

EDUCATOR NOTES:

Educator notes for Creating a beneficial garden: [assessment](#), [investigation](#) and [planting](#).

Learning and Engagement Approach

This sequence is comprised of 3 different activities, including:

- assessment: children will be assessing the garden for the presence of invertebrates
- investigation: children will be refining their sampling and identification techniques to locate and identify beneficial insects
- planting: children plant flowers to attract beneficial insects into the garden.

This activity sequence is designed to engage young learners aged from 7 – 13 years.

These activities are intended to:

- facilitate an investigation
- increase awareness of insects in the garden and the beneficial roles they may play
- plant a beneficial garden
- implement the learning from the previous components of the activity sequence
- incorporate mathematics (mapping) and sketching from a birds-eye view
- apply principles of scientific investigation and hypothesis testing.

Safety Considerations

- Check the weather before conducting any outdoors activity. If there is going to be extreme temperatures, storms or high wind, postpone the activity.
- Ensure that everyone is wearing closed shoes, hats, and sunscreen and has a water bottle handy.
- Keep any allergy plan information at hand and any associated allergy medication.
- As some invertebrates are venomous, model and explain how to handle them safely prior to children undertaking the activity (see below)
- Do not use your hands to hold or move the animals, always use paddle sticks and paint brushes to gently move them.

Materials and References

A great place to get information about beneficial plants which will grow in your area is your local garden centre, your local Landcare group or community garden. Use this [Australian City Farms and Community Gardens Network map](#) to find a City Farm or Community Garden near you.

Download the [Gardenate app](#) or use the [Gardenate website](#) to help determine the timing, spacing, and other compatible plants required for your climate zone.

Learn more about these common flowering plants used in beneficial gardens.

- [Marigolds](#)
- [Calendula](#)
- [Alyssum](#)

Resources for invertebrate identification for the assessment and investigation activities

Museum Victoria has developed a free [National Field Guide app](#) for Android and Apple devices. There are eight apps available so choose one best suited to your state.

Download the [Urban Wildlife app](#) for free to help you identify beneficial insects in your area.

[What are insects?](#) and [Bugwise fact sheets](#) from the Australian Museum.

[Explore bugs and insects](#) from Backyard Buddies.

The Australian Museum has a free [Bugwise Invertebrate Guide](#) to help your children identify common spiders, insects and other invertebrates from illustrations.

Find out more about [Insect identification tips](#) from the Wild Pollinator Count.

Here is some further information about these common beneficial bugs

- [Bees](#) (native and European)
- [Ladybugs](#)
- [Hover flies](#)
- [Mantids](#)

Pollinator role play for investigation activity

This role-play is an informal engagement activity. The purpose of the role-play is for children to understand that plants offer enticements to pollinators so that they will visit.

Guide the children in developing their own role-play to illustrate insect pollination:

- Two children are flowers and one child is the bee.
- At first – tell the bee that they must not visit the flowers until they offer a reasonable enticement.
- Ask the rest of the children how the flowers could attract the bee:

Some suggestions could include:

- Smell
- Colour
- Nectar
- Shape

Improvise with materials already in the room to symbolise these things.

Once the bee has been encouraged to visit the flower, the child who is the flower sticks a small amount of rolled up tape onto the bee as they come close, which is then transferred over to the other flower when it visits.

Site Suggestions

Beneficial plants are best planted on the outside of your garden bed. This is so that the insects can see them easily and so the beneficial plants don't take too much of the area needed for crops. If you don't have a lot of space, the beneficial plants can be planted at the ends of the bed, rather than on all sides.

It is best to plant your beneficial plants in small clumps, comprising of the same type of plant. These small clumps can be formed by planting three of your beneficial plant seedlings in a triangle shape. Use the spacing guide on the information labels to plan your planting.

Planting your beneficial plants in clumps makes them more visible to the insects and an abundance of flowers provides an incentive for the insects to stop and visit.

Educator Tips

Timing the assessment and investigation activity

- It is best to conduct this activity between 10am and 2pm, when flowers are open and insects are visiting.
- If you live in temperate regions these activities are best conducted from September to April.

Aligning this Activity

- [Growing healthy plants using natural pesticides](#)
- [Creating a food garden: planting](#)

Extension Activities

Assessment

Extension 1

Use Information Computer Technology (ICT) programs such as Excel to display your data in different types of graphs. Share it on your organisation's communication platform.

Extension 2

Time your invertebrate activity to run during a local community celebration. It's a great way to celebrate together and get people involved in finding and learning about invertebrates. Celebrate Landcare Week at the start of August!

Investigation

Extension 1

Know your enemy. Collect some stems from aphid affected plants in the garden (common plants that have aphids include beets, chard, roses, lettuce, bok choy and beans). Put the stems in a vase to raise them inside. Monitor how their population grows and how quickly they reproduce.

Extension 2

Investigate the land management practices of Aboriginal and Torres Strait Islander peoples. How does sustainable management of the environment protect biodiversity?

Planting

Extension 1

Design an experiment to assess whether beneficial planting is effective. What could you change or remove to test whether you're on the right track?

Extension 2

Design a poster to promote beneficial planting. Focus on three key messages that you would like your audience to know.

Community Engagement

Use [The National Landcare Directory](#) to find a community environmental 'care' group near you.

Use this [Australian City Farms and Community Gardens Network map](#) to find a City Farm or Community Garden near you to get some ideas for your project.

Curriculum and Framework Links

SCIENCE

Year 2: [ACSSU030](#), [ACSHE035](#)

Year 3: [ACSSU044](#), [ACSIS054](#)

Year 4: [ACSHE062](#), [ACSIS064](#)

Year 5: [ACSHE083](#)

Year 6: [ACSSU094](#), [ACSHE100](#)

Year 7: [ACSHE120](#)

Year 8: [ACSHE135](#)

HUMANITIES AND SOCIAL SCIENCES

Year 2 : [ACHASSI042](#)

Year 3: [ACHASSI052](#), [ACHASSI059](#), [ACHASSI060](#)

Year 4: [ACHASSI080](#), [ACHASSK088](#), [ACHASSK090](#)

Year 5: [ACHASSI102](#), [ACHASSK120](#)

Year 6: [ACHASSI122](#), [ACHASSI130](#)

DESIGN AND TECHNOLOGIES

Year 2: [ACTDEK003](#)

Year 3 & 4: [ACTDEP017](#)

Year 5 & 6: [ACTDEP019](#)

Year 7 & 8: [ACTDEK032](#)

HEALTH AND PHYSICAL EDUCATION

Year 2: [ACPPS018](#), [ACPPS022](#), [ACPPS023](#)

Year 3 & 4: [ACPPS036](#), [ACPPS040](#), [ACPPS041](#)

Year 5 & 6: [ACPPS054](#), [ACPPS059](#)

Year 7 & 8: [ACPPS073](#), [ACPPS078](#)

ETHICAL UNDERSTANDING

[Exploring values, rights and responsibilities](#)



PERSONAL AND SOCIAL CAPABILITY

[Social awareness](#)

CURRICULUM CONNECTIONS

[Outdoor Learning](#)

CROSS CURRICULUM PRIORITY

[Sustainability](#)

My Time, Our Place: Framework for School Age Care

[Outcome 2 and 4](#)