

Pollination

Suitable for Years 3-6, April-July

Taking advantage of the arboretum's magnificent spring and summer flowers students will explore plant lifecycles in detail. Students explore the pollination strategies employed by different trees and the effects these strategies have on flower structure and function.

Key Concepts

Pollination, flower structure and function, pollinators (wind and insects), adaptation, lifecycles, fertilisation

Learning Outcomes

By the end of the programme, students should be able to:

- Name the different parts of a flower and describe the function of each
- Describe the lifecycle of a plant
- Know that some flowers are wind pollinated and some are insect pollinated
- Explain the importance of colour and scent for insect pollination
- Understand the difference between pollination and fertilisation

Before you come

Q What is a flower? Why do plants grow flowers?

Programme Outline

Learning Objectives	Activity
To assess students prior knowledge and vocabulary	Introduction Discussion / brainstorming knowledge about parts of a flower and their functions, pollinators, and adaptations to improve chances of successful pollination.
To recognise and name the different parts of a flower To suggest the role of each flower part in the processes of pollination and fertilisation To identify how different flowers are adapted and why	Flower detectives Flower parts – using a hand lens to identify different flower parts involved in pollination and fertilisation Adaptations – Look for and discuss the shape of flowers that increase the chance of pollen sticking to insect, and the adaptation of petals to provide a large landing platform

<p>To understand the importance of colour and pattern for insect pollinated flowers</p>	<p><i>Through the eyes of a bee</i> Explore the range of flower colours to be found in the arboretum and discover how different pollinators view colours. Look at some of the hidden UV patterns that attract pollinators</p>
<p>To understand the importance of scent for insect pollinated flowers To discover different scent strategies flowers use</p>	<p><i>Great smell census</i> What scents are we attracted to? The children are invited to smell a variety of different scents before voting for their favourite. The group will then discuss the different strategies flowers use to attract a specific insect pollinator.</p>
<p>To describe the process of pollination To suggest strategies flowers use to maximise pollination</p>	<p><i>Honey bee relay</i> This activity is a frantic fun way to explore the process of pollination. Which flowers have been successfully pollinated? How can pollen be wasted? How do flowers increase their chances of pollination?</p>
<p>To assess the students understanding of the main learning points of the programme To explain how the process of pollination fits within the lifecycle of a plant</p>	<p><i>Conclusion</i> A short quiz that revisits flower parts, their functions and the process of pollination, before asking what comes next in the lifecycle.</p>

Self-guided trails

To complement this half-day programme, we recommend the following activities from our **Growing Green Activity Pack**:

- 20 Flower search
- 21 Flower detectives

This pack can be viewed at www.forestry.gov.uk/westonbirt-education.

National Curriculum links

Plants

- Year 3 – identify and describe the functions of different parts of flowering plants (including flowers)
- Year 3 – explore the part that flowers play in the life cycle of flowering plants, including pollination and seed formation

Living things and their habitats

- Year 5 – describe the life process of reproduction in some plants