

What Is An Ecosystem?



The Parts of an Ecosystem

An **ecosystem** is the network of interactions (or **links**) between the **living** and **non-living** parts of an **environment**.



The Parts of an Ecosystem

*What would be some **living** parts of an environment?*

Living parts of an environment are called **biotic elements**. These include things like:

- Plants
- Animals
- Birds
- Fish
- Insects
- Bacteria



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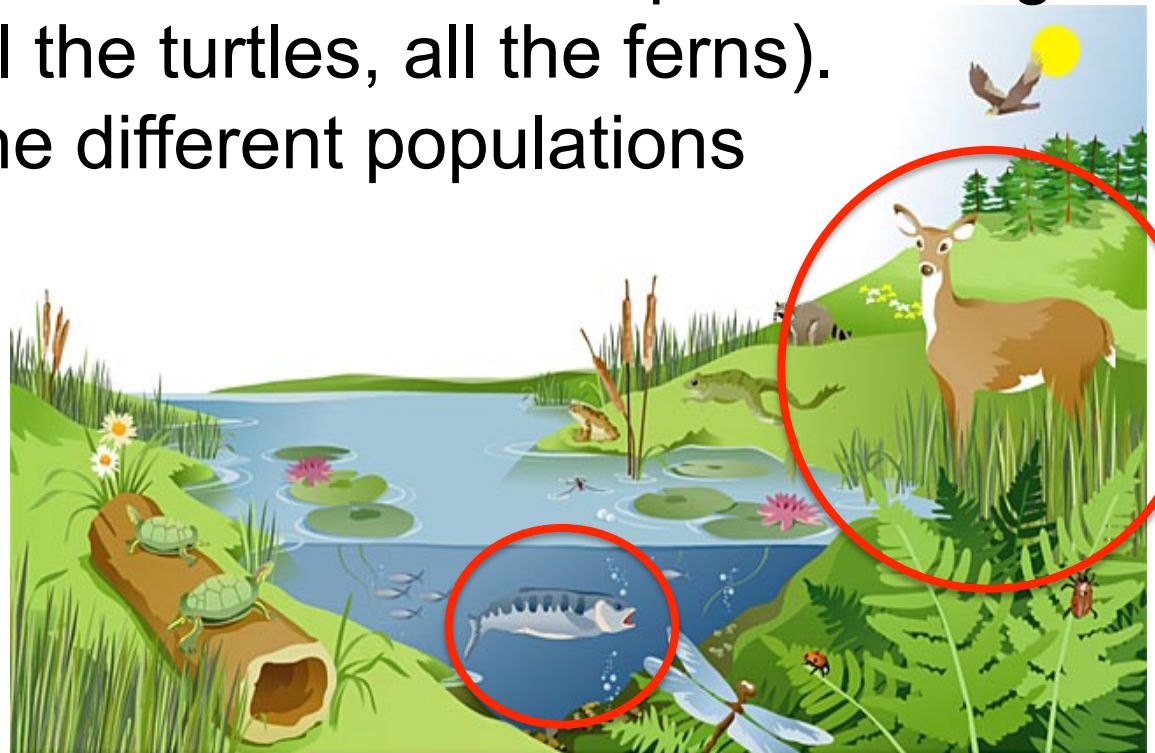
The Parts of an Ecosystem

Species – organisms of the same type that can reproduce to create offspring (e.g., fish, deer).

Population – all the members of one species living in an area (e.g., all the turtles, all the ferns).

Community – all the different populations living in an area

(e.g., all the deer, fish, frogs, turtles, ferns, water lilies).



