St Bernadette's Catholic Primary Voluntary Academy





Mechanisms: Slider and Levers

Prior Knowledge

Year 1 Children's Prior Knowledge

EYFS

- To be be able to use scissors to cut and shape paper and card
- To be able to create flaps using paper and card
- To be able to join two pieces of paper using a split pin

Year 2 Children's Prior Knowledge

EYFS

- To be be able to use scissors to cut and shape paper and card
- To be able to create flaps using paper and card
- To be able to join two pieces of paper using a split pin

	Learning	Activity	Key Knowledge (By the end of the lesson)		Vocabulary (Tier 3)
	Objective		Substantive	Disciplinary	
Lesson 1	DT L.O. 5 To be able to explore and evaluate a range of existing products. To be able to identify sliders and levers.	Introduce the idea of making a moving picture of The Great Fire of London for a display. Identify the purpose and user of the product Look at a range of moving pictures - focusing on picture books, cards etc	Know that mechanisms create movement in a product	Be able to say whether a mechanism is a slider or a lever	moving picture mechanism lever slider

		Look at examples of different types of mechanisms focusing on levers and sliders. Discuss purpose of each and how they are all around us eg door handles are levers, the childrens' trays are examples of sliders etc Take some examples of moving pictures apart, if possible and explore how they have been put together, look at the materials used etc			
Lesson 2	DT L.O. 3 To be able to select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing]. To be able to make a slider.	We are going to learn how to make a simple slider. Demonstrate to the children how to make a simple slider. Children to decide which picture they would like to move, and make a decision as to whether this should be represented using a side to side slider or an up and down slider. Children to create a moving picture using a slider. Possibly link to habitats and Science work?	Know that a slider moves from side to side or up and down	 Create a simple slider Use simple tools (scissors) safely 	slot guide bridge
Lesson 3	DT L.O. 3 To be able to select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing]. To be able to make a lever	We are going to learn how to make a simple lever. Look at the work of the Greek Mathematician and Scientist, Archimedes, who came up with the explanation of how levers (and pulleys) work. Demonstrate to the children how to make a simple lever. Children to decide what picture they would like to move, but possibly link to Science and habitats work? Children to make a lever.	 Know that Archemedes explained how levers could move heavy products Know that a lever moves in a curve or circle. 	 Make a simple lever Use simple tools safely (hole punch & scissors) 	pivot paper fastener

Lesson 4	DT. L.O1 To be able to design purposeful, functional appealing products for themselves and other users based on design criteria. To identify the design criteria	Introduce the idea that they are going to make a moving picture box as part of a Fire of London display. Discuss what we need to do or have to create a successful moving picture - identify the design criteria for making it. Discuss the stages needed for making the product - painting the inside of the shoebox, fixed parts to go inside, making the mechanism itself - make the decision as to whether they are making a slider or a lever in their product. What part of the picture will move? - flames, water etc Children to create a labelled diagram, identifying the mechanism and how it fits in with the design. Identify materials and tools needed.	Know that a slider or lever will create movement.	Say how the slider or lever will create movement and in which direction.	design design criteria product purpose
Lesson 5	DT L.O. 4 To be able to select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics To create/decorate the box ready to add the moving part	Painting of boxes to prepare the background of the Fire of London scene. Making fixed boxes ready to go inside the shoebox - houses etc Remembering the purpose and the need to meet design criteria.		Make fixed parts for the moving picture	slot guide Bridge pivot paper fastener
Lesson 6	.DT L.O. 3 To be able to select from and use a range of tools and equipment to perform practical	Making of the moving part - either the slider or mechanism. Attach to the shoebox Add any other parts to the moving picture box.	 Know that a hole punch and split pin are needed to create a lever. 	 Make a working slider or lever Use simple finishing techniques to improve the 	slot guide Bridge pivot paper fastener

	tasks [for example, cutting, shaping, joining and finishing]. To add a moving mechanism to the product	Remembering the purpose and the need to meet design criteria.		appearance of their product	
Lesson 7	DT L.O. 6 To be able to evaluate their ideas and products against design criteria. Evaluate product against design criteria	Evaluation of their finished product against the design criteria. Focus on whether the moving part is successful and works. Remember the purpose of why they were making the product - for a display. Communicate in groups - Did they have to make changes? What would you do differently next time? Photographs of finished products.	Know that a product must meet the design criteria to be successful.	Evaluate a finished product against design criteria.	evaluate user