



SCHOOL COMPETITION

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Info page for schools

What is it?

A competition for schools, aimed at Years 6 – 10 and focused on Engineering Net Zero.

The UK government has passed a law requiring the UK to reach net zero emissions of greenhouse gases by 2050. To ensure that this is reached by 2050, we believe that there is an element of education required, as the current students will be the future leaders who will help to create and reach this target. As industry leaders in the Energy sector, we would like to facilitate and support learning in schools on all topics related to the Net Zero target. By getting involved in this competition, we hope that students will learn what difference they can make and how easily it can be achieved.

Why do we want to do this?

- Improve the knowledge of teachers and students on the government targets, the impact this will have and is having, on society, and the role that today's students will have in ensuring these targets are met in the future.
- Engage a younger generation on all aspects of Net Zero and, in particular, the important role that nuclear will play in delivering this.
- Encourage students to think about, and make, small changes to their lives, which will have an over-all impact on the Net Zero target.
- Create a fun and applicable challenge to help get wider engagement beyond just STEM students.
- Encourage pupils to consider careers in engineering.

The Competition

The Task: Each school team or individual is to propose and present an idea on how their school can contribute to achieving Net Zero. This could relate to energy, recycling, sustainability, reducing emissions, or any other wider topic which contributes to the government target of Net Zero by 2050.

- Pupils to work in teams of up to 4, or individually.
- One idea per team or individual is to be submitted for judging.
- Atkins will provide support to teachers and pupils throughout the competition, including supporting activities, presentations and virtual talks.
- Idea is to be presented in either poster or video format.
 - Posters to be of approximately A0 size. Maximum word count – 1000.
 - Videos of no longer than 5 minutes in length.
 - Props, models etc can also be used, but should be easily transportable for judging.
- Submissions will be shortlisted based on the judging criteria below and top submissions will be presented to an Atkins' panel in a 'Dragon's Den'-style pitch.
- The winning teams will be awarded with prizes for their school.

Judging Criteria and Process

Judging will be completed with consideration of the following criteria:

- Originality of idea;
- Impact to the school and over-all Net Zero;
- Consideration of all aspects of the solution, including (but not limited to) cost, ease of implementation, resources, time.

Note: no preference will be given to the format of the submission (poster or video).

Process:

- Entry forms are available through your Atkins sponsor.
- Submissions will be shortlisted in two age group categories: Years 6 – 8, and Years 9 – 10.
- The top 3 teams from each age group will be invited to present to a panel of Atkins industry experts.
- The winning team / individual for each age group will be selected from this shortlisted group, to be judged based on the presentation pitch of their idea.
- The winning team / individual for each age group will receive a prize, as well as a prize for the whole class or club.
- All submissions will be automatically entered for a single spot prize (no age group differentiation). This spot prize will be donated to the entire school.

What you will be provided with

- An Atkins sponsor to support your school and teams. They'll be there to answer your questions, help with presentations, preparation and supervision of activities (virtual or in person, depending on circumstances).
- Activity sheets containing approximately 1-hour long exercises, linked to the key stage curriculum
 - Calculation exercises;
 - Practical / experimental exercises;
 - Self-contained with all required information provided within each activity sheet.
- General teaching and presentation material on the Energy industry and Net Zero as it relates to energy.
- Ideas for other activities which would complement the presentation material.

Timelines



Prizes

The competition is split into two year group categories; Years 7-8 and Years 9-10. The following prizes will be awarded in each year group:

- 1st Prize: A trip for the winning team to the nearest net zero supporting power station and £200 for the school.
- 2nd Prize: Demonstration of engineering drone technology for the winning team and £100 for the school

Resources

Worksheets available on [Time to step up! - Engineering Net Zero](#)

Activity sheet topics	Description, resources required and time to complete	Link to key stage curriculum
Energy supply	<ul style="list-style-type: none"> • Asks children to find out who supplies energy to their house and how that company generates electricity. • Est. time to complete: 30 minutes • Requires internet access 	KS2: Humans and the environment KS3: Physics, Energy
Energy demand	<ul style="list-style-type: none"> • Asks children to record their electricity meter readings for 2 weeks in a row, and attempt to reduce their electricity consumption in the second week. • Est. time to complete: 10 minutes (over 2 weeks) • Access to electricity meter required. 	KS2: Humans and the environment KS3: Physics, Energy



Carbon Footprint	<ul style="list-style-type: none"> Asks children to complete questionnaire to calculate their carbon footprint, and then answer some questions about the result. Est. time to complete: 15 minutes Requires internet access 	KS2: Humans and the environment
Energy Sources	<ul style="list-style-type: none"> Students create a poster about one energy generation method (e.g. Solar). Estimated 2-3 hours to complete. May require internet access for research / creating poster. 	KS2: Humans and the environment KS3: Physics, Energy
Energy Security	<ul style="list-style-type: none"> Students are given simple supply and demand graphs. Must answer a series of questions based on these. Estimated 20 minutes to complete. Bonus exercise uses Energy Mixer (requires internet) - 30 mins 	KS2: Humans and the environment KS3: Physics, Energy
Achieving Net Zero	<p>Includes three activities:</p> <ul style="list-style-type: none"> Research new technology (e.g. SMRs, batteries) Use electricity map and think about results Complete challenges on Mackay Energy Calculator <p>Estimated 1 hour to complete. Requires internet connection.</p>	KS2: Humans and the environment KS3: Physics, Energy

Interested?

- Register at: ENZschools@atkinsglobal.com
- And we'll email you with the next steps!