

Ecology Test Review

1. Scientific method

- a. What are the steps of the scientific method?

- b. What is the difference between an independent and a dependent variable?

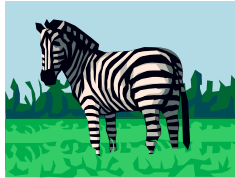
2. Levels of Organization

- a. List the levels of ecological organization in order starting from SMALLEST to LARGEST beginning with an individual/organism.

- b. What is the biosphere? _____

- c. What is the difference between a population and a community? _____

- d. Which of the following describes a population?



- i. All the zebras living in the same area
- ii. Zebras and giraffes in the same area
- iii. Zebras, giraffes, and grass in the same area

3. Energy Flow

- a. The _____ is the primary source of energy in most ecosystems.

- b. Organisms that can convert sunlight into food (glucose) are called _____ or _____

- c. Organisms that CANNOT make their own food are called _____ or _____

- d. Herbivores eat only _____

- e. Carnivores eat only _____

- f. Omnivores eat both _____ and _____.

- g. When animals and plants die _____ break them down and release nutrients back into the soil for plants to use. Examples of this type of organism are _____ and fungi.



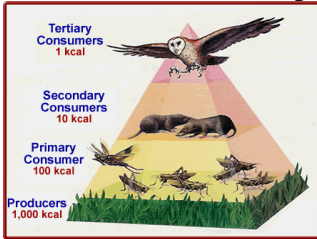
- h. Dead animals are eaten by _____.

4. Food Chain and Food Webs

a. Draw a simple food chain beginning with grass and ending with a hawk in the space below.

b. What is a food web? _____

c. What do the arrows represent? _____



d. What is a trophic level? _____

e. What is at the first trophic level? _____

f. Energy INCREASES/ DECREASES (circle one) as it moves up the food chain.

g. Only _____ of the energy available at each trophic level is passed up to the next trophic level.

h. What happens to the remainder of the energy? _____

5. Relationships

a. Non-living or _____ factors.

b. Give three examples of abiotic factors in an ecosystem

1) _____ 2) _____ 3) _____

c. Living or _____ factors.

d. Give three examples of biotic factors in an ecosystem

1) _____ 2) _____ 3) _____

e. What is symbiosis?

f. What are the three types of symbiosis?

1) _____ 2) _____ 3) _____

g. For the following, what type of symbiosis is it?

i. Barnacle on a whale _____

ii. Bee and a flower _____

iii. Tick on a dog _____

iv. Tapeworm in a cow _____

h. What is competition?

i. An example of competition would be _____

i. What is predation?

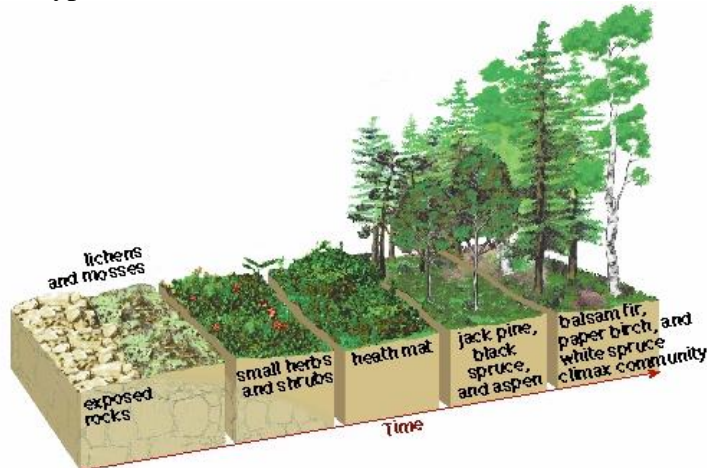
j. A _____ hunts and kills the _____!

Label the PREDATOR and the PREY in the following picture



6. Ecological Succession

a. What type of succession is this?



b. Primary succession takes longer because

c. What is the pioneer species in the above picture? _____

d. Which of the following causes primary succession?

- i. Tornado
- ii. Fire
- iii. Lava flow (volcano)

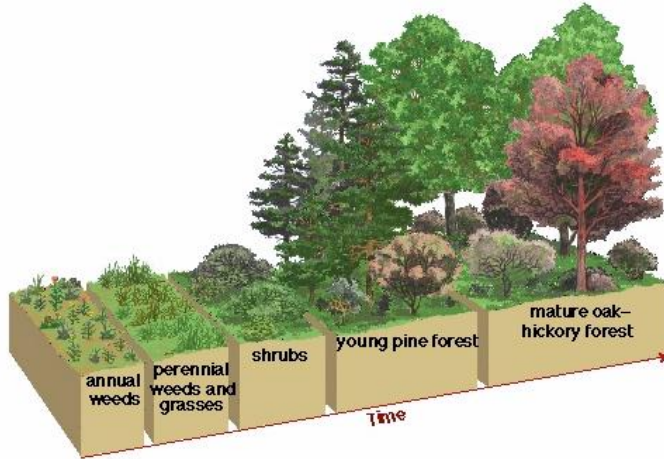
e. The first species to live in a previously uninhabited area are known as _____

f. What is a climax community?

g. What is the climax community in the above picture?

- i. Small herbs and shrubs
- ii. Lichens and mosses
- iii. Fir, birch, and white spruce

h. What type of succession is this? _____



i. What is the pioneer species in the above picture? _____

j. Which of the following causes secondary succession?

- i. Tornado
- ii. Glacier
- iii. Lava (Volcano)

k. A _____ is an organism's role or job in an ecosystem. A _____ is the place that the organism lives in an ecosystem.

l. Niche or habitat?

- i. A rattlesnake lives in wooded areas and under logs _____
- ii. A rattlesnake preys on mice to get food _____
- iii. A scavenger preys on dead animals _____

m. Two species can occupy the same _____, but not the same _____.