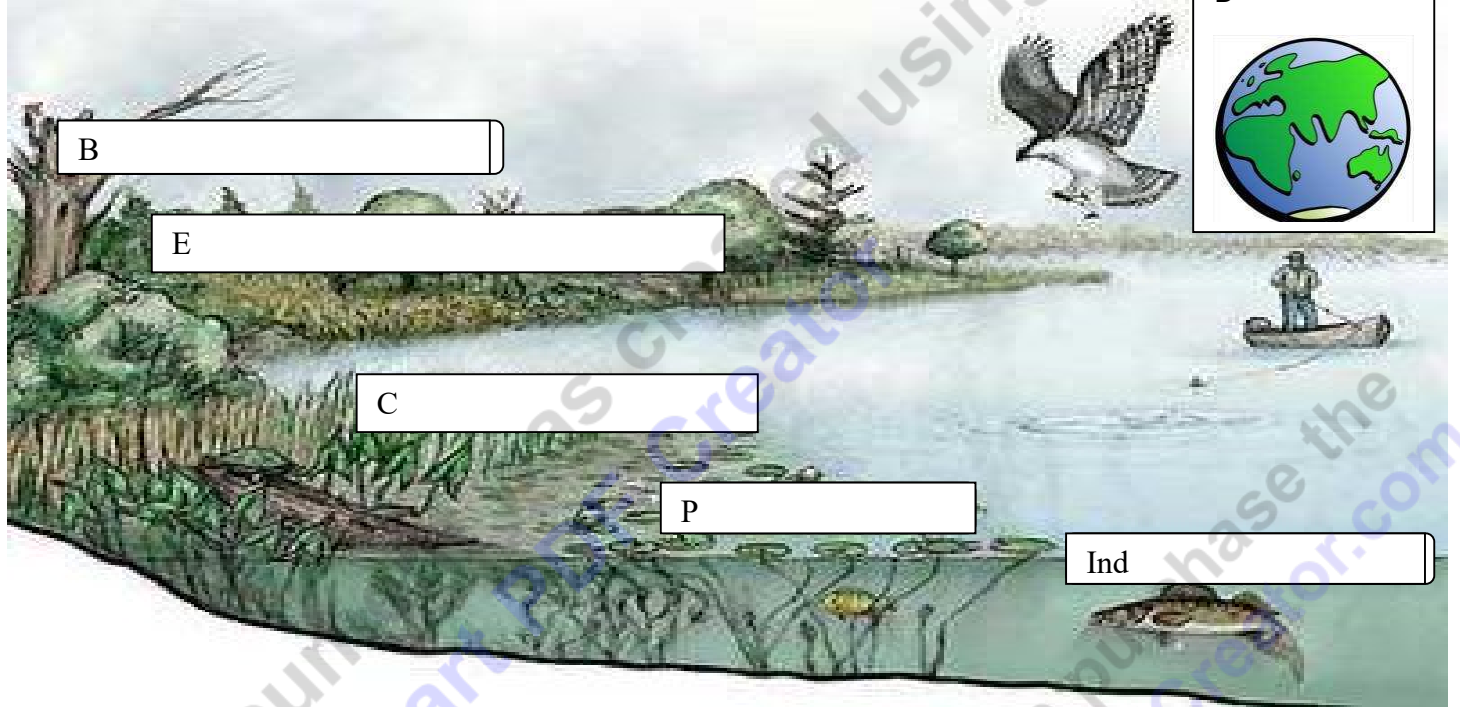


# Ecology Interactions Unit

Name:

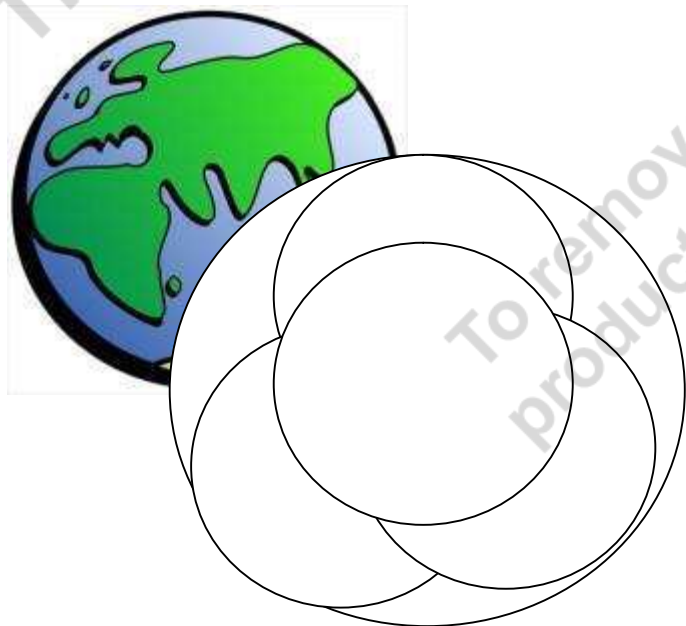
Due:

Please label the levels of biological organization associated with ecology as they may apply to the pictures below.



