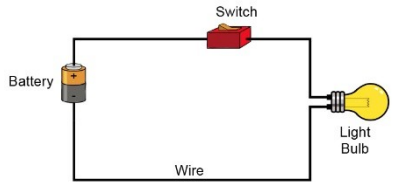
St Paul's Church of England Primary School

"Don't let anyone look down on you because you are young but set an example for the believers in speech; in conduct; in love; in faith and in purity."
(1 Timothy 4:12)

Subject: DT	Year group: 5 Term: Spring 2	Title: Inventors and Inventions

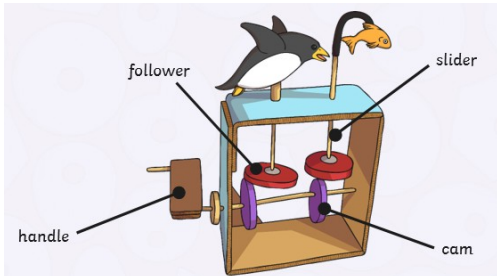
What should I know?

- How to plan a sequence of actions to make a product
- How to use prototypes to develop and share ideas
- How to use woodworking skills to create a product
- How to use electrical systems such as switches, bulbs and buzzers
- How to use appropriate finishing techniques
- To consider and explain how the finished product could be improved



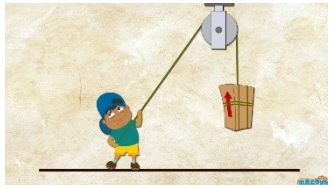
Facts I will learn …

- The key principles of design
- How key people have influenced design
- The rules for working safely with electronics and woodworking tools
- The importance of using technical vocabulary when presenting a report on a product



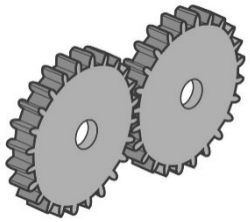
Key questions …

- How does the mechanism work?
- How many gears are there? How do the gears mesh? What is the direction of each gear?
- What is the result of using this mechanism (e.g. change of direction, faster/slower movement).
- Which gear moves faster?
- Can you see a relationship between the number of teeth on the two gears and their relative speeds?



Key Skills…

- To make prototypes
- To develop one idea in depth using research
- To select from and use a wide range of tools then list those that are appropriate to the task
- To cut accurately and safely to a marked line
- To refine their product – review and rework/improve
- To consider user and purpose.
- To identify the strengths and weaknesses of their design ideas
- To use mechanical systems such as cams, pulleys and gears
- To use electrical systems such as motors



Web links

Experiences that school may provide:

- The opportunity to explore mechanical toys

Experiences that could be provided

Key vocab	Definition
Gears	A part of a machine that causes another part to move because of teeth which connect the two moving parts.
Cams	In machinery, a noncircular disc or cylinder that, when rotated, imparts an up-and-down or start-and-stop motion to a connected part.
Pulley	A simple machine that makes lifting something easier. A pulley has a wheel or set of wheels with grooves that a rope or chain can be pulled over.
Mechanism	The whole or parts of a machine, mechanical system, or device.
Torque	The measured ability

https://www.bbc.co.uk/bitesize/clips/zb79wmn https://www.bbc.co.uk/bitesize/clips/z7k3cdm	**at home…** • Explore mechanical toys and how they work • Make simple mechanisms using construction toys	of a force to produce turning or twisting around an axis, such as a gear or shaft.