



DO NOW 8/24

- ▶ Fill in the following blank with AS MANY possible things that you can think of using your knowledge from the video and all other activities we have done in the class thus far. Write them down in your warm-ups.
 - ▶ More people, more _____


DO NOW 8/25

Answer the following questions:

1. Make a FOOD CHAIN consisting of the following organisms:
 - Owl, corn, cricket, mouse
2. Using the above food chain: If the corn has 1000 calories of stored energy, how many calories of stored energy would be found in the cricket level?
3. Using the above food chain: What would happen if the OWLS increase? (pick one for each)
 - Corn would increase OR decrease?
 - Cricket would increase OR decrease?
 - Mouse would increase OR decrease?

A green gecko is shown on a wooden surface, with its shadow cast onto the wood. A white rectangular box is overlaid on the image, containing the title 'ECOLOGICAL RELATIONSHIPS' in red, bold, uppercase letters. The background is a close-up of the wooden planks, with a green gecko in the center. The gecko's shadow is cast to the left and slightly upwards. The text box is positioned in the upper left quadrant of the image.

ECOLOGICAL RELATIONSHIPS

A red arrow pointing to the right, located on the left side of the slide, pointing towards the text box.

SB4a. Investigate the relationships among organisms, populations, communities, ecosystems, and biomes

WHAT IS ECOLOGY?

- ➔ Ecology is the study of interactions btwn organisms and their environment.



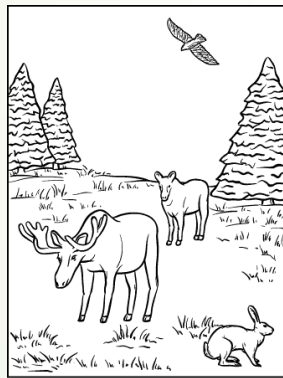
ABIOTIC VS. BIOTIC

➤ ABIOTIC

- Nonliving parts of environment
- Ex: hills, soil, water

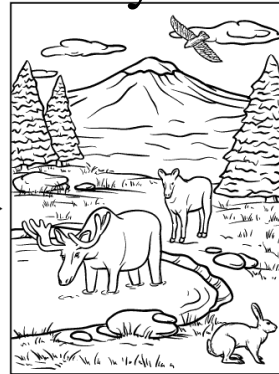
➤ BIOTIC

- Living parts of environment
- EX: animals & plants



Biotic

Ecosystem



Abiotic



➔ 1.



➔ 2.



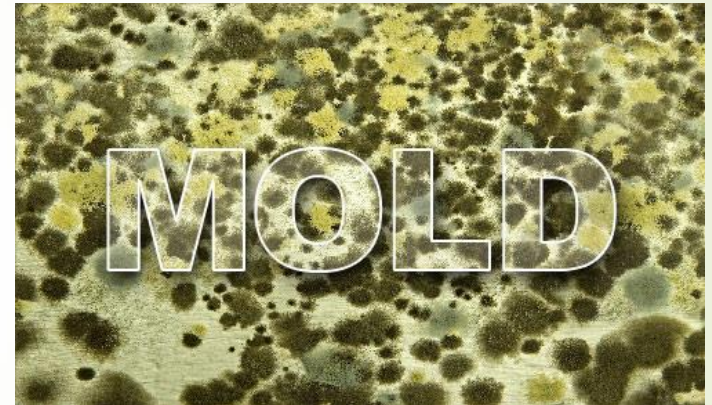
➔ 3.



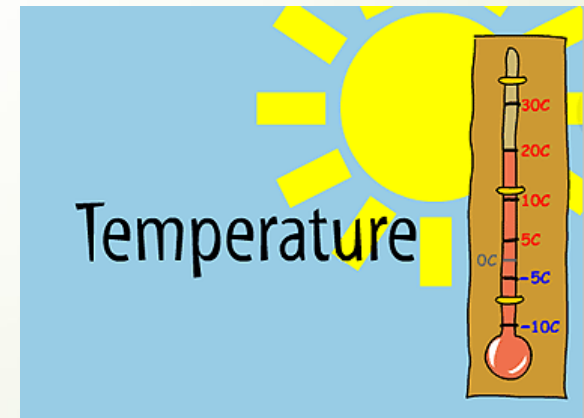
➔ 4.



