

DT

Structures: Fairground Wheel

Year 2

What I should already know

- Explain that wheels move because they are attached to an axle.
- Recognise that wheels and axles are used in everyday life, not just in cars.
- Identify and explain vehicle design flaws using the correct vocabulary.
- Design a vehicle that includes functioning wheels, axles and axle holders.
- Make a moving vehicle with working wheels and axles.
- Explain what must be changed if there are any operational issues.



Vocabulary

Axle	A long, straight piece of material which connects to a rotating component
Evaluation	When you look at the good and bad points of something, then think about how to try and improve it
Ferris Wheel	A ride at a fairground which carries passengers around on a large, vertical wheel.  Passengers travel in a pod (a container which carries them around)
Mechanism	The parts of an object that move together as part of a machine
Stable	Object that does not easily topple over
Test	To find out if something works as it should
Weak	Something that is easily broken (opposite of strong)

Technical skills

- Selecting a suitable linkage system to produce the desired motions.
- Designing a wheel.
- Selecting appropriate materials based on their properties.
- Selecting materials according to their characteristics.
- Following a design brief.
- Evaluating different designs.
- Testing and adapting a design.

Sticky Knowledge

To know that different materials have different properties and are therefore suitable for different uses.

To know the features of a Ferris wheel include the wheel, frame, pods, a base, an axle and an axle holder.

To know that it is important to test my design as I go along so that I can solve any problems that may occur.