

# In DT we are learning about... Mechanisms- Can you make a Victorian style toy with a CAM for a foundation child to play with?

## Key vocabulary



**Rotary motion** - movement that goes round.

- **Cam** - a mechanism that changes one sort of movement to another. Cams can be an off centre wheel or a specially shaped wheel.
- **Follower** - the device that follows the movement of the cam: a lever or a slider.
- **Lever** - a piece of rigid material that moves to and fro around a pivot point creating oscillating motion.
- **Slider** - a piece of rigid material that moves backwards and forwards in a straight line creating reciprocating motion.
- **Guide** - a piece of material used to guide the movement of another.
- **Spacer** - a piece of material used to create extra space to allow moving parts to move freely.

## Characteristics needed for this topic:

- Optimism
- Curiosity
- Risk taking



## for a foundation child to play with?



## Sticky knowledge



A cam mechanism is made up of 3 components: cam, slider and follower

A cam is a mechanism that changes one sort of movement to another. Cams can be an off-centre wheel or a specially shaped wheel.

When the cam rotates, the follower moves up and down in a reciprocating motion

A follower is a device that follows the movement of the cam: a lever or a slider.

## Links to previous learning



### Year 4

Levers and linkages are mechanisms that make things move. Lever and linkage mechanisms usually produce oscillating and or reciprocating movement.

Oscillating is moving back and forth in a regular rhythm. Reciprocating is moving backwards and forwards in a straight line.

### Year 5

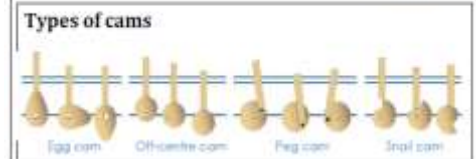
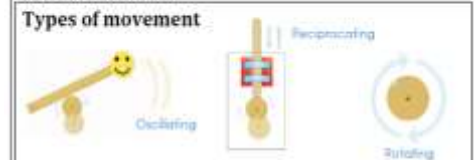
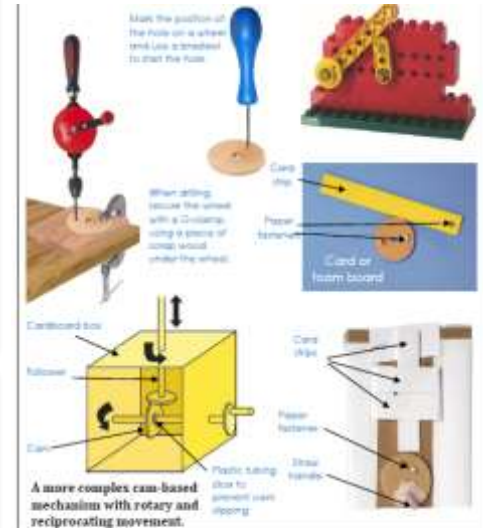
Fairground rides can run using either a gear or pulley mechanical system

You can change the speed of rotation by using pulleys and gears  
Using a small pulley or gear to drive a larger one reduces rotation speed and gears down the product

You need power (a battery), an input (pressing of a switch) and a process (the turning of the motor and gears/pulleys) to achieve an output (the ride rotating)

## Key Designers

Victorian style toys with cams  
The Flying Pigeon by Archytas of Tarentum (first ever mechanical toy)  
The mechanical lion by Leonardo da Vinci



## Aspirations

- Toy designer
- Carpenter
- Engineer