➔ 5.



➔ 6.



7.



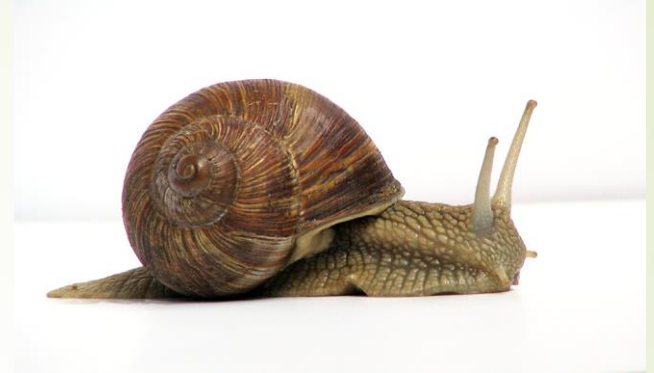
8.



9.



10.



11.



12.



Organism- one individual of a species.

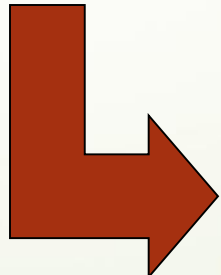
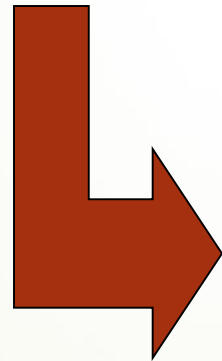
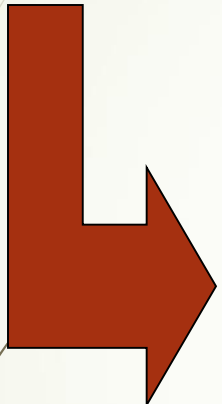
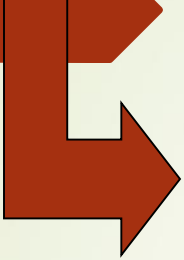
Population- group of organisms of the same species that live together & reproduce.

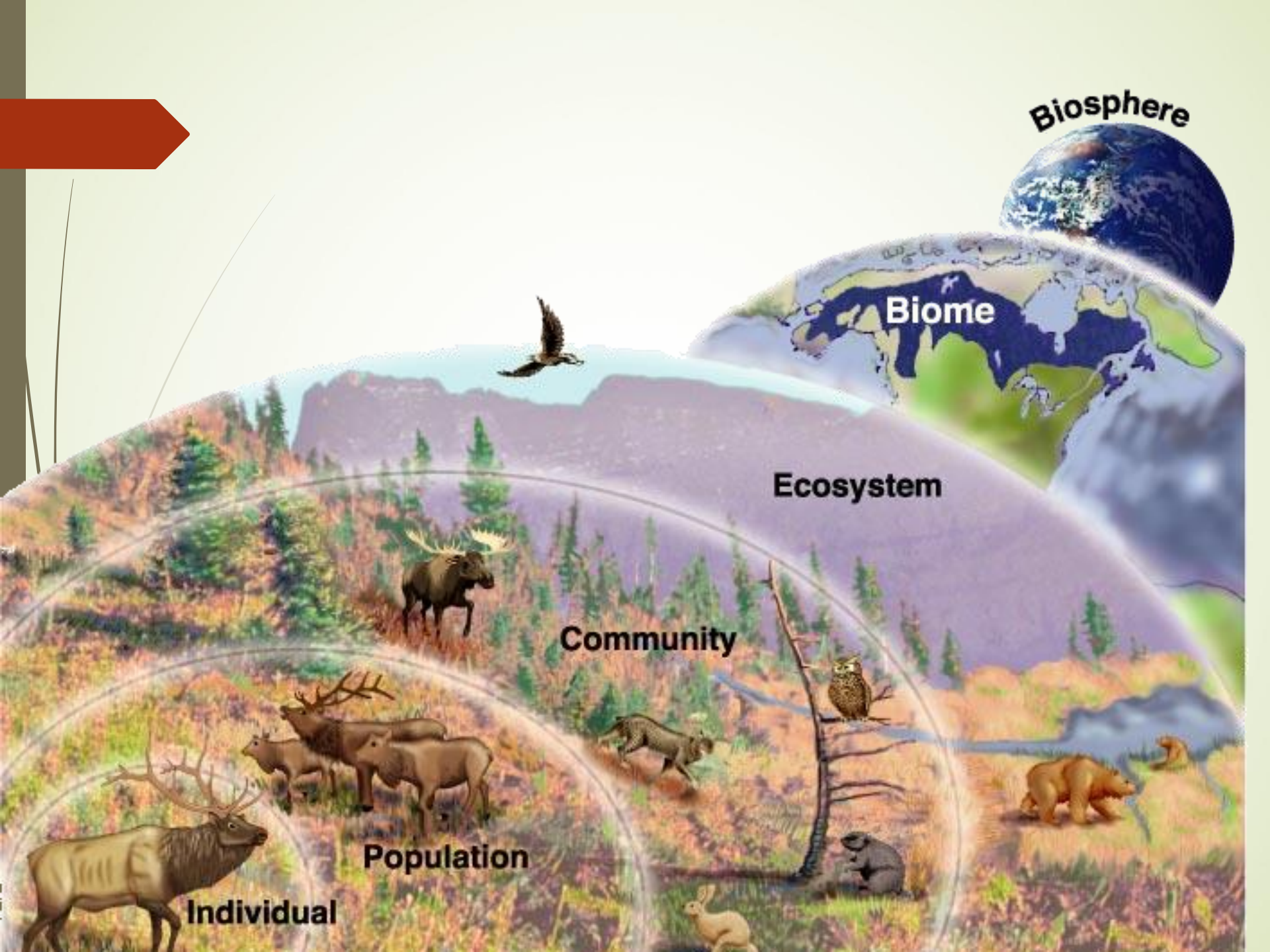
Community- several different populations that interact in the same habitat (all populations)

