Home Learning Challenges

Scream Machine

Here is a selection of homework challenges based on our topic this term. You may choose which tasks you complete and when.

1 House Point	2 House Points	3 House Points
Make a flipbook animation of a roller coaster ride that includes a loop the loop.	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.	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.
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.	Research the history of fairground rides, and create a PowerPoint presentation that includes information, timelines, pictures, film and sound clips.	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.
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.	Research and write a biographical account of Walter Elias Disney, animator and entrepreneur. Find the location of Disney theme parks around the world.	Create a pendulum swing. Add different weighted objects to the swing. Do heavier objects swing higher? Do heavier objects slow down more quickly? Discuss patterns.

This challenge grid runs up until just after the May half term.