

## **The activity day**

Earth Future: A STEM enrichment day. We aim to assure pupils that engineering is a credible career choice; a choice full of invention, reward and purpose.

The activity day encourages pupils to discover how climate change challenges could affect their world in the future and to come up with wacky ideas to meet the associated challenges. They explore their ideas and are advised by engineering mentors on feasibility, business criteria and sustainability; expert speakers will present and set the scene.

We can appeal to those pupils who have a passion for engineering but never realised what it was! We need to portray the engineering profession as a proficient and reputable and we need to have fun.

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## Questions and Answers

What is it?

*A brief summary, what is it, what does it do, why is it important, what need is it addressing*

Earth Future is an off timetable STEM enrichment activity day; it is Primary school oriented and is designed to identify climate change challenges and engineering solutions. The climate change specifics are identified as future issues local to the school and the engineering solutions encouraged to be as creative as possible.

This initiative is aimed at Year 6 pupils and is designed to cater for Key Stage 2 of the National Curriculum. It aims to engage pupils into considering engineering careers at an early age, to further educate on climate change and to attract wider participation in STEM activities.

What are the actual tasks?

Pupils devise a plan for, and a presentation upon engineering solutions to the climate change challenges we face. Some of the challenges will be highlighted by climate change speaker; some solutions will be highlighted by engineering speaker. The presentations will be watched by peers and marked by mentors and / or speakers.

What will be the outputs (e.g., presentations, reports, materials, etc.)

- Presentation from Climate change experts
- Presentation from Engineering Experts
- Pupils design engineering solutions to climate change challenges and produce a presentation which will be marked by engineering mentors
- Materials consideration is minimal. Marker pens, A1 paper, possible use of construction materials such as card and bendy straws is also useful. Where possible schools will have PowerPoint facilities for the presentation.

How long will it take?

One school day. Ideally with a brief introductory presentation approx. 1 week prior to the day.

How many people involved/what expertise is each bringing to the project?

- |                            |   |
|----------------------------|---|
| - Climate change Presenter | Highlights the climate change challenges we all face (specifically locally)       |
| - Engineering Presenter    | Highlights the ways in which engineering may combat the above                     |
| - Engineering mentors      | Guidance on project material and proof that engineering is a credible career path |
| - Compere                  | Introductory session prior to activity day (1 hour)                               |

What evidence do you have that the project is a good idea?

Previous successful 'Our World in 2050' events, that organised by J.Stent and C.Magras. Previous successful transition of the first Earth Future day.

What other work is out there that might be relevant (sometimes it's good if you can show links with other work, and with other priorities, or to show how a need has not been addressed previously)

The day is based on a previously proven activity day 'Our World in 2050' which was organised by the IMechE. It had the same aims but Secondary school oriented.

What benefit will it bring?

Pupils will learn about climate change challenges locally and about what this might mean in the near future. EF explains that these challenges will affect their lives and that they may be responsible for problem solving through engineering careers or similar. They will have a chance to benefit from the experience and expertise of engineering mentors who will advise on the feasibility of engineering solutions to the challenges. We hope to highlight climate change issues and to promote careers that can help.

Is it sustainable? Are you looking to make it sustainable (i.e., is it something that could stand on its own feet after a while? Are you working to raise the capacity of others?)

Sustainability is the ultimate aim. It is believed that through a website and suitable funding the model can be made sustainable and capable of evolution thus benefiting schools and pupils for years to come. In order to host an Earth Future event schools will need access to the following aspects: (It is believed that these can be remotely maintained through a website)

- Access to downloadable data book (region specific)
- Access to a pool of climate change speakers
- Access to a pool of engineering speakers
- Access to a pool of engineering mentors
- Access to a pool of comperes

Additional considerations:

- Ability to advertise an event and to visit those being completed nearby
- Ability for speakers to be connected to liaise on material
- KS2 compliant