Please describe the biosphere on this planet?

Create a habitat of your choice in the box below. Provide the needs of living things around the habitat.



Please match the animal to its habitat (Use this word bank to help)

Boreal Forest	Tide Pool	Desert	Tropical Rain Forest
Tundra	Deciduous Forest	Savanna	Polar / Arctic
Prairie	Eyelash River	Coral Reef	Estuary Forest Floor

-Note: There's a lot of diversity in the world so the matching below is meant to be general.

_____ : Monkey	_____ : Starfish
_____ : Moose	_____ : Reindeer
_____ : Trout	_____ : Pelican
_____ : Antelope	_____ : Lion
_____ : Squirrel	_____ : Anemone
_____ : Mushroom	_____ : Scorpion
_____ : Follicle Mite	_____ : Penguin

Please describe what the ecological niche of an African Dung Beetle might be. – You may need to do some research.



Please match the animal to its niche (Use this word bank to help)

Spider	Clam	Algae	Lion	Fungus	Hyena	Termite	Bee
Squirrel	Deer	Beaver	Earthworm	Porcupine	Crab	Tree	

\_\_\_\_\_ I eat the cambium of trees which kills the tree. The dead hollow trees become denning and feeding habitats for countless other species.

\_\_\_\_\_ I decompose wood in dry areas where fungus can't break it down.

\_\_\_\_\_ I help spread the seeds of trees by collecting them and storing them.

\_\_\_\_\_ I am a filter feeder who helps clean water by filtering out the organics.

\_\_\_\_\_ I am a top predator that keeps the herbivores in balance with the ecosystem.

\_\_\_\_\_ I am a rodent that creates valuable habitat by blocking up streams with dams to create ponds of standing water.

\_\_\_\_\_ I help pollinate plants.

\_\_\_\_\_ I help control the number of insects by eating them.

\_\_\_\_\_ I produce oxygen on planet earth through photosynthesis and also a valuable food source / start of the food chain in ponds and in the ocean.

\_\_\_\_\_ I eat producers and I'm a food source to larger predators

\_\_\_\_\_ I help scavenge the landscape / decompose dead animals.

\_\_\_\_\_ I help aerate the soil by crawling through it and create nutrient rich castings.

\_\_\_\_\_ I help break down organic matter and return nutrients to the producers

\_\_\_\_\_ I live in water and help breakdown organic matter by scavenging.

\_\_\_\_\_ I produce sugar through photosynthesis. I also keep the soil together, provide habitat, food, oxygen, and keep the forest floor cool and damp.

Circle the limiting factors from the list below that were described in class?

**Mushrooms, Competition, Rainbows, Tacos, Space, Water, Sell by dates, Corn Starch, Sunlight, Diseases, Holidays, Wipes, Hunting, Rechargeable Batteries, Dictionaries, Predators, Whistles Energy Drinks, Magic Markers, Parasites, Almonds, Cans, Folds**

From the circled list above, which are density dependent and which are density independent?

Density Dependent

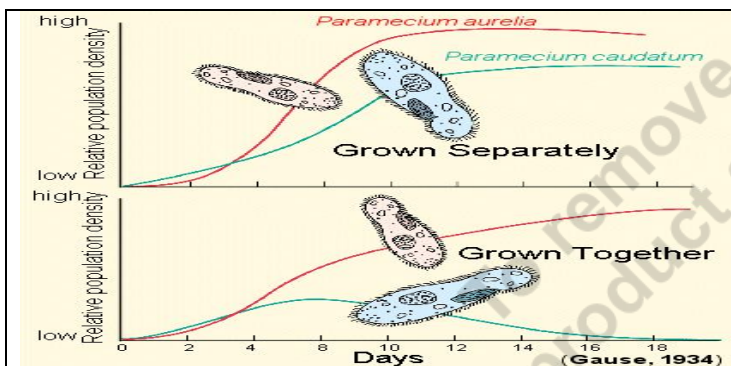
Density Independent



Which box is showing a density dependent limiting factor, and which is showing a density independent limiting factor? **Explain**




Please describe the type of competition based on the pictures below.



Two *Paramecium*, one thrives, one goes extinct. No two species with the same niche can coexist.



Hyena trying to get food from lion.

