

# Core Knowledge

- A producer is a living thing that makes its own food. Most producers need sunlight, water and air to survive.
- A consumer is a living thing that gets energy by eating other organisms for food.
- A food chain is a series of organisms listed in a way that shows which is a food source for another.
- A food web is multiple connected food chains in an ecosystem.
- Organisms need chemical energy to move and grow.
- Carl Linnaeus is famous for his work in Taxonomy.
- Plants are producers that make food using the process of photosynthesis.
- Plants are green because their leaves and stems contain a chemical called chlorophyll.

# Living Things



**Plant → Caterpillar → Robin → Hawk**  
The robin is a predator when it eats a caterpillar but then becomes prey for a hawk!

# Domain Themes

- Producers, Consumers and Decomposers
- Food Chains and Food Webs
- Classification
- Photosynthesis
- Disruption to Ecosystems
- Cells
- Disease
- Smoking, Drugs and Alcohol



# Core Knowledge

- An ecosystem includes all the living and non-living things that interact in a given area.
- A change in an ecosystem that affects organisms is known as a disruption.
- Some disruptions have natural causes. However, humans cause many ecosystem disruptions, too. Disruptions such as fire, weather, geologic events (volcano, earthquake, tsunami), disease, overfishing, deforestation, invasive species, water pollution.
- A cell is the smallest unit of life. Cells are the basic unit of all living things.
- Nucleus – this controls what happens in the cell. It contains DNA, the genetic information that cells need to grow and reproduce.
- Disease can be passed in many different ways – air, touch, animals, water, food.
- Stimulants speed up messages in the brain and along the nerves. This makes you feel more alert. Nicotine from tobacco is a stimulant. Caffeine is another stimulant and is found in fizzy drinks, coffee and tea.

# Home Learning

## *Investigate how exercise affects our heart rate.*

- First, find your resting heart rate. Make sure you are relaxed then locate your pulse. Record the number of beats you feel in one minute.
- Now spend 1 minute exercising at a low intensity e.g. walking. At the end of the minute, immediately record your pulse rate.
- Repeat this process at 2 further intensity levels e.g. jogging for 1 minute and sprinting for 1 minute. Remember to rest in between each exercise to allow your heart to return to your resting heart rate and to make it a fair test.
- Look at your data set. Can you explain your findings? Why do our hearts beat faster when we exercise? Can you create an appropriate graph to share your results?

*Try the investigation with a friend / family member. Compare your results!*



# Key Vocabulary

- |                 |                      |              |
|-----------------|----------------------|--------------|
| • Organism      | • Biomass            | • Nucleus    |
| • Scavenger     | • Transpiration      | • Disease    |
| • Herbivore     | • Deforestation      | • Defence    |
| • Carnivore     | • Invasive species   | • Addictive  |
| • Vertebrates   | • Prevention         | • Substance  |
| • Invertebrates | • Endangered species | • Stimulant  |
| • Chlorophyll   | • Cytoplasm          | • Depressant |
| • Chloroplasts  |                      |              |