

# Year 5 and 6 Design and Technology Knowledge Organiser – CAMs



Technical knowledge



Practical knowledge



Design inspiration

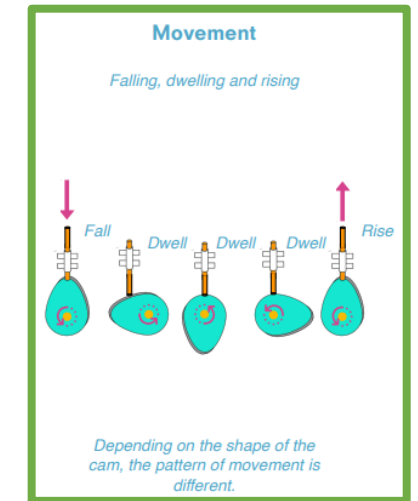
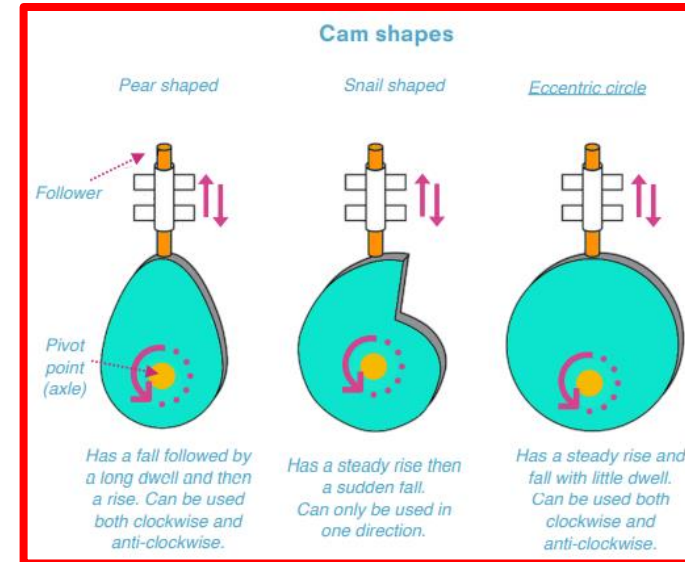


Design process

Subject Specific Vocabulary	Meaning
linear reciprocating	moving back and forth in a straight line
vice versa	a Latin phrase that means the other way round
dwell	to stay in one position
eccentric circle	a circle that has an off-centre pivot point
automatically	an automatic action is one that you do without thinking about it
fluency	if you are fluent in something, you do it effortlessly
automaton	a toy with mechanical figures
inspiration	where you got your ideas from
purpose	the reason for which something is made
user	the person for whom the product is designed

## Summary

A cam and follower mechanism turns rotary motion into linear reciprocating motion (or vice versa). As the cam rotates, the follower rises and falls in a process known as reciprocating motion. Cams are similar to a wheel but, instead of having a circular profile they have different shaped profiles; different profiles create different types of movement. The three types of movement are rise, dwell and fall.



## Key Facts

- Cams can create circular movement.
- Cams can create side-to-side movement.
- Cams can be used either singly or in combination with others.

## Being Designers

Designers need to practise making things until their hands and fingers do things automatically, without much thinking. This is called fluency. By practising making pulleys in lots of different ways, your hands and fingers will become fluent in making and assembling.

Designers take inspiration from existing products. They think about a product's purpose, the users and how it is designed.