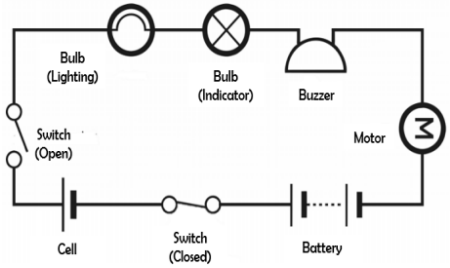
Year 5
Design & Technology

Mechanical Systems: Fairground Rides

DT – Year 5
Mechanical Systems: Fairground Ride

Key Vocabulary	Definition
Mechanical system/Mechanism	Something that uses related components which act together to make movement.
Electrical circuit	A path of electrical components that allow electricity to pass through it. A drawing of a circuit often looks like this: 
Component	A part or element of a larger whole, especially a machine or vehicle.
Motor spindle	The rod on the end of the motor onto which a gear or pulley is attached.
Rotate	To turn on or around a fixed point.
Purpose	Why have you designed your product? How will it be used?
Audience	Who is your product designed for? Who will use it?
Pulley	A grooved wheel over which a drive belt can run.
Drive belt	The belt which connects and transfers movement between two pulleys.

Fairground rides:


Ferris wheel


Carousel/Merry-go-round

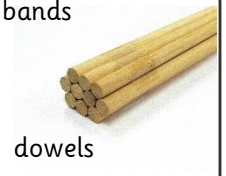

Chair swing ride

Mechanism components:


elastic bands


crocodile leads


battery


dowels


motor


wooden pulleys


plastic reels

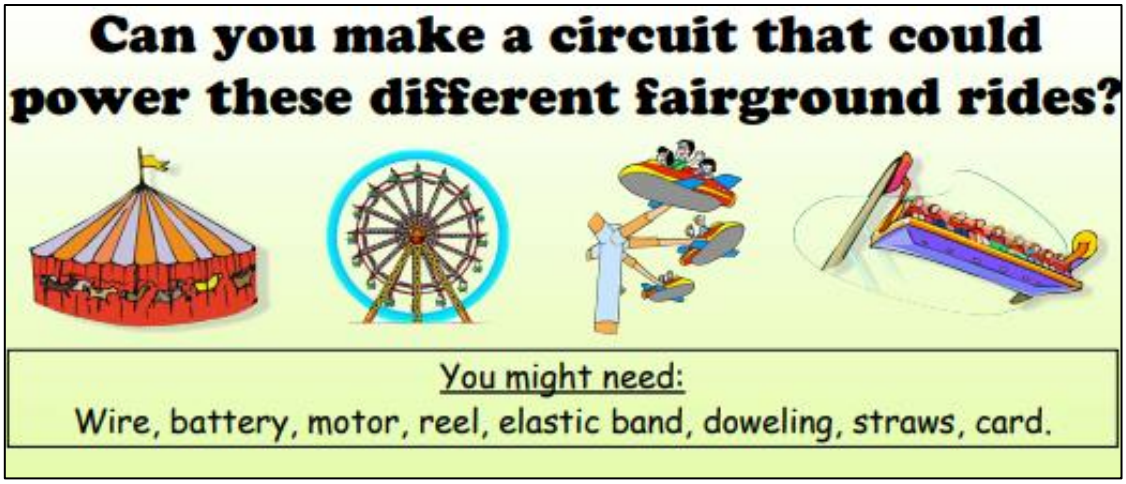
- Remove jewellery and tie long hair back.
- Never use anything with a plug, wire or cord around water.
- Follow instructions carefully.
- Remember that electricity can be dangerous if not used correctly.
- Stand up when using materials/tools. Make sure your chair is tucked in.
- Return all equipment safely and responsibly.

Lesson 1: I can explore a range of familiar products using rotating parts. I can carry out research for a new product for a target audience.

To attract more visitors, Pleasureland has asked you to design a new fairground ride for primary-aged children.

You need to create a prototype by researching, designing and building a rotating ride.

Lesson 2: I can investigate ways of using electrical motors to create rotating parts.



Draw and label your circuit below:

Lesson 3: I can investigate ways of making a framework for a fairground ride.

Lesson 4: I can design a fairground ride with a rotating part.

Purpose and User:
Labelled Design:
Circuit and Mechanism Design:
Materials/Tools required:

Lesson 5: I can make a fairground ride following a design.

Lesson 6: I can evaluate a finished product.

A photograph of my fairground ride

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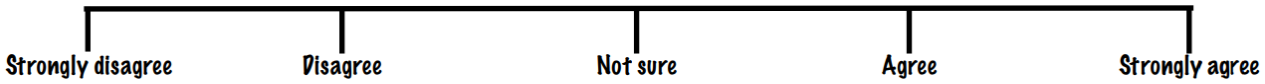
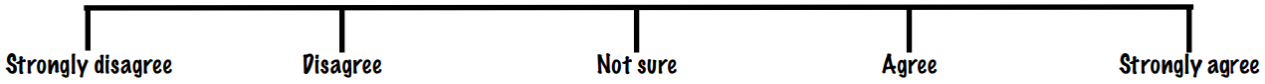
My Fairground Ride Evaluation

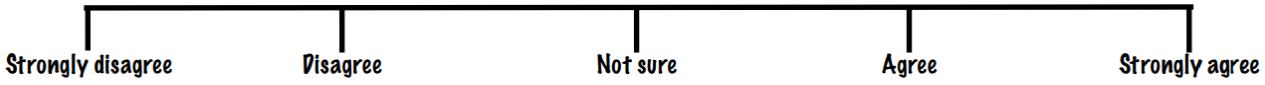
1. I followed my design well when making my fairground ride.



