

BRING IT ON Company Challenge - Sofia

What is the Engineering Challenge?

Once constructed, wind turbines need regular visits for maintenance and upgrades. All of this is done by engineers who travel out to sea and access the turbines by boat. The problem is that the turbines are in the middle of the North Sea and the waves on most days can be very large. This means that the boat and the doorway to the turbine can often be at quite different heights as waves move backwards and forwards. Can the children design a system that allows the engineer to travel safely from the boat to the turbine and back even in a rising and falling sea?

Ideas

This can be done as simply as a 'design planner' type activity on a piece of paper to highlight an aspect of offshore engineering. More interestingly the children could then be asked to develop a working prototype to develop their design and technology skills (measuring, cutting, choosing materials etc). The situation can be recreated in a number of ways such as using a toy boat (someone can be the wave and make it move up and down!) And identifying a point on a wall, a table leg, a lego tower or whatever. Some solutions may require an actual connection in some way, others may focus on how the engineer gets from A to B safely without an actual link between boat and turbine. The opportunity for pupils to communicate their project idea as a short presentation, film or even a flyer is also an essential element of developing any new engineering idea.

What is Sofia?



Sofia is the name for a wind farm sited 200km off the NE coast on a shallow area of the seabed known as Dogger Bank. It will make up about a quarter of the largest wind farm on Earth. It is due to be fully operational by 2026.

Curriculum Links

Design and Technology - the challenge sits very much within the main themes of the D&T curriculum requirements. Teachers may focus on specific elements depending on pupil age and experience

Useful Links

Sofia website for info about the project: sofiawindfarm.com
Great video about a Turbine engineer: <https://www.youtube.com/watch?v=vfUhBKZR4sU&t=26s>

If you have any questions please contact:
andrew@sparkteesvalley.com



www.bringitonne.co.uk

