


Science Knowledge
Organiser
Soil




Step 1 – Explore soil

- soils: sandy, clay, peat, chalky
- jars with lids
- sieves
- water



Step 2 – The importance of soil


- soils: sandy, clay, peat, chalky
- three small plant pots
- plant seeds
- hand lenses or magnifying glasses



Step 3 – Plan – soil experiment

Per group:


- four filter funnels
- five measuring cylinders
- four pieces of filter paper
- four soil samples: sandy, clay, peat, chalky
- mass balance
- water



Step 4 – Investigate – soil experiment

Per group:


- four filter funnels
- five measuring cylinders
- four pieces of filter paper
- four soil samples: sandy, clay, peat, chalky
- mass balance
- water



Step 5 – Evaluate – soil experiment

Per group:

- four plant pots
- four soil samples: sandy, clay, peat, chalky
- plant seeds



Key Vocabulary

soil	sandy soil
clay soil	peat soil
chalky soil	organic matter
nutrients	habitat loss
deforestation	habitat
independent variable	dependent variable
controlled variable	filter paper
filter funnel	measuring cylinder
absorb	evaluation
data	



Key questions:

- What is soil?
- What are the different types of soil?
- What is soil made up of?
- What are the features of chalky soil?
- What are the features of sandy soil?
- What are the features of clay soil?
- What are the features of peat soil?
- What are the differences between these types of soil?
- Why do plants need soil?
- What does soil provide plants with?
- Why do animals need soil?
- What does soil provide animals with?
- What impact has human activity had on soil?
- How does this impact animals, plants and humans?
- How has human activity cause soil loss and what is the impact on living things?
- What will you use to measure the amount of soil?
- What will you use to measure the volume of water?
- What types of soil are you using in this experiment?
- What will you change in this experiment?
- What will you measure in this experiment?
- What will you keep the same?
- How will you record your results?
- Which soil absorbs the most water?
- What is your experiment plan?
- What are you changing?
- What are you measuring?
- What are you keeping the same?
- What was the volume of water in the measuring cylinder?
- What was the mass of the soil?
- Which soil absorbed the most water?
- Which soil absorbed the least water?
- What is an experiment evaluation?
- If you were to repeat this experiment, how could you improve your results?
- What questions do you have for further investigation?