

TERM 1 – DT

Term 1 Book – Man on the Moon

Topic(s) - Design and make a moving lever scene		Guide Time = 6weeks
Assessment:	<p>Year 1: Design a product that uses a lever to show a scene from the canon book 'The man on the moon'. Decide on the size of the lever and decide where to fix the pivot. Evaluate the product by saying one positive and one improvement for the moving lever product.</p> <p>Year 2: Design a product that uses a lever to show a scene from the canon book 'The man on the moon'. Add labels to the design and justify why the size of lever and place of where the pivot has been fixed has been chosen. Evaluate the product by saying two positives and two improvements for the moving lever product. .</p> <p>As well as completed products and work scrutiny, teachers are to make judgements based upon children's ability to recall VIPs, key knowledge and vocabulary.</p>	<p>Very Important Points (VIPs):</p> <ul style="list-style-type: none"> • Levers work by reducing the amount of force needed to be used to move or lift an object. • Changing where you fix a pivot effects the movement of the mechanism. • Levers are used in everyday items. <p>Fat Questions:</p> <p>How do levers help us in everyday life? What would life be like without levers? How could you open a door without a lever? Where do you think levers were first used? What other mechanisms are there other than levers?</p>
Links to prior learning (sequencing) and canon book	<p>Children used cutting and making skills in the Autumn term 1 as well as through Foundation Stage learning. Children's designs link to Man on the Moon canon book giving them opportunities to make their own decisions based on what they have read.</p> <p>Previously children have designed, made and evaluated a product in Autumn term 1.</p>	
Links to other learning (cross fertilisation)	<p>Thematic questions:</p> <p>The World Beyond Us How are levers enabling us to explore the world beyond us?</p> <p>Modern Britain How have levers changed the way we live in our homes?</p> <p>Healthy Bodies & Healthy Minds How do levers support those with disabilities to live a fulfilled life?</p> <p>The World Around Us</p>	

	<p>Does what job you have effect your use of levers, do some jobs use more than others? Why?</p> <p><u>Culture</u> Are the skills needed to make levers useful in all cultures?</p> <p><u>Technology in Action</u> Can technology help us to design and make stronger levers?</p>	
Links to future learning	This unit links to future work around forms of mechanism including sliders and wheels.	
Character/Wider Development ('50 things', cultural capital, skills)	Children will continue to develop a sense of pride in their work and appreciate the amount of effort it takes to create something. The children will learn to be critical towards themselves as well and others but, remaining respectful whilst doing so. Children will develop their evaluative skills being both critical and supportive of others.	

OVERVIEW OF TEACHING SEQUENCE

Key Facts/Learning	Learning Focus or Key Question	Learning Outcomes (NC)	Key Words/ Vocabulary	Greater Depth/SEND	Misconceptions	Activities and Resources
Lesson 1 – Understanding what a lever is	<p>What is a lever?</p> <p>What do levers do?</p> <p>Where do we find levers in everyday life?</p>	<p>NC Explore and use mechanisms (levers)</p> <p>Design purposeful, functional appealing products for themselves</p>	<p>Moving Mechanism</p> <p>Split Pin</p> <p>Pivot</p> <p>Fulcrum</p> <p>Assemble</p> <p>Design</p> <p>Make</p> <p>Evaluate</p>	<p>SEND – To recognise what a lever is and make one move.</p> <p>GD – To evaluate levers suggesting why</p>	<p>Pupils may confuse what a lever is in everyday life.</p> <p>Pupils may misuse templates which may lead to inaccurate measurements and levers which are not fit for purpose.</p>	<p>R4P: Non-fiction lever text</p> <p>Activities: Pupils to be given a range of objects with levers. They are to explore how levers work and discuss which they think work well and why. Y2 to also decide how they think the levers were made and make notes using post it notes to explain their opinions.</p>

