# Great gardens

**All living things need water to survive, and are dependent on other elements in their habitat to thrive. Through an exploration of their school habitat, and the creation of their own habitats, students will understand these essential relationships.**

**Subject area:**

Science

**Year level:**

Year 4

## Learning objectives:

- Understand how plants provide shelter for animals.
- Observe mutually beneficial relationships between two living things.
- Understand how important water is to the survival of all living things.
- Create a web that connects various living and non-living things within a habitat.

## General capabilities

**Literacy**

**Information and communication technology (ICT) capability**

**Critical and creative thinking**

**Personal and social capability**

## Curriculum links

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|---|---|
| *Biological Sciences* | ACSSU073 |
| *Science as a Human Endeavour* | ACSHE062 |

## Cross curriculum priorities - Sustainability

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|---|---|
| OI.1 | The biosphere system is a dynamic system providing conditions that sustain life on Earth. |
| OI.2 | All life forms, including human life, are connected through ecosystems on which they depend for their wellbeing and survival. |
| OI.3 | Sustainable patterns of living rely on the interdependence of healthy social, economic and ecological systems. |

# Habitat investigations

**Students will explore their natural school habitat, identifying the interdependence of all living things through design of a habitat web.**

**Time required:**

1 hour

## Resources required:

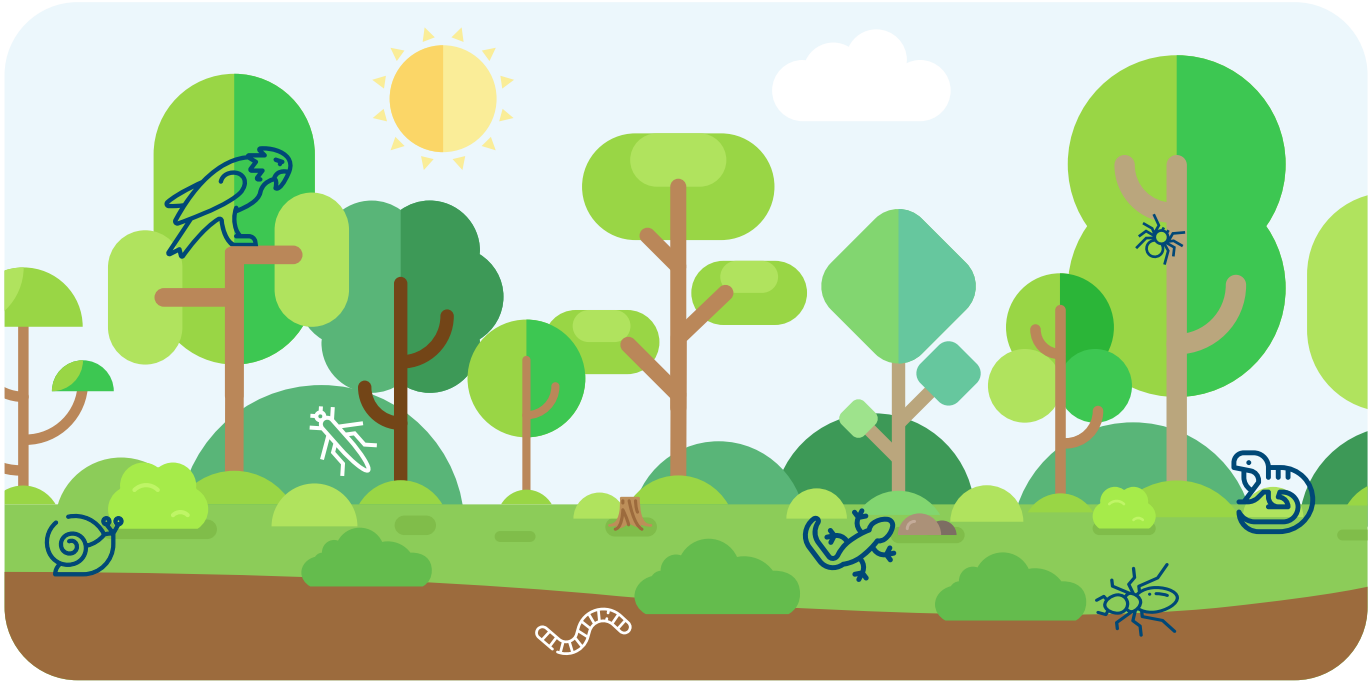
- iPad per student
- String
- Bluetac
- Card to write facts on

## Preparation:

1. Print images of plants and insects that students are likely to find in their garden.
2. Review importance of internet research awareness with students, making sure they check the information they are researching is from a credible source.

## Steps:

1. Walk around the school grounds and take photos of plants and insect species in their natural habitat using the student iPads.
2. Discuss how plants provide a habitat for insects by providing food and protection from the sun and other environmental factors. Many plants need insects to pollinate them and earthworms to tunnel about so they move air into the soil. Decomposers, including earthworms, fungus and bacteria, live off dead plant and animal matter. They break down this material and make nutrients more available for plants.
3. As a class, create a habitat web on the board or window using the images taken. Use sourced images of plants and insects likely to be found in their gardens to supplement images missed.
4. Using string or a marker, draw a line between the living plant or animal and what they need to survive. For example, what does the ladybug need in its habitat to survive? What do plants need to survive? What do worms need to survive? Discuss how all of the plants and animals need water to survive.



# Habitat heroes

**Using samples from their school grounds, students will create a mini habitat to highlight the reliance of all living things on water for survival.**

**Time required:**

1 hour

## Resources required:

- A3 pieces of card
- Glue
- Small plastic minibeasts
- iPad per student
- Piccollage on student iPads

## Preparation:

1. Small plastic minibeasts to use in class habitat display.
2. A3 Card for small group use.

## Steps:

1. Discuss why water is important for plant growth and the survival of animals.
2. In groups or pairs, students walk around the school and collect four different samples from the garden such as a small stick, handful of grass, flowers, stones or soil.
3. Groups create a mini habitat on an A3 piece of card with edges folded up to hold items in place.
4. Colour the paper and draw illustrations around the samples in their habitat.
5. Place small plastic minibeasts throughout habitats to create a class display.
6. As a class, explore facts about the habitats to reinforce what the students have learnt from the activity.
7. Write down why water is fundamental to all of these elements e.g. frogs like wet soil, plants need water to grow.
8. Take photos of the minibeasts in the habitats and create a piccollage.
9. Get students to include text boxes on their piccollage describing why they designed their habitat the way they did and how water is important to the animals and plants in their model.

# Garden designers

**By using the Waterwise plants directory on the Water Corporation's website, students will learn about the different needs of plants in terms of sun, water and garden location. They will design their own waterwise garden, ensuring they can justify their choice of plants.**

**Time required:**

1 hour

## Resources required:

- iPad per student
- A3 paper

## Preparation:

1. Ensure access to Water Corporation plant directory

## Steps

1. Use Water Corporation plant directory to design a native garden for an area of your school.
2. Identify a space in the school garden which you could use for your waterwise garden.
3. Discuss the amount of sun your garden will receive through the day and whether tall trees or just smaller shrubs would be suitable.
4. Place the school suburb in the plant directory search criteria and select the type of garden students would like to create.
5. Guide students through the drop down menus in the directory, and allow them time to design their garden. Students will need to justify why they've chosen particular plants.
6. Draw their garden design on A3 paper and label the plants they've chosen to include.