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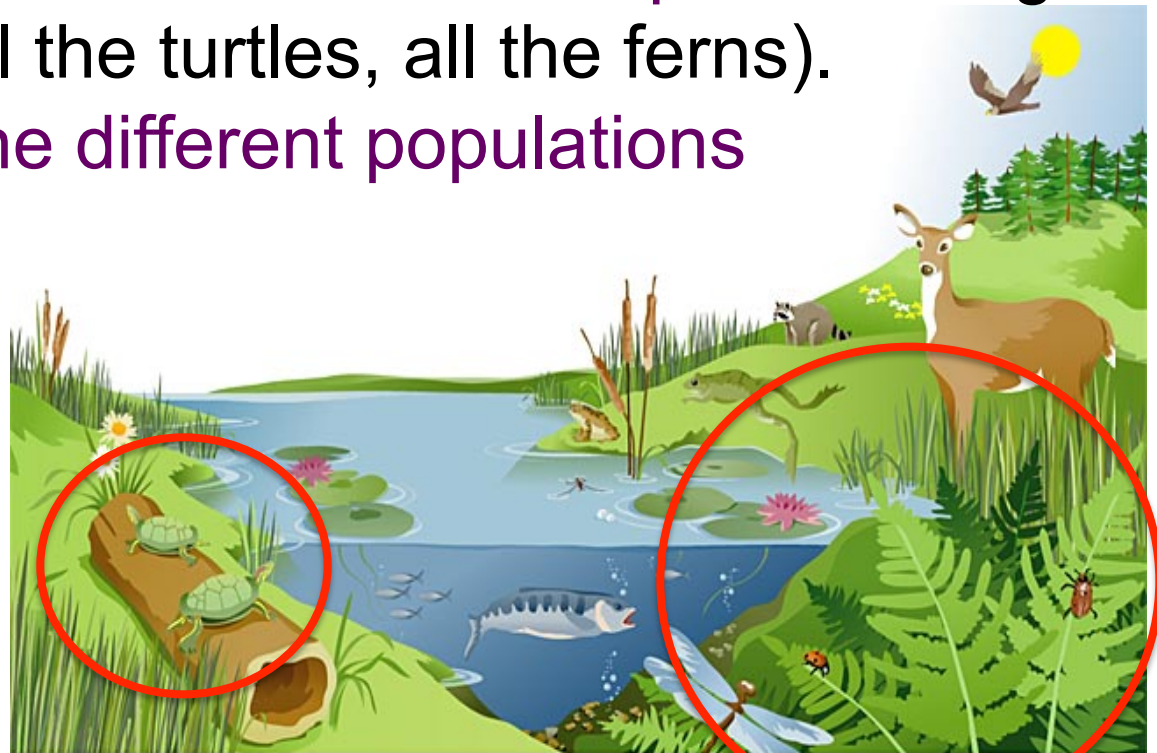


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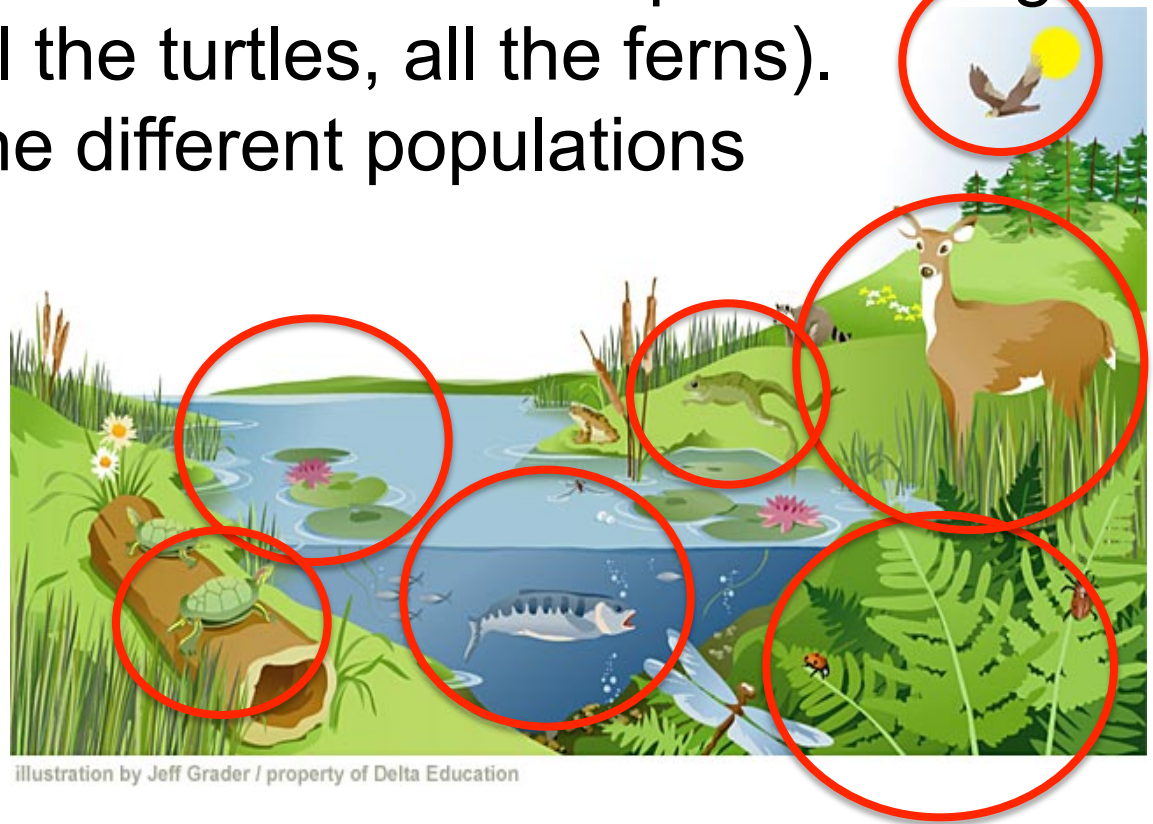
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The Parts of an Ecosystem

