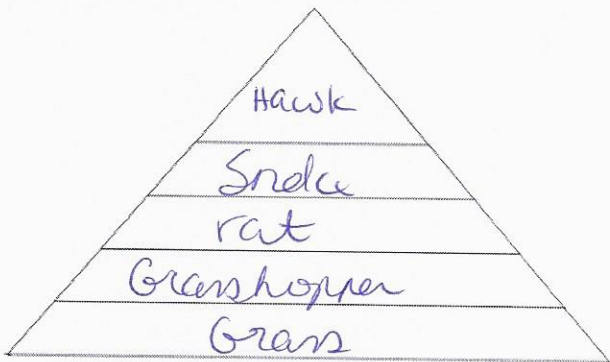


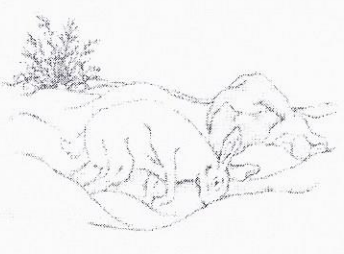
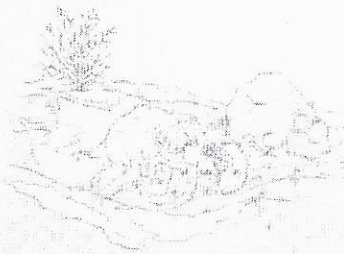
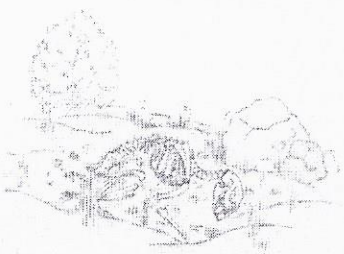
Ecosystems worksheet #2

1. Place the following words in the correct level on the food pyramid.

Hawk – Grass – Rat – Grasshopper – Snake /1



2. A hare died in a field in December. Explain the steps in the chemical recycling process by describing what happens in each of the months indicated.

January	March	May
		

↓
decomposition begins

↓
decomposition continues + minerals absorbed by soil

↓
organic material absorbed by soil used for new biomass

3. The table below gives a list of disturbances. Some are natural, and others are the result of human activity. Table I - Different Possible Disturbances

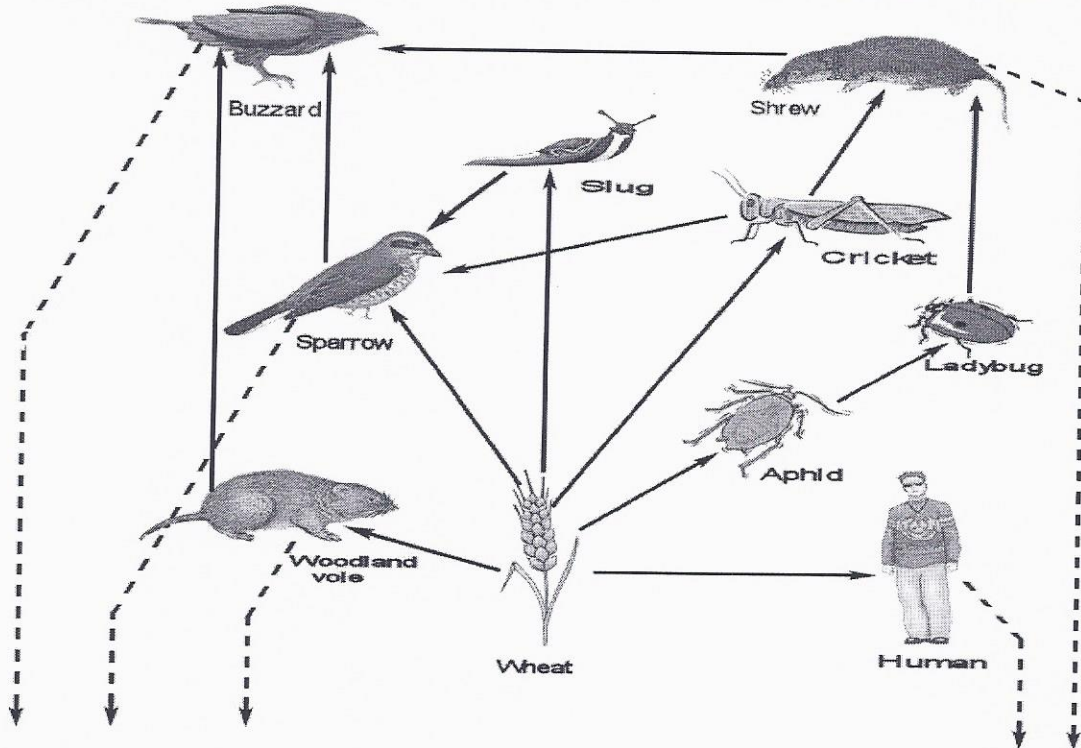
Disturbances	
1.	Volcanic eruption
2.	Acid rain
3.	Snowstorm
4.	Tree cutting
5.	Forest fire

Which of these disturbances result from natural causes only?