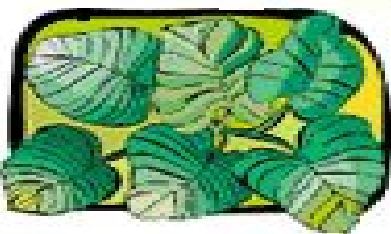
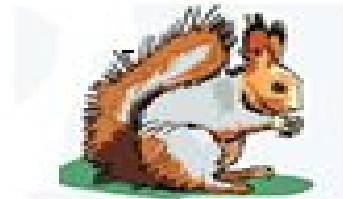
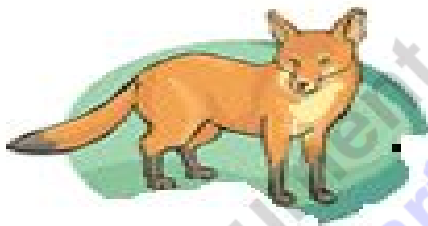


Two male Oryx competing for females



One bird chasing another bird away from area.

Please draw arrows to the organism that each species eats to correctly create a food web.



Please describe the bean game? What is a generalist? What is a specialist? What strategies were used to survive? How does habitat affect feeding and ultimately survival? I would attach a sheet!

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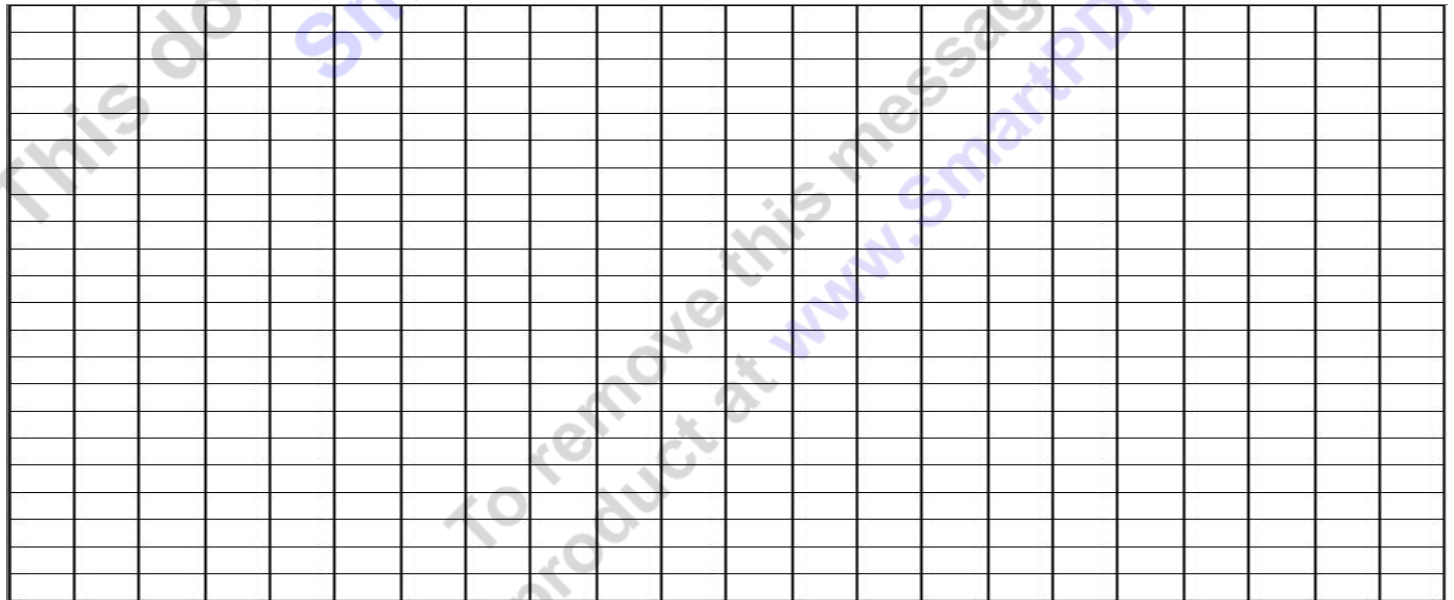
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Please complete a typical predator prey graph using the space below.



Time  
Predator  
Prey



Please find the relative abundance for each of the species below.

	Total	%	
✱ =			Θ✱ΩΩΩ✱✱✱✱Ω✱✱ΩΩ✱Θ✱✱✱ ✱✱Θ✱✱✱✱Ω✱✱✱ΩΩ✱ΩΩ✱ΩΘ ✱ΩΘ✱✱✱✱✱✱✱✱✱✱✱✱✱ΩΩ✱ ✱✱✱✱ΩΩ✱Θ✱✱✱✱Θ✱✱✱✱Ω✱ ΩΩ✱Θ✱✱✱Ω✱✱✱ΩΩΩ✱✱✱Θ✱✱Θ ✱Θ✱✱✱✱Ω✱✱Θ✱✱✱✱ΘΩΩΩΩΩΩ ✱ΩΩ✱Θ✱✱✱Ω✱✱✱ΩΩΩ✱✱✱ΩΩ✱ ✱✱✱✱✱✱✱✱✱✱✱✱✱✱✱✱✱✱✱ ✱✱✱✱✱ΩΘ✱ΩΘ✱✱✱✱✱✱✱✱✱ ΩΩΩΩΘ✱ΩΩΩ✱✱✱✱✱Ω✱✱✱✱ ✱Ω✱✱✱✱ΩΩΘΘΘ✱✱✱✱Θ✱✱✱ ✱✱✱✱✱✱✱✱✱✱✱✱✱✱✱✱✱✱✱
Ω =			
✱Ω =			
Θ =			
Total #			

What's the species diversity?

