

Year 2 Term 3 *Does Mrs Armitage's vehicle 'have wheels'?*

Prior learning- establishing what was key/relevant prior learning (sticking new knowledge to old knowledge) , assessing any gaps so we can plug these in current work.

- select from and use a range of tools and equipment to perform practical tasks (for example, cutting, shaping, joining and finishing (taught in term 2 when making bridges during Victorian topic)
- Year 1 made puppets and developed understanding of key words and processes such as planning, designing, prototypes and evaluation

National Curriculum

Design and Technology

Design, make, evaluate and improve

- Explain what they are making and which materials they are using.
- Design products that have a clear purpose and an intended user.
- Use pictures and words to convey what they want to make.
- Make products, using a range of tools to cut, shape, join and finish.
- Say what they like and don't like about their product and explain why.
- Talk about how closely their finished product meets their design criteria.

Construction, mechanics and electronics

- Use a range of materials to create models with wheels and axles e.g. tubes, dowel and cotton reels.
- Use materials to practise drilling, screwing, nailing and glueing to strengthen products.

Materials

- Demonstrate a range of joining techniques such as gluing, taping or creating hinges.
- Cut materials safely using tools provided.
- Demonstrate a range of cutting and shaping techniques

Take inspiration from design throughout history

- Explore objects and designs to identify likes and dislikes.
- Explore how products have been created.

Science

Working scientifically

- asking simple questions and recognising that they can be answered in different ways
- observing closely, using simple equipment
- performing simple tests
- identifying and classifying
- using their observations and ideas to suggest answers to questions
- gathering and recording data to help in answering questions

Uses of Everyday Materials

- 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.

<p>Big ideas/concepts</p> <p>DT</p> <p>Good design involves planning, making, evaluating and improving a product.</p> <p>Science</p> <p><u>Properties of materials</u></p> <p>Identify and compare the suitability of a variety of everyday materials, including wood, metal, plastic, glass, brick, rock, paper and cardboard for particular uses</p> <p>find out how the shapes of solid objects made from some materials can be changed by squashing, bending, twisting and stretching</p> <p>Pupils work scientifically by: comparing the uses of everyday materials in and around the school with materials found in other places; observing closely, identifying and classifying the uses of different materials, and recording their observations.</p>	<p>Key question/s:</p> <p>What are the parts of a vehicle called?</p> <p>How do they make a vehicle work?</p> <p>What is a design brief?</p> <p>How can we evaluate our designs?</p> <p>How can we improve our design?</p> <p>What makes a suitable material?</p> <p>What materials are waterproof, durable and strong?</p> <p>Why do materials rust?</p> <p>What conclusions can we draw?</p>	<p>Vocabulary (including etymology?)</p> <p>design</p> <p>Produce</p> <p>prototype</p> <p>evaluate/evaluation</p> <p>chassis</p> <p>axle</p> <p>material</p> <p>waterproof</p> <p>durable</p> <p>rust</p> <p>evidence</p> <p>prediction</p> <p>conclusion</p>
<p>Plans - content, how will we teach this?</p> <p>Learn about vehicle components</p> <p>Explore use of joins for materials</p> <p>Investigate and experiment with materials to understand why they might be used in car design</p> <p>Create own design and plan for prototype based on acquired knowledge</p>	<p>Other curriculum areas with rich links to concepts or content?</p> <ul style="list-style-type: none"> • Literacy - writing letters to complain about Mrs Armitage's contraptions • Recounting stories by Quentin Blake • Drawing in style of QB • Using length measurement to construct parts 	<p>Important figures/quotes- the best that has been thought/said/done</p> <p>John Dunlop</p> <p>Emeline King (Ford's first female transportation designer, African American)</p>