

## Vocabulary to know for the test:

- Carnivore	- Omnivore	- Consumer	- Ecology	- Mimicry
- Food chain	- Predator	- Decomposer	- Camouflage	- Extinct
- Food web	- Prey	- Ecosystem	- Hibernation	- Adaptation
- Herbivore	- Producer	- Habitat	- Migration	- Niche

Adaptation – a physical feature or a behavior that helps an organism survive in its habitat

Carnivores - Organism that only eat meat (other consumers)

Camouflage - Coloring, marking, or other physical appearance of an organism that helps it blend in with its surroundings

Consumer - Organism that eats other living things to gain energy

Decomposer - Organisms that break down the remains of other dead organisms

Ecology - Study of how animals, plants, and other living organisms relate to their environment

Ecosystem - System (interactions) of living and non-living things

Extinct – no longer in living or in existence

Food Chain - The path of energy in an ecosystem as one living thing eats and receives energy from other organisms

Food Web - Two or more food chains that intermingle

Habitat - Place where a population lives, environment that provides food, shelter, and water

Herbivores - Organism that only eats plants

Hibernation - To go into a deep sleep during which an animal uses very little energy and usually does not need to eat

Migration - To move to another region, usually when seasons change and food supplies become scarce

Mimicry - Adaptation and survival technique where an organism looks, acts, or smells like another organism or natural object

Niche – the role a plant or an animal plays in its habitat

Omnivores - Organism that eat both plants and meat (other consumers)

Predator - Organism that hunts other animals for food

Prey - Organism that is hunted by others for food

Producer - Any organism that makes its own food

### 1. Understand a food chain and food web: what begins them, ends them, is in them, which way are the arrows!

Food chains are the flow of energy from organism to organism; Food Webs are a combination of multiple food chains  
what begins them, the sun, since the food chain is the 'chain' of how energy is passed... in some cases, others will argue that it will be the producer that starts all food chain. - we discussed in class it depends on the author of the food chain. I will accept either answer. I need you to understand why and be willing to choose either answer (depending on the choices given). 😊

ends them, decomposers... though there really is no ending since energy is "recycled" and passed through a cycle. But, typically the accepted answer is decomposers 😊

is in them, 1<sup>st</sup>) Suns, 2<sup>nd</sup>) Producers, 3<sup>rd</sup>) Consumers (sometime called primary consumer, secondary consumer, tertiary consumer, and top predator), and 4<sup>th</sup>) Decomposers

which way are the arrows? Why? They always point to where the energy is passing!!!! (in other words, where the food is going, who is eating whom) Arrows do NOT show who ate what, but the flow of energy

### 2. Can you name examples of producers, consumers, and decomposers?

Producers: grass, flowers, all kinds of plants etc.

Consumers: insects, deer, bears, raccoons, birds, lions, bobcats etc.

Decomposers: bacteria, fungus, mold etc.

### 3. Understand what would happen if any / all of producers, consumers, and decomposers disappeared

Without Producers, there would be nothing to make the food. Producers take nutrients from the soil, water, air (carbon dioxide) and the sunlight to turn energy into a form (food) that we (consumers) can use. Without producers, we would not have food and we would die out!

Consumers help keep the number of producers and other consumers in check so no one type will overrun the Earth! In addition, we also help disperse the seeds that plants need to reproduce. Some consumers (bees, birds, and other insects) help pollinate plants so they can produce food.

Decomposers help break down dead consumers and producers. They turn the bodies of these items back into nutrients and put it back into the soil for producers to use. Without decomposers, we would have no decay and a lot of 'bodies' lying around.

#### 4. Understand where all organisms get their energy from; source of all energy

*Producers make all food, a source of energy for all consumers and decomposers - without producers, there would be no food and the consumers and decomposers would eventually die out.*

*The sun provides all energy for all life on earth. Without the sun, producers could not make the food.*

*\*\* the answer is either the "Sun" or "Producers" depending on the context of the question. Please understand the difference! Conceptually, the sun is the source of all energy. For all organisms, producers use the sun to make useable food / energy for us ... so you can argue that organisms get their energy from producers...*

#### 5. What is extinction; what are some of the causes?

*Extinction is when all the organisms of one type (species) no longer exist. Organisms become extinct when they cannot adapt to their changing environment. Some specific causes and examples are:*