#### Importance of biodiversity

- Generation of soils and maintenance of soil quality.
- Maintenance of air quality.
- Maintenance of water quality.
- Pest Control.
- Detoxification and decomposition of wastes.
- Pollination and crop production.
- Provision of food security.
- Provision of health care (Medicines).
- Income generation.
- Spiritual / cultural value

Why should we maintain biodiversity? Pick at least three from above.

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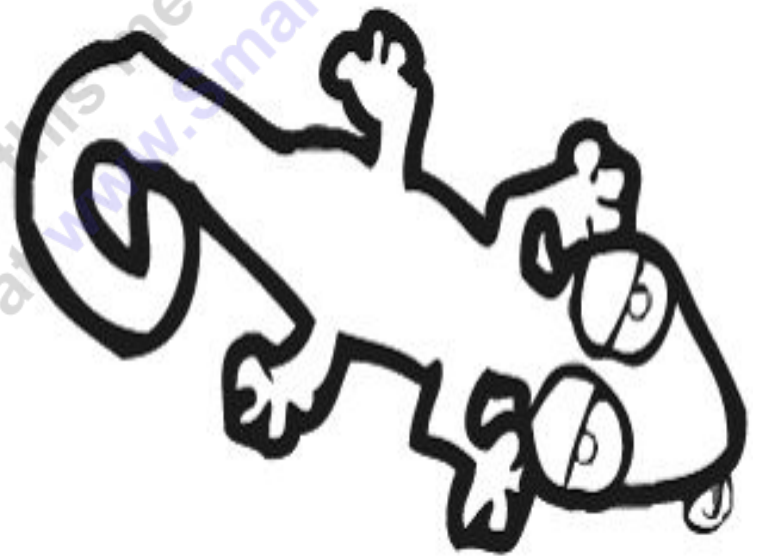
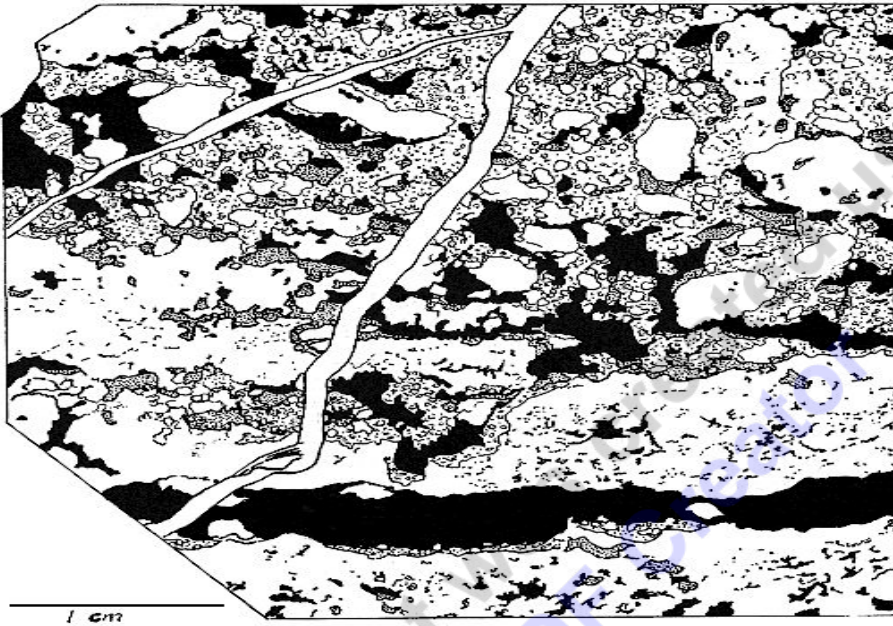


