Glenfield Infant School Knowledge Organiser

Year 2 — Spring 1	DT	Mechanisms- Fairground Wheel

What should I already know?

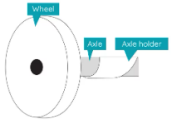
I have experimented with making stable structures with card, tape and glue. I have learned how to turn 2D nets into 3D structures. I have begun to evaluate designs and look for ways to improve them. I have explored making stable structures.

Vocabulary

axle	A long straight rod which connects to a rotating part (e.g. the wheels of a car).
Axle holder	The part of a mechanism which holds the axle steady.
design	To make, draw or write plans for something.
design brief	A challenge that asks for something to be designed.
Diagram	A picture showing what something looks like or explaining how something works.
Ferris wheel	A ride at a fairground which carries passengers around a large, vertical wheel.
frame	A sturdy support that holds a fairground wheel in place.
mechanism	Parts of an object that move together to make something work.
wheel	A circular object that turns round. It can be fixed to a vehicle to allow it to move easily over the ground.

1. How do wheels move? How do builders know what to build?

l, axle and axle holder ass



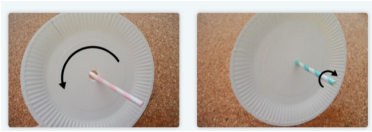
Sticky Knowledge

In order for a wheel to move it must be attached to an axle.
A design brief gives instructions on what should be made.

2. What are the properties of different materials? Which of these properties may be useful for a fairground wheel?

cotton reels

yogurt pots



Sticky Knowledge

A fairground wheel needs to be strong, hard and waterproof. Axles can be fixed or moving so parts move together or spin freely.

3. How can I make a stable fairground wheel?

Which packaging is the most or least stable?

Using different packaging for the frame

Sticky Knowledge

A wide base and weight in the bottom makes a structure more stable. Evaluating designs can help improve them and fix problems.

4. What do people want the wheel to be like?

Design survey

Question:	Tallies

Sticky Knowledge

Our local area is known for things like the football team, the water, the New Forest. A survey can find out what people want and this can be used in a design.

5. How can we stop the people from being tipped upside down?

Sticky Knowledge

The pods stay upright by rotating around a fixed point (their own axel)

6. Can I test my wheel and check if I met the design criteria?

Design criteria	✓/✗
★ A wheel that spins.	
★ A stable frame.	
★ Pods for eight to ten people.	
★ Decorated for our area.	
★ The right material properties.	

Sticky Knowledge

Testing an evaluating means looking at what is good and bad and thinking about how to make it better.