

Complete
Canadian 
Curriculum



Grade
4

Science



Popular Canada

Habitats

A habitat is a place where plants and animals live and grow. Plants and animals must have everything they need for health in their habitats. However, with various human activities, their habitats can be harmed or destroyed, and the plants and animals are put at risk of extinction.

Human Activities that Cause Habitat Loss

- oil spills
- oil extractions
- hydroelectric dams
- air pollution
- developments
- logging

Levels of Danger for Species at Risk

Least at Risk

species of special concern
threatened species
endangered species
extirpated species

Most at Risk

extinct species

Producers and Consumers

Living things are either producers or consumers.

- Plants are producers because they make their own food with energy from the sun.
- Animals are consumers because they get their energy by eating plants or other animals.

Types of Animals



- **Herbivores**
eat plants only



- **Carnivores**
eat animals only

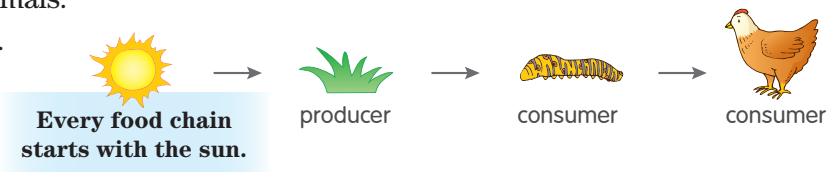


- **Omnivores**
eat both plants and animals

Food Chains

A food chain shows the order that animals eat plants and other animals.

e.g.

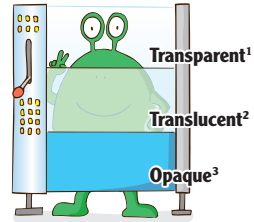


Light

Light is a form of energy that is found naturally or artificially in the universe. We can see something because light is bouncing or reflecting off that thing.

Properties of Light

- Light travels in straight lines.
- Reflection – Light can be reflected by shiny objects.
- Refraction – Light bends as it passes from one medium to another.
- Transparency – Light can pass through some materials but not others.

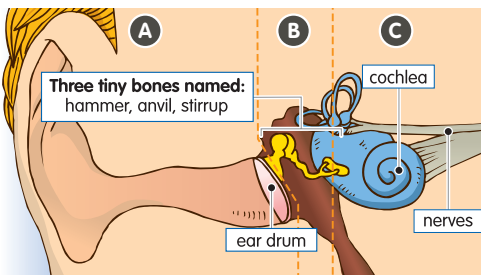


- 1: allows all light to pass through
- 2: allows some light to pass through
- 3: does not allow light to pass through it at all; absorbs light and results in a shadow

Sound

Sounds are caused by vibrations. The faster something vibrates, the higher the pitch is; the stronger it vibrates, the louder the sound is. The human ear detects vibrations, thus giving us information about our environment.

Cross-section of an Ear



- Outer Ear**
collects sound
- Middle Ear**
three tiny bones make vibrations larger
- Inner Ear**
the cochlea changes the vibrations into signals which are carried by nerves to the brain

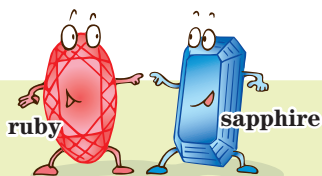
Sound travels in waves. When sound waves strike other things, they can be absorbed or reflected. Smooth and shiny surfaces reflect sound waves, while rough surfaces absorb them.

Minerals

Minerals are non-living, solid substances that occur naturally. They are what rocks are made of.

Properties of Minerals

- colour
- streak
- transparency
- specific gravity
- lustre
- hardness

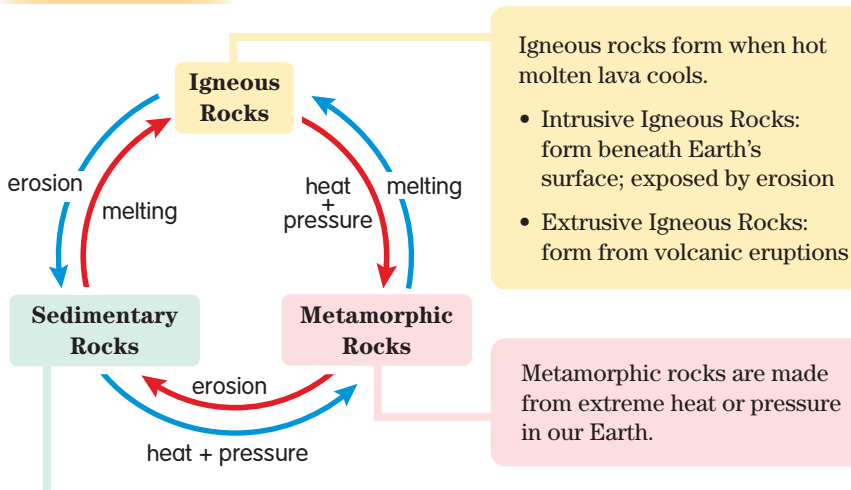


Diamonds are the hardest mineral according to the Mohs scale of hardness.

Rocks

Almost all rocks are solid and made from non-living substances. They are formed from minerals.

Rock Cycle



Formation of Sedimentary Rocks

1. Small pieces of rock break off from bigger rocks and become sand.
2. Rivers tumble the sand into the sea.
3. Chemicals in sea water cement the grains together.
4. Sandstone layers are revealed as the sea recedes.