A. Photosynthesis explains how energy from the sun is captured by **green plants** and used to make _____.
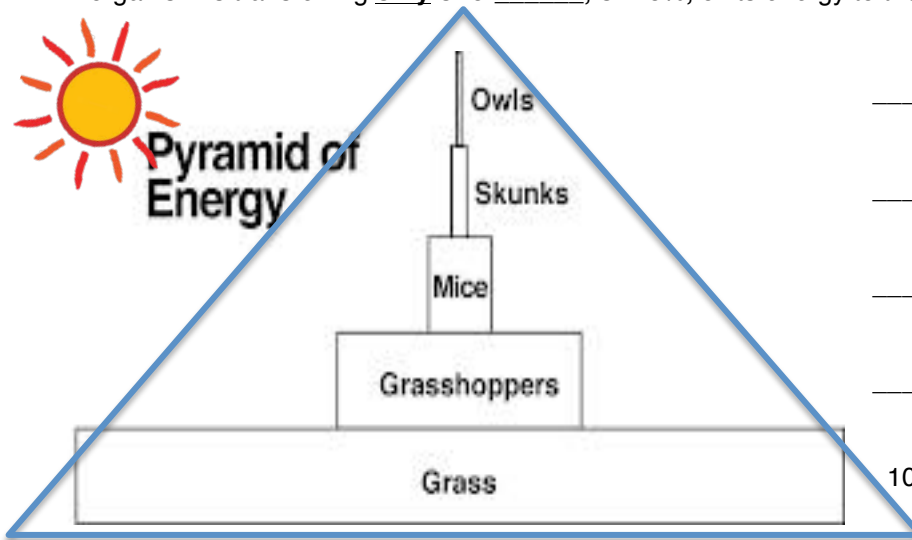Most of this energy is used to carry on the plant's life activities. The rest of the energy is passed on as food to
the next level of the **food chain** (or food web or energy pyramid).

FOOD CHAIN

sun   producer   herbavore   ?   carnivore   Bacteria decomposer

Energy moves this way

FOOD WEB

A simple food web

Decomposers
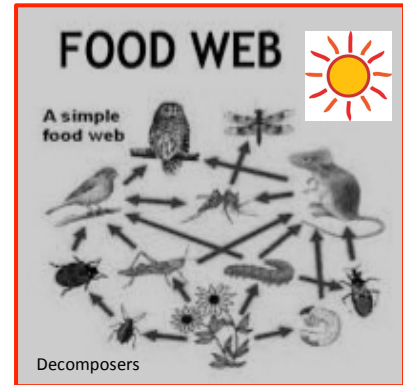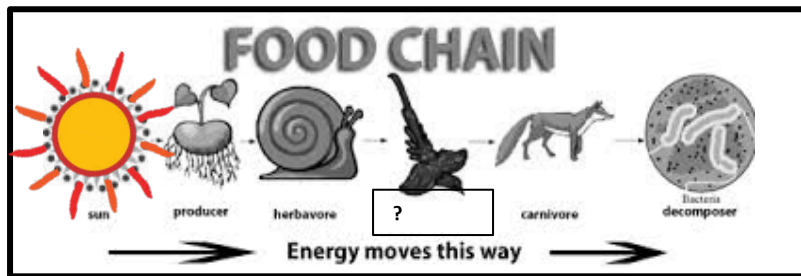
The figures above shows energy flow in a simple food chain and a food
web. At each level of the food chain, about 90% of the energy is lost, mostly as heat. The total energy passed
from one level to the next is only about **one-tenth or ____% of the energy received from the previous organism.
Therefore, as you move up the food chain or food web, there is L____ energy available. Remember, each
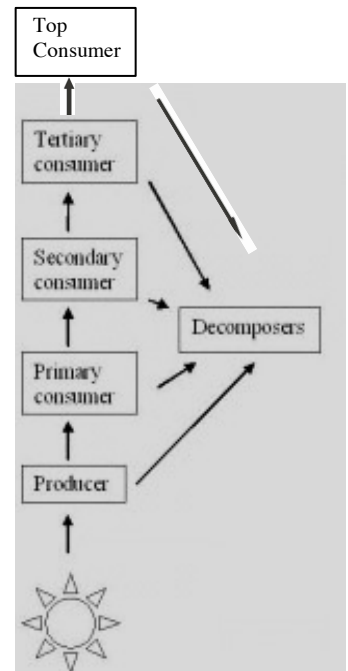organism is transferring **only one-_____, or 10%,** of its energy to the next organism.

Pyramid of Energy

Owls

Skunks

Mice

Grasshoppers

Grass

____% = _____ml

____% = _____ml

____% = _____ml

____% = _____ml

100% = 10,000 ml
(10 liters)

Top Consumer

Tertiary consumer

Secondary consumer

Primary consumer

Producer

Decomposers

B. COLOR CODE:
  __**1.** Color all of the the PRODUCERS or their area **GREEN** in each above diagram.

C. Draw straight edge arrows to show energy transfer (Use a straight edge.):
  __2. Draw **arrows→** above showing the directions of energy transfers in an **Energy Pyramid**.
  __3. Add a **Decompsers** box and then add energy **arrows→** to the **decomposers.** _____

D. Demonstrate the energy of each level as the volume of water:
  __4. Start with the energy of the **producers** as **100%.** Use 10,000 ml (10 liters) as 100%.
  __5. Figure the volume of liquid to model the amount of energy for each level. Fill in above.
  __6. Model the correct amount of liquid, to represent the energy at each level, by moving
      it to an appropriate sized container. Keep your containers lined up in order.
  __7. Have your liquid amounts checked._____

10 liters↓=10000 ml

2 liters= 2000 ml

Soda   Soda

E. Label. DO NOT USE ARROWS because arrows show energy transfer.
       Use a **straight edge** for ALL lines or rectangles.
  __8. Use these "trophic" terms to label the above energy pyramid. (Do not use arrows). _____

__1) Auto**troph**	__3) Herb**ivore**	__6) Produc**er**	__9) Prim**ary**
__2) Hetero**troph**	__4) Carn**ivore**	__7) Consum**er**	__10) Second**ary**
	__5) Omn**ivore**	__8) Decompos**er**	__11) Terti**ary**