

Name of session		Sensation Seeds and Fabulous Flowers	
		Level: Key stage 2 (lower)	Length of session: 2 hours
Curriculum Links			
Year 3 and 4 Working scientifically			
Pupils should be taught to:			
<ul style="list-style-type: none"><li>• Make systematic and careful observations and, where appropriate, take accurate measurements using standard units, using a range of equipment</li><li>• Gathering, recording and presenting data in a variety of ways to help in answering questions</li><li>• Recording findings using drawings and labelled diagrams</li></ul>			
Year 3 Plants			
Pupils should be taught to:			
<ul style="list-style-type: none"><li>• identify and describe the functions of different parts of flowering plants: roots, stem/trunk, leaves and flowers</li><li>• Explore the requirements of plants for life and growth (air, light, water, nutrients from soil, and room to grow)</li><li>• Explore the parts that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal</li></ul>			
Previous knowledge expected from students		Key concepts/key words	
Life cycle of a flowering plant, parts of a plant, what plants need to grow (some of this may need to be recapped from KS1)		Plant, roots, stem, leaves, bud, flower, pollination, bee, butterfly, pollen, seed, water, air, soil, sunlight, habitat, exploring, collecting, diversity, seed dispersal.	
Learning objectives			
To be able to use observations of seeds to determine their method of dispersal. To learn about the life cycle of a flowering plant and name the reproductive parts of a flower. To learn what seeds and plants need to grow. To learn the parts of a flowering plant and a flower and their functions. To be able to make observations and drawing of flowers and identify their reproductive parts.			
Outcomes			
All pupils will have experienced 'being a seed' and most/all will be able to recollect collecting water, soil, air and sunshine and understand that they need all 4 to be able to grow. Most/all pupils will be able to recollect the parts of the plant, roots, stem, leaves, bud and flower and their functions. All pupils will have observed seeds closely and some may be able to use these observations to determine method of seed dispersal. Pupils will be able to recall several methods of seed dispersal. All pupils will observe and make collections of seeds/plant parts from a variety of different habitats. All pupils will have observed flowers closely and made an attempt to draw a diagram of the flower, identifying the pollen and stigma, petals and sepals.			
Starter			
Can anyone see a plant or tell me the name of a plant? Talk about trees being oldest <u>living thing</u> .			
Introduction			
Timings	Student Activity		
15 mins	<b>Seed tig</b> Recap what plants need to survive, play seed tig game where pupils gather water, sunshine, soil and air tokens to grow. When seeds grow, mention functions of roots, stem, leaves and flower.		
Main Activities			
30 mins	<b>Seed investigation.</b>		

	<p>Discuss why all the seeds falling off a tree might not grow if they fell directly under the tree, leads on to seed dispersal.</p> <p>Look at different types of seeds gathered locally. Discuss which ways the seeds are dispersed. After careful handling and observation of seeds, using magnifying glasses, pupils use observations to categorize the seeds into seed dispersal method.</p>
30mins	<p><b>Plant Walk</b></p> <p>Explore different habitats where seeds (or plants depending on season) are found, collect seeds on the seed journey worksheet. Make notes as to which method of dispersal each plant uses.</p> <p>Mention the fact that some of the seeds found are a source of food for wildlife (birds and mice).</p>
40mins	<p><b>Plant reproduction</b></p> <p>Investigating parts of a flower using the giant flower, pupils help build the flower, naming its parts. Discuss roll of insects in pollination and fertilization.</p> <p>Observe flowers in the ecology centre using magnifiers. Plant reproduction worksheet: draw flowers and discuss pollination.</p>
<b>Plenary</b>	
5 mins: What effect would it have if we lost all our pollinators?	
<b>Extension work</b>	
Play seed germination game – not all seeds will grow into plants, different factors such as getting eaten, falling on hard ground, getting washed away, will all determine which seeds grow into plants.	
<b>Pre-course preparation work suggestions</b>	
<p>Discussion to establish prior knowledge and what the children would like to find out.</p> <p>Go on a walk on the school site looking for seeds/flowers/petals if it is a suitable site.</p> <p>Dissect flowers and learn names of parts – could use daffodils – key words: stem, leaves, petals, pollen. Have examples of seeds/flowers/petals to handle and compare size, colour, shape, etc.</p> <p>Role play a seed germinating and growing in to a flower as well as pollination after showing the children suitable video clips.</p>	
<b>Further Work (post course) suggestions</b>	
<p>Write formal thank you letters, make suggestions for improvement to the Ecology Centre, grow seeds at school in different conditions, cut up different fruit and vegetable to find their seeds, look up amazing different seeds from around the world and discover how they are dispersed.</p>	
<b>Alternatives (field sites and wet weather)</b>	
<p>This session is not translatable inside, and therefore will go ahead in wet weather.</p> <p>The introduction and plenary can be done inside if the weather is wet or too cold/windy.</p> <p>The session will be cancelled only due to severe weather warning such as flooding, high winds and stormy weather.</p>	
<b>Opportunities for evaluation</b>	
<p>Teacher evaluation: Photograph pupils in action for evidence, observation throughout the session, assess understanding post session through activities and questioning. By providing appropriate level of adult/child ration to ensure pupils are kept 'on task'.</p>	
<p>Leader evaluation: The session leader will assess progress throughout the day by open ended questioning and plenary session. Through observation, the session leader will ensure that all pupils are engaged in learning and complete the tasks required.</p>	
<b>Resources</b>	
Variety of seeds, seed dispersal cards, magnifying glasses, Seed tig tokens, seed walk worksheets,	

giant parts of a flower, flower observation worksheets, pencils, clipboards.

**Key H&S**

Dress and prepare for the outdoors. Long trousers due to tall grass, brambles and nettles.

Sensible footwear in all weather conditions.

Waterproofs in wet weather. Sunhats, suntan lotion and water bottles in hot sunny weather.

All pupils and teachers should wash their hands prior to leaving the site or eating.

Teachers should arrange a pre-visit to discuss specific health & safety requirements to generate their own risk assessments.

Course leaders: Site check and dangerous litter pick.