

| TOPICS | Soils | | KEY STAGE | 2 | Date | 08/10 |
|--------|---------------|---|-----------|---|------|-------------|
| LINKS | NATIONAL CUR. | SC1; 2A,B,C,F,G,H; SC3 1A | | | | |
| | QCA | 3C CHARACTERISTICS OF MATERIALS; 3D ROCKS AND SOILS | | | | Page 1 of 1 |

| Learning objectives | Structure | Plenary |
|--|--|---|
| <ul style="list-style-type: none"> To understand how soils are made (3C, 3D) To make comparisons between soils by touch, smell, sight (SC1 1f, SC3 1a) To understand how different soil properties affect different plants <p>Assessment questions</p> <ul style="list-style-type: none"> What is soil? Why is soil important? What colour is it? What properties does soil have? What does pH measure? Why is Soil pH important for gardening? What goes into compost heaps? | <p>Introduction</p> <p>Ask class what soil is, to name some of the ingredients and why it is important.</p> <p>The children will take part in the following activities:</p> <p>Activity 1 - Soil Soup</p> <p>Discuss the ingredients of soil – depending on their knowledge it may be necessary to make a bowl of soil as in Soils KS1.</p> <p>Activity 2 - Soil Testing</p> <p>The class will be testing 2 or 3 samples of soil; Rosemoor, Taddiport soil and school soil. They will carry out a number of tests and record these on a worksheet. They will record what it looks and feels like in its dry state. They will sieve and record how it has changed. They will test soil pH, wet the soil and describe how it looks and feels, take a soil smear to record its colour, and carry out a texture test to find the soil type. Hands are washed between each soil. Discuss the similarities and differences between the soils and how this affects plant growth.</p> <p>Activity 3</p> <p>Garden walk to the compost bins in the Fruit and Veg Garden. Discuss the differences – general compost, grass cuttings, leaf compost, importance of air, worms, heat. Point out that Rosemoor soil is a different colour on the surface from the soil in the classroom because of years of mulches to improve it.</p> <p>Activity 4</p> <p>If there is sufficient time, walk through woodland to look at root plate of fallen tree, see roots and different layers of soil. Return to classroom to sum up topic and ask questions.</p> <div style="border: 1px solid black; padding: 5px; margin-top: 10px;"> <p>Key vocabulary:</p> <p>Decomposition, rot, weathering, erosion, pH, acid, alkaline, neutral, loam, clay, sand</p> </div> | <ul style="list-style-type: none"> What are the ingredients of soil ? Name some differences between soils. What are soil properties. <p>Resources:</p> <ul style="list-style-type: none"> 2-3 soils in bowls Plates Sieves Pencils Magnifying glasses Recording sheets Water Bowls of water for washing hands pH testing kit; test tubes, test tube rack, barium sulphate, indicator solution, de-ionised water, spatula, pH colour chart Soil ingredients; Dead leaves, animals, wood, air, water, sand, clay, rocks, all in bowls Mixing bowl and spoon. |