Ecosystem- Interactions between populations and surroundings (biotic & abiotic factors)

Biome- ecosystems of same type- climate, location, plants, animals

Ecological
Organization





Biosphere



Biome



Ecosystem

Community

Population

Individual



Individual



Population



Community



Ecosystem



Biome



Biosphere

NICHE VS. HABITAT

➤ NICHE

- The role of an organism in the environment.
- It's "job"
- Herbivore, scavenger, decomposer



➤ HABITAT

- Place where an organism lives.
- EX: tree, log, stream



I GAVE THAT NICHE A SPECIES



NICHES LOVE SPECIES

Types of Feeding Relationships

1. Autotrophs (producers)

- Self-feeders, produce their own food
- Example: plants, algae



2. Heterotrophs (consumers)

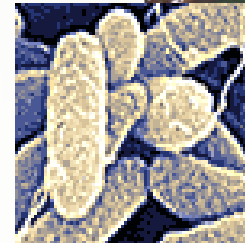
- Depend on other organisms for food
 - A. Herbivore – eats only plants
 - B. Carnivore – eats only meat
 - C. Omnivore – eats both



(Heterotrophs Continued...)

D. Decomposers

- Break down and absorb nutrients from dead organisms
 - ❖ Example: mushrooms, bacteria



bacteria

E. Scavengers

- Eat food that has already been killed
 - ❖ Example: Vultures, hyenas



Types of Survival Relationships

Symbiosis: any relationship where 2 animals live closely together

1. **Predation**- one animal preys on/eats another



2. **Competition**- two animals fight over same resource



3. Mutualism

- a. Both species benefit
- b. +/+
- c. Example:
 - ▶ lichens- combo of fungi & algae. Algae provides food for fungi & fungi provides water for algae.
 - ▶ tickbirds eat parasites off of a rhino



tickbirds

4. Parasitism

- a. One organism benefits and the other is harmed
- b. +/-
- c. Example:
 - ▶ tapeworm living inside a person's intestine



Worm Dracunculus - exiting

5. Commensalism

- a) Relationship in which one species benefits and the other is not affected
- b) $+/0$
- c) Example: remoras that live on/around a shark's mouth- these fish do not hurt the shark or help the shark but ride on the shark and eat sharks leftover food scraps.

