

Willerby Carr Lane Primary School – Design and Technology

Topic: Moving pictures

Year: 1

Strand: Mechanisms

What should I already know?

- Joined materials together using tape and glue
- Used scissors safely to cut paper and thin card
- Observed and played with moving toys

What will I know / be able to do by the end of the unit?

What are levers and sliders?	They are mechanisms. They can be used to make things move in different directions. In a story book for instance a picture of a character can be moved across a page by moving a slider. They can help bring a story or picture to life.
What products use levers?	Scissors, story books with moving parts, balances
What is a pivot?	A pivot is a pin which makes things turn around from a fixed spot. An example would be a see-saw
What tools and equipment do you need to make a moving mechanism?	You can use strips of card to make levers or sliders . Split pins can be used to attach card to make it turn about a point. You can use construction kits to make simple levers eg Knex
What directions can to make things move using sliders and levers?	Left, right, vertical, horizontal, up and down.
Can you evaluate your mechanism and talk about how to improve it?	<ul style="list-style-type: none"> • What could you have done to make it better? What worked well? • How can you stop a lever getting stuck? • How can you make your lever less floppy and stiffer?

Vocabulary

Designing	
directional arrows	to draw arrows around a picture to show the direction of movement
drawing with labels	to make a picture of what you are making or have seen adding words around it to name the parts.
idea	something you have thought about to make
Making	
accurately cut	to cut along an outline of shape as near to the line as possible
hole punch	a tool that is used to make holes in paper or card by pushing a hole cutter through it.
join	bring together or connect two separate parts
planning	to draw pictures and ideas after exploring different models of levers and sliders and to write a sequence of what you need to do and a list of what items you will need to do it.
split pins	two short pieces of metal pushed together that can push through card or paper and then be opened out on the other side to attach to it.
Knowledge and Understanding	
directional words:	forward/ backwards up / down left / right
handle	it is attached to things to hold onto to be used to make something move.
lever	a lever is able to move on a pivot
mechanism	makes a part of group of parts move to make something happen

moving / movement	the act of something moving from one place to another
pivot	a shaft or pin in which something turns
pull	the action of moving something towards you.

push	the action of moving something away from you.
slider	moves something backwards /forwards and up/down with a push or pull action

Key Design Decisions & Skills

- Identify simple levers and sliders in moving books and stories and explain how they work
- Make practise models out of card eg a moving part on a face or make a rabbit pop up from a magician's hat. Make models out of classroom construction kits to explore levers following simple instructions.
- Draw simple products to show how they work and add directional arrows
- Use appropriate vocabulary to describe mechanisms and how they move
- With some support make and assemble strips of cards to make sliders and lever mechanisms
- Choose and use a given technique to make a simple slider or lever mechanism to make a moving picture. Make the picture 'come alive' by making an animal or object move across a page or background.
- Use tools and equipment safely. Be careful when using split pins as they have a sharp point so push it into something soft underneath. Be careful when using a hole punch to avoid catching fingers and use on a flat and even surface.
- Evaluate strengths and weaknesses of their product

Tools and Resources

- Thin card and paper
- Scissors
- Glue
- Tape
- Disposable pictures which can be cut up for experimentation
- Objects to act as a starting point with moving parts eg scissors, balances, story books, cards
- Pens and paints
- Construction kits
- Split pins
- Single whole punch

Can you explain how these objects with levers work?
What directions do they move?



Can you explain how this slider works?



