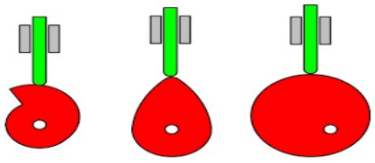
# Monday

## IDEAs LO: To understand more about CAM mechanisms

| Who taught you in this session? | Teacher | TA | 1:1 | HLTA |
|---|---|---|---|---|
| Independent | Supported | | | |
| Child | **L.O. To understand more about CAM mechanisms**<br>***CORNERSTONES Programme of study***: *Understand and use mechanical systems in their products (for example, gears, pulleys, cams, levers and linkages*<br>***CORNERSTONES Essential skills***: *Select the most appropriate mechanical system for a particular purpose* | | | Teacher |
| | I know what a CAM mechanism is and how it works | | | |
| | I can label the parts of a cam mechanism accurately | | | |
| | I understand the meanings of some technical words involved with cam mechanisms | | | |
| Lesson 4 | | | | |

**Cam creations!**

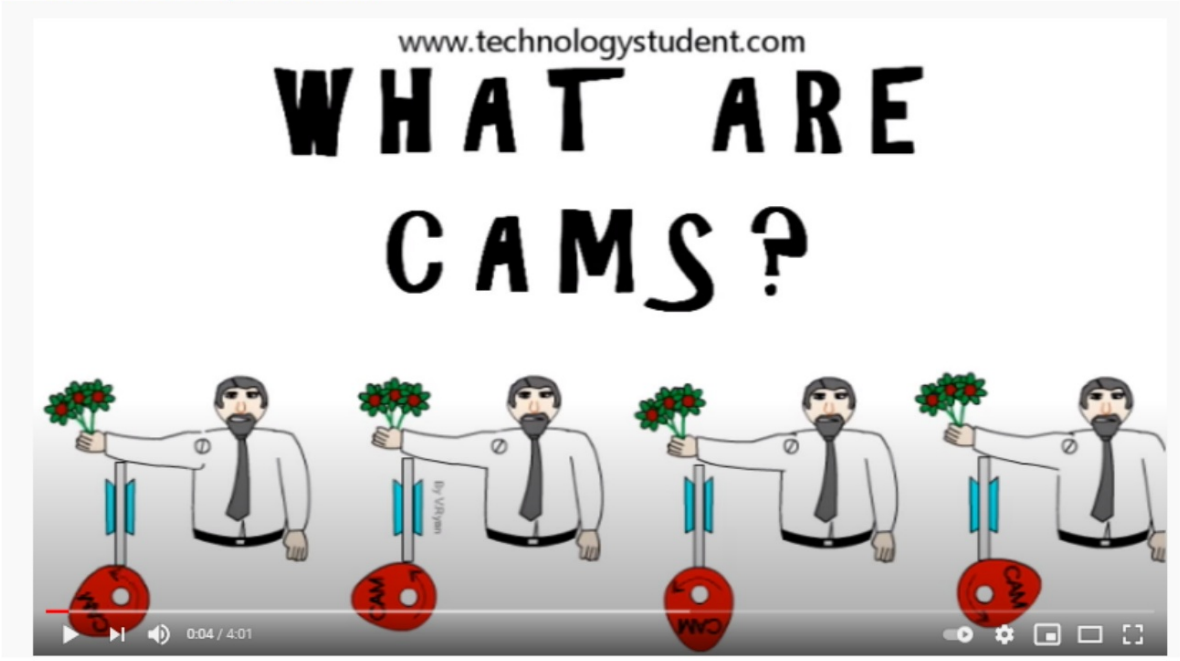


### PROGRESSION OBJECTIVES

Explain and use mechanical systems in their products to meet a design brief. Mechanical systems can include sliders, levers, linkages, gears, pulleys and cams. Other mechanisms include pneumatics and hydraulics.

