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Hovercraft Challenge - 'Girls in Aerospace' and 'Boys in Engineering'

In the past five years, over 3000 pupils have participated in more than 50 'Hovercraft Challenge' events that have taken place across the North West region, which include events held at The University of Manchester and in Merseyside, Lancashire, Cumbria and Cheshire. The pupils work in teams to build an operational hovercraft in a day and learn about careers in Science and Engineering as well as the opportunities afforded by Higher Education. More than 40 'Girls in Aerospace' events have taken place where girls have also learnt that it is not only men who can be scientists and engineers. The events have been delivered by the Undergraduate Recruitment and Widening Participation team with assistance from the Faculty of Engineering and Physical Sciences at The University of Manchester.

The 'Hovercraft Challenge' provides an exciting, hands-on experience combining teambuilding and technical problem solving and is designed to inspire and encourage pupils to consider a career in Science or Engineering. The pupils are challenged to design and make a working hovercraft, which will support the weight of one person as the hovercraft is moved across the floor. The events are planned for up to 80 pupils – for example, ten Year 10 girls from eight schools. These events are aimed at pupils with an interest in Science and Technology and the ability to benefit from Higher Education. The 'Hovercraft Challenge' events are used to support pupils participating in a number of programmes across the North West including 'Gifted and Talented' and 'Aimhigher.'

During the 'Hovercraft Challenge' events, as the pupils build and test their hovercraft, they are supported by ambassadors from universities and sometimes local companies. These ambassadors assist the pupils as well as being role models; the pupils can use the opportunity to ask questions about science and engineering as well as university life. Some of the ambassadors also give short presentations to the whole group on how they became interested in science or engineering and the benefits of Higher Education.



Each year it is planned to hold about twelve events across the North West with at least four for the schools in the Greater Manchester area. The 'Hovercraft Challenge' event has been held at a number of different venues around the North West. One of the venues for the 'Girls in Aerospace –



Hovercraft Challenge' has been the Great Hall in the Sackville Street Building at the University of Manchester, where the hall has been transformed into a workshop, test-track and runway on which the girls built, tested and 'flew' their hovercraft.

The organization and administration of the event is managed by the Undergraduate Recruitment and Widening Participation team at The University of Manchester. All the necessary paperwork, including information, booking forms, maps, risk assessment, parent information letter and parent permission forms will be provided to the school co-ordinator.

The comments below are representative of those made by pupils and teachers who participated in previous 'Girls in Aerospace' events:

"I liked the teamwork and making friends with new people. I also worked with people from my school that I never would have worked with." – Pupil, Glenburn Sports College, Skelmersdale.

"It's the best thing I have ever done and made, I would love to do it again." – Pupil, Notre Dame Catholic College, Liverpool.

"I believe this type of event, just for girls is fantastic - in the classroom, practical science tasks are dominated by the boys, mixed situations frequently produce stronger stereotypes." – Teacher, Stainburn School and Science College, Workington.

"An excellent event that both staff and pupils enjoyed. I would love to return next year with a new group." – Teacher, Westleigh High School, Leigh.



Analysis of the evaluation forms completed by pupils after the fifteen events in 2007-08 showed the following information:

82.6 % Strongly Agreed/Agreed "that they had learnt something new about Engineers and Engineering."

56.2 % Strongly Agreed/Agreed "that they had found out something about University that they did not know before."

64.9 % Strongly Agreed/Agreed "that the event had made them more likely to think about going on to Higher Education or University."

34.6 % Strongly Agreed/Agreed "that they are considering a career in Science, Engineering or Technology."

If you have any questions or require any further information please contact me by telephone or email. I look forward to meeting you at one of the 'Hovercraft Challenge' events in the near future.

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