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Press

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St Thomas More RC College win the Siemens Rollercoaster Challenge

- School beats seven others and wins £250 for STEM projects
- Rollercoaster Challenge puts STEM in action in schools across Manchester

Manchester's St Thomas More RC College has won the Siemens Rollercoaster Challenge beating seven other schools across Manchester with its 'Stranger Nights' attraction in the final held at the Great Science Share at the University of Manchester, this week.

The Rollercoaster Challenge is aimed at school pupils aged between 10 and 14 and asks them to design a rollercoaster using a K'NEX kit. Fourteen teams from eight schools entered in 2018.

It is designed to help them understand the practical aspects of Science, Technology, Engineering and Maths (STEM), with the winning team being awarded £250 towards STEM projects for their school.

The teams have three months to design and build their rollercoaster, creating a portfolio and a video to showcase the project. In addition they must show the processes they undertook to design and build, as well as any problems they encountered and how they overcame them.

Teams must calculate the speed and G-Force of the rollercoaster. They also need to calculate how much it would cost to build in real life, and how much they would need to charge per ride to make a profit.

The winning team demonstrated excellent skills in many areas. The judges thought they had worked well together as a team, produced a great design and incorporated the challenge requirements of thrill and design, all wrapped around solid maths, science and engineering skills.

Jennifer Barriball, Project Manager Quality and Business Excellence, Siemens Energy Management, said: "Each year I am surprised with the ingenuity of the rollercoaster projects submitted to the competition. The winning team clearly applied an engineering mindset, providing creative solutions to overcome the problems they encountered and in the process came up with a design which was both innovative and exciting. We hope this exercise has shown all the participants that STEM underpins jobs in a diverse set of industries."

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Christopher Payne, Science Teacher at St Thomas More RC College, said: "We're delighted to have won the Siemens Rollercoaster Challenge. This has been a fantastic project, which has utilised and further developed the ingenuity of our pupils. As well as providing an exciting opportunity to put STEM into practice, it has also helped our pupils to improve their problem solving and negotiation skills, something which will become all the more important as they progress through school and into the workplace. I'd encourage all schools to enter the competition - we'll definitely be entering for our third successive year in 2019!"

Siemens and Engineering UK judge the final portfolios and videos to make their decision.

Mark Wood from Engineering UK was part of the judging panel, he said: "Thomas More's team working skills shone through, overcoming their time issues and team changes by merging ideas and designs but ensuring both concepts were incorporated and all parties were happy. The theme was current and well researched with a wonderful blend of thrill and design which was flawlessly linked. The portfolio was well put together and the team displayed good presentation techniques at the stand, particularly when answering questions."

This year SeaWorld Parks & Entertainment's Mike Denninger, who oversees attraction development for all 12 parks across the US, viewed some of the teams submissions and was a special 'virtual' guest at the event.

Mike Denninger, Senior Vice President, Attractions, SeaWorld Parks & Entertainment, said: "Rollercoaster design is a perfect match of using the STEM subjects with something that excites you in the business world. Using these core disciplines not only serves the design from a build perspective, but it can also enhance the ride experience. I am delighted that so many took part in the Siemens Rollercoaster Challenge and I hope the teams enjoyed working on their designs as much as I did viewing them. Congratulations to all who took part and hope to see you at SeaWorld soon on one of our world-class rollercoasters!"

In addition to the overall winner, six other category winners were awarded £50 towards STEM projects for their school.

Team choice: Alice in Wonderland - St Peters RC High School

Design: Black Panther - St Peters RC High School Innovation: A Pharo-old job - Stockport Academy G-force: Manchester Creative Media Academy

Safety: Stranger Nights, St Thomas More RC High School

Special additional judges award - for a team that demonstrated exceptional teamwork:

Dancing Queens - Stretford High School

The final took place at the University of Manchester as part of the Great Science Share, a day long annual event for 7-9 year olds where schools can share the best science projects they have worked on. Around 500 children attended the event, with satellite events taking place across the country.

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