

Scientists and Inventors: Charles Macintosh

<p>Aim: To find out about people who have developed new materials in the context of learning about Charles Macintosh.</p> <p>I can describe Charles Macintosh and his famous invention.</p> <p>To identify and compare the suitability of a variety of everyday materials for particular uses in the context of testing materials to find the most suitable material for a waterproof coat.</p> <p>I can investigate the most suitable material for a particular use.</p>	<p>Success Criteria: I can give facts about Charles Macintosh.</p> <p>I can describe Macintosh's famous invention.</p> <p>I can test materials to find out how waterproof they are.</p> <p>I can choose the best material for a new waterproof coat.</p>	<p>Resources: Lesson Pack</p> <p>5 different fabrics or sheets, each one placed over a beaker and secured with elastic band, per group (suggestions include cotton fabric, tissue, sheet of tinfoil, sheet of cling film, plastic sheet, wool fabric, neoprene, laminated cotton or nylon)</p> <p>Tray per group</p> <p>Syringe per group</p> <p>Water</p>
	<p>Key/New Words: Charles Macintosh, waterproof, raincoat, properties, fabric.</p>	<p>Preparation: Differentiated Charles Macintosh Fact File Activity Sheet - per child</p> <p>Differentiated Waterproof Coat Activity Sheet - per child</p> <p>Properties Word Bank - as required</p>

Prior Learning: It will be helpful if children have previously learnt about the properties of everyday materials and their uses. This lesson would also work well with the 'Uses of Everyday Materials' unit.

Learning Sequence

	<p>Wet Weather Wear: Children discuss the types of clothes we wear in wet and rainy weather, and the properties these clothes have. Use the images on the Lesson Presentation to guide their discussion.</p>	
	<p>Charles Macintosh: Use the Lesson Presentation to describe Charles Macintosh and explain that he invented waterproof fabric.</p>	
	<p>Macintosh Fact File: Children complete the differentiated Charles Macintosh Fact File Activity Sheet with information about his life and his invention. <i>Look for children who can give facts about Charles Macintosh, and who can describe his invention of waterproof fabric and the raincoat.</i></p> <p>★ Write 2 facts about Charles Macintosh. Use the word bank to help. Complete the sentences about his invention.</p> <p>★★ Write 3 facts about Charles Macintosh. Use the word bank to scaffold their writing about his invention.</p> <p>★★★ Write 4 facts about Charles Macintosh and describe his invention.</p>	
	<p>Waterproof Coat Test: Introduce the context of the task: to find the best material for a new waterproof coat. Children work in groups to test the different fabrics and sheets as described on the Lesson Presentation.</p>	
	<p>Design the Waterproof Coat: Children record their results on the differentiated Waterproof Coat Activity Sheet and select the most suitable fabric or sheet for the new waterproof coat. <i>Look for children who can use the results of their test to select the most suitable materials for a waterproof coat.</i></p> <p>★ Use their results to select the most suitable material.</p> <p>★★ Explain their choice of material using the Properties Word Bank.</p> <p>★★★ Explain why they didn't choose some materials even though they are waterproof.</p>	
	<p>Materials: Children discuss the materials that the materials and sheets that they tested are made from.</p>	
	<p>Unsuitable Materials: Children discuss why some waterproof materials are not suitable for a raincoat.</p>	

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Taskit

Exploreit: Can children create their own waterproof fabric? Try using a wax crayon to completely colour one side of a piece of fabric. Does the fabric become waterproof?

Sortit: Use this [Sorting Table](#) to sort materials according to whether they are waterproof or not.

Describeit: Ask children to bring in a raincoat or other waterproof item of clothing. Challenge them to describe the other properties of the item.