- *Environment changes so the organism's habitat no longer exist or begins to "disappear" (become smaller)*
- *Organisms food disappears or changes*
- *The organism becomes prey to many predators... predators may adapt more quickly and this organism may become food for new predators...*
- *Weather and climate changes causes the habitat to change, food source to disappear, or cause new predators to move into the organism's area*

#### 6. Know about animals' adaptation; be able to name specific examples of animal adaptations

*MANY examples... but here are just a few...*

*First here are the basic adaptations we have learned: Hibernations, Migration, Mimicry, and Chameleon*

- *Squirrels, Bears and other animals hibernate so they do not have to "worry" about finding food during the winter when food is scarce*
- *Polar Bears have black skin to help absorb as much heat / suns energy and thick white fur to not only hold in the heat, but the white coloring helps it blend into the snowy environment*
- *Many birds fly south during the colder winter months to warmer climates*
- *Many fish swim in large schools that can confuse other fish into thinking this large school of fish is actually a larger fish*
- *Chameleons can change their coloring to blend into their environment so that their predators do not see them, as well as potential food/prey for the chameleon*
- *Leopards have a patterning on their fur to help blend into the environment, especially important when stalking prey*
- *Owls have very large eyes to help them see better since they hunt at night*

#### 7. Can you give an example of camouflage, and mimicry?; Do you know why animals migrate or hibernate?

*Camouflage is when an organism blends into its environment so that it cannot be seen... whether it is so that they cannot be food for anyone else - or - so that their prey cannot see them coming.*

- Example: Zebras travel in groups and their stripes / coloring help them camouflage with each other and the background
- Polar Bears are white and blends into the snowy environment

Mimicry is when an organism looks or acts like something else or another organism. Most often, the organism looks like a more dangerous consumer.

- Example: Viceroy Butterflies look very similar to the nasty tasting Monarch Butterflies. Viceroy's adaptations is a mimicry of the Monarchs
- Scarlet snakes look (or mimicry) like the very poisonous Coral snake - therefore other animals (especially humans) will avoid the non-poisonous scarlet snake

Animals migrate for numerous reasons:

- Traveling to warmer or wetter climates so they can survive, rather than freeze and also find the food that seems to disappear during the colder climates (animals that travel or plants that do not grow during the colder seasons)
- Some animals migrate to find mates and reproduce at their original "home" or to find nesting areas
  - o African Elephants migrate during the dry and wet seasons. They live in the African savanna and migrate during the dry season to the wetter river areas to ensure they have food and water.
  - o Salmon migrate to the ocean to live their adult life, but will migrate back to their freshwater river birth place to lay their eggs.

Animals hibernate primarily because they would be unable to survive the cold of winter or find food during the colder seasons.

- o Chipmunks store food in their burrows. They hibernate, but will occasionally wake up to eat their stored food, before going back to sleep (hibernate) for a few more weeks.
- o Bees hibernate when flowers – their food source – are not in bloom.

## 8. How are organisms interdependent?

Communities are filled with the population of many types of organisms. Communities live in Ecosystems. Ecosystems are made up of many types of habitats. The non-living things in an ecosystem determine the type of ecosystem there is. The populations in the communities influence each other.

- When a plant population decreases, the consumers that depend on this plant will decrease. They will either die from a lack of food or move away to find a new food source. They may end up eating the food of another population.
- If a consumer population disappears or gets smaller, then
  - o the plants that they eat may over grow and take over the soil for other necessary plants
  - o the predator that eats that consumer will then starve and cannot find food
- Producers are needed to make the food. Without producers, we would have no food.
- Consumers are needed to keep the ecosystem in check. Producers (plants) would over run the earth if there were no consumers. Consumers also help disperse the seeds for some producers enabling them to continue to exist. Some decomposers need
- Decomposers are needed to break down the remains of dead producers and consumers and to put nutrients back into the soil. Without decomposers the remains of producers and consumers would be left on the earth.

## 9. What happens to the ecosystem if there is too many of one type of organism, or not enough.

Answer is above...

**10. What is the difference between a habitat and ecosystem?**

- *Ecosystems are made up of many types of habitats. The non-living things in an ecosystem determine the type of ecosystem there is. Ecosystems are made up of living and non-living things.*
- *Habitats provide food, water, and shelter for one population. Habitats are only the home for one population. Ecosystems are the home for communities. (many populations make up a community)*

**My presentation is available on my website. Homework, Quizzes, and Activities conducted in class are the biggest help.**