

Learning Outcomes:

Nature of Science	Students should be able to organise and communicate their research and investigative findings in a variety of ways fit for purpose and audience, using relevant scientific terminology and representations
Physical World	Students should be able to design, build, and test a device that transforms energy from one form to another in order to perform a function; describe the energy changes and ways of improving efficiency

Investigation: Science Class Trip to Funderland at the RDS Dublin

Your science class has finished learning about potential energy. You now know that as the distance between interacting objects changes, different amounts of potential energy are stored in the system. To test your knowledge of potential energy, your teacher is taking you to Funderland at the RDS Dublin for a "Physics Day" event. You are to analyse four different attractions explaining where potential energy is the highest and where it is the lowest. Then you will summarise your analysis in words and illustrations.



1. Review potential energy.
2. Research the rides at Funderland
3. Decide on four attractions to analyse. The attractions can be rides or carnival games.
4. Analyse the attractions you chose.
5. Remember to look for the areas where the potential energy is the greatest and where it is the lowest.

What factors affects the amount of potential energy in the system?

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For each attraction, complete the following:

- Write one paragraph describing the potential energy in the attraction. For example, if you chose a roller coaster, you might describe the different areas of potential energy as the ride moves along the track. Be sure to include all areas where potential energy is present.

- Create an illustration to model the potential energy of the attraction. Label all areas of potential energy.

- If time allows, trade your analysis with another student to see if you agree with his or her description and illustration models. Draw the other students analysis here.

- Discuss with the student any discrepancies that you find in his or her models. Record thoughts from your discussion here.

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