Edward Peake Church of England Middle School		
Design Technology	**Topic: Animal Automata**	**Year: 6**

What should I already know?
• What a specification is and how to write one for a design brief. • How to produce design ideas. • About the material plywood. • How to work safely in the workshop. • How to use a coping saw to cut curved and straight lines in plywood. • How to use files and glass paper to smooth the edges of plywood. • How to evaluate design ideas and a finished design.

What will know by the end of the unit?
• What an automata is and how it works. • How a cam mechanism converts rotary motion to linear motion. • How to use a tenon saw to cut straight lines in plywood. • How to make a frame structure. • How to drill holes in plywood. • How to make a cam mechanism. • How to make an animal automata.

Vocabulary	
Automata	A mechanical figure.
Mechanism	A system of parts working together in a machine.
Cam	Changes the input motion, usually from rotary to linear.
Follower	Allows the design to move up and down.
Rotary motion	Movement following a circular path around a fixed point.
Linear motion	Movement in a straight line and in one direction.
Dwell	A small pause in the movement of a machine.
Reinforce	Strengthen with added pieces.
Specification	A list of requirements a product must meet.
Evaluation	A review of how things have gone.

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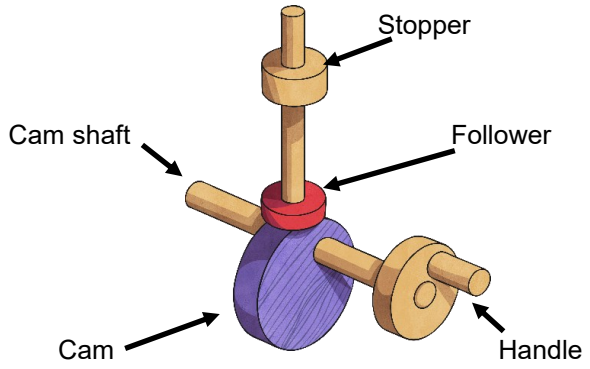
Cam mechanism



Key information

- A cam is mainly used to convert rotary motion to linear motion.
- The cam creates the pattern of the movement.
- The moving design is attached to a follower, this allows it to go up and down..
- Plywood is a manufactured board, it is made from layers of timber glued in opposite directions.
- A tenon saw is used to cut straight lines in timber.

Mechanisms

A machine is made up of a number of working parts called mechanisms. A mechanism changes an input force + movement into a desired output force + movement.

INPUT
Force + Movement going into a ...

MECHANISM
To convert or transmit energy to create an ...

OUTPUT
Force + Movement to satisfy a need.

In a cam mechanism the input force is turning the handle which is a rotational movement.

The cam mechanism converts the movement.

In a cam mechanism the output force moves the figure up and down which is a linear movement.

Investigation tasks

1. Research everyday products that use a cam mechanism?
2. Research into levers. Can you make a catapult?
3. Research other types of motion. Can you make an information sheet to explain it to other students?
4. Can you make a rotating picture to show the sun rising and setting?