

Everyday Materials

Science

Year 1

Lesson 5 of 6

Learning Objective		Resources
To carry out an experiment to find out which materials are waterproof.		Slides Worksheet 5A/5B/5C Materials to test Plastic cups Elastic bands Water Spoons Plastic trays Materials to construct umbrella frames (FSD? activity only)
Teaching Input		
- Introduce children to the character on the slides whose umbrella has a hole in it. He wants to create a patch for his umbrella but he is not sure which material he should use. Can you help? - How do you think we could find out what material would be best to use for an umbrella? What would this material need to be in order to be useful? Children to think, pair, share their ideas. - Explain that the most important thing about an umbrella cover is that it is waterproof so that the person underneath it doesn't get wet. It also needs to be strong enough so that it will not rip in stormy weather. Tell children that today their task will be to test some different materials to see if they are waterproof or not. How do you think we could do this? Invite children to share their ideas then go through the suggestions on the slides. - Show children the materials they will be testing today and ask them to predict which ones they think will be waterproof and which won't.		
Main Activity		
<u>Lower ability:</u> Support children in small groups to test each of the materials on worksheet 5A to see if they are waterproof or not using the method shown on the slides. Children to then record the results and decide which material they think would be best for an umbrella, based on what they have found out. Children to stick a small sample of each material in the correct box on the worksheet.	<u>Middle ability:</u> Children to work with a partner to test each of the materials on worksheet 5B to see if they are waterproof or not using the method shown on the slides. Children to then decide which material they think would be best for an umbrella, based on what they have found out. Children to stick a small sample of each material in the correct box on the worksheet.	<u>Higher ability:</u> Children to work through the questions on worksheet 5C, then carry out and record their experiment.
Fancy something different....?		
- Tell children that their challenge today is to make a waterproof umbrella. To do this, they will need to test a variety of materials to see which are waterproof. Provide children with newspaper, cellophane, clingfilm, fabric, etc. and test them using the method above. - Once children have decided which material they think would be best to use, challenge them to make an umbrella using this material. Children could use dowelling, cardboard tubes, plastic tubing, etc. to make the frame for their umbrella. - Once children have made their umbrellas, go outside and test them. If it's not raining, using a watering can to create the same effect!		
Plenary	Assessment Questions	
What did we find out today about waterproof materials? Which materials are waterproof? Are all waterproof materials suitable for making an umbrella with? Why or why not? Discuss ideas as a class.	- Can children make suggestions for how to test which materials are waterproof and which aren't? - Can children test a variety of materials to see which are waterproof and which aren't? - Can children draw conclusions from their experiment?	