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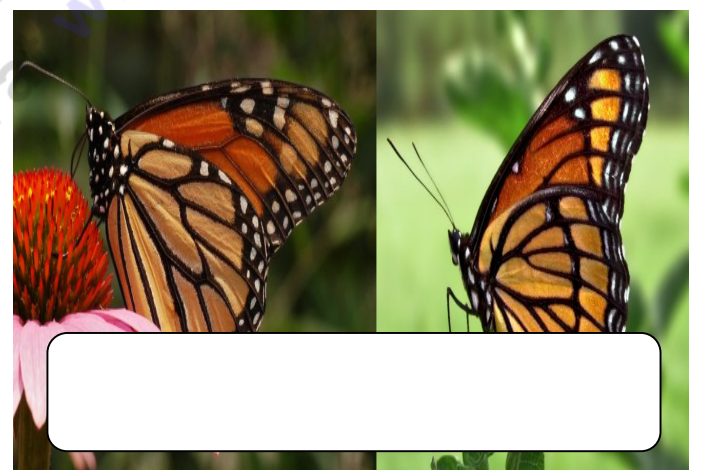
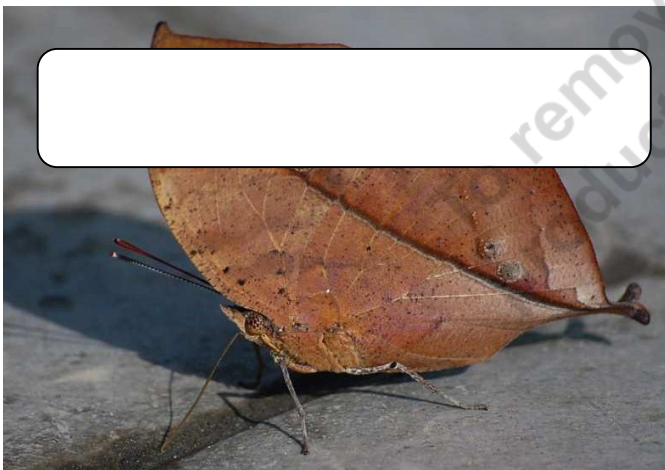
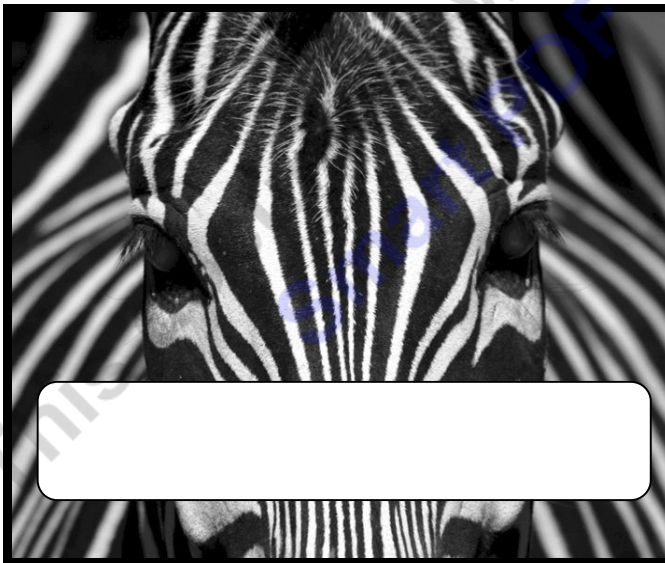
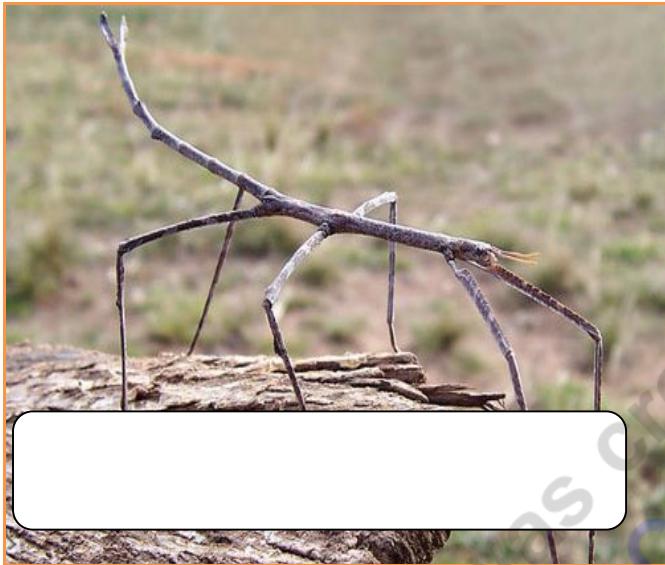
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Camouflage the butterfly to match the background. Camouflage the lizard and frog to a background of your choice. Please use color and don't just scribble.

