## Key facts to learn:

• **Topic:** Swept Away (Japan)

- After experimenting with a range of cams, creating a design for an automata toy based on a choice of cam to create a desired movement

- Understanding how linkages change the direction of a force

- Understanding that for the frame to function effectively the components must be cut accurately and the joints of the frame secured at right angles

## Key skills to do:

• Making things move at the same time

Measuring, marking and checking the accuracy of the jelutong and dowel pieces required

- Measuring, marking and cutting components accurately using a ruler and scissors
- Assembling components accurately to make a stable frame
- Selecting appropriate materials based on the materials being joined and the speed at which the glue needs to dry/set
- Applying points of improvements
- Describing changes they would make/ do if they were to do the project again

• Using a bench hook to saw safely and effectively

• Exploring cams, learning that different shaped cams produce different follower movements

- Exploring types of motions and direction of a motion

## Words to know and spell (Tier 2 Vocabulary)

| | | |
|---|---|---|
| Design | Joints | Checking |
| Create | Secured | Measure |
| Movement | Right angles | Marking |
| Force | Marking | Cutting |

# Bumble bees – DT KCV – Mechanisms

## Words to understand and spell  (Tier 3 Vocabulary)

| | |
|---|---|
| **Cams** | Rotating part in machinery |
| **Linkages** | The action of linking |
| **Direction** | A course along which something moves |
| **Function** | Work or operate in a particular way |
| **Components** | A part of a larger whole especially a part of a machine |
| **jelutong and dowel** | Light weight timber and a style of joint |
| **Accuracy** | Measurement of a correct standard |
| **Joined** | Link or connect |
| **Motions** | Process of moving or being moved |
| **Explore** | Inquire into to discuss in detail |
| **Assembling** | Fit together the separate component parts of a machine |

## Concept check questions. Test yourself:

What is a cam?

How do linkages change the direction of movement?

How do you make a frame function effectively?

How do you make things move at the same time?

What is the best way to assemble components?