

Year 1: Superheroes

What should I already know?

D&T is a subject where you develop skills, knowledge and understanding to design and make functional products.

- Early experiences of working with paper and card to make simple flaps and hinges.
- Experience of simple cutting, shaping and joining skills using scissors, glue, paper fasteners and masking tape.

Key Questions

What sort of mechanism shall I make?

How can I make sure it moves across my page?

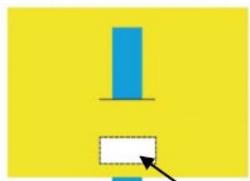
What joining technique will work best for my puppet?

Is my slider or lever fit for purpose?

Powerful Knowledge

Demonstrations of sliders and levers:

KS1 – Simple slider



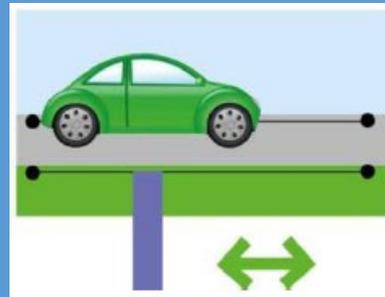
Guide/bridge on back of picture

KS1 – Simple lever

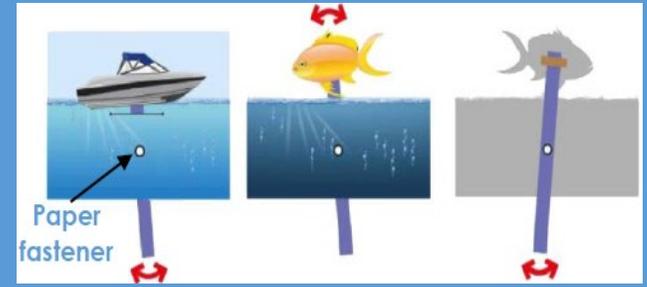


Paper fastener pivot

Sliders move from side to side & up and down



Levers can be used with or without a slot to move in a curve.



Interesting facts

Superman was first introduced to comic books in 1938. A year later, in 1939, the first Batman comic was released.



Glossary

Mechanism	A device used to create movement in a product.
Lever	A rigid bar which moves around a pivot. Levers are used in many everyday products. In this project children will use card strips for levers and paper fasteners for pivots.
Slider	A rigid bar which moves backwards and forwards along a straight line. Unlike a lever, a slider does not have a pivot point.
Slot	The hole through which a lever or slider is placed to enable part of a picture to move.
Guide or bridge	A short card strip used to keep sliders in place and control movement.

Simple mechanisms move...



in a straight line



in a straight line,
backwards and
forwards



round and
round

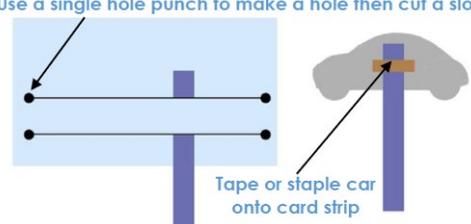
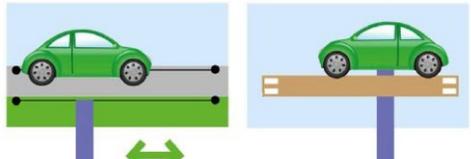
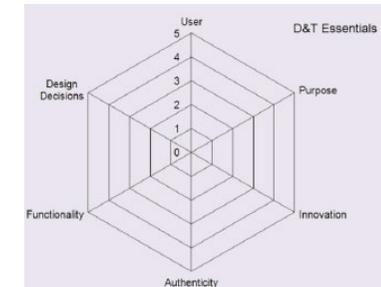


