|  |  |  |  |
| --- | --- | --- | --- |
|  Focus: DT | Moving Toys | Year 4 | Summer |

|  |
| --- |
| Key Vocabulary |
| FunctionalAestheticLinearRotaryAssembleJoinCam – round, snail, eccentric, egg-shaped, ellipse, hexagonHandle |

|  |
| --- |
| **Key Knowledge** |
| Use previous experiences in DT to generate ideas. |
| Research different types of mechanisms. |
| Recognise the movement of a mechanism in a toy or model. |
| Understand that a cam will change rotary motion into linear motion. |
| Explore how different shaped cams produce different movements. |
| Explain the relationship between a cam and a follower. |
| Select the most sensible tools, materials, equipment and components to create a product.  |

Design brief: To design and construct a moving toy with a cam.



Functional considerations: The toy needs to be able to move in a linear motion. The movement must be noticeable and smooth.

Aesthetic consideration – the toy needs to be themed for a small child.



**The eccentric cam** – this rotates as it is fixed to the axle which is turned by the handle.

**The follower cam** – the eccentric cam causes the follower to move up and down (linear) and rotate.

 Linear motion – straight line

 Rotary motion – turning in a circle