

Teacher notes

Planning a visit

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A visit to Thorpe Park can be one of the most exciting ways in which to explore the theories of structures, mechanisms and systems and controls.

We have been working with practising teachers to devise a project that will enable students to enjoy the thrills of the Park whilst gathering useful information about one of two locations around the Park (Calypso Quay or Lost City) and applying theory that can be developed back in the classroom.

On return, students will be expected to produce a PowerPoint presentation analysing their chosen location and submit a proposal for a new ride.

Two downloadable worksheets, entitled 'Location Analysis', are provided for students to complete whilst at the Park with regards to their chosen location. The worksheets draw their attention to where classroom theories are put into action and will hopefully enable students to gain a useful insight into Design and Technology at the Park whilst not restricting their enjoyment of the day.

Two additional sheets, entitled 'G Force Briefing Sheet' and 'Design Process', explain to students what is expected of them on return.

We hope this provides you with a flexible resource that can be adapted for pupils of all abilities.

Design and Technology In Action

You can also download 'Design and Technology in Action' from this site, a classroom resource containing pupil information sheets on the application of theory through the rides, supported by relevant exercises and classroom activities.

To book a visit call our School enquiry line on **0870 400 3025**.



Using the resource

Using the Resource

Before the visit

- Distribute 'G Force Briefing Sheet', 'Design Process' sheet and 'Location Analysis' worksheets to students.
- Inform students of the requirements of the day i.e. location analysis and information gathering with relation to the after visit activity.
- Divide students into groups and assign each group one of the following areas to conduct their analysis and position their new ride:
 - Calypso Quay
 - Lost City
- A Park map can be found on Teacher information card 2 of the Design and Technology In Action resource.



During the visit

- Students should be encouraged to spend time gathering information and completing the 'Location Analysis' worksheets provided, relating to their chosen location, paying particular attention to the existing rides and the theme.
- You may also wish to suggest that students take pictures of the rides and the area for reference purposes when they are completing the after visit activity.



After the visit

- In their groups, students should be encouraged to collate the information they have gathered and as a team generate a design proposal for a new ride.
- At the end of the task, students should produce a PowerPoint presentation of their collective location analysis and ride design proposal providing justification for their choices.
- Presentations should incorporate visual representations of their ride and where possible drawing and modelling ideas in 2D/3D, e.g. passenger vehicle, entrance station.
- The task can take as much time as you deem necessary and can be extended to challenge more able students.

We hope you enjoy your visit. Should you need any further information on planning your visit please call our School enquiry line on: **0870 400 3025**.

G Force briefing sheet 1

Thorpe Park wants to introduce a new ride/attraction, aimed at your age group, located in either Calypso Quay or Lost City.

You have been recruited as part of **G Force** to complete an analysis of one of these locations, your teacher will provide you with worksheets to complete whilst at the Park and to submit a design proposal for a new ride in your chosen location.

Before the trip

In your groups, choose the location in which you will conduct your analysis and position your new ride.

During the trip

Gather as much information as possible relating to your chosen location.

After the trip

Gather all your group information and produce a PowerPoint presentation analysing your chosen location and detailing your design proposal.

An outline of the **Design process** has been provided to guide you in your thinking.

Remember to keep a record of all design ideas and developments with justifications for changes in your **design folio**.



Colossus

Lost City

Nemesis Inferno

Calypso Quay



Pupil sheet

Design process

Design Brief

- Write a brief summary of the problem you are trying to solve.

Research and Investigation

- Your trip to the Park is the perfect opportunity to gather as much information as possible.
- Your teacher will provide you with information gathering sheets to help you complete your location analysis and inform your ride proposal.

Design Specification

- Make a list detailing what your ride must do, what it must look like and any other requirements.

Initial Ideas

- Brainstorming with your project team is always a good way to generate lots of ideas.

Development

- Develop more formal detailed drawings of your idea with annotations (notes to explain things that might not be obvious to anyone else).
- Try to include specific details regarding:
 - Structure of your ride.
 - Motion and the mechanisms used to create it.
 - Special effects – will your ride have any effects and if so how will they operate?
 - The passenger vehicle.
 - The entrance station.
- You could also model or provide 2D and/or 3D drawings for parts of your ride so that it is easier for others to understand.

Commercial Issues

- **Theme** – Will the theme of your ride fit into the location?
- **Name and Logo** – You might want to use the computer to help you.
- **Promotion** – You must ensure the promotional material (e.g. leaflets and posters) is as colourful as possible, will appeal to your target age group and continues the theme of the ride.

**If you have covered all of the elements above your design proposal is ready.
Good luck!**



Location analysis 1

Name of Area:

Name of Existing Rides:

General Location Theme

How is the theme made consistent?

Try and write down some key words that describe the theme of the area.

What kind of 'feel' do you think the designers at Thorpe Park are trying to create?

Existing Rides

Look at the types of rides in your chosen location. Think about what they do and feel like.

Structures

Look at the structures of the rides. Can you find any examples of triangulation?
Write down the name of the ride and try to sketch the section.



Location analysis 2

Existing Rides cont.

Try and find examples of where the following forces might be acting on the rides. Write down the name of the ride and try and sketch the section.

Compression	Tension	Torsion	Shear	Bending
				

Mechanisms

Look at the motion the rides exhibit.

What motions can you identify? Try and work out how the motion is created in each case.

Theming

Look at the theming of the individual rides. Try and describe the theming of some of the rides.

How does the theming 'fit' with the general theme of the area?

Look at the passenger vehicles for each of the rides – are they themed?

Remember it is important to gather as much information as possible. You can use the reverse of these sheets to make observations or sketches you think might be useful in the completion of your project.