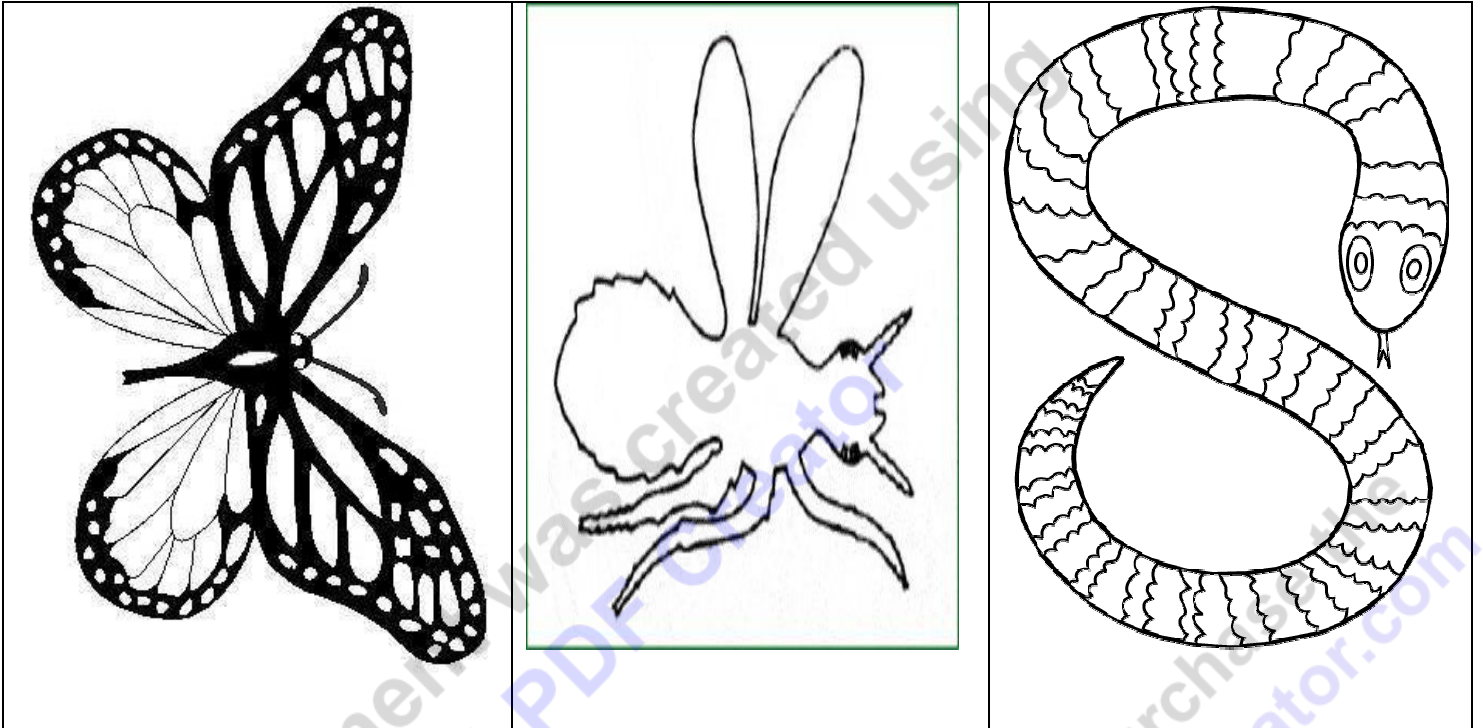




Please label the correct type of camouflage below.  
 Concealing Coloration, Disruptive Coloration, Disguise, Mimicry



Please dress up the following organisms with different colors schemes that represent Mullerian mimicry.



Please use the box below to draw and then describe one parasite in detail. Provide information around your drawing.



Please draw and describe some info about parasites from the student PowerPoint presentations or teacher slideshow.

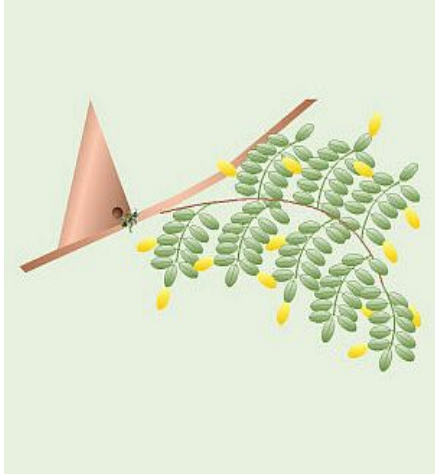
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Please describe the three mutualisms below. A strong answer will be very specific and include the type of mutualism.



Please describe how the picture on the right is commensalism? Make sure to include the definition of commensalism in your response.





Please add some features to the plant below so that it can avoid predation. Provide a written description of these features around the plant. Also draw an animal that is interested in eating this plant and one feature that it has to get around that plants defense.



What's an exotic species and how do humans spread them?