# What are cams?

**Watch the video and while you are watching, write down any technical words you hear on a scrap piece of paper, then copy into your books around the video picture.**




https://www.yout-ube.com/watch?v=tzWQasmUfLY

## Components

A cam mechanism is made up of two main components - a **cam** and a **follower.**

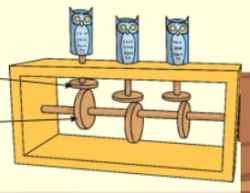
The **mechanism** causes **components** to move either in a **linear** motion (a straight line) or a **rotary** motion (goes round) .

**Cam** - a rotating disk shaped to convert rotary into linear motion.

**Follower** - the component which follows the movement of the cam.

follower

cam



## Components

Can you identify the cam?

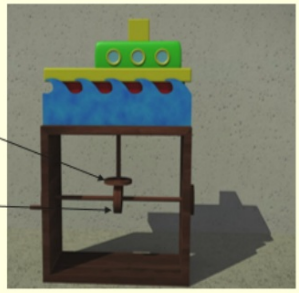
Can you identify the follower?

Where is the rotary motion used?

Where is the linear motion used?

follower

cam

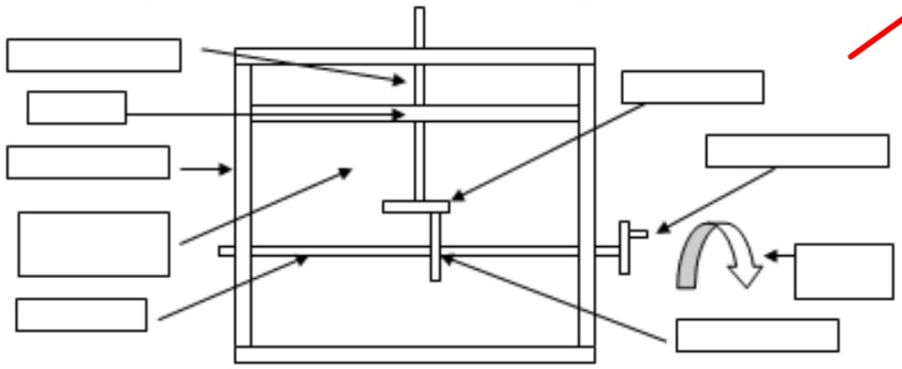


**Can you add any more information to your annotations now?**

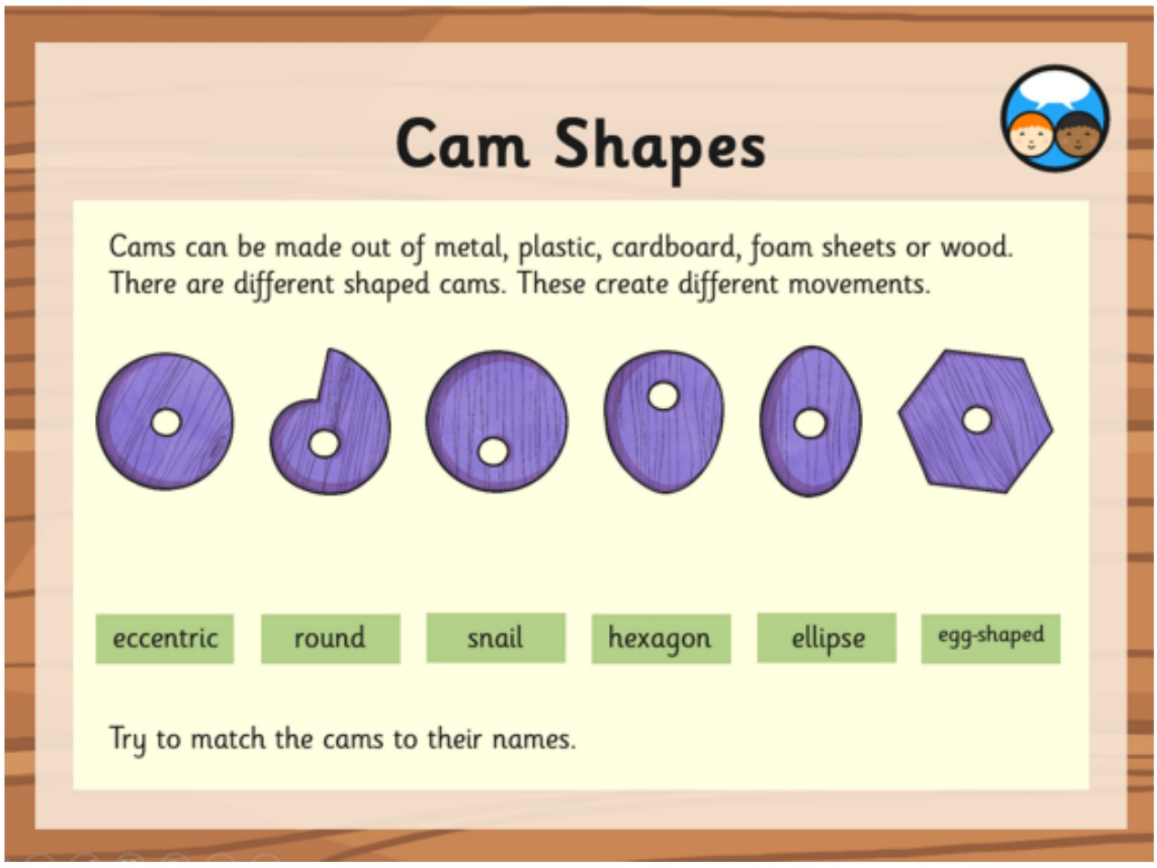
You should have heard words like:

