



Edgewood Primary School - Year 3 and 4

Design and Technology – Knowledge Organiser

Mechanisms Unit: Moving Puppets (levers and linkages)



Prior Knowledge

Explored and used mechanisms such as, sliders, levers, wheels and axels.

Gained an understanding of how some mechanisms work so they can move smoothly.

Gained experience of basic cutting, joining and finishing techniques with paper and card.

Key Knowledge for this Unit

Design

Follow the design process of Access Art Unit.

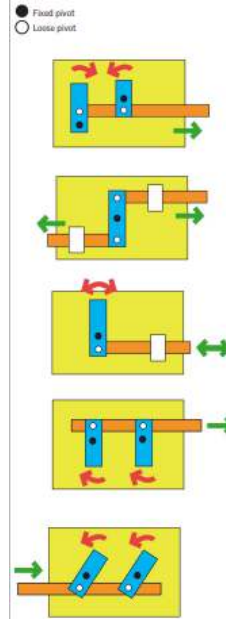
Health and Safety

If you need to move around with scissors, hold around the closed blades, facing down.

Keep your work area and floor area clear – keep your belongings organised.

Walk safely and calmly around the classroom.

Make



Evaluate

How well does your mechanism work?

Does it move smoothly?

Does it meet its purpose?

Who would use your mechanism?

What would they like about it?

How did you prevent any unwanted friction?

How did this affect the mechanism?

What else could you do to improve your mechanism?

Key Vocabulary

mechanism, lever, linkage, pivot, slot, bridge, guide, system, input, process, output, linear, rotary, oscillating, reciprocating

Lever and linkage mechanisms usually produce oscillating or reciprocating movement:



Linear – in a straight line



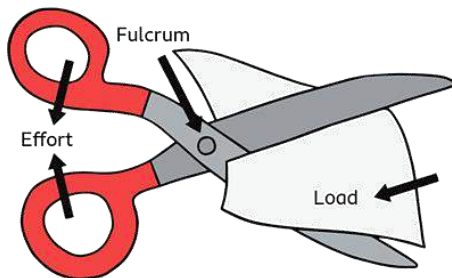
Reciprocating – backwards and forwards in a straight line e.g. a slider



Rotary – round and round e.g. a wheel, cam, pulley, gear wheel



Oscillating – backwards and forwards in an arc e.g. a lever



Examples



Pop Quiz Questions

- How does a wheel and axel work together to create movement?
- How does a slider/lever mechanism work?
- Give examples of when a slider/lever mechanism would be used.