

Young Engineers Award

TEACHERS HOW-TO GUIDE

Welcome teachers! We are delighted you have signed up to enter this competition. We can't wait to see what great ideas your class come up with and to find the brightest young engineers in the country.

This is a project-style competition. You will be asked to divide your class into teams of 5 or 6. Each team will come up with a project idea by identifying something they would like to improve in their community.

WHAT THE TEAMS HAVE TO DO

Each team is given a Project Book to fill in. This is available to **download on the website** or on the teachers **STEPS Account**. The Project Book is made up of 3 short worksheets (Think, Draw, Evaluate), corresponding to Steps 1, 2 and 5 below. The teams will be judged solely on their Project Book entry.

 45MINS	STEP 1: THINK Engineering Personality Quiz Worksheet 1	 45MINS	STEP 4: TALK Present the project
 45MINS	STEP 2: DRAW Worksheet 2	 45MINS	STEP 5: EVALUATE Worksheet 3 Congratulations Quiz
 45MINS	STEP 3: BUILD Make the prototype		CONGRATULATIONS! You have finished! TIME TO SUBMIT!

SUGGESTED LESSON PLANS

Teachers are absolutely free to come up with their own method of guiding the teams through the competition and filling out the worksheets in the Project Book. However, to make it easier, we, at STEPS, have designed suggested lesson plans to guide you through the process. There are 5 lesson plans - one for each step (above). The lesson plans are available to **download on the STEPS website** and on your **STEPS Account**.

WANT MORE? THE TEACHERS GUIDE

The Teachers Guide is comprehensive reference document if you are looking for more in-depth explanation or some additional activities. It is not designed to be read from back to front - it is simply there to support you if you need it. In fact you may not need to use it at all. It has information on engineering in general, the worksheets and other FAQ's that might be helpful. You can download it **on the website** or on **your STEPS Account**.

FREQUENTLY ASKED QUESTIONS

1

WHAT IF A QUESTION ISN'T CLEAR?

Email steps@engineersireland.ie if you have queries about the questions.

2

WHAT ARE THE QUIZZES?

The quizzes (the Engineering Personality Quiz and the Congratulations Quiz) are games to introduce and summarise the student's engineering experience. They are fun for the students and they help us, at Engineers Ireland, understand how the students engaged with engineering.

3

WHO JUDGES THE COMPETITION?

A panel of STEPS Volunteer Engineers judges the competition.

4

WHAT IS THE DEADLINE FOR ENTRY??

Entries must be submitted and received by midnight 14th December 2018.

5

WHEN ARE THE RESULTS ANNOUNCED?

Results will be announced on Thursday 7th March during Engineers week.

6

DO YOU HAVE A RECOMMENDED TIMELINE?

Yes! We recommend that the teams have completed Worksheet 1 & 2, and have built their prototype by 16th November. If you have been offered a visit from a STEPS Volunteer Engineer, your class must have prepared a presentation (5mins) on their projects in advance of the visit.

7

WHAT MATERIALS WILL I NEED?

The projects will be judged solely on the 3 worksheets submitted. For these you will need only pens and an imagination. However, we strongly recommend that the teams attempt to build a prototype and either attach photographs of the prototype in the final report or draw a picture of themselves building the prototype. We recommend that the prototype is built with materials that are readily available: glue/paper/string from school supplies and recycled materials collected at home. However, it is entirely up to you the teacher or the students how they would like to represent their designs physically.

8

HOW TO SUBMIT

To enter the competition you need to submit the completed Project Book and the quiz sheets by midnight 14th December. (Please note: The competition will be judged on the Project Book only.)

You can enter online, on your STEPS Account (preferred) or by post or email. See details below:

ONLINE

Scan (or photograph) each page of the Project Books and quizzes. Upload these to your STEPS Account (steps.smapply.io).

POST

You can post the entries to STEPS at Engineers Ireland, 22 Clyde Road, Ballsbridge, D4..

EMAIL

You can scan (or photograph) your entries and email them to steps@engineersireland.ie



9

WHAT IF I DON'T HAVE ACCESS TO A SCANNER?

No problem. Send an email explaining the issue to steps@engineersireland.ie.

10

HOW DO I REGISTER FOR A VOLUNTEER ENGINEER?

On Page 3 of the online application Form you will be asked to tick a box indicating you would like a visit. Unfortunately, we cannot guarantee a visit for all schools, as we have limited numbers of volunteer engineers.

11

WHAT IF I CANT GET A STEPS VOLUNTEER ENGINEER?

No problem at all. We have 2 live webinars scheduled for 15th November and 4th December, where engineer volunteers will be available to answer any questions and engage with your class. However, the award is designed so that there is no need for any input from an engineer at all. The projects are student led, and as such the teacher is simply required to facilitate, not instruct. The Teachers Pack is comprehensive and gives lots of advice and scripting on how to guide the teams. We also advise teachers to ask local engineering firms if they can visit, or parent engineers in the school.

12

HELP! I WANT TO DO IT - BUT I DONT KNOW ENOUGH ABOUT ENGINEERING

Don't worry! We have lots of helpful guidance on how to facilitate the STEPS Young Engineers Award in the Teachers Pack, including a sample project and suggested lesson plans. It is your students that do the work - not you!

Good Luck! #YEA