- A) 1, 2 and 3 **B) 1 and 3** C) 1, 3, 4 and 5 D) 2 and 5

4. In recent years, wheat farmers have noticed a sharp increase in the woodland vole population. Wheat, an important food source for humans, is also an important part of the diet of woodland voles. Woodland voles are often labelled as pests since they can carry bacteria and viruses. The farmers are worried about their harvest and are considering the possibility of spreading a rodent poison that will eliminate the voles.

Food web for a wheat field: Wheat is a food source for many living things: the stalk for aphids, the leaves for crickets and slugs, and the kernels for voles, sparrows, and humans.



- a- Give three consequences to the food web if the vole population continues to increase.

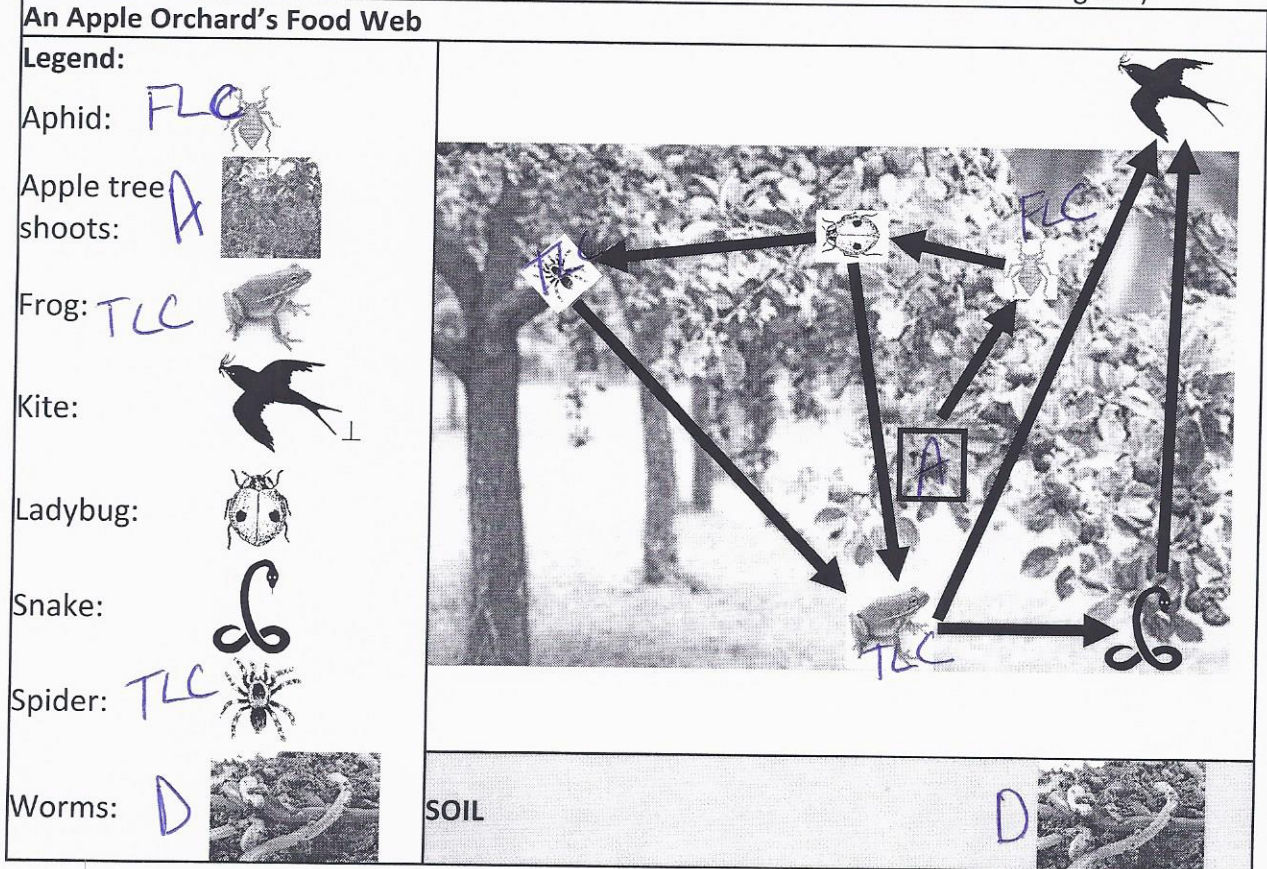
↓ wheat ↓ sparrow
 ↑ buzzard ↓ sparrow, slug, cricket & aphid

- b- Give an explanation to why the increase in the vole population may have occurred.

