
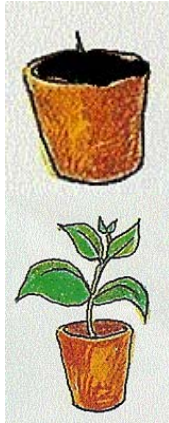


**Week 9 – Life cycle of flowering plants**

Focus + Resources	Lesson Notes
<p><b>Lessons 1 and 2</b></p> <p><b>Objectives</b></p> <ul style="list-style-type: none"> <li>To explain how insects pollinate flowers</li> <li>To order correctly the steps in the life cycle of a plant</li> </ul> <p><b>Key Ideas</b></p> <ul style="list-style-type: none"> <li>Flowers need pollinating to make fruits and seeds</li> <li>The life cycle of flowering plants includes pollination, fertilisation, seed production, seed dispersal and germination</li> </ul> <p><b>Resources</b></p> <ul style="list-style-type: none"> <li>Star Science – Life Cycles</li> <li>Science Success 3</li> <li>Eyewitness – Plant</li> <li>Usborne Encyclopedia of Science</li> <li>WES Year 5 Science Workbook 4</li> <li>Magnifying glass</li> <li>Flowers containing pollen (you may need to buy these if not growing locally)</li> </ul> <p><b>Extension Activity</b> See end of Lesson 1.</p> <div style="text-align: center;">  </div>	<p><b>Lesson 1</b></p> <ul style="list-style-type: none"> <li><b>Pollination.</b> Have some flowers with pollen available. Read together page 12 in <i>Life Cycles</i>, discussing each of the questions. Discuss the fact that wind-borne pollen is light, small and quite smooth (first picture) while insect-borne pollen is larger, heavier and has spines that stick to an insect's body (second picture). Let your child collect some pollen from flowers (if possible) and examine this with the magnifying glass. Discuss what she can observe. <i>Can you tell which type of pollen it is?</i> Ask her to read the Fact File and discuss the ways that plants can be pollinated.</li> <li><b>Flower Power.</b> Activity 4.6 in <i>Science Workbook 4</i> will help your child to understand the processes involved in pollination. Read the Fact File together first of all and then let your child choose the right facts to put in each speech bubble.</li> <li><b>Insect pollinators.</b> Talk about the importance of insects in the pollination of flowers. Read and share pages 22-23 in <i>Eyewitness Plant</i> which provide more detailed information about pollination.</li> <li><b>Pollination Street.</b> Read the top of page 14 in <i>Life Cycles</i>. Remind your child of what has to happen in pollination and then let her complete the cartoons in Activity 4.7 in <i>Science Workbook 4</i> (Task Sheet 6). Consolidate by reading the Fact File at the bottom of page 14.</li> <li><b>Strange pollinators.</b> If there is time and if your child is interested, read and share pages 24-27 in <i>Eyewitness Plant</i> to extend knowledge of the role of pollination. This can be planned as an extension activity.</li> </ul> <hr/> <p><b>Lesson 2</b></p> <ul style="list-style-type: none"> <li><b>Describing patterns.</b> Start the lesson with Activity 4.8 in <i>Science Workbook 4</i>. This is an exercise in developing skills in scientific enquiry and will help your child to identify patterns in results of investigations. Let your child read through the activity and then discuss what is required. Ask her to evaluate each of the suggested conclusions and look for the good and bad points in each. Let your child make her own choice of order for the conclusions and the good points about her first choice. Then, when she has finished, discuss her answers. (See Additional Teaching Points.)</li> <li><b>Life cycles.</b> Read together pages 52-53 in <i>Science Success</i>. This provides an overview of the topic. Discuss what is meant by 'reproduce' and 'extinct'. Look at the life cycle of a tomato plant on page 53 and ask your child to identify the seeds. <i>Where does the life cycle start?</i> Establish that when we talk about a 'cycle' it is a process that continues all the time – there is no starting or finishing point.</li> </ul>

### Week 9, Lesson 2 continued

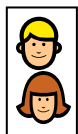


- **Plant story.** Turn to Activity 4.9 in *Science Workbook 4*. Your child is asked to label the stages in the life cycle of a poppy. Look back together at page 13 in *Eyewitness Plant* and ask your child to 'talk you through' each stage in the life cycle of the flower. Ask your child to explain each of the words in the Word-bank on the worksheet before she starts. She should just put a brief caption for each stage on the worksheet. (The boxes on the sheet are quite small in order to encourage this.)
- **Fast Plants.** Turn to page 15 in *Life Cycles*. Through the last activity, your child has been introduced to the idea that flowers have life cycles of different lengths. Talk about how long the life cycle of the poppy lasts (one year, in common with many other flowering plants). Ask your child to read through the 7 stages listed on page 15. *Could you change the way you write the life cycle?* Establish that you could write the life cycle starting at any point but that the order of the stages must remain the same. Ask your child to look at the series of pictures and at the table and talk about how the plant grows. *At which stage is it growing fastest?* (between 11 and 15 days). The graph (Task Sheet 7) is in Activity 4.10a, *Science Workbook 4*, and the questions to answer in 4.10b. Let your child complete this activity independently. Discuss the answers when she has finished. (Answers in Term 2 Appendix.)

## Week 9 – Additional Teaching Points

### Teacher tips

- The notes in *Life Cycles* suggest a visit to a habitat to observe insects visiting flowering plants. If you have a suitable place nearby and if the season is right to observe flowering plants, then try and arrange this some time before Lesson 1 this week. The topic can be covered quite thoroughly without this visit if the time and place are not suitable. If you go on a visit, you will need to show your child page 13 in *Life Cycles* before you go out and explain that you are going to find out about the ways that insects play a part in the growth of flowering plants. Explain that your child will be finding out more about this during the lesson. Suggest that you take a notebook on the visit and note down the answers to the questions posed in the textbook. (You may want to write the questions into the notebook rather than taking the textbook with you.)
- Lesson 2. Activity 4.8 is designed to improve skills in scientific enquiry. In this exercise, your child is looking at the conclusions we draw about an investigation and identifying the important points to include. During discussion you should clarify that the features of a good conclusion include: that it mentions what was changed (volume of water) and what was measured (height of grass); that it describes a whole pattern (the more water, the taller it grew) and not just one result (the one with the most water grew the highest); that it indicates limitations of the evidence (only up to 10cm<sup>3</sup> of water, so the conclusion might not hold for larger volumes of water). Using these criteria, your child should recognise that Carl's conclusion is the best. (Overall order: Carl, Kay, Sally, Mike, Jo).



### Student tips

**Seed dispersal investigation.** Don't forget to check how your seeds are doing. Can you still see them all? Have some of them been eaten by birds? Have any started to germinate? Record your findings. Take a photo of each of the seeds if you can.

Plant story

Activity 4.9

Week 9

The pictures below show the life cycle of a poppy.

Write a caption for each stage in the life cycle of a poppy. Use the words in the Word-bank to help you.

