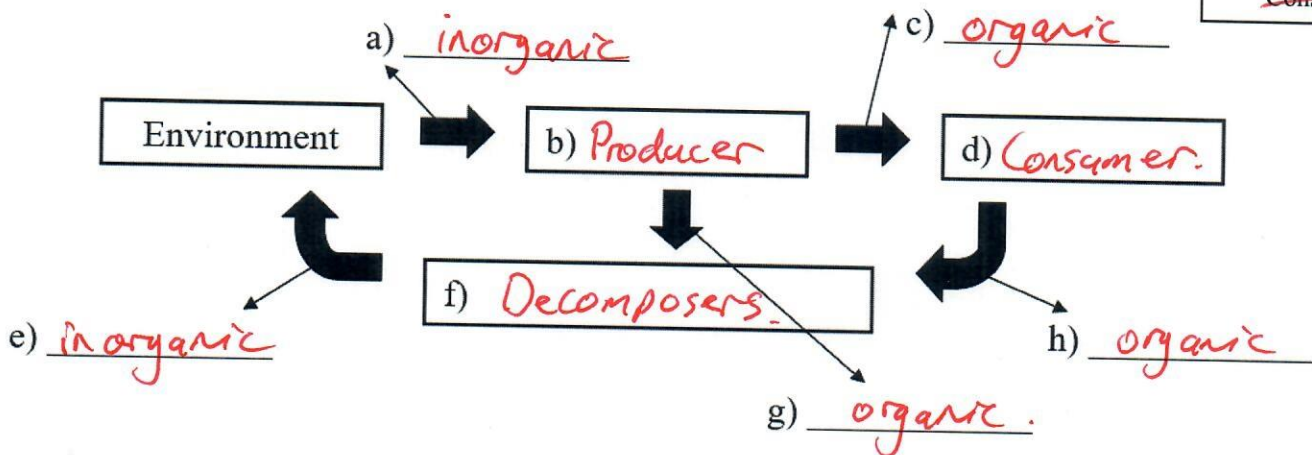
Match the letters on the above diagram to the type of energy moving through the ecosystem:

Chemical Energy: B Radiation (Solar energy): A Thermal Energy: C

5) The following diagram illustrates Material Flow through an ecosystem:

Use the following terms to identify the unknown letters: (you may use each term more than once if necessary)

- Organic Matter
- Inorganic Matter
- ~~Producer~~
- ~~Decomposer~~
- ~~Consumer~~



6) Study the following trophic relationships found in an ecosystem.

Identify the organism(s) from the food web that correspond to the following:

- a) Producer: Balsam Fir
- b) Decomposer: Blushing Wood Mushroom
- c) Primary Consumer: Snowshoe Hare
- d) Secondary Consumer: Canadian Lynx
- e) Tertiary Consumer: Grey wolf
- f) Autotroph: Balsam Fir
- g) Saprotroph: Blushing Wood Mushroom
- h) Heterotroph: Snowshoe Hare + Lynx + Wolf
- i) Herbivore: Snowshoe Hare
- j) Carnivore: Lynx + Wolf

