


Mechanisms Year 1

National curriculum	Vocabulary
<p>Design To design purposeful, functional, appealing products for themselves and other users based on design criteria. To generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology.</p> <p>Make To select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing] . To select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics.</p> <p>Evaluate To evaluate their ideas and products against design criteria To explore and evaluate a range of existing products</p> <p>Technical Knowledge To build structures, exploring how they can be made stronger, stiffer and more stable. To explore and use mechanisms (for example, levers, sliders, wheels and axles), in their product.</p>	<p>backwards lever movement pivot pull push</p> <p>slider cut direction evaluate</p> <p>forward handle cutting</p>

Investigate Technical knowledge	Design	Make	Evaluate
Year 1			
<ul style="list-style-type: none"> -Draw on their own experience to help generate ideas -Suggest ideas and explain what they are going to do. -Explore and evaluate how existing products work. -Use a mechanism like lever, slider or wheel. 	<ul style="list-style-type: none"> -Draw their ideas for their design 	<ul style="list-style-type: none"> -With help measure, mark out, cut and shape a range of materials -Use tools eg scissors -Assemble, join and combine materials and components together using a variety of methods. 	<ul style="list-style-type: none"> -Evaluate their product by asking questions about what they have made and how they have gone about it
<p style="text-align: center;">How to make sliders</p> 			<ul style="list-style-type: none"> What have you made? How does it work? How did you make it? What mechanism have you used? Slider, lever or wheel.

Learning Objective	Lesson outline
<p>Investigate</p> <p>LO: To look at different mechanisms.</p> <p>DT Skills: Draw on their own experience to help generate ideas.</p> <p>-Explore and evaluate how existing products work.</p>	<p>Explain they will be designing and making their own moving picture about the fire of London.</p> <p>Explore different mechanisms. Match the object to the correct mechanism.</p>

<p>Practical focus - sliders</p> <p>LO: To make a moving picture by using a slider.</p> <p>DT Skills: -Use a mechanism (slider) - Explore and evaluate how existing products work. -Assemble, join and combine materials and components together using a variety of methods.</p>	<p>Explain they will be designing and making their own moving picture about the fire of London.</p> <p>This lesson is about investigating how we can make a moving picture using a slider. Teacher to show the mechanism of a slider and how it works.</p> <p>Children to be given a template to cut and make a sliding picture.</p> <p>Evaluate how they have made a moving picture. Does your slider work? Talk about how they might use this mechanism when making their moving picture.</p>
<p>Practical focus – levers</p> <p>LO: To make a moving picture using a lever.</p> <p>DT Skills: -Use a mechanism (lever) - Explore and evaluate how existing products work. -Assemble, join and combine materials and components together using a variety of methods.</p>	<p>Recap previous DT lesson</p> <p>This lesson is about investigating how we can make a moving picture using a lever Teacher to show the mechanism of a lever and how it works.</p> <p>Adults will model how to use equipment and materials correctly and safely – model how to make a lever.</p> <p>Children can use from a range of templates and make a moving picture using a lever.</p> <p>LA – given simple lever to make. GD - can they make their own lever</p> <p>Evaluate how they have made a moving picture. Does your lever work? Talk about how they might use this mechanism when making their moving picture.</p>
<p>Practical focus – wheel</p> <p>LO: To make a moving picture using a wheel.</p> <p>DT Skills: -Use a mechanism (wheel) - Explore and evaluate how existing products work. -Assemble, join and combine materials and components together using a variety of methods.</p>	<p>Recap previous DT lesson (sliders and levers)</p> <p>This lesson is about investigating how we can make a moving picture using a wheel. Teacher to show the mechanism of a wheel and how it works.</p> <p>Adults will model how to use equipment and materials correctly and safely – model how to make a wheel.</p> <p>Children can use from a range of templates and make a moving picture using a wheel</p> <p>LA – given simple wheel to make.</p> <p>Evaluate how they have made a moving picture. Does your slider work? Talk about how they might use this mechanism when making their moving picture.</p>
<p>Design</p> <p>LO: To design a moving picture with a working mechanism.</p> <p>DT Skills: -Draw their ideas for their design -Draw on their own experience to help generate ideas -Suggest ideas and explain what they are going to do.</p>	<p>Recap different mechanisms and how they can be used to make a moving picture.</p> <p>Explain they need to make a moving picture to show what happened during the Great fire of London.</p> <p>Discuss and share ideas, for example the flames of the fire spreading across the houses, fire at the windows etc.</p> <p>What mechanism could you use? Recap sliders/levers/wheel</p> <p>What will your picture be (just a house, street scene, London?)</p> <p>Create a simple design criteria:</p> <ol style="list-style-type: none"> 1) Include a mechanism 2) Must be about the Fire of London 3) Must be a moving picture <p>Children to draw a picture of their design and decide what mechanism they are going to use and label. Pictures and images of the Great of fire of London available for the children to use when designing picture.</p> <p>Evaluate designs and share some of the children’s ideas and what mechanism they are going to use.</p>

<p>Make</p> <p>LO: To make a moving picture using a mechanism.</p> <p>DT Skills: With help measure, mark out, cut and shape a range of materials</p> <p>Use tools eg scissors.</p> <p>Assemble, join and combine materials and components together using a variety of methods.</p> <p>Use a mechanism, like slider, lever or wheel.</p>	<p>Remind children of their designs and mechanism they have chosen.</p> <p>This lesson is about using the materials and tools to make their own moving picture.</p> <p>Children to create own moving pictures. Adults will model how to use equipment and materials correctly and safely.</p> <p>LA: support with assembling and joining</p> <p>During the making stage adults to question and model ways to overcome design defaults.</p> <p>Does your picture include a working mechanism?</p>	
<p>Evaluate</p> <p>LO: To evaluate their own moving picture.</p> <p>DT Skills: Evaluate their product by asking questions about what they have made and how they have gone about it</p>	<p>Children to evaluate their own moving pictures by referring to design criteria.</p> <p>What mechanism have you used?</p> <p>Does the picture move?</p> <p>Does it show you what happened at the Great fire of London?</p> <p>How did you make it?</p> <p>Children look at each other's designs and choose their favourite one and explain why. If they did this again, would they do something different?</p>	
<p>Working towards</p>	<p>End of unit assessment Working at Age related expectations</p>	<p>Working at a greater depth</p>