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| **Session 1: We're Going on a Material Hunt** | | | | | |
| Science curriculum area: **Everyday materials** | | | **Everyday Materials:**  i. distinguish between an object and the material from which it is made (1EM)  ii. identify and name a variety of everyday materials, including wood, plastic, glass, metal, water, and rock (1EM)  iii. describe the simple physical properties of a variety of everyday materials (1EM)  iv. compare and group together a variety of everyday materials on the basis of their simple physical properties (1EM) | | |
| Working Scientifically | | | i. asking simple questions and recognising that they can be answered in different ways  ii. identifying and classifying  iii. using their observations and ideas to suggest answers to questions | | |
| Teaching Objectives | | | * Discuss, identify and label various materials. * Consider what the classroom would be like if objects were made of different materials. * Distinguish between an object and the material from which it is made (Yr1). * Sort the objects according to their properties and their usefulness (Yr2). | | |
| Key Vocabulary: rough/smooth, flat/bumpy, sharp/blunt, wood, metal, plastic, glass, rock, materials, properties | | | | | |
| Resources  A collection of objects made from different materials and with different textures, hoops, opaque bag, Material Zones resource, and vocabulary definitions. | | | | | Weblinks  <http://www.bbc.co.uk/schools/scienceclips/ages/5_6/sorting_using_mate.shtml> - *A sorting and using materials challenge game.* |
| Before the session: Set up three zones in the classroom, each prepared with one of the activities mentioned in the Material Zones resource. Each table will need a selection of objects made from different materials. In addition to the objects, table 1 will also need sticky notes and pencils, table 2 will need an opaque bag and table 3 will need a large book (or partition).  Whole class: Ask the chn to come in to the classroom and explain that there are three activities set up and that everyone will have the chance to do all three. Ask the chn to choose an activity to work on or put the chn into groups and direct them towards an activity zone. Briefly explain about each zone before the chn choose. The Material Zones resource gives an explanation of each zone but you will need to read this out to the chn and make sure they understand. Explain to the chn that all things are made from 'materials'. Establish that this does not mean that objects are made from cloth/fabric (material) but that the word 'material' refers to the matter from which a thing is made. Encourage the chn to use the word 'material' when discussing the objects, and the terms wood, plastic, glass and metal.  When all chn have had a turn at the activities, bring them together and ask them to share one thing that has surprised them, or something they have learnt, from the material zones. It may be that an object is made from a material they didn't expect, or that it is difficult to describe certain materials. Play 'I-Spy The Material' with the chn, by looking around the room and spotting materials starting with a certain letter, but then moving on to spotting materials with certain properties or features (rough/smooth etc). Ask for volunteers to play this game too. In their explanations, make sure chn understand and can distinguish between the object and the material it is made from and use the terms: wood, plastic, glass and metal. You may also want to ask the more able to consider why those objects are made from those particular materials. What useful properties do those materials have to make them the best for the job? Give the chn cameras and sketch books and tell them that you are going to challenge them to find a material and record it. You may choose to give them a time limit to this challenge. For example, you could say: *You have 5 minutes to find 3 objects made of metal and sketch them on a page in your sketchbook*. | | | | | |
| Year 1  Teacher/adult to work with this group.  Place four hoops on the floor of the classroom and label them 'wood', 'plastic', 'metal' and 'glass'. Ask the chn to help you tidy away all the objects on the tables, by placing them in the appropriate hoops. | | | | Year 2  Challenge this group to resolve the problem of some objects being made from more than one material and to work out how they might resolve that (by overlapping the hoops). They may also want to define the categories themselves: usefulness, man-made, natural. Let them investigate and explore. | |
| Plenary | Ask the chn to sit and consider these questions: What would the classroom be like if the tables were made of jelly? Or the chairs were chocolate? Why are certain materials used to make these items? | | | | |
| Outcomes | | Children will:   * Identify some of the materials in the classroom * Appreciate the usefulness of some materials (tables made of wood and metal, not jelly) * Understand the difference between an object and the material from which it is made (Yr1) * Sort objects according to their properties, usefulness and other criteria (Yr2) | | | |