

Caroline Haslett Primary School - DT

Topic: Material

Year 6

Moving toy

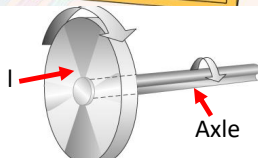
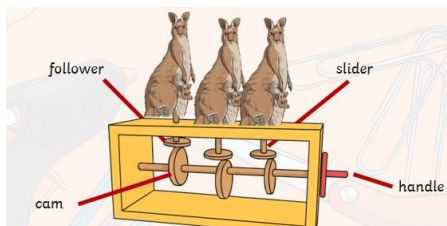
Knowledge

- Cam is a rotating or sliding piece in a mechanical linkage used especially in transforming rotary motion to linear motion.

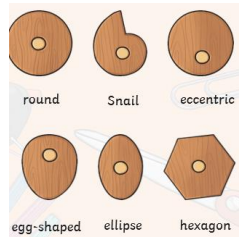
- Linear motion.



- Rotary motion.



Wheel



Vocabulary

- **Cam** - rotating or sliding piece.
- **Linear motion** - straight line.
- **Rotary motion** - turning in a circle.
- **Follower** - rod that rests on the edge of a turning cam.
- **Eccentric cam** - this rotates as it fixed to the axle which is turned by the handle.
- **Follower cam** - the eccentric cam causes the follower to move up and down (linear) and rotate.

Design, make, evaluate

1. Research and generate ideas from previous knowledge and moving toys.
2. Design and construct a moving toy with a cam mechanism. The toy needs to be able to move in a linear motion. The movement should be noticeable and smooth. The toy should have an intended user in mind.
3. While making, the children should select tools, materials and equipment components to help them make a moving toy. Include:
 - Wheels
 - Rods
 - Axle
 - CAMS

Children need to understand properties of materials and be able to use the most sensible one for their toy. Assemble, join and combine materials-axle/shaft, follower, and cam.

4. Evaluate against design criteria considering the intended user.

Skills

- Understand that there are many types of mechanisms.
- Recognise the movement of a mechanism within a toy or model.
- Understand that a cam will change rotary motion into linear motion.
- Understand that different shaped cams produce different movements.
- Know about the relationship between a cam and a follower.