



SS John Fisher & Thomas More Catholic Primary School

A Voluntary Academy

"Journeying together with Jesus Christ, we learn to love and love to learn."



Year Group: Year 1&2	Term: Spring (Cycle B)	Topic: Materials – Make a raincoat for Teddy
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National Curriculum Links (Ref: NC 2014)

Design


- design purposeful, functional, appealing products for themselves and other users based on design criteria.
- generate, develop, model and communicate their ideas through talking, drawing and templates.

Make

- select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing].
- select from and use a wide range of materials and components according to their characteristics.

Evaluate

- explore and evaluate a range of existing products.
- evaluate their ideas and products against design criteria.

Knowledge and skills objectives	Activity	Differentiation
<p><u>Lesson 1 and 2</u> I can explore different types of materials and their properties.</p> <p>I can identify waterproof materials and decide which material is best for a raincoat.</p> <p><u>Working technologically</u></p>	<p><u>Introduction</u> Show the image of Teddy getting wet while playing outside. Poor Ted! He has got very wet while playing out in the garden.</p> <p>TTYP – Can you help him? He is supposed to go on a school trip to the Peak District soon, but he is feeling worried about it because it tends to rain a lot there (Show images of Peak District to the children). Tell the children that they are going to learn about the Peak District in Geography this term to best help Teddy prepare for his school trip.</p> 	<p>All children to work in mixed ability groups to explore different types of materials and finding out about their properties.</p> <p>Next, children to perform a simple test to find out which materials are waterproof and which are absorbent.</p> <p>Finally decide which is the best material for a raincoat.</p>



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I can explore and evaluate a range of existing products.

Resources

Paper
Fabric
Felt
Plastic
Cardboard
Water
cups

TTYP – How can we help Teddy? What can we do to stop him from getting wet in the rain again? Draw out responses such as umbrella, raincoat etc

Explain to children that our D&T topic for this term links to our Science topic: Everyday Materials. In D&T, we will be designing and making a raincoat for Teddy to wear for when he visits the Peak District.

Tell children that today, we are going to explore different types of materials and think about which one is best for a raincoat. Explain that the clothes that people wear to protect them from the rain are **waterproof**. **If a material is waterproof it keeps water out.**

Waterproof fabric was invented by a scientist called Charles Macintosh. His invention was so important that raincoats are named after him!

Task 2

Have a range of materials and ask children if they can name any. In small groups, children describe what the materials look like, feel like, what words would they use to describe each material, e.g. hard, smooth, strong, dull, soft, shiny, stretchy etc... Does it make a sound when they squash it? Can they fold it?

What would Teddy's raincoat need to be made out of? What type of material would keep water out and stop Teddy from getting wet?






Remind them of the word waterproof. Explain that if a material is not waterproof then it is absorbent.

Children investigate which materials are waterproof and which ones are absorbent. Then decide what is the most suitable material for Teddy's raincoat.

Plenary

Give reasons why a particular material is best for a raincoat and not a different one.



Material	Test result - circle	Would you use it?
Tin foil 	waterproof / absorbent	
cardboard 	waterproof / absorbent	
Paper 	waterproof / absorbent	
Plastic 	waterproof / absorbent	
fabric 	waterproof / absorbent	



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Lesson 3

I can design a raincoat for Teddy.

Working technologically

I can design purposeful, functional, appealing products based on design criteria.

I can generate, develop, model and communicate my ideas through talking, drawing and templates.

Resources

Design criteria checklist.
Design sheet template.

Starter questions: What does waterproof and absorbent mean? Which materials were waterproof and which were not?

Explain that today we will be designing a raincoat for Teddy to wear for when he visits the Peak District.

TTYP - Which material would be best to make a raincoat for Teddy and why?

Explain the meaning of 'design criteria' (this is what our design will be judged against when we decide how good the raincoat is). As a class, think about the design criteria when deciding on the best material for designing Teddy's raincoat. Their raincoat needs to be:

- waterproof to protect from rain and keep Teddy dry
- bright and light coloured
- comfy and lightweight
- stylish and smart with a hood and sleeves.

Teacher models how to complete the design sheet template, thinking about how to keep Teddy dry and making sure he doesn't get wet on his way to the Peak District.

Ask the children what they will need to make their raincoat and create a whole-class list of resources needed.

All children complete their raincoat design on the template provided.



Challenge: Write up their own design criteria and refer to it when designing their raincoat.

Plenary

Show two examples of children's designs. What's good about their design? What could they make even better?

My Design

I am going to make _____

Draw and label your design



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Lesson 4 and 5

I can make a raincoat for Teddy using a waterproof material.

Working technologically:

I can select and use a range of tools and equipment to perform practical tasks (e.g. cutting, shaping, joining and finishing).

Resources

- Binca square fabric
- Wool
- Embroidery cotton
- Plastic sewing needles
- Plastics
- Velcro fasteners
- Buttons
- Scissors
- Glue
- staples
- Fabric glue

Remind children they will need to refer to their design and decide which part of the raincoat to work on first.

TTYP – What are the things we need to remember for the design criteria?

Guide the children through the making process. Ensure they have their design sheet to refer to throughout the lesson.

In small groups, children draw an outline of a raincoat and cut out the front and the back shape carefully so they have 2 pieces of the same fabric.

Next, children to join the two pieces of fabric together, stitching using plastic sewing needles. Leave a hole for Teddy's arms and head.



After that, cover the raincoat with plastic using glue or staples to make it waterproof and add a hood to protect Teddy's head from the rain.

Finally, cut out the front of the raincoat to add fasteners or buttons to make it look more stylish and smarter for Teddy.

You can add pockets too!



All children make their raincoat based on their design.

Challenge: Children add extra details such as zip, fasteners, buttons etc. to make the raincoat more appealing to Teddy.

Plenary

Show two examples of the children's raincoats.

Each child comes to the front of the class and explains which part they most enjoyed making and which part they found the most difficult.



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<p><u>Lesson 6</u> I can evaluate my raincoat.</p> <p><u>Working technologically</u></p> <p>I can evaluate ideas and products against design criteria.</p>	<p>Explain that today we are going to evaluate our designs.</p> <p>TTYP - What does evaluate mean? What went well when you were making your raincoat? How could you make it even better?</p> <p>Display the raincoat evaluation sheet and model how to tick off the design criteria. Discuss the following questions:</p> <p>Was your final product the same as your design? If not, what did you change and why? What went well? What was challenging? How did you overcome these challenges? How could you make it even better next time?</p> <p>Model how to complete the evaluation sheet.</p>	<p>All children complete the evaluation sheet and tick off the design criteria.</p>
<p>Resources</p>		<p>Plenary</p> <p>Share two examples of the completed evaluation sheets.</p> <p>Why have these children done a good evaluation? Which parts have they explained in detail?</p>
<p>Key Vocabulary</p> <p>Tier 2: design, make, evaluate, discuss, change, label, annotate, moving, product, criteria, improve, appealing, idea Tier 3: materials, raincoat, fabric, textiles, waterproof, absorbent, lightweight, protection, dry, plastic, cut, join, sew, properties</p>		