



# 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

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

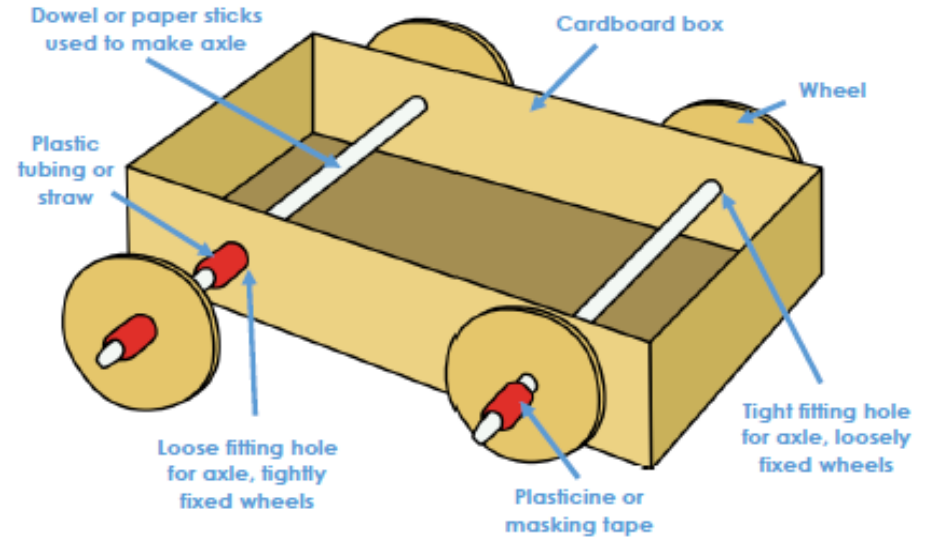
# Year 2 Design and Technology: Mechanisms (wheels and axles)

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

How do these vehicles work?



## Two different ways to fix wheels



## Types of wheels



Wood/card/MDF



Plastic



Cotton reels



Foam covered reels

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.