cam
movement
linear motion
rotary motion
off-centre
crank handle
axle
frame structure
cam mechanism
cam follower

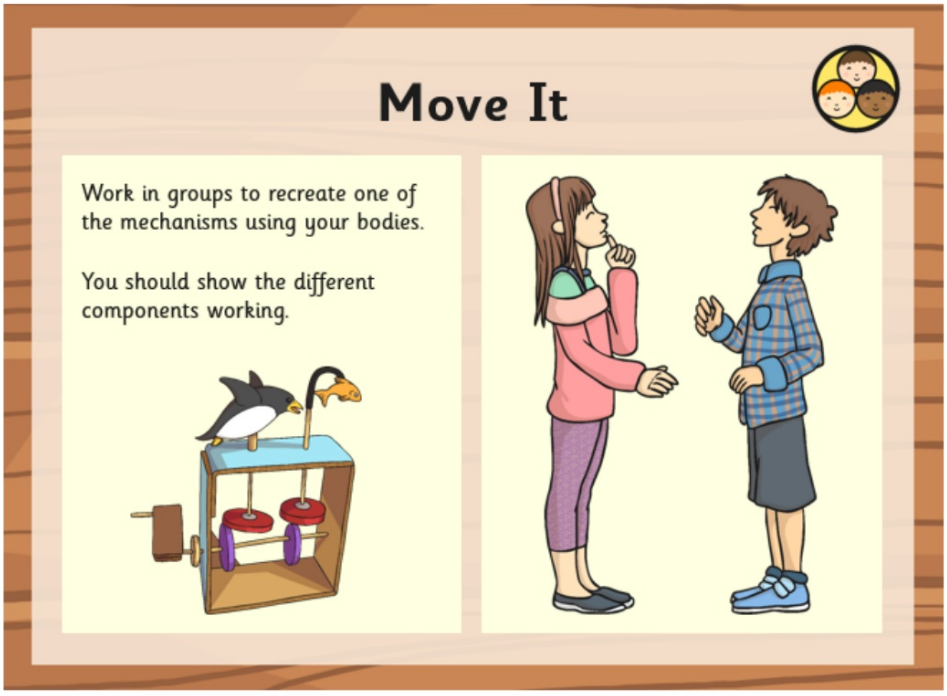
Can you carefully label them on the diagram?



note it on paper




**Draw the 6 different cam shapes in your book and label their names**



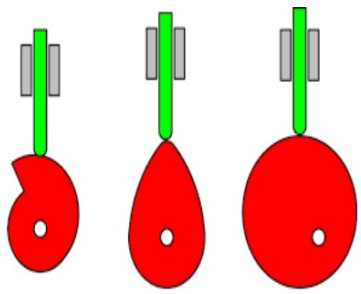

Use paper props if you need! Take a photo for books, stick it in and label the parts!

