



St Peter's CE Primary School

Wacky Races Topic Overview

Unit Overview:

This is a D and T unit with a science focus on materials. The children will investigate a range of everyday materials describing their properties. The children will learn about man-made and natural materials then group materials according to their properties. The unit ends with a D and T project in which the children will research Wacky Races vehicles then plan and make their own Wacky Races vehicle.

Key Questions:

1. Can you name a variety of everyday materials?
2. Can you identify man-made and natural materials and explain the difference?
3. Can you state the properties of a range of materials using correct vocabulary?
4. How can the shape of some materials be changed?
5. What are the best materials to make a Wacky Races vehicle?

Objectives covered in this unit:

D and T (see progression in expectations document)	<ul style="list-style-type: none">• I can work to a design brief.• I can research designs.• I can create my own designs and develop a final design based on the market research.• I can carry out market research to find out the most popular design.• I can make my design using the most appropriate material.• I can resolve problems or improve my product to make it the best I can.• I can evaluate my design.
Science	<ul style="list-style-type: none">• Distinguish 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.• Describe the simple physical properties of a variety of everyday materials.• Compare and group together a variety of everyday materials on the basis of their simple physical properties.• Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses.• Find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching.
History	<ul style="list-style-type: none">• I understand the concepts of continuity and change over time.
Art	I can use digital media in art.



Wacky Races

Key Knowledge

1.Can you name a variety of everyday materials?	We use a wide range of different materials daily; these might include: Metal, Plastic, Wood, Glass, Ceramics, synthetic fibres.
2.Can you identify man-made and natural materials and explain the difference?	Natural materials are sourced directly from nature - cotton is picked from cotton plants, corn harvested from corn fields and granite is mined from quarries. Man-made materials , on the other hand, go through rigorous processing to alter the material so that it suits its intended purpose.
3.Can you state the properties of a range of materials using correct vocabulary?	Properties of Materials Materials may be soft, hard, flexible (bendable), rigid (stiff), transparent (see-through), opaque (meaning light does not shine through it), rough, smooth, shiny, or dull. For example, glass is a transparent, hard, and smooth material .
4. How can the shape of some materials be changed?	You can change the shape of some materials by bending, twisting, squashing or stretching them.
5.What are the best materials to make a Wacky Races vehicle?	Various answers needing credible answer. Cardboard is light and help the vehicle move faster. Wood is strong and will hold lots of blocks.



Wacky Races

Vocabulary

Vocabulary				
Tier 1	Materials shape	soft twist	Hard bend	Bendy smooth
Tier 2	Research Final design	Design ideas	Market research	Design brief

Tier 3	Man made Transparent glass	Material metal	Property wood	Rigid plastic
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