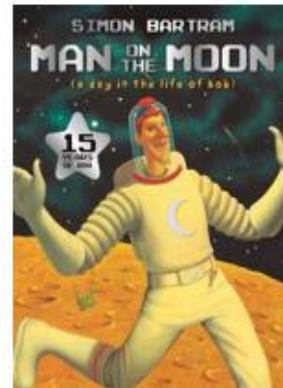
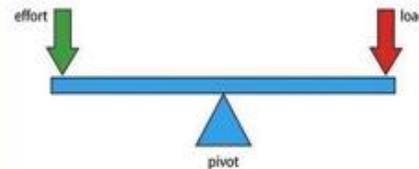
		and other users based on design criteria. L.O: To understand what a lever is		some are more effective at their job than others.		Y1- Pupils will make a simple lever based on teacher modelling. They will use card and split pins to create levers. SEND pupils will have pieces cut out, other pupils will have templates to cut. Y2- Pupils will use templates and their own measuring skills to make a simple lever based on teacher modelling. They will use card and split pins to create levers. Deepen the moment: What could your lever be used for in school or out of school?
Lesson 2- Create a scene where a lever will perform an action	Can I create a lever that will enable movement in a scene from the book?	NC Generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups. Select from and use a range of tools and equipment to perform practical tasks. Select from and use a wide range of materials and components, including construction and materials	Moving Mechanism Split Pin Pivot Fulcrum Assemble Design Make Evaluate	SEND- To use a template to sketch and colour a Man on the Moon scene. GD- To design and make a moving lever using a scene from Man on the Moon.	Pupils may not choose an appropriate part to move. Pupils may over complicate designs leading to multiple moving parts. Pupils may not sketch and create their designs to scale.	R4P: Instructions for making a moving lever picture. Activities: Pupils will read the Man on the Moon and choose a favourite scene from the book which captures their imagination. (Y1 may have scene chosen to support templates). Pupils will plan where a lever could fit into their chosen scene to make a moving part. First pupils will sketch their scene and create a plan using words and annotations in Year 2 to show where their moving parts will be. Y1- Pupils to use paper and card to create their scene. They will use colours to reflect the book. Y2- Pupils to use paper, card and other materials to create their scene ready for 2 moving parts. Pupils to have a photo of their work and write about their choices giving reasons. Deepen the moment:

		according to their characteristics. L.O: To design and make a moving lever. .				Predict whether you think the size of the lever will affect the movement of the lever.
Lesson 3- Evaluate a moving lever scene	Does my scene have a successfully moving part? How could I modify my work to improve it?	NC Evaluate their ideas and products against design criteria. L.O: To make and evaluate a moving lever	Moving Mechanism Split Pin Pivot Fulcrum Assemble Design Make Evaluate	SEND- To have a final product which has a moving part. To say 1 thing good about their product To say 1 thing that could be improved. GD- To have a final product which has a moving part (Y2, 2 moving parts) which they can confidently give positives and improvements for.	Pupil may not make their levers to scale. Pupil's levers may not be measured equally. Pupils may place split pins in incorrect places leading to their lever being Unsuccessful, and not moving. Pupils may think that because their lever moves it cannot be improved.	R4P: Other simple machines Activities: Pupils to investigate lever size to decide which they will choose to use for their scene, they are to explore how the size of the lever changes its effects on an object. Y1- Pupils to make their lever using paper/card using a template size modelled by teacher. Y2- Pupils to complete measurements to create their lever based on models. Discuss which size they are choosing and why then use ruler skills to measure in cm. All pupils to then evaluate their lever against the product design criteria. Y1- 1 positive and 1 improvement Y2- 2 positives and 2 improvements Deepen the moment: Why are certain materials used to make levers in different places? Discussion or annotated explanation for Y2.
Context (big picture learning) Children will be able to explain what a lever is and give an example of how they move. Children will be able to design, make and evaluate a product using their canon book. Children will use their knowledge of levers to understand the world around them.						

KS1 D.T Knowledge Organiser: Levers

Key Vocabulary:

- **Lever**- a moving part that lifts using a pivot point.
- **Design** – to plan ideas
- **Moving**- something that moves
- **Mechanism**- parts that work together
- **Split Pin**- small pin, can be used as a pivot point
- **Pivot**- fixed point where something turns or moves up.
- **Fulcrum**- another name for pivot point
- **Assemble**- make
- **Make**
- **Evaluate**- look at your work, say positive comments and suggest improvements.

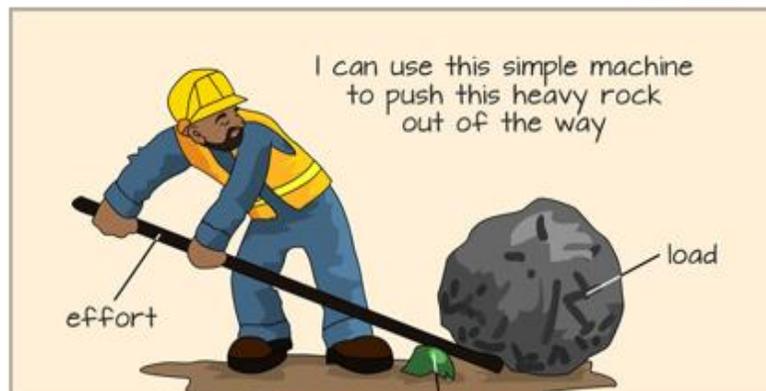


Fat Questions:

- How do levers help us in everyday life?
- What would life be like without levers?
- How would you open a door without a lever?
- Where do you think levers were first used?
- What other mechanisms are there other than levers?

VIPs (Very Important Points):

- Levers work by reducing the amount of force needed to be used to move or lift an object.
- Changing where you fix a pivot effects the movement of the mechanism.
- Levers are used in everyday items.



Intent

To design and make a moving scene from the book 'Man on the Moon.' Using a lever mechanism. To evaluate my finished work including positive comments and development ideas.