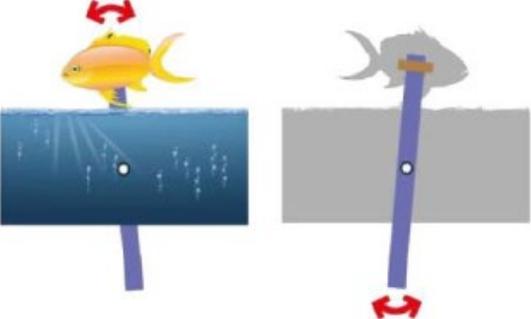
in a curve

Design & Technology Spring 1 - Super Heroes

<p>National Curriculum Objectives:</p> <ul style="list-style-type: none"> • Early experiences of working with paper and card to make simple flaps and hinges. • Experience of simple cutting, shaping and joining skills using scissors, glue, paper fasteners and masking tape. 	<p>Prior Objectives:</p> <ul style="list-style-type: none"> • Early experiences of working with paper and card to make simple flaps and hinges. • Experience of simple cutting, shaping and joining skills using scissors, glue, paper fasteners and masking tape.
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<p>Lesson 1</p> <p> Skill - Research</p> <p> Knowledge -</p>	<p>Lesson 2</p> <p> Skill -</p> <p> Knowledge -</p>	<p>Lesson 3</p> <p> Skill -</p> <p> Knowledge -</p>	<p>Lesson 4</p> <p> Skill -</p> <p> Knowledge -</p>	<p>Lesson 5</p> <p> Skill -</p> <p> Knowledge -</p>
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<p><u>WALT:</u> Investigate sliders & levers</p> <p>WILF:</p> <p>-</p> <p>-</p> <p>-</p> <p>Lesson</p> <ul style="list-style-type: none"> • Children explore and evaluate a collection of books and everyday products that have moving parts, including those with levers and sliders. e.g. What is it? Who is it for? What is it for? • Use questions to develop children's understanding e.g. What do you think will move? How will you make it move? What part of the product moved and how did it move? How do you think the mechanism works? What else could 	<p><u>WALT:</u> Determine the success criteria</p> <p>WILF:</p> <p>-</p> <p>-</p> <p>Lesson</p> <ul style="list-style-type: none"> • Demonstrate simple levers and sliders to the children using prepared teaching aids. It is helpful if these are also used in context e.g. the slider is used to show a car driving on a road, the lever is used to show a fish jumping above the water. <div style="text-align: center;"> <p>Use a single hole punch to make a hole then cut a slot</p>  <p>Tape or staple car onto card strip</p>  <p>Sticky fixers on back of card A card strip could be used instead of cutting slots to allow movement</p> </div>	<p><u>WALT:</u> Design a functional and appealing product for a chosen user and purpose based on simple design criteria.</p> <p>WILF:</p> <p>-</p> <p>-</p> <p>-</p> <p>Lesson</p> <ul style="list-style-type: none"> • Discuss with the children what they will be designing, making and evaluating e.g. Who will your product be for? What will be its purpose? How do you want it to move? Will you use a lever or a slider? • Generate simple design criteria with the children e.g. the mechanism should work smoothly, it should make the right type of movement. • Encourage the children to develop their ideas 	<p><u>WALT:</u> Create a final product</p> <p>WILF:</p> <p>-</p> <p>-</p> <p>-</p> <p>Lesson</p> <p>Having recapped on the design process, children have the chance to create their design according to the success criteria. Teacher continues to provide examples of sliders or levers, which the children can look at and use as a physical reminder of how their final product needs to operate.</p> <p>Recording:</p> <p>Children will have produced their final product. Discuss with them what they have produced e.g. who have you made your product for? Did</p>	<p><u>WALT:</u> Evaluate our final product against the original design criteria</p> <p>WILF:</p> <p>Children evaluate their ideas throughout and their final products against original design criteria.</p> <p>Lesson</p> <p>With the class the teacher models completing a 5-point scale, This scale will evaluate the children's product against the original design criteria and assess how they feel that they did with their final outcome.</p> <p>See below for an example of a 5-point scale:</p> <div style="text-align: center;">  </div>
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<p>move in the product? How well does it work?</p> <ul style="list-style-type: none"> • Introduce and develop vocabulary e.g. lever, pivot, slider, left, right, push, pull, up, down, forwards, backwards, in, out. • Spoken language - participate in discussion about books and other products with moving parts, taking turns and listening to what others say. Ask relevant questions to extend their knowledge and understanding. Build technical and directional vocabulary. <p>Recording:</p> <p>Photo evidence of children accessing the resources made available by the teacher. HAPs can add a comment about their learning in the session e.g. "today we looked at ..."</p>	 <ul style="list-style-type: none"> • Use questions to develop children's understanding e.g. <i>How does the slider move? How does the lever move? Which part of the mechanism is the pivot? What does the movement of the slider and lever remind you of?</i> • Following teacher demonstration of the correct use of tools and materials, children should develop their knowledge and skills by replicating the slider and lever teaching aids. Encourage children to add pictures to their mechanisms. • Spoken language - children listen and respond appropriately to adults. Ask relevant questions to extend their knowledge and understanding. Build technical and directional vocabulary. • Mathematics - describe position, direction and movement. Use appropriate standard and non-standard measures. <p>Recording:</p> <p>Children will have produced an example of a lever and/ or slider, based on the teachers chosen final product</p>	<p>Recording:</p> <p>Children produce a design of what they intend for their finished product to look like. For example, using a slider, you could produce a story page (or poster) of a superhero flying through the air or batman throwing a 'batarang'. Draw arrows to show the direction that the picture will move.</p>	<p>you use a lever or a slider? How does it move?</p> <p>Photo evidence</p>	<p>Recording:</p> <p>See above. Also, teacher can create QR codes with recordings of their pupils explaining the reasons for evaluating their product as they did.</p>
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Assessment:
Key Vocabulary: slider, lever, pivot, slot, bridge/guide, card, masking tape, paper fastener, join, pull, push, up, down, straight, curve, forwards, backwards, design, make, evaluate, user, purpose, ideas, design criteria, product, function

