Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. What is **ecology**?

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. **LEVELS OF ORGANIZATION**
* A single member of a species is known as an **\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.**
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ are groups of individuals.
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ are grouping of different populations.
* An \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ includes a community and its surroundings.
* A \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ is a group of ecosystems with the same type of climate.
* A ­­­­­­­­­­­­­­­­­­\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ would be the entire planet.



1. **PRODUCERS**

Q: What do we call organisms that make their own food?

A: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Q: What process do plants undergo to make their own food?

A: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Q: What’s the equation for photosynthesis?

A: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. **CONSUMERS**

Q: What do we call an organism that consumes its food?

A: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

* There are four types of heterotrophs, depending on where the organism’s energy (i.e. food) comes from:
	+ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
	+ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
	+ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
	+ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Q: Where does a carnivore get its energy?

* A: From \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ only

Q: What are some examples of carnivores?

* A: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_



Q: Where does an **omnivore** get its energy?

A: From both \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_/grains/fruit, etc

Q: What are some examples of omnivores?

A: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Q: Where does a **decomposer** get its energy?

A: From breaking down \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Q: What are some examples of decomposers?

A: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. **FOOD CHAINS**
* Energy flows through an ecosystem in \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, from the sun or inorganic compounds to autotrophs (producers) and then to various heterotrophs (consumers)
* Energy is transferred by organisms \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* Energy transfer is represented by \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ going in the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_



1. **FOOD WEBS**
* A \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ links all the food chains in an ecosystem together
* More \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ interactions than unidirectional flow of food chains
* In reality, the interactions between \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ in an ecosystem’s exists as a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ instead of a food chain



1. **ENERGY PYRAMIDS**
* Each step in the food chain is called a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Amount of energy available in this tropic level

* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ are the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ trophic level
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ make up the second, third or higher trophic level

**Energy pyramid** – only \_\_\_\_\_\_\_\_\_ of energy is transferred from one trophic level to the next

Energy is used up by the organism’s \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and/or released as \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_



1. **BIOTIC VERSUS ABIOTIC**
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ factor –influences/interactions of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ organisms
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ factor – physical, \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ influence that affect an ecosystem

Q: What are some biotic factors that affect a forest?

A: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Q: What are some abiotic factors that affect a forest?

A: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. **COMMUNITY INTERACTIONS**
* Competition
* Predation
* Symbiosis
	+ Mutualism
	+ Commensalism
	+ Parasitism
1. **Competition**
* Definition – organisms of the same or different species attempt to use the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ principle – no two species can occupy the same \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ in the same habitat at the same time; one species will \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ the other
* **Niche** – range of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ conditions in which an organism \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ and the way in which the organism \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ those conditions
1. **Predation**
* Definition – one organism captures and \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ on another
* Predator \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, prey does not.
1. **Symbiosis**
* Definition \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ between two organisms
* There are 3 kinds:
	+ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
	+ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
	+ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
1. **POPULATION GROWTH**

Three factors affect population size

1. Number of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

2. Number of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

3. Number of individuals that enter or leave pop.

* + - Immigration – \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
		- Emigration – \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
1. **Exponential Growth**
* Under ideal conditions with unlimited resources, a population will grow \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.
1. **Logistic Growth**
* As resources become \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, the growth of a population slows or stops
* \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_(K) – largest number of \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ a given environment can support
* Once the population reaches its carrying capacity, the population size \_\_\_\_\_\_\_\_\_\_\_\_\_



1. **Coevolution**

Definition- a long term change that takes place in two species because of their \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_with one another.