

Springdale First School



Imagine, Believe, Achieve

Year 2 Design and Technology Mechanisms

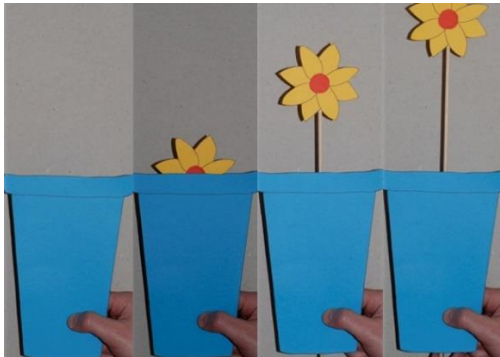
★ Children's prior learning in this area

Sliders – select and use tools to cut and shape.

Lever – explaining choices of tools and techniques used to cut, shape and join.

Evaluate products against design criteria.

Using toys with wheels and axles.



★ Cultural Capital Opportunities

Roman roads – use of carts – how that impacted car manufacturing. Investigate being a car manufacturer.



Toys – Look back at different toys that have wheels and axles.








★ Key vocabulary and glossary

Anchor – wheel, axle, chassis, cutting, moving, design, make, evaluate.

Goldilocks – axle holder, body, finishing, free, moving, mechanism, vehicle, movement, cab.

Step on – assembling, functional.

<p>Enquiry Question – What would we do without wheels?</p>	<p>Enquiry Question- How does a wheel work?</p>	<p>Enquiry Question – What components are needed to make a moving vehicle?</p>
<p>Concept – Product.</p>	<p>Concept – Design.</p>	<p>Concept - Design</p>
<p> Children will know the importance of wheels and the impact inventing them has on our lives today.</p> <p>Pose question – where do we find wheels? Create a mind map in small groups or as a class. Wheel are everywhere!</p> <p><u>Research the techniques that the designer may have used to make product – discuss what can be used to make product.</u></p> <p><u>Use technical vocabulary related to product.</u></p> <p><u>Investigate the purpose of the product and the impact it has had on our lives</u></p> <p>The first wheel was thought to be invented around 3,500 BC and was a pottery wheel.</p> <p>The first wheeled vehicle was a bullock cart, followed by war chariots and four-wheeled carts of the gods. The spoke wheel was invented in around 2000 BC, which considerably reduced the weight of the wheel.</p> <p>Look at they ways wheels are used today and compare with when they were first used – Could we live without them?</p>	<p> Children will know that - Wheel and axle consists of a round disk, known as a wheel, with a rod through the centre of it, known as the axle.</p> <p>Create a class design criteria.</p> <p>Children to investigate how a wheel works through first hand experience – look at bikes, toy cars, carts, wheelbarrows...</p> <p><u>To know what design criteria is and how it can be used to create a product.</u></p> <p><u>To know the purpose of their product.</u></p> <p><u>Generate and develop initial ideas about specific product and use through talk</u></p> <p><u>Use technical vocabulary related to product</u></p> <p>Through investigation of different components (a variety of axles, wheels, tape, blue tac, split pins, tacs) ask chn to create a moving mechanism - ‘working wheel’ with the equipment on their tables. Evaluate findings as a class.</p>	<p> Children will be able to select a range of tools and equipment to cut, join and cut.</p> <p>Children will design their own product.</p> <p>R&R – what components do you need to make a moving wheel.</p> <p><u>Investigate design ideas through experimenting with product design.</u></p> <p><u>Explore ideas using drawings and mock-ups</u></p> <p><u>Suggest steps in the creation phase.</u></p> <p>Using a design criteria – chn to draw and annotate their own design for a moving vehicle.</p>
<p>Let’s make!</p>		<p>Enquiry Question – is your product fit for purpose?</p>
<p>Concept – Make.</p>		<p>Concept – Evaluate</p>
<p> Following the design criteria – make their product using chosen tools and techniques.</p> <p><u>Use a range of tools and equipment to perform practical tasks, such as cutting and joining to allow movement and finishing.</u></p> <p><u>Select from and using a range of materials and components, such as paper, card, plastic and wood, according to their characteristics.</u></p> <p><u>Use technical vocabulary related to product.</u></p> <p>Follow steps to create product using own design.</p>		<p> Children will discuss the success of their product against given criteria and compare with peers.</p> <p><u>To know how to evaluate their product against the design criteria and suggest improvements.</u></p> <p><u>Evaluate own and each other’s product(s) against the design criteria.</u></p> <p><u>Evaluate the success of their product against the design criteria.</u></p>

