Year 5 Topic

Scream Machine

Roll up, roll up! We're going on a day trip to a theme park!

In this topic, we'll write poems to capture the excitement of riding a roller coaster and investigate the wonders of centripetal force. After carrying out fair tests to investigate the materials used to make roller coasters, we'll create prototype rides of our own. Let's hope we choose the right materials! In our computing work, we'll upload photographs of rides and examine online theme park maps. Then, we'll use advanced techniques and commands to search for information on the internet. In English, we'll write stories, signs and emails about theme parks and investigate forces by making a ride.

At the end of the topic, we'll write non-fiction books, using a variety of sources including online information. We'll use software to write computer programs and deliver a presentation to advertise a ride. Finally, we'll make some delicious fairground food for everyone to enjoy!

Help your child prepare for their project

In Scream Machine, the children will learn the secrets of theme park design and how their favourite rides work. Why not look at toys with moving parts at home, to see if you can find out how they work? You could also research famous theme parks around the world online. Which are the most popular rides?

What will you choose to do?

- Plan a trip to a local theme park for your family. Calculate how much it will cost, how long it will take to get there and write an itinerary for the day.
- Research the history of fairground rides, and create a PowerPoint presentation that includes information, timelines, pictures, film and sound clips.
- Make a flipbook animation of a roller coaster ride that includes a loop the loop.
- Research online to find information about roller coasters from around the world. Which is the oldest? The longest? The scariest? Record your results in a table.
- Use the web to investigate mathematical data about a range of different theme park rides. Find information such as the ride's length, g-force, type and height. Use your data to create spreadsheets or charts, then interpret and find relationships and patterns.
- Explore your home and the surrounding area to look for machines, toys and other objects that use cams, gears, levers and pulleys. Take photos and create a montage of all the different mechanisms found.
- Make a loop the loop using flexible track. Modify the track until a marble or toy car can successfully make it round the loop. Challenge other family members to get the marble or car to fly off the end and land in a pot by changing the trajectory. Keep a tally to show your success rate.
- Become a pendulum on the swings at the park. Swing as high as possible and time how long it takes for you to slow down and stop completely. Time friends and family then identify patterns in your results. Do heavier people slow down more quickly?
- Use a technical construction toy, such as Lego Technic, Meccano or Fischertechnik to make a simple crane or beam crane with pulleys and nylon twine. Use a force meter to see how much force is required to lift a mass using different numbers of pulleys.
- Research and write a biographical account of Walter Elias Disney, animator and entrepreneur. Find the location of Disney theme parks around the world.