

Alder Coppice Primary School — Knowledge Organiser

DESIGN & TECHNOLOGY

Year: 3

Unit 2: MECHANICS

Links to: SCIENCE (forces)

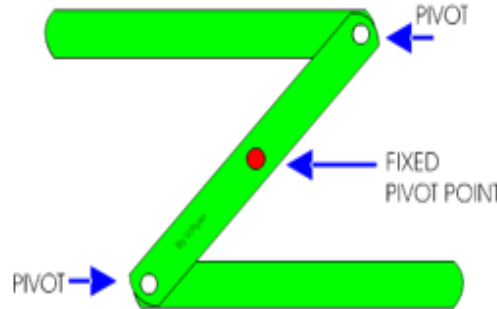
What I Should Already Know:

Some things can move in different ways
 Naming some direction of movement and how things move
 To know that a mechanism provides movement
 To know what a wheel mechanism is
 To know what a lever is and how it works
 To know what a slider mechanism is and how it works.

Skills & Enquiry:

Communication - ideas, observations, comparisons, preferences
Physical –
 Skills to manipulate materials and use tools
Thinking -
 To generate ideas for design
 To select materials for a purpose
 To select appropriate tools/ techniques to shape and join
Investigate –
 To investigate simple mechanisms

Diagrams:



Unit Specific Vocabulary:

Mechanism - something that can be used in a product to make movement.
Motion - the movement
Oscillating - motion backwards and forwards in an arc (like a lever)
Reciprocating - motion backwards and forwards
Linear motion - motion in a straight line
Loose pivot - a turn is allowed to move freely
Pivot - the point at which something turns
Fixed pivot - point which forces the direction to change
Fulcrum - the fixed point for a pivot to take place
Lever - a long sturdy board used to move or lift objects
Linkage - a mechanism made by connecting levers
Input - force going in
Output - action or force coming out

What I should know by the end of the Unit:

To know that a mechanism provides movement
 To know how levers when combined create linkages to change motion direction
 To know the names of different forms of motion including: **Linear**

Oscillating

Reciprocating

Rotary

Key Facts:

- **Linkages** are used to create a change in direction.
- They are created by connecting levers using pivots.
- A linkage and lever mechanism is a simple machine that creates movement in straight lines. **You push or pull the levers.** How much force or effort you use known as the **input** movement effects what happens in the **output** movement.