What would be some non-living parts of an environment?



Non-living parts of an environment are called **abiotic elements**.

These include things like:

- Sunlight
- Water (Rain, Snow)
- Air (Wind, Clouds)
- Sand, Soil, Rocks

The Needs of Living Things

A **habitat** is the physical space where an organism lives and where its basic needs for survival are met.



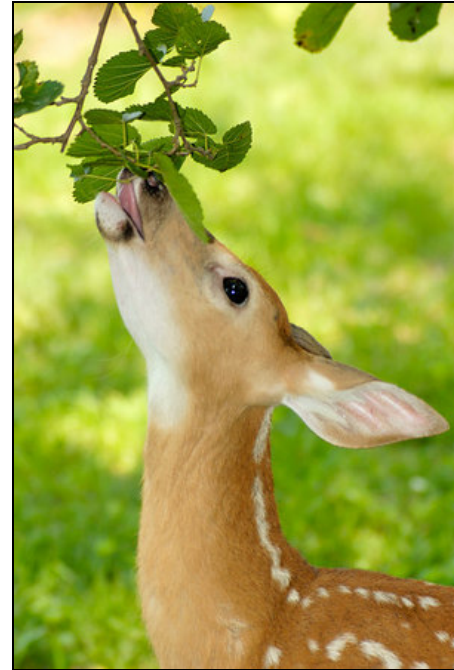
SUNLIGHT

- Plants use sunlight to make their own food (sugar) through a process called photosynthesis.
- Amount of sunlight determines what can grow
 - e.g., dandelions like sun
 - e.g., ferns prefer shade
 - e.g., kelp grows near water surface

The Needs of Living Things

SUNLIGHT

- Animals obtain energy indirectly from sunlight as they eat plants, or animals that themselves eat plants.



- Some animals require sunlight to warm their bodies.

The Needs of Living Things

WATER

- Plants need water to **grow** and **produce food**.
- Animals need water to **digest food** and **form body fluids**.
- Some organisms need water to **live in**.



Did you know...?

Water makes up about 60-65% of the human body.

The Needs of Living Things



AIR

- Humans and other organisms breathe air to obtain oxygen.
- Plants absorb CO_2 from the air to help them make food (sugar).
- Plants make oxygen, and without plants, there wouldn't be enough oxygen in the air.



The Needs of Living Things



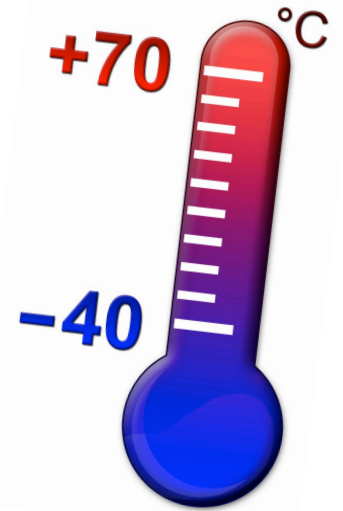
FOOD

- Provides organisms with **nutrients**, needed for energy and growth.
- Nutrients include:
 - Sugars
 - Starches
 - Fats
 - Proteins
 - Vitamins
 - Minerals

The Needs of Living Things

TEMPERATURE

- Organisms can usually survive within a certain range of temperature.
- Too hot or too cold for a period of time can be dangerous.



SHELTER

- Some form of protection or home for an organism.
- e.g., nest, cave, tree, reef