



## Year 1 – DT: Mechanisms - Sliders and Levers

### Polar Story Board

Key Knowledge	Key Skills	Key Vocabulary ( with definitions)	Key Questions
<p>To explore and use sliders and levers.</p> <p>To understand that different mechanisms produce different types of movement.</p> <p>To know and use technical vocabulary relevant to the project.</p> <p>To have early experiences of working with paper and card to make simple flaps and hinges.</p> <p>To have experience of simple cutting, shaping and joining skills using scissors, glue, paper fasteners and masking tape.</p>	<p>To generate ideas based on simple design criteria and their own experiences, explaining what they could make.</p> <p>To develop, model and communicate their ideas through drawings and mock-ups with card and paper.</p> <p>To plan by suggesting what to do next.</p> <p>To Select and use tools, explaining their choices, to cut, shape and join paper and card.</p> <p>To use simple finishing techniques suitable for the product they are creating.</p> <p>To explore a range of existing books and everyday products that use simple sliders and levers.</p> <p>To evaluate their product by discussing how well it works in relation to the purpose and the user and whether it meets design criteria.</p>	<p><b>Mechanisms:</b> a device used to create movement within a product.</p> <p><b>Slider:</b> Help to move things from side to side and up and down.</p> <p><b>Lever:</b> The use a fulcrum (a fixed point around which the lever can pivot) to make things move in arc (curve).</p> <p><b>Card:</b> A thick piece of paper to support mechanisms to make a pop up and moving card.</p> <p><b>Slot:</b> the hole through which a lever or slider is placed to enable part of a picture to move.</p> <p><b>Pivot:</b> the central point, pin, or shaft on which a mechanism turns.</p> <p><b>Bridge/guide:</b> a short card strip used to keep sliders in place and control movement.</p> <p><b>Evaluation:</b> How well does it work? Does it meet its purpose? Who will use it? What else could you do to improve?</p> <p>Masking tape Paper fastener Join Pull Push Up Down Straight Curve Forwards Backwards Polar animal</p>	<p><b>When exploring books with sliders and levers:</b></p> <p>What is it?</p> <p>Who is it for?</p> <p>What is it for?</p> <p>What do you think will move?</p> <p>How will you make it move?</p> <p>What part of the product moved and how did it move?</p> <p>How do you think the mechanism works?</p> <p>What else could move in the product?</p> <p>How well does it work?</p> <p>How does the slider move?</p> <p>How does the lever move?</p> <p>Which part of the mechanism is the pivot?</p> <p>What does the movement of the slider and lever remind you of?</p> <p><b>When designing a product:</b></p> <p>Who will your product be for?</p> <p>What will be its purpose?</p> <p>How do you want it to move?</p> <p>Will you use a slider or lever?</p>



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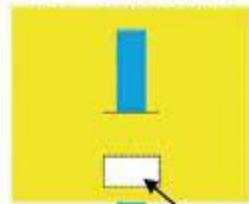
### Polar Story Board

#### Outcome: Polar Story Board

Effective sliders and levers should move s  
You need to consider where you will place  
the slot and how long it will be.



KS1 – Simple slider



Guide/bridge on  
back of picture

KS1 – Simple lever



Paper  
fastener pivot

#### Simple mechanisms

move:



in a straight  
line



in a straight  
line, backwards  
and forwards



round and  
round



in a curve

#### Useful links:

<https://www.youtube.com/watch?v=9-bG8BM3d3Y>

<https://www.youtube.com/watch?v=lueqE0lxLyc>

<https://www.youtube.com/watch?v=ESMuGWYIzBU>