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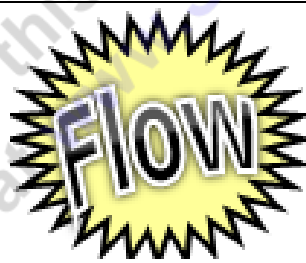
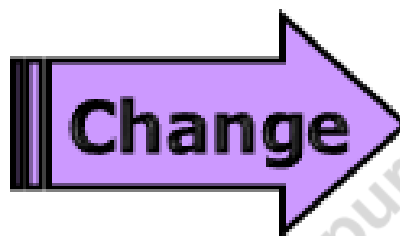
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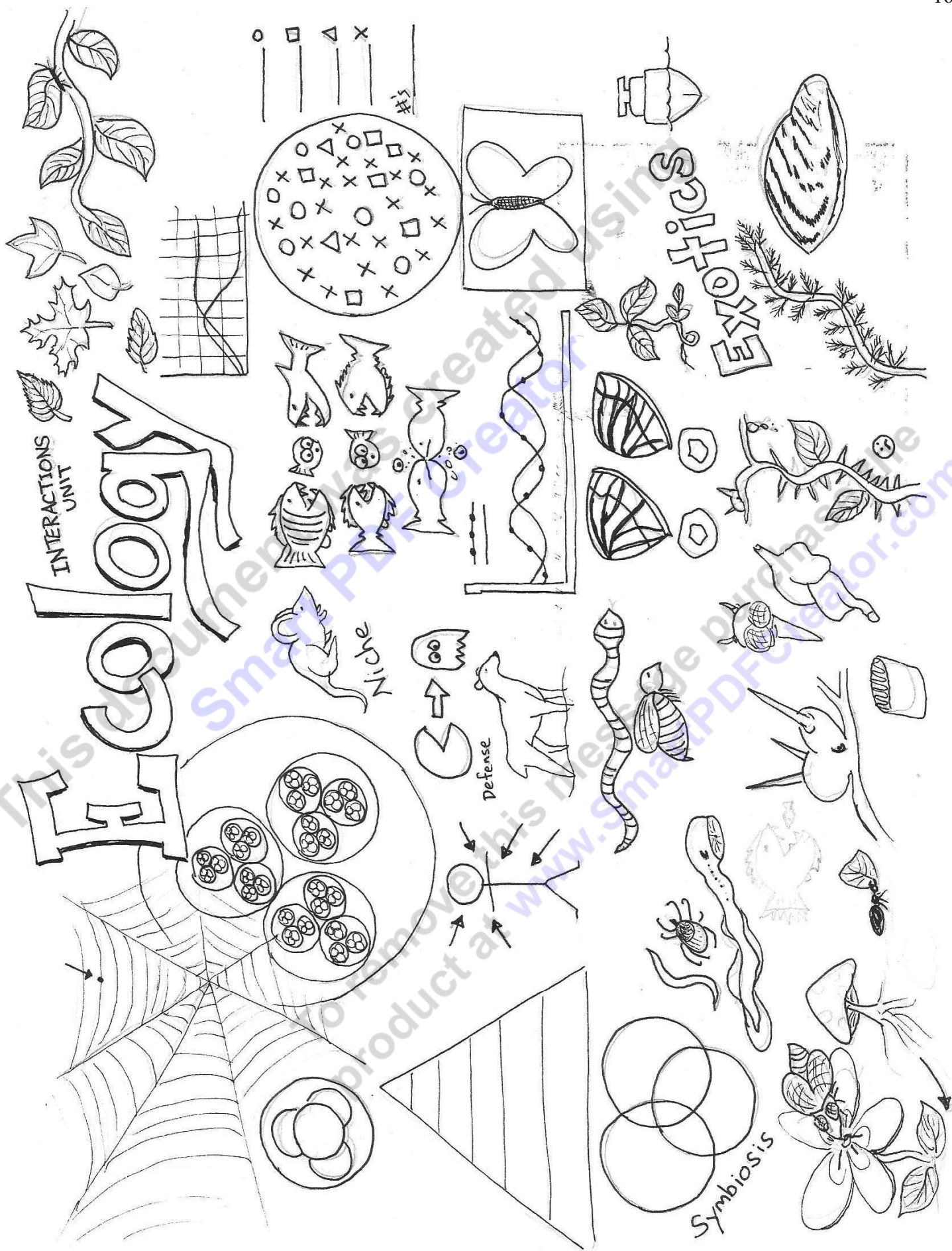
Please describe some of the negative impacts and other information about some invasive exotic species.  
Provide a sketch under the WANTED Posters created by classmates with the name



