DT

Topic: Fairground Rides Gears and Pulleys

What I should already know

- That mechanisms can transform one type of movement into another kind
- That we can integrate electronic devices into our design and use code to control how they work

Key Knowledge

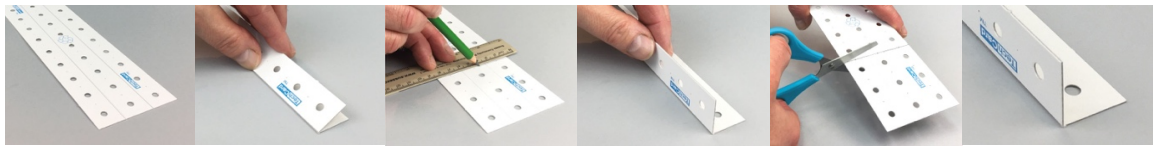
Mechanical Systems

For the fairground ride to move, it is essential that the mechanical system is planned effectively, and includes an input, a process, and an output.

Batteries hold stored power, accessed by using an input to enable a motor to set in motion the motor spindle. Motor spindles can attach the motor to the gears/ pulley system (process)., which in turn propels the ride to move forwards/ backwards (output).



Building with tech card:



Components are pre-scored for accurate folding.

To get a neat fold, fold TechCard right over.

Pin holes formed in TechCard help to mark accurately.

Fold it back to a ninety degree angle.

TechCard is easy to cut with scissors.

Vocabulary

gear	The **gears** on a machine or vehicle are a device for changing the rate at which energy is changed into motion.
pulley	A **pulley** is a device consisting of a wheel over which a rope or chain is pulled in order to lift heavy objects.
Tech Card	High quality and durable card with holes to make building easier.
motor	The **motor** uses electricity or fuel to produce movement.
spindle	A long straight part that turns in a machine, or that another part of the machine turns around.
component	One of several parts of which something is made.
kit	A set of parts ready be made into something.
microcontroller	a computer system on a chip that does a job
component	A component is a part of a circuit. e.g. motor
automatic	Something that works by itself with little or no direct human control.
debug	identify and remove errors from computer software
motor	A component which turns electrical energy into (rotational) movement.
LED	A light-emitting diode (LED) is a component that produces light from electricity.
input	What has to happen to control the function of a circuit.
short-circuit	A mistake in a circuit where electricity flows in the shortest path back to the battery instead of round the whole circuit.