

# What Is An Ecosystem?

(Lesson 1)

*What do you think an ecosystem has in it?*



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

## **LIVING PARTS – also called BIOTIC ELEMENTS**

- Plants
- Animals
- Birds
- Fish
- Insects
- Bacteria
- \_\_\_\_\_
- \_\_\_\_\_



illustration by Jeff Grader / property of Delta Education

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

## **NON-LIVING PARTS – also called ABIOTIC ELEMENTS**

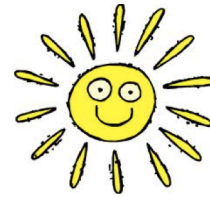
- Sunlight
- Water (rain, snow)
- Air (wind, clouds)
- Sand, Rocks, Soil

# 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 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
- Animals obtain energy indirectly from sunlight as they eat plants, or animals that themselves eat plants.
- Some animals require sunlight to warm their bodies.



## **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.



## **Air**

- Humans and other organisms breathe air to obtain oxygen.
- Plants absorb CO<sub>2</sub> from the air to help them make food (sugar).
- Plants make oxygen, and without plants, there wouldn't be enough oxygen in the air.



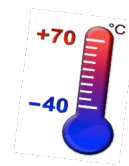
## **Food**

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



## **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

