

Vale Park Fungi Foray – EY/PY

Vale Park Primary is walking distance to the River Torrens and to the Vale Park Our Patch (VPOP) Community Group's Wildflower Walk. Since 2008, VPOP has been developing the wonderful Wildflower Walk near the Ascot Avenue Road Bridge at Vale Park, which has over 100 species of labelled wildflowers and grasses, including over 20 species of reintroduced native orchids! Students from Vale Park PS have been actively involved in the establishment of this native revegetation site and users of the environmental education resources that the group has developed. We have discovered how important fungi are to the success of our wildflower species and the overall health of our revegetated sites. For this reason we are wanting to lift the profile of fungi within our local community and provide students and interested adults insights into this remarkable life form. Fungi are tremendously important to human society and the planet we live on. Investigating fruiting fungi when they are abundant is a wonderful opportunity for students to explore, investigate and discover some of the remarkable qualities these important life forms have.

Key Question Why are there a variety of fungi (fruiting bodies) found at The Vale Park Our Patch River Torrens site?

Main teaching points

- **Fungal Kingdom** - Fungi are classified into their own kingdom and one of the three most biological complex kingdoms along with plants and animals on Earth. Fungi are more like an animal than a plant as they gather their food rather than make their food like plants do. Animals and fungi both digest their food, although animals digest their food inside their bodies and fungi digest outside their bodies.
- **Grouping Fungi by features** - There are many types of fungi and like plants and animals can be grouped by finding similarities and differences. Similarities and differences can be made by observing fungi in the field and also after fungi have been collected back at school. Fungi can be sorted into a wide range of categories by looking at key features of the fungal fruit body.
- **Fungi Life-cycle** - What we usually see when we find fungi is the fruiting body (like an apple on a tree) with the main part of the fungi system unseen under the ground. Understanding the fungi lifecycle and the parts of the fruiting body can help explain how fungi grow and get the food they require to live.
- **Role in nature** - Fungi play important roles in all ecosystems and students explore three of the land based fungi modes as they look for and investigate the fungi they find. These are the 'life modes' see below.
- **Mycorrhizal (mate or helper)** has a symbiotic relationship with a living plant.
- **Saprotrophic (rotter or slobberer)** breaks down plant and animal material.
- **Parasitic (slow killers or pirate)** takes nutrients from a living plant/animal.

What you need

- Posters Natural Resource Management Ed Adelaide and Mt Lofty Fungi ID Charts Set of 12 for field
- Different types of fungi poster set for categorising and sorting fungi 1x set created by Adelaide Fungal Studies Group.
- Gill attachment and Mushroom morphology A4 back on back poster for field.

- Lifecycle of Fungi plus gilled and pore fungi posters with pieces and labels.
- Flags (bamboo stakes) with coloured ribbons or tape 1 or 2 per student 60 flags for field.
- Fungi hand mirrors (numbered) 1x per std. For field.
- Hand held microscopes 5x once fungi is collected to store jellies and delicate fungi for observation.

Possible lesson sequence

1. Prepare classroom tables or use dedicated Science Room space so students can explore fungi posters and pre collected fungi specimens.
2. Short introduction about lesson, time to explore posters and collections, lifecycle, fungi categories, fungi ID posters, 'modes' and importance of fungi.
3. Issue a team of 2 or 3 with Fungi bag and explain each of the items, flags, mirror and Fungi ID poster.
4. Go through important **safety information. Keep within boundaries** shown, need to **keep to tracks, open areas** and take care not to step on plants or fungi. **Do not pick or smell the fungi** (asthmatic care), if touching be careful not to touch eyes or mouth, wash hands after lesson. Warning not to pick and eat wild fungi and reasons for this.
5. Students given 10 to 20 minutes to explore area and flag 2-4 different fungi. Mirrors and charts can be used to explore the features of the fungi flagged and 'life mode' if they can be found using the ID chart.
6. Whistle in and visit flags giving each group time for a short report on one of their fungi.
7. Collect only one specimen of each so fungi can spore and grow more fungi. Return to school
8. Students can categorise their fungi using the charts and/or ID checklist and or use the microscopes to view closely their features.
9. Materials also provided for students to make spore prints of fungi collected.
10. Option for students to share something interesting they discovered about fungi living at the River Torrens and precinct.

Methodology for Fungi lesson sequence

Fungi as a topic of investigation for early and primary years students provides many valuable learning opportunities. The methodology used fosters student curiosity and encourages them to notice what is happening in their local environment. This can be at school, at home or in their local communities. Information and resources are also provided to give students some scientific language and scaffolding to assist them with their own fungi observations and investigations.

Australian Curriculum Content Descriptions

Year 1

Science Understanding/Biological Sciences

Living things have a variety of external features ([ACSSU017](#)) Living things live in different places where their needs are met ([ACSSU211](#))

Science as a Human Endeavour/ Nature and development of science

Science involves observing, asking questions about, and describing changes in, objects and events ([ACSHE021](#)).

Year 2

Science Understanding/ Biological sciences

Living things grow, change and have offspring similar to themselves. ([ACSSU030](#))

Science as a Human Endeavour/ Nature and development of science

People use science in their daily lives, including when caring for their environment and living things ([ACSHE035](#))

Science Inquiry Skills/ Planning and conducting

Participate in guided investigations to explore and answer questions ([ACSIS038](#))

Year 3

Science Understanding/Biological Sciences

Living things can be grouped on the basis of observable features and can be distinguished from non-living things ([ACSSU044](#))

Science Inquiry Skills/Planning and conducting

With guidance, plan and conduct scientific investigations to find answers to questions, considering the safe use of appropriate materials and equipment ([ACSIS054](#))

Year 4

Science Understanding/Biological Sciences

Living things have life cycles ([ACSSU072](#))

Science Inquiry Skills/Planning and conducting

With guidance, plan and conduct scientific investigations to find answers to questions, considering the safe use of appropriate materials and equipment ([ACSIS065](#))

Year 5

Science Understanding/Biological Sciences

Living things have structural features and adaptations that help them to survive in their environment ([ACSSU043](#))

Science Inquiry Skills/Planning and conducting

Identify, plan and apply the elements of scientific investigations to answer questions and solve problems using equipment and materials safely and identifying potential risks ([ACSIS086](#))

Year 6

Science Understanding/Biological Sciences

The growth and survival of living things are affected by the physical conditions of their environment ([ACSSU094](#))

Science Inquiry Skills/Planning and conducting

Identify, plan and apply the elements of scientific investigations to answer questions and solve problems using equipment and materials safely and identifying potential risks ([ACSIS103](#))

Year 7

Science Understanding/Biological Sciences

Classification helps organise the diverse group of organisms ([ACSSU111](#)) Interactions between organisms can be described in terms of food chains and food webs; human activity can affect these interactions ([ACSSU112](#))

Science as a Human Endeavour/ Nature and development of science

Scientific knowledge has changed peoples' understanding of the world and is refined as new evidence becomes available ([ACSHE119](#))

The content descriptors above were selected to best represent the learning from the lesson sequence we offered Vale Park classes for Sapphire's McMullan's Adelaide visit in 2017. An Adelaide and Mt Lofty Ranges NRM Community Grant sponsored her visit.

Lesson sequence developed by Rose Dow, a representative from Vale Park Our Patch and former teacher at Arbury Park Outdoor School.