

ROLLERCOASTER DESIGN

Session Brief | U KS2

(1 Hour)

Pupils will start by exploring how Rollercoasters work before delving into designing. They will learn about rollercoaster manufacturers, and the cost of rides will be discussed in a group activity before discussing the design process. Pupils become a design team to create the next unique rollercoaster design concept. Let their imagination go wild with this fun and interesting session.

Session Content

- How rollercoasters work - k'nex loop experiment.
- Where rollercoasters come from and cost.
- How rollercoasters are designed.
- Design a rollercoaster in groups and share ideas.

National Curriculum Links

- Use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups.
- Explain that unsupported objects fall towards the Earth because of the force of gravity acting between the Earth and the falling object.

Pre-visit

- Pupils can investigate how different themes are used when designing a rollercoaster (eg. Accelerator is themed on a Caterham racing car).
- Set pupils a competition to build a marble rollercoaster using cardboard tubing, masking tape and a marble.

During visit

- Investigate rollercoasters in the Park, looking at their target market, sign design, track and carriages, and theme.
- Ride each rollercoaster giving it a mark out of 10 and a reason why. Which was your favourite ride?

Post-visit

- Launch a marketing campaign for their rollercoaster, creating leaflets, posters and a 'launch event'. They could even create a TV advert using video cameras.
- Their rollercoaster could be part of a school theme park. Pupils should consider what else a park would need to be successful e.g. restaurants, gift shops, other attractions.