### **Year 6 DT Automata Toys**

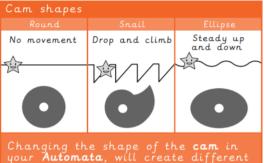
#### **Key Skills**

- 1. To prepare (mark, cut, saw) the materials required for the automata frame.
- 2. To assemble the automata frame components and supports with the help of an exploded-diagram.
- 3. To explore the relationship between cam profiles and follower movement, to inform a design decision.
- 4. To apply the housing and finishing touches to the automata frame.



Respect, Believe, Achieve

## **Key Knowledge**



#### **Vocab/Key Words**

**Automata** - Also known as mechanical toys or kinetic art. They use hand powered mechanisms to create movement.

**Cam** - A rotating or sliding piece in a mechanism. It changes rotary motion to linear motion.

**Component** - One of several parts of which something is made.

**Follower** - The post which traces the shape of the cam, rising and falling in a linear or reciprocating motion.

Frame - The rectangular structure which holds the Automata together.

**Linkage** - A set of bars linked together to form a mechanism.

#### What I will know/be able to do by the end

- I can measure, mark and check the accuracy of the wood and card automata components
- I can follow health and safety rules
- I can suggest appropriate design criteria points to fulfil the design brief

#### Websites/Signposting/Connection to a famous person

https://www.instructables.com/Mechanical -Cam-Toys/

https://www.youtube.com/watch? v=CKGHIKcbZi0

#### Previous Learning

- Pop-up books (Year 5)
- Slingshot cars (Year 4)
- Pneumatic toys (Year 3)
- Moving Monsters and Ferris Wheels (Year 2)
- Moving storybook and wheels and axles (Yéar 1)

# Automata toy components: 1. Character

- Follower
- 3. Ca.m.
- Frame
- Axle attached to handle

