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| **Session 2: Material Pairs and Properties** |
| 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)v. identify and compare the suitability of a variety of everyday materials, including wood,metal, plastic, glass, brick, rock, paper and cardboard for particular uses (2EM) |
| Working Scientifically | i. asking simple questions and recognising that they can be answered in different waysii. observing closely, using simple equipment iii. identifying and classifyingiv. using their observations and ideas to suggest answers to questions |
| Teaching Objectives | * Identify and compare the materials various objects are made from.
* Discuss the differences between an object and the material from which it is made (Y1).
* Consider how the properties of materials make them suitable for their purpose (Y2).
* Write songs about the properties of materials (to the tune of *Frère Jacques*).
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| Key Vocabulary: rough/smooth, flat/bumpy, sharp/blunt, wood, metal, plastic, glass, rock, materials, properties |
| ResourcesA collection of objects made from different materials and with different textures, Material Snap, and Frère Jacques materials song. | Weblinks<https://www.youtube.com/watch?v=BC6rvbxdywg> - *video of Frère Jacques tune.* |
| Before the session: Make sure there are objects made from different materials available around the classroom. Print and cut out the Material Snap cards from the resources. Whole class: Ask the chn to sit down and show them a wooden ruler. Ask what material they think it is made from and where that material comes from (natural, man-made?). Talk about how it has changed (cut into blocks of wood, then cut to size, polished and marked). Show the chn a selection of objects (maybe on the carpet area or on a central table). Ask the chn to get into pairs and take a set of Material Snap cards to their tables. Explain that they need to mix the cards up and place them face down on the table in two piles. Say that each person in the pair then turns a card over at the same time and reads aloud what is written on the card. Then they need to go and find an object matching that material. When they have got their objects, they must think of words to describe the objects and their similarities and differences, before replacing the objects and turning another pair of cards over. Listen carefully to the discussions that occur during this time to find out more about what they already know about materials and their properties. Ask the chn to choose an object that is made from a material they want to think more about. If the object is made of more than one material, ask them to identify which material they are going to focus on. Emphasise that there is a difference between an object and the materials from which it is made. Explain to the chn that they are going to write songs about their chosen material. They may want to get together with a working partner who has also chosen that material. Sing the tune *Frère Jacques* to the chn (or play the video in the link above). Sing the tune together (just 'la la', instead of words) until everyone has it in their heads. Alternatively, use a different tune you already know as a class. Stop the class regularly to see how they are getting on and for chn to draw on suggestions from their peers if they are stuck. Their song should include a line about the simple properties of their chosen material. |
| Year 1 Teacher/adult to work with this group.Work with this group to write a song together. To help them, ask the chn to go around the circle and say out the properties out loud first. Write them down and then together sing them. They don't have to rhyme.  | Year 2 Challenge this group to write their own materials song to that tune (there is an example in the resources). If they are struggling, tell them to say the properties out loud first to remind them before they sing it. |
| Plenary | Sit the chn in a circle at the end of the session, with their objects in front of them. Sing round in a circle, everyone sharing their song in their pair. If a pair doesn't want to sing, sing with them or suggest that everyone sings their song together. |
| Outcomes | Children will: * Understand that objects are made of different materials and they have simple properties
* Know that there is a difference between an object and the material from which it is made
* Identify and name a variety of everyday materials, including wood, plastic, glass, metal, water and rock
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