



Design Technology Knowledge Organiser – Mechanical Systems: Levers and Linkages (Year 3)

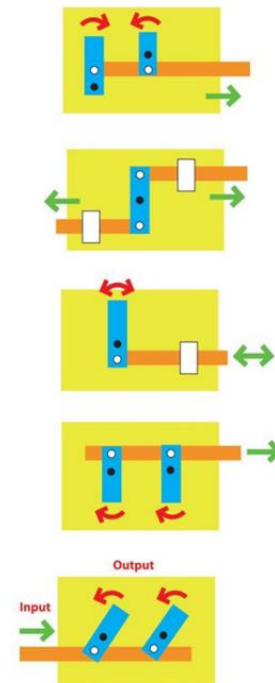
What will we be learning?

- Using a 'design brief'.
- Making a design.
- Testing out.
- Make.
- Evaluate against the purpose for the audience.

Key knowledge

Design-make-evaluate process.
How to make a moving robot.
Learn how to annotate a sketch.
What makes a moving robot appealing to the user?
Experiment with different lever and linkage mechanisms.
Know what a prototype is and create one for their product.
Decide which material is most appropriate through testing.
Modify and problem-solve to create a product that they are proud of.
Ask the question—does my moving robot meet the needs of the user and achieve its purpose?

● Fixed pivot
○ Loose pivot



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

Glossary

Purpose	Fixed Pivot
Annotate	Loose pivot
Prototype	System
Mechanism	Linear
Lever	Reciprocating
Linkage	Rotary
Guide or bridge	Oscillating