

DT

Making Toys

Year 5

What I should already know

- Some knowledge of how to attach wheels to axels. (See Y2 DT Transport)
- Some knowledge of linkages and levers and how they work. (See Y2 DT Moving Cards.)



Technical Knowledge and skills

- Research and analyse a range of existing moving toys.
- Design and create a moving toy that fits a design criteria made by research, surveys, questionnaires etc.
- Use a range of tools and techniques to create a range of cam mechanisms on moving toys.
- Mark out and measure accurately to create a moving toy.
- Experiment to create a range of different cam mechanisms.
- Evaluate their product against the set design criteria.

Sticky Knowledge

A cam mechanism will change rotary motion into linear motion .

Using different shaped cams can change the movement of the follower.

How to create an exploded and cross-sectional diagram to demonstrate how my product will be made

Know how to use tools equipment safely and effectively.

Know a range of different techniques to create a cam mechanism.

Vocabulary

|                         |   |
|-------------------------|---|
| Exploded Diagram        | A drawing that shows the order of assembly of various parts by separating them slightly by distance.                        |
| Prototype               | A first version of an object.   |
| Cross-sectional Diagram | A diagram of a particular section of a project.   |
| Lever                   | A rigid bar resting on a pivot.   |
| Linkage                 | A system of links.  |
| Pivot                   | The central point, pin, or shaft on which a mechanism turns.  |
| Linear                  | Arranged in or extending along a straight line.   |
| Rotary                  | Revolving around a centre or axis.  |
| Cam mechanism           | A mechanical linkage whose purpose is to produce a prescribed motion of the output link.                                    |
| Cam Follower            | The peg or roller which follows the curvature of a cam and to which the motion of the cam is thereby directly communicated. |