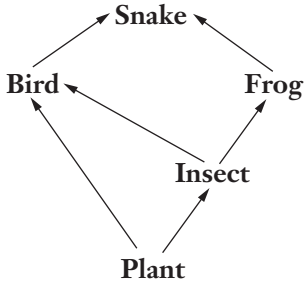
*In your textbook, read about how organisms obtain energy and about matter and energy flow in ecosystems.*

**Answer the questions below. Use the diagram of a food web to answer questions 1–7.**




**1.** How many food chains make up the food web?

**2.** Which organism is an herbivore?

**3.** Which organism is an autotroph?

**4.** Which organism is a third-order heterotroph? To what trophic level does that organism belong?

**5.** Which organism is an omnivore?

**6.** Which organisms belong to more than one food chain?

**7.** Which organism belongs to more than one trophic level?

**8.** What are decomposers? From which trophic levels are the organisms that decomposers feed on?

**9.** What does a pyramid of energy show about the amount of energy available at different trophic levels of a food chain?

**10.** Why do different trophic levels have different amounts of energy?

*In your textbook, read about cycles in nature.*

**Circle the letter of the choice that best completes the statement or answers the question.**

**11.** Energy that is lost at each trophic level of an ecosystem is replenished by
**a.** heat. **b.** nutrients. **c.** sunlight. **d.** organisms.

**12.** Besides energy, what moves through the organisms at each trophic level of an ecosystem?
**a.** organisms **b.** nutrients **c.** sunlight **d.** cycles

**13.** Evaporation and condensation a part of the
**a.** carbon cycle. **b.** nitrogen cycle. **c.** phosphorus cycle. **d.** water cycle.

**14.** Plants lose water to the air through
**a.** condensation. **b.** photosynthesis. **c.** their roots. **d.** evaporation.

**15.** Animals lose water when they
**a.** breathe in. **b.** urinate. **c.** breathe out. **d.** both b and c.

**16.** The water in the atmosphere is returned to the earth by
**a.** precipitation. **b.** evaporation. **c.** photosynthesis. **d.** decomposition.

**17.** Autotrophs and heterotrophs use carbon molecules for energy and
**a.** photosynthesis. **b.** growth. **c.** decomposition. **d.** both a and b.

**18.** What do plants use in photosynthesis to make carbon molecules?
**a.** carbon dioxide **b.** carbohydrates **c.** fertilizer **d.** oxygen

**19.** Heterotrophs get carbon molecules by
**a.** making the molecules themselves. **b.** feeding on other organisms.
**c.** decaying. **d.** growing.

**20.** When decomposers break down the carbon molecules in dead organisms,
**a.** the dead organisms are converted to coal. **b.** oxygen is released.
**c.** carbon dioxide is released. **d.** carbon dioxide is converted to energy-rich carbon molecules.

**21.** Fertilizers provide plants with
**a.** nitrogen. **b.** carbon. **c.** water. **d.** oxygen.

**22.** Which of the following convert(s) nitrogen in the air into a form plants can use?
**a.** bacteria **b.** lightning **c.** sunlight **d.** both a and b

**23.** Plants use nitrogen to make
**a.** carbohydrates. **b.** nitrogen gas. **c.** proteins. **d.** both b and c.

**24.** An animal returns nitrogen to the environment when it
**a.** breathes. **b.** decomposes. **c.** urinates. **d.** both b and c.

**25.** Animals get phosphorus from
**a.** the air. **b.** eating plants. **c.** water. **d.** the soil.

**26.** Phosphorus in the soil comes from
**a.** rocks. **b.** decaying organisms. **c.** the air. **d.** both a and b.