



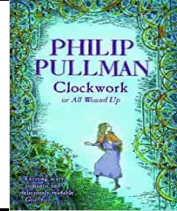
Clockwork

Key texts

The Invention of Hugo Cabret by Brian Selznick



Clockwork by Philip Pullman



Visit to the M.A.D. Museum



Vocabulary

audience- the people the device is intended for
automaton- moving mechanical device

CAM- see diagram

Crank- handle to turn

gears- a toothed cog

linear- move along a line e.g. up and down.

motion- movement

rotation/ rotary- circular movement

Computer system - how devices and processes are connected

Packets - small parts of data shared between digital devices

Ranking - a sequence of steps to determine the order of returned search results

Web crawlers - programs used to create a web index of key words or phrases

light source- provides light

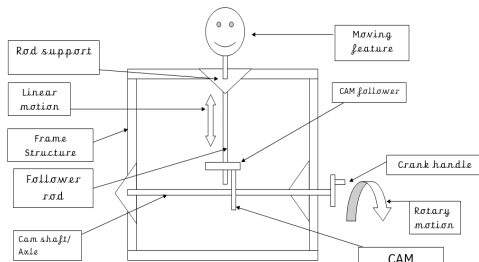
reflect/reflection- occurs when light travels through one material and bounces off another

Shadow- a dark area or shape produced by an object coming between the rays of light and the surface

Design and Technology

- The word 'automaton' comes from the Greek 'automatos' which means 'acting of ones own will'.
- Automata are often designed to entertain and amaze.
- Many automata use CAMs.
- Common use of CAMs today are in cars.
- CAMs turn rotary motion into linear motion.
- The shape of the CAM affects the movement it creates.
- Gears lock together to change the rotary direction.
- Different sized gears alter the speed of rotation.
- Gears found in clocks to wind the hands.

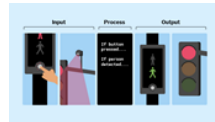
<http://www.technologystudent.com/cams/camdex.htm>



Computing

A system is a set of interconnected parts that work together.

IT systems use IPO (input, process, output).



Web crawlers are used to create an index of the WWW.



Rules are used to rank search results.

Connected computers transfer data between IT systems and networks.



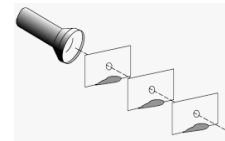
Data is transferred in packets.

Protocols (agreed methods) are used to transfer data.

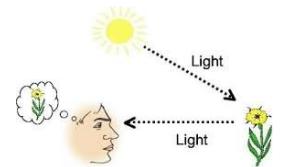
Communication and collaboration using the internet can be public or private.

Science

Light travels in straight lines.



We see objects because they give out or reflect light into our eye.



Because light travels in straight lines, shadows have the same shape as the objects that cast them.