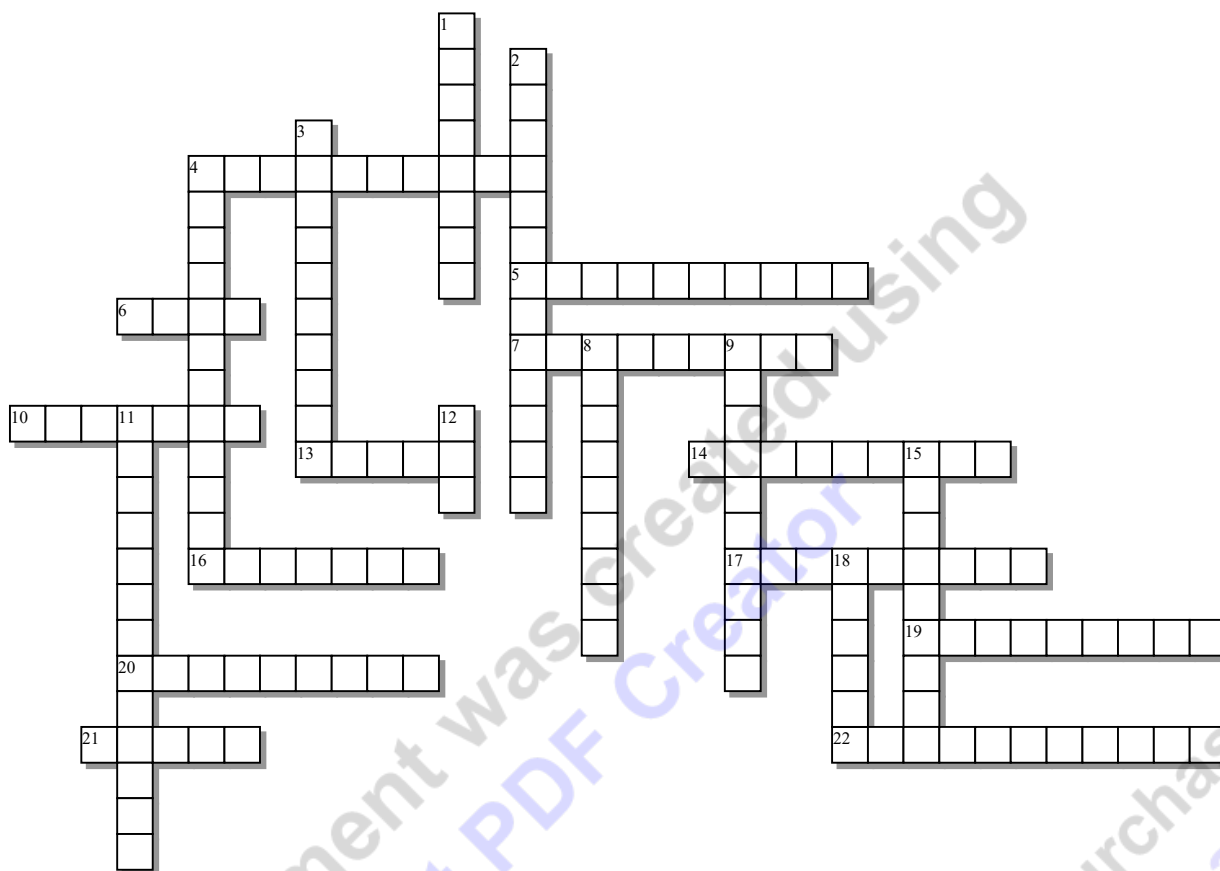
What can you tell me about each of the pictures below? Provide an example from the unit.









**Across:**

- 4 - An adaptation that allows the animal to blend in with its environment to avoid being detected.
- 5 - Symbiosis where one organism benefits while the other is harmed.
- 6 - An animal hunted for food.
- 7 - The relationships between groups of populations.
- 10 - A place an organism lives.
- 13 - The place or function of a given organism within its ecosystem. Ecological N\_ \_ \_ \_
- 14 - The part of the earth and its atmosphere in which living organisms exist.
- 16 - The resemblance of an animal species to another species or to natural objects.
- 17 - The variety, or number of kinds of species. Species D\_ \_ \_ \_ \_
- 19 - A long term relationship between two or more different species.
- 20 - Competitive \_ \_ \_ \_ \_ Theory: All organisms exist in competition for available resources.
- 21 - A regional ecosystem characterized by distinct types of vegetation, animals. Determined by temperature and rainfall.
- 22 - The interaction between organisms or species, in which the fitness of one is lowered by the presence of another.

**Down:**

- 1 - An organism that lives by preying on other organisms.
- 2 - Competition: Over resources between different species.
- 3 - Groups of similar individuals who tend to mate with each other in a limited geographic area.
- 4 - Symbiosis where one organism benefits and the other doesn't benefit, or suffer harm.
- 8 - Symbiosis where both species benefit.
- 9 - Organism with unique DNA and cells
- 11 - Competition: The same species compete for resources.
- 12 - Food \_ \_ \_ :A complex network of many interconnected food chains and feeding interactions.
- 15 - The relationships of populations with each other and their environment.
- 18 - A species that have been introduced to an ecosystem that are not endemic to the area. (non-native) E\_ \_ \_ \_ \_

**Possible Answers:**

**Biome, Biosphere, Camouflage, Commensalism, Community, Competition, Diversity, Ecosystem, Exclusion, Exotic, Habitat, Individual, Interspecific, Intraspecific, Mimicry, Mutualism, Niche, Parasitism, Population, Predator, Prey, Symbiosis, Web**

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