

Caroline Haslett Primary School - DT

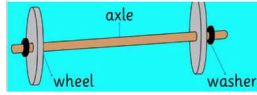
Topic: Mechanisms

Year 1 - Summer term

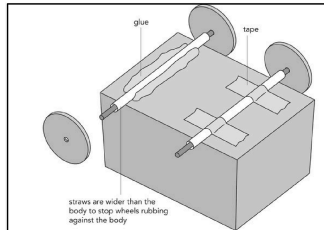
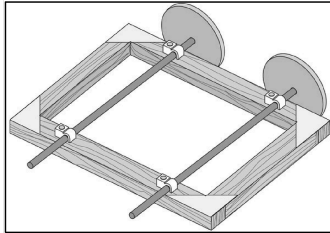
Wheels and axles

Knowledge

- Wheels must be secured to an axle



- Examples of how to fix wheels and axles.



- An axle can either be fixed or move freely. If the axle is fixed the wheels must be able to rotate on the axle. If the axle is free the wheels must be secured to rotate with the axle.

Vocabulary

- * Wheel- a round circle shape for moving.
- * Axle-a rod that enables a wheel to rotate and turn with the axle.
- * Chassis-the frame or base on which the vehicle is built.
- * Axle holder-the component through which an axle fits and rotates.
- * Circular dowel-wooden rods used for making axles to hold wheels.
- * Rotate-a turn around a fixed point.

Design, make, evaluate

- Explore and assemble moving vehicles using construction kits.
- Practise methods of cutting, shaping and strengthening materials (e.g. card for the fire engine body) and using a junior hacksaw to cut and measure a piece of dowel.
- Identify features of a fire engine and design their own using an annotated diagram.
- Follow design to make product, refining the design as work progresses.
- Evaluate process, suggesting improvements to existing designs.

Skills

- Cut safely using tools provided.
- Use scissors and hacksaws to cut accurately.
- Measure to the nearest cm.
- Understand that combining materials can provide additional strength.
- Use a range of joining techniques-such as gluing and taping.

Skills	
Design	<p>Have their own ideas.</p> <p>Explain what they want to do.</p> <p>Explain what their product is for, and how it will work.</p> <p>Use pictures and words to plan, begin to use models.</p> <p>Design a product for themselves following design criteria.</p> <p>Research similar existing products.</p>
Make	<p>Explain what they're making and why.</p> <p>Consider what they need to do next.</p> <p>Select tools/equipment to cut, shape and join, and explain choices.</p> <p>Measure, mark out, cut and shape, with support.</p> <p>Choose suitable materials and explain choices.</p> <p>Try to use finishing techniques to make the product look good.</p> <p>Work in a safe manner.</p>
Evaluate	<p>Talk about their work, linking it to what they were asked to do.</p> <p>Talk about existing products considering: use, materials, how they work, audience, where they might be used.</p> <p>Talk about existing products, and say what is and isn't good.</p> <p>Talk about things that other people have made.</p> <p>Begin to talk about what could make the product better.</p>
Mechanisms	<p>Explore and assemble moving vehicles using construction kits.</p> <p>Begin to understand how to use axles and wheels.</p>
Construction and materials	<p>Begin to measure and join materials, with some support.</p> <p>Describe some different characteristics of materials.</p> <p>Suggest ways to make material/product stronger.</p> <p>Cut safely using tools provided.</p> <p>Use scissors and junior hacksaws to cut accurately.</p> <p>Measure to the nearest cm.</p> <p>Understand that combining materials can provide additional strength.</p> <p>Use a range of joining techniques, such as gluing and taping.</p>