FOOD WEB
INDOOR LAB

BACKGROUND:
Food is involved with both the flow of *energy* and the flow of *matter* through the living and sometimes non-living world. Matter is constantly recycled through living things and the earth, but energy is used and lost in the activities of living things. The *sun* provides all the energy, and the *earth* provides all the matter or materials.

Matter flows through the system and recycles back in the following manner.

Give an example of each:
Producers →Primary Consumer (C1) →Secondary Consumer (C2) →Tertiary Consumer (C3)
(Plants)   (Herbivore)   (Carnivore)   (Carnivore)

                    Decomposer
                    (Saprophyte)

Energy flows through the system and is lost at each stage in the following manner:

Sun→Plants→Primary Consumer→Secondary Consumer→ Tertiary Consumer

DIRECTIONS:
  A. Arrange the following four organisms into a *food cycle* with arrows and describe the function of each in the ecosystem (producer/primary consumer, secondary consumer, etc.).
      Grouse, wild oats, owl, grasshopper, mushroom.

  B. Arrange the following four organisms into an *energy pyramid*: **tadpole, aquatic plant, northern pike, sunfish.**

C. A more complex and realistic illustration of matter and energy movement through an ecosystem is the *food web.* Use arrows to show the movement of matter and energy among the examples below to make a food web. The arrows should always point to the consuming organism. Also label which are producers (P), primary consumers (C1), secondary consumers (C2), tertiary consumers (C3), and decomposers (D).

MOUNTAIN LION   **HAWK**   **SNAKE**

          DEER   **MOUSE**   **RABBIT**

SHRUBS   **TREE**   **GRASS**

          BACTRIA   **MUSHROOM**   **MAGGOT**

D. Now make a food web for the *aquatic* ecosystem below

WALLEYE   **NORTHERN PIKE**   **LARGE MOUTH BASS**

          CRAPPIE   **SUNFISH**   **MINNOW**

FROG   **SNAIL**   **SANDWORM**

          ALGAE   **WATER PLANTS**

          BACTERIA   **FUNGUS**

EXTRA CREDIT (IF AVAILABLE): Have your instructor check your lab sheet. If it is correct, look at the skulls on the front desk and tell where you think they might fit in the food web. Use P, C1 to C3, etc. Can you identify the animal?

A.

B.

C.

D.