

Fairgrounds Year 6 Learning Journey

Start Date:	Sunday 10 September	Unit Length:	12 weeks
	<p>Links to Host Country (Qatar)</p> <ul style="list-style-type: none"> Find out about theme parks in Qatar (including the waterpark). Research entertainment and things to do. What is the most popular form of entertainment? 	<p>During this unit our students will be:</p> <div style="display: flex; flex-direction: column; align-items: center;"> <div style="background-color: #ff69b4; padding: 5px; border-radius: 10px; margin-bottom: 10px;">Resilient</div> <div style="background-color: #8b4513; padding: 5px; border-radius: 10px;">Thinkers</div> </div>	
<p>Fairgrounds We all know that fairground rides are designed to ignite our senses, through fear, excitement and the unexpected but how does this happen? How are these rides powered in a way which enables them to speed up and slow down at just the right moments, whilst staying on a track that twists upside down? As technologists and designers, we will use the science behind the rides to create our own fairground rides and games.</p>			
<p>Entry Point For the Entry Point, children will work in groups to design and build a prototype for a ride or game that they feel would attract people in a fairground. They should justify their design to the rest of the class. Children will decide which designs would be most successful.</p>			
<p>Knowledge Harvest In their groups, children will individually draw and label a diagram to explain how their model works. They will include information about speed, acceleration and direction and also name any forces involved, if they can e.g. gravity, surface friction, air resistance (or drag).</p>			
<p>Science</p> <ul style="list-style-type: none"> We will carry out an investigation using different balls to find out about Newton's three laws. Children will carry out an experiment to find out how much force is needed for different objects. We will think about how these forces relate to fairground rides such as rollercoasters. Children will make predictions about different experiments involving forces. In groups, children will design and make their own loop the loop circuits, which will be tested using marbles. We will find out how friction affects movement and how it slows people down when using slides. Children will create models to demonstrate centrifugal and centripetal forces. We will research simple machines that use levers, pulleys and cogs/gears. We will carry out experiments to find out about magnetic forces. Children will share their knowledge of electricity and how it is used in fairgrounds. We will use different components to create electrical circuits. We will find out about the uses of light and sound at fairgrounds. 			
<p>ICT and Computing</p> <ul style="list-style-type: none"> Children will use Scratch to code a Ferris wheel that allows passengers to enter, spin around and then safely exit. Children will add control panels to their Ferris wheels to add further functions. We will look at and create flow charts for different fairground rides. 			
<p>Design, Technology and Innovation</p> <ul style="list-style-type: none"> As a class, we will play a variety of hand operated games. 			

- Children will design and create their own hand operated games.
- We will find out about different hand operated games that are found at fairgrounds.
- Children will create sketches of these games, adding detailed labels to explain how the game works.
- Children will design and create their own boats.
- As a class, we will host a boat race.

International

- We will locate different these parks around the world and look at different statistics for them.
- Children will think about the impact that these parks have on the local area.

Exit Point

For the Exit Point, Year 6 children will create a fairground exhibition with operating models of different fairground attractions. They will explain the science behind how these attractions work. There will even be typical fairground snacks.

Assessment

Science 3.12 Be able to record the method and results including tables, graphs, diagrams and/or models.

Mastering	Secure	Developing	Emerging
<p>I can:</p> <ul style="list-style-type: none"> • Create graphs to show my results and talk about which is the best. • Present my results to the rest of the class. • Talk about why it is important to record investigations carefully. 	<p>I can:</p> <ul style="list-style-type: none"> • Describe in detail all the steps in the right order that we took when we did our investigation and give enough information for someone else to be able to do the same experiment. • Talk about why it is important to make careful observations and record the information correctly. • Choose the best way to show how we did our investigation. • Choose the best way to share the information that we have collected. • Talk about why we have chosen to show the information in this way. 	<p>I can:</p> <ul style="list-style-type: none"> • Complete a given investigation template to make sure we include all the steps that we took. • Draw and label a graph to show our results. • Share our results in at least two different ways. 	<p>I can:</p> <ul style="list-style-type: none"> • Talk or write about how we did our investigation making sure that this is in the past tense.