# Tuesday

## FPT LO: To create my own CAM mechanism

| Who taught you in this session? | Teacher | TA | 1:1 | HLTA |
|---|---|---|---|---|
| Independent | Supported | | | |
| Child | L.O. To create my own cam mechanism<br>CORNERSTONES Programme of study: Select from and use a wider range of tools and equipment to perform practical tasks (for example, cutting, shaping, joining and finishing), accurately.<br>CORNERSTONES Essential skills: Combine materials with moving joints | | | Teacher |
| | I know I must follow the instructions carefully | | | |
| | I can cut, shape, join and finish accurately | | | |
| | I understand how the different mechanisms affect the movement | | | |
| Lesson 5 | | | | |

**Cam creations!**



## PROGRESSION OBJECTIVES

Explain and use mechanical systems in their products to meet a design brief. Mechanical systems can include sliders, levers, linkages, gears, pulleys and cams. Other mechanisms include pneumatics and hydraulics.

Now you're going to make your own simple cam mechanism to investigate the effect of different cam shapes!

You will need:

a lolly stick

thick corrugated card

split pin

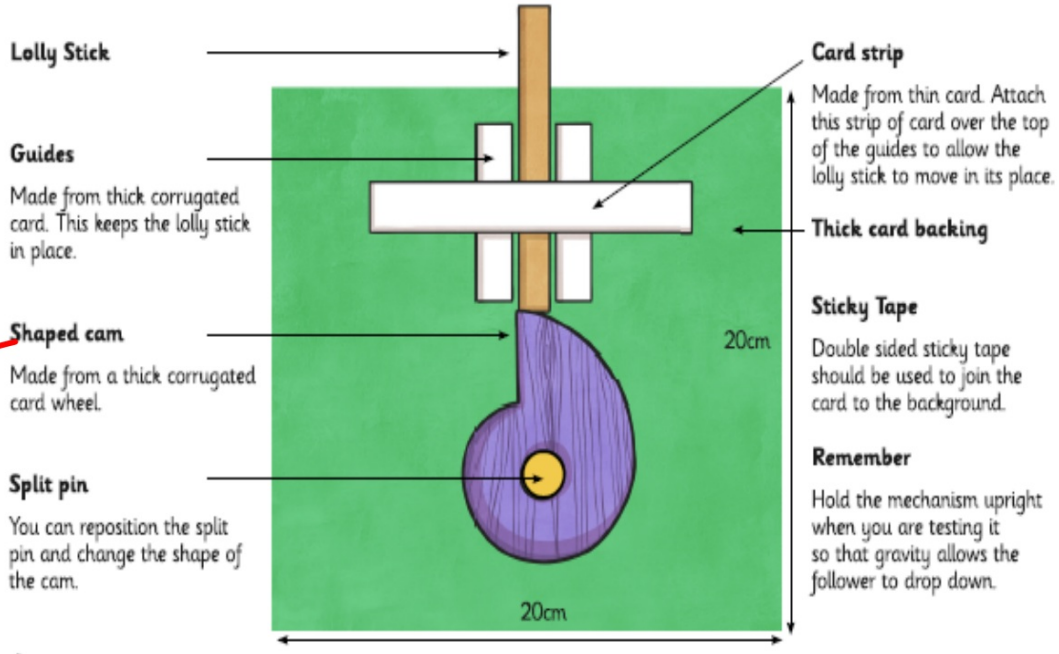
card strip

card

sticky tape

Use thick card if you don't have a lollipop stick

1 shaped



Take a photo for books, stick in and label with some of the information from the exploring cam movement sheet

# Complete the sheets with as much detail as you can!

| Cam Shape | Describe What Happened |
| --- | --- |
|  | |
|  | |
|  | |
|  | |