

Working in STEM: Design and Build a Wind Farm in Virtual Reality

3DW would like to invite pupils from schools across the North West to participate in their interactive workshop. The workshop aims to boost young people's confidence with a cross-over Science, Technology, Engineering and Mathematics (STEM) skills, careers and a variety of employability skills!

Key Details:

- **Cost:** For schools, FREE (funding provided by the Walney Extension Community Fund)
- **Participants:** maximum of 30 Year 8 pupils
- **Date:** A day during March-July that is suitable for the school
- **Time required:** One full school day to run workshop and a few emails prior to workshop to organise logistics
- **Staff:** one teacher (or can have multiple throughout the day if it's more convenient for the school) to supervise/manage pupils behaviour
- **Equipment & materials:** 3DW will provide all materials and computer equipment for the session. All we will need is a room with six tables for six groups of five pupils and access to a projector or screen

Please check out our [video of the onshore wind version](#) and our [detailed report on the offshore wind](#) version of this workshop for more visual information.



Workshop Overview:

- In small teams, pupils will be experiencing what it's like to work on a wind farm development for the day. The teams will create their own 'company' with each member having a specific role such as Project Manager, Financial Manager, Technical Adviser or Public Relations (PR) Consultant. They will have to plan and design a wind farm layout considering real-life constraints and obstacles.
- The students start with the exciting task of creating a wind farm design taking into account the wind turbine size, power output and visual impact. Pupils will start to plan their design using a 2D map and then develop it using 3DW's own bespoke software. As they are working on their design, they will also have to plan out a cable route to connect their wind farm to the National Grid.
- Once they have a design they are happy with, pupils will have to look at the costs of building and running a wind farm and using their numeracy skills, work out if their project is financially viable. Interlinked with these tasks is an opportunity to view their designs through an Oculus Rift virtual reality headset and have an immersive experience of their creations.
- Finally they compile everything they have worked on into a presentation to pitch their design against the other companies, to the general public and stakeholders. There is a prize for the company with the best overall design and the workshop ends with a reflective exercise to assist pupils in developing their growth mind-set.
- Not only will pupils develop their skills in a crossover of STEM subjects, they will develop other skills such as leadership, collaboration, problem-solving and presentation skills.

Thank you for your time, we look forward to working with you 😊

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