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| Session title | Soil and seeds – an autumn exploration | |
| Key question | What are seeds and where does soil come from? | |
| Session description | In this session, learners find out how plants make seeds and how they are dispersed. They find and record real life examples of eight different types of seed.<br>The learners also investigate first-hand what soil is made from and how different habitats have different soils. **Especially suitable for the autumn term.** | |
| Key Stage | KS2 | |
| Duration | 1 hour plus 15 minutes walking time. | |

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| Curriculum links | Key Stage 2 Science<br>▪ Describe the process of reproduction in some plants and animals<br>▪ Explore the part that flowers play in the life cycle of flowering plants, including pollination, seed formation and seed dispersal<br>▪ Recognise that soil is made from rocks and organic matter<br>▪ Recognise that environments can change and that this can sometimes pose dangers to living things<br>Key Stage 2 Geography<br>▪ Describe and understand key aspects of physical geography, including: climate zones, biomes and vegetation belts, rivers, mountains, volcanoes and earthquakes, and the water cycle. | |
| Learning outcomes | Most learners… | More able learners… |
| | Will understand what soil is made from and how it is formed.<br>Will know that wetland soils soak up water and prevent plant material from rotting.<br>Will know that peat is a special type of wetland soil.<br>Will understand the difference between pollination and seed dispersal.<br>Will know about some seed dispersal methods. | Will understand that wetland soils store plant matter more than other soils.<br>Will understand that rotting microbes cannot breathe under water.<br>Will know that peat is used for fuel and potting plants.<br>Will be able to name petals as the reason bees find flowers and nectar as the liquid they collect.<br>Will be able to identify some plants and their seed dispersal methods. |
| Learning / enquiry skills developed | ▪ Explain the process of soil formation and how wetland soils contain more plant matter<br>▪ Predict what might happen to soil as a result of environmental change and the implications of this for wetlands<br>▪ Appreciate the difference between pollination and seed dispersal<br>▪ Experience a range of seed dispersal methods in wetland plants<br>▪ Report what new knowledge has been gained | |
| Key vocabulary | Rotting<br>Habitat<br>Carbon<br>Nectar<br>Seed pod | Compost<br>Environment<br>Petal<br>Pollen<br>Dispersal | Microbes<br>Micro-habitat<br>Stamen<br>Pollinate |

| **Session outline** | Time |
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| Introduction | 5 mins |
| The session leader introduces the following key questions:<br>▪ Where does soil come from?<br>▪ What are seeds? | |
| **Section 1. Soil.** | |
| Activity 1: Cow pat demonstration. | 5 mins |
| A short but memorable WOW activity to grab the learners' attention and lead into the first part of the session. | |
| Activity 2: What is soil? What is it made of? Where did it come from? | 20 mins |
| In our woodland, learners work in pairs to discover first-hand what soil is and discuss how it might have got here. | |
| Activity 3: Wetland soil is special. | 5 mins |
| Learners discover how wetland soils, and peat in particular, are amazing, important habitats, and how they are threatened by changes brought about by humans. | |
| **Section 2. Seeds.** | |
| Activity 4: Who makes the baby plants? | 10 mins |
| Leader chooses a learner to help a bee to look for nectar in our giant working flowers. It picks up pollen and transfers it to the second flower, which then 'grows' a seed pod. Leader then uses our 8 model seed pods/real seed heads to show 8 seed dispersal methods. | |
| Activity 5. Seed distribution – game and survey | 20 mins |
| Learners play a quick game to discover a 9th seed dispersal method, then set off to find and record as many real-life examples as they can. This can be continued during the afternoon or back at school. | |
| Plenary | 5 mins |
| We refer back to the title question, reviewing what we have learnt. We allow time for learners to ask any remaining questions or offer observations and ideas for taking the theme back to school. | |