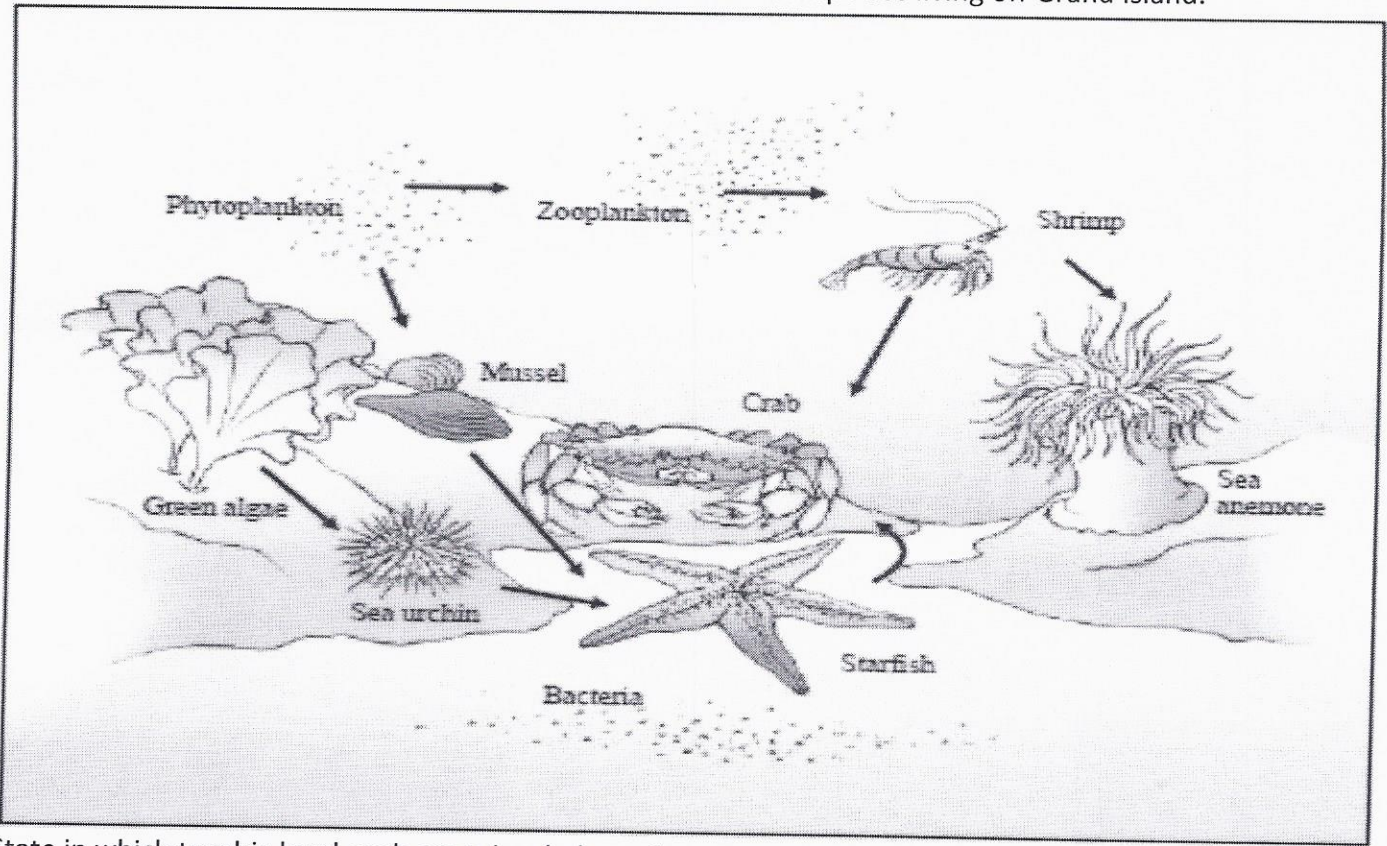
Buzzard pop ↓ - less predator

5. Apple cultivators must consider all aspects of the Orchard's ecosystem in order to ensure the highest possible crop yield. The trees in the orchard obtain their energy through the process of photosynthesis.

Using the following information, identify an autotroph, a decomposer, a first-level consumer and a third-level consumer from the orchard's food web. (put answers on the diagram)



6. The following diagram shows the food web for the coastal species living off Grand Island.



State in which trophic level each organism belongs to.

	Producers	Consumers	Decomposers
A	Green algae, phytoplankton and zooplankton	Shrimp, anemone, urchin, muscle and crab	Bacteria and starfish
B	Green algae, phytoplankton and zooplankton	Shrimp, anemone, urchin, muscle, starfish and crab	Bacteria
C	Green algae and phytoplankton	Zooplankton, shrimp, anemone, urchin, muscle and crab	Bacteria and starfish
D	Green algae and phytoplankton	Zooplankton, shrimp, anemone, urchin, muscle, crab and starfish	Bacteria

7. Using the same food web as number 6, biologists have noticed a rapid decline in the sea anemone population of the estuary near Grand Island. At first, they thought this was caused by abiotic factors, but they discovered that the direct cause of this rapid decline is a new type of fungus affecting sea anemones only. In the short term, what impact is this disturbance likely to have on the zooplankton population?

↑ in zoo plankton because ↓ in shrimp