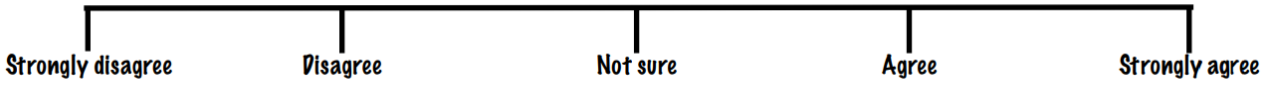
2. I am pleased with the quality of my fairground ride.



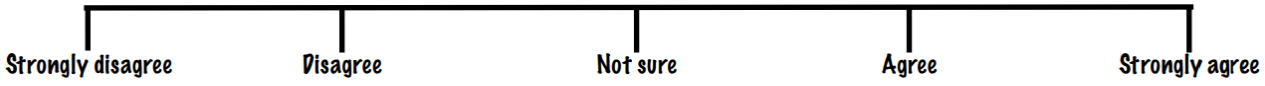
3. My ride suits the purpose and auidence it was designed for.



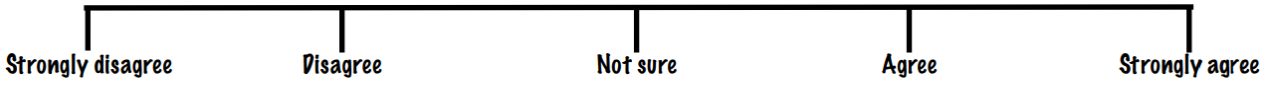
4. The rotating part of my fairground ride works well.



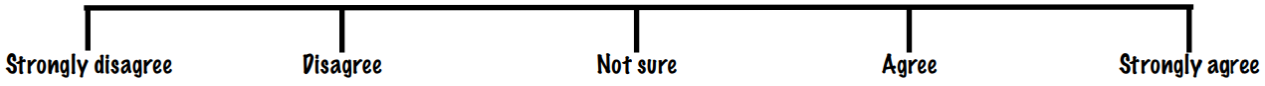
5. The framework of my fairground ride is sturdy.

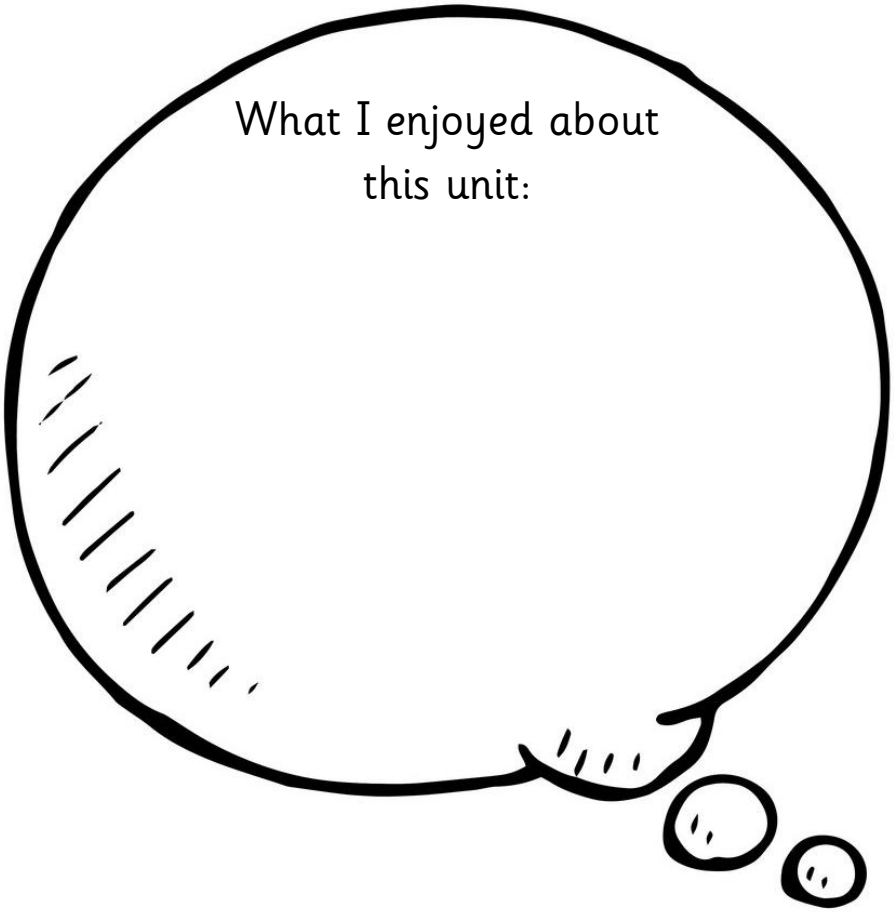


6. I think I chose the correct materials to make my ride with.



7. I learnt a lot about working with motors when making my ride.




What I enjoyed about
this unit:


How I would change my product
if I were to make it again: