



Year 2 Design and Technology: Mechanisms (wheels and axles)

How can we make a moving car which travels in a straight line?



Prior Learning

- I have made vehicles with moving wheels using construction kits.
- I have explored moving vehicles through play.
- I have gained some experience of designing, making and evaluating products for a user and purpose.
- I have developed some cutting, joining and finishing skills with card.

Sticky Knowledge

- I can explore and use wheels, axles and axle holders.
- I can explore and evaluate a range of products with wheels and axles.
- I can generate initial ideas and simple design criteria through talking and using own experiences.
- I can develop and communicate ideas through drawings and mock-ups.
- I can select from and use a range of tools and equipment to perform practical tasks such as cutting and joining to allow movement and finishing.
- I can select from and use a range of materials and components such as paper, card, plastic and wood according to their characteristics.
- I can evaluate my ideas throughout and my product against design criteria.

Vocabulary

*Product	The item or object that is being made.
*User	The person or people who will use the product.
*Purpose	What the product is used for.
*Function	What the product should be able to do to work properly.
*Design	A plan or idea of what the product will be like and how it will function.
Axle	A rod on which one or more wheels can rotate, either freely or be fixed to and turn with the axle.
Axle holder	The component through which an axle fits and rotates.
Chassis	The frame or base on which a vehicle is built.
Dowel	Wooden rods used for making axles to hold wheels.
*Mock-up	A 3D representation of a product using construction kits.
*Evaluate	I can talk about what is good about a product and ways it can be improved.

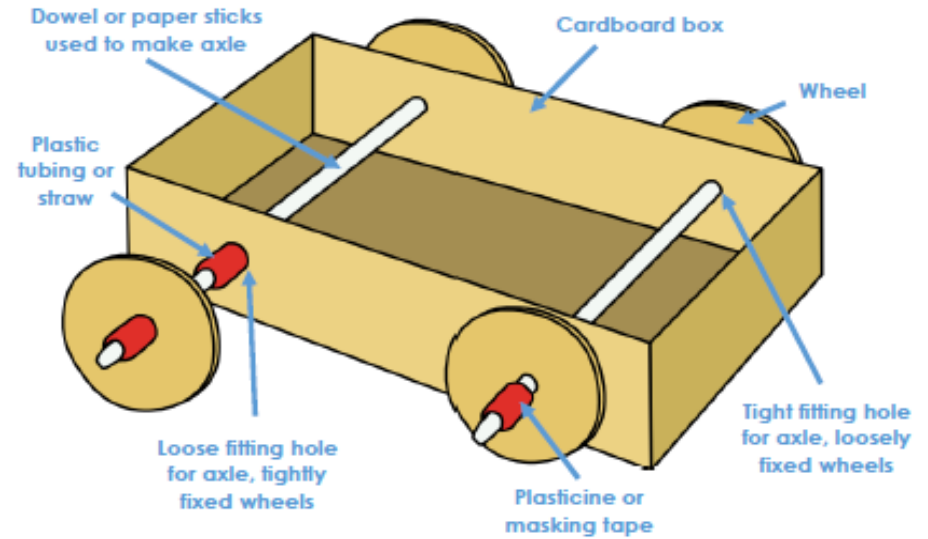
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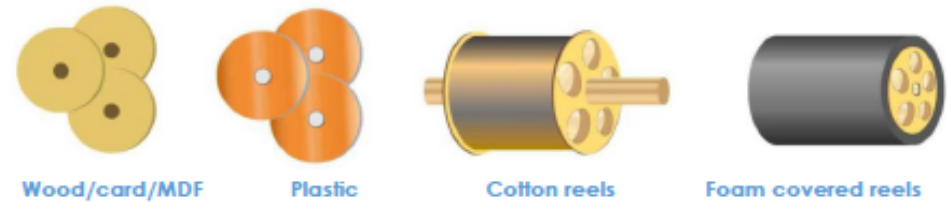
How do these vehicles work?



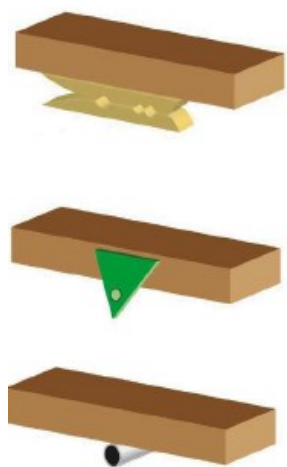
Two different ways to fix wheels



Types of wheels



How can I attach my axles?



Clothes peg

Card triangles

Straw

Axles are attached firmly to the wheel so the axle rotates and the wheel moves with it.

