









# Rocks: Soil Formation

<b>Aim:</b> Recognise that soils are made from rocks and organic matter by explaining how soil is formed. I can explain how soil is formed.	<b>Success Criteria:</b> I can explain that soil is composed of different things. I can describe the 4 processes of soil formation.	<b>Resources:</b> <b>Lesson Pack</b> Clear plastic bottles (Round bottomed two litre bottles are best.) Thin pieces of fabric Cardboard pieces Shredded paper Fruit and vegetable scraps (cut into small pieces) Compost Small stones 5 to 6 tiger worms per group Scissors Plastic gloves Plant saucers Elastic bands
<b>Key/New Words:</b> Soil, formation, formed, rock, organic matter, animals, top soil, sub soil, base rock, additions, losses, translocations, transformations.	<b>Preparation:</b> <b>Creating a Mini Compost Bin Instruction Sheet</b> - 1 per group. Read through <b>Adult Guidance Soil Formation</b> .	

**Prior Learning:** It would be helpful if children have practised handling plasticine 'worms' prior to this lesson.

**Health and Safety:** Ensure that children wash their hands after handling composting materials. Ensure that plastic bottles have plenty of air holes and there are drainage holes at the bottom. Make sure that the soil is not under or over watered. Add air holes prior to children creating their mini-compost bins, although children can still add a few of their own.

## Learning Sequence

	<b>Soil:</b> Show the questions <b>What is soil? What is soil made from?</b> Take children to the playing fields / school allotment or any area where there is visible soil. Children observe and feedback about what could be in soil. Point out what's around e.g. trees as well as discussing what might be living in the soil.	
	<b>What Is Soil Made Of?</b> Address errors and misconceptions arising from the lesson introduction by highlighting the relevant information on the <b>Lesson Presentation</b> . <b>Layers of Soil:</b> Show and explain the diagram of the different layers of soil present in the ground. <b>Soil Formation:</b> Explain the soil formation process. <b>Compost:</b> Read information on the <b>Lesson Presentation</b> explaining what compost is and why people choose to compost.	
	<b>Creating Compost:</b> Read through the instructions for creating a mini compost bin. <b>Check children's understanding of key concepts – for example – why are using a base of small stones?</b> Check children understand the health and safety guidelines both for them and the worms. Each group should have a copy of the <b>Creating a Mini Compost Bin Instruction Sheet</b> to refer to while creating their mini compost bin.	
	<b>Caring for the Worms:</b> How can we care for the worms properly? After children have fed back ideas, use the checklist to see if they have covered the main points. Go through any remaining points explaining why it will keep the worms healthy.	

## Taskit

**Researchit:** Children take a sample of soil (from a back garden or a pot plant for example) and research what type of soil it is and which rock it is formed from.

**Modelit:** Children create a model of the different layers of soil.

**Filmit:** Children create a short information film using appropriate diagrams and pictures to explain how soil is formed.