Science Progression of Knowledge and Skills Rocks

Key to understanding this document: Black = National Curriculum objectives Red = Knowledge/Skills to be taught Green = Resources to be used

At The Discovery School we understand the importance of our children knowing more, remembering more and doing more. With this in mind, we teach the children the knowledge they require, ensuring they have opportunities for the retrieval of knowledge and the chance to apply new skills during their learning.							
Area of Learning	**EYFS**	**Year 1**	**Year 2**	**Year 3**	**Year 4**	**Year 5**	**Year 6**
Rocks				Working scientifically: Classifying and presenting data to help answer questions. Using results to draw a simple conclusion and suggest improvements. Using simple scientific equipment. Setting up simple practical enquiries. R1-compare and group together different kinds of rocks on the basis of their appearance and simple physical properties. 1.Begin by allowing the children to handle a selection of rocks and look at them carefully using a hand lens or microscope where possible. First the children could sort them in any way they chose, then feedback and discuss different ways of sorting as a class. Then they could sort them according to whether or not they can see crystals in them. Children could then choose sorting criteria of their own: e.g. texture, sharpness of edges etc. Children present their findings and draw conclusions. 2. Children to understand the different types of rocks and how they are formed. **Sedimentary, igneous and metamorphic** 3. Children to carry out a simple test to see which rocks are impermeable/ permeable.			

				Working scientifically: Use systematic and careful observations using a range of equipment. R2- describe in simple terms how fossils are formed when things that have lived are trapped within rock. Children understand what is meant by a fossil and can explain this. Show children examples of fossils. Children make their own fossils. E.g. using clay and imprinting shells (could use plasticine as an alternative). Working scientifically: Setting up practical enquiries, comparative and fair tests. Record findings using simple scientific language/ using tables (scaffolded table) Using results to draw simple conclusions and make predictions for new values. R3-recognise that soils are made from rocks and organic matter. **Soil workshop with spadeworks.** **Refer to Andrew Berry scheme for the investigations below.** 1.Children to explore different types of soil e.g. sandy or clay soil by setting up a simple test. Children mix some water with the soil to see if they can make a ball or a worm. 2.How much water do different soils absorb? 3.How could the way the farmer uses the field affect how much water is absorbed by the soil?			
Key Vocabulary				rock soil fossil sedimentary metamorphic igneous permeable			

				impermeable appearance soft hard crystal rock formation mineral			
Key Resources				Rocks Soils Shells Clay Containers/ beakers Tray Forks Plastic bottles Filter paper Measuring jug Tea lights			