

DT Knowledge organiser - Mechanisms Cam toys

Key Vocabulary

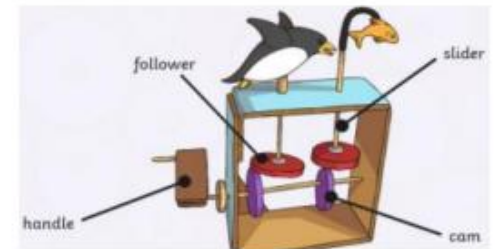
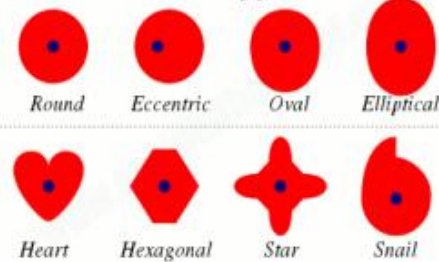
Cam shaft	A shaft with one or more cams attached to it
Snail cam	Cam that produces a slow rise and quick drop movement
Eccentric cam	The cam is a disc with its centre of rotation positioned 'off centre'. This means as the cam rotates the flat follower rises and falls at a constant rate
Movement	A change of direction and speed
Hand-powered mechanisms	A mechanism that is controlled by turning a handle
Linear motion	Movement in a straight line
Rotation	The action of rotating about an axis or centre
Follower	The follower is in contact with the cam and causes the slider to move the object from rotational to linear motion
Slider	A slider converts rotational movement into linear movement
Component	A part or element of a larger whole, especially a part of a machine or vehicle

Skills

- To design and construct a cam toy
- To learn about all the different types of cam mechanisms and how they affect
- the movement of a cam toy.
- To experiment with different cam mechanisms
- A cam mechanism is made up of 3 components: cam, slider and follower

Examples of cams

Some common types of cams



Here are some different examples of cam mechanisms. Each one causes a cam toy to move in a different way.

Here is a cam toy that uses a cam mechanism to move the caterpillar.

Linear motion - straight line



Rotary motion - turning in a circle

