



## Endpoints for Design Technology

### Year 3 – Making it Move



This project is all about cams. We will be experimenting with different shaped cams before making and evaluating a toy which used a cam.

#### What I know and can explain

Cams are devices that can convert circular motion into up-and-down motion

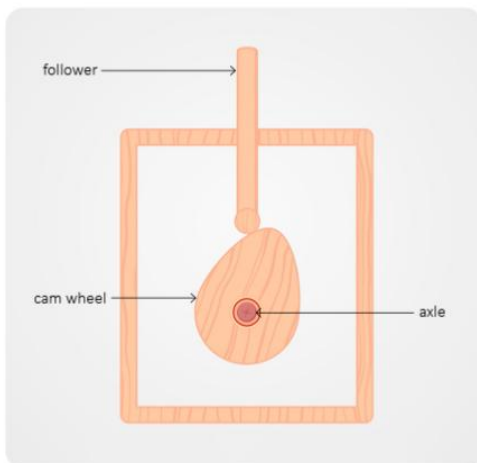
Different shaped cams produce different patterns of movement in the follower

Materials for a specific task must be selected on the basis of their properties

Design criteria are the exact goals a project must achieve to be successful.

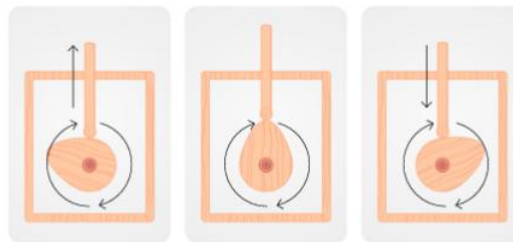
#### Cam mechanism

A cam mechanism is used to change rotational movement into up and down movement. It consists of three parts: a cam wheel, an axle and a follower.



#### Movement created by a cam

When the axle turns, the cam wheel rotates. This makes the follower that rests on the cam wheel move up and down, following the shape of the wheel's edge.



#### Useful Vocabulary

**Axle** – A rod that allows wheels to rotate which helps a machine move easily

**Cam** – A mechanism used to change circular movement into up and down movement made up of a cam wheel, an axle and a follower

**Follower** - Part of a mechanism that follows the movement of another part

**Lever** – A mechanism consisting of a rigid bar that rotates around a fixed point called a fulcrum or pivot, such as in a seesaw

**Linkage** – A mechanism which combines the slider and lever mechanisms, such as in a scissor lift

**Mechanism** - A system of parts that work together in a machine

**Slider** – A mechanism that moves from side-to-side or up and down