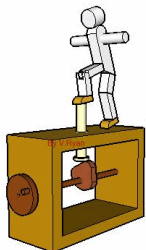


# DT—Year 5—Moving Toys

## Design Brief

To design and make a moving toy suitable for children to play with, that has a cam mechanism.



## Year 4 Design Skills

- Investigate existing products, including drawing them to analyse and understand how they are made.
- Plan a sequence of actions to make a product.
- Develop more than one design.
- Generate designs with annotated sketches.
- Refine work and techniques as work progresses, continually evaluating the product design.
- Identify strengths and weaknesses of their design ideas.
- Talk about how closely their finished product meets their design criteria and meets the need of the user.
- Disassemble products to understand how they work.
- Improve on existing designs, giving reasons for choices.

## Year 5 Design Skills

- Undertake research to inform design process. This may include surveys and interviews.
- Use prototypes, cross sectional diagrams, exploded diagrams and CAD software to represent diagrams.
- Consider the views of others when evaluating their own work.
- Ensure products have a high quality finish, using art skills where appropriate.
- Justify their decisions about materials and methods of construction.
- Make suggestions on how their design/ products can be improved.
- Use knowledge of inventors, designers, engineers, chefs and manufactures who have developed ground breaking products to create their own innovative designs.

## Mechanical Systems Skills

### Year 4

- Incorporate a circuit into a model.
- Use electrical systems such as switches, bulbs and buzzers.
- To use skills and knowledge of moving mechanisms in a product.

### Year 5

- Build frameworks to support mechanisms.
- Stiffen and reinforce complex structures
- Use a glue gun with supervision.
- Join materials using appropriate methods.
- Understand and use mechanical systems such as cams, pulleys and gears.

## Vocabulary

frameworks	mechanisms
stiffen	self operating
reinforce	machine
structures	
pulleys	
cams	
Rube Goldberg	

## Design Process

### Research

Look at a product to see how it has been made.

### Skills

Practise and learn new skills to make the final product.

### Design

Design the product using knowledge from research and skills learned.

### Prototype

Make the prototype and identify any changes needed for the final design.

### Make

Make the final product using skills learned.

### Evaluate

Evaluate the final product.