**Virtual Faraday Challenge**

**How to enter (and win!)**

**What you need to do**

Your brief is to design a product which helps Network Rail minimise their impact on the environment. Remember, we don’t want you design a station, just a small part of it or a product they could use to help.

You will need to do some research around the type of waste you want to manage and think about how it could be reduced, reused, or recycled or disposed of sustainably.

This is a virtual challenge so you only need to send us your design but if you want to build a model, that’s great, we would love to see it.

**Who can enter?**

You can choose which category to enter your design in. Choose from:

* Secondary group entry (aged 11 to 15)
* Secondary individual entry (aged 11 to 15)
* Primary group entry (aged 7 to 11)
* Primary individual entry (aged 7 to 11)
* Family entry (must be a maximum of 6 people and include no more than two adults and at least one person aged 7 to 15)

**How to enter**

When you are ready to submit your design you **MUST** put it on a PowerPoint which must follow the following guidance. Entries on other formats will not be marked.

* Must be no more than 10 slides, including the title slide.
* The font used must be no smaller than Ariel 20 point.
* Can include video(s) no longer than 2 minutes in total and photographs, where relevant.
* Must be all your own work.
* Must include a title page which has the following information:
* Category you are submitting in (see above)
* Team name (which will be used if your entry appears on the IET Faraday website)
* Name(s) of the entrant(s) (which are for internal use only and will not appear on any public website or social media site)
* Your location (Town/city, country)
* Where you heard about the Virtual Faraday Challenge
* Adult contact email. Please ensure this is the email address of your teacher, parent or carer and that they are aware you are using this to submit your entry.

**How to win**

We will only be able to judge your idea on what you present to us so you will need to think carefully about how you can communicate your ideas to us clearly and concisely. We will use your submission to judge the extent to which:

* You have followed the design brief and designed a single product. ***(3 marks)***
* Your product provides an innovative and realistic solution to help Network Rail manage waste and minimize thier impact on the environment. ***(8 marks)***
* You demonstrate that you understand some of the impacts on the environment of the waste you are trying to manage ***(8 marks)***
* You have provided detailed drawings of your design showing how it would be engineered. (Short videos can be included in the PowerPoint but these must not be the only way you show your design.) ***(10 marks)***
* You give details of the materials you will use to construct your product and the reasons you have chosen these, including, if relevant, details of how your product will be powered. ***(8 marks)***
* You explain how your product would be used to manage waste and protect the environment. ***(8 marks)***
* Your submission follows all the requirements on the ‘How to enter’ section of this guidance. ***(5 marks)***

**Good luck engineers!**