

Guidance Notes for SFI Badge of Excellence for STEM Awareness

This year Science Foundation Ireland will continue a pilot of a third level of achievement for the SFI Discover Science and Maths Awards as follows:

- ✓ **Level 1** Certificate of STEM
- ✓ **Level 2** Plaque of STEM
- ✓ **Level 3** Badge of Excellence for STEM Awareness

The Badge of Excellence for STEM Awareness is to acknowledge schools that have achieved a Plaque of STEM and have also demonstrated excellence in their efforts to raise awareness of and excitement about STEM among the following groups:

- | | | |
|-----------|-------------|--------------------------|
| 1. Pupils | 2. Teachers | 3. Parents and Guardians |
|-----------|-------------|--------------------------|

What do we mean by STEM?

The STEM Education Policy Statement reflects how STEM is multi-faceted and goes well beyond the main STEM disciplines of Science, Technology, Engineering and Maths. It allows students to learn and apply content, practices and skills of the STEM disciplines to situations they encounter in their everyday lives to develop STEM literate students.

STEM in Primary Schools

In primary school, children experience STEM through subject areas such as Science, Maths and Design and Make. STEM education involves a **cross-disciplinary approach** that builds on the understanding developed in Science and Maths and can be integrated across a range of subjects.

What are the STEM Skills?

STEM education focuses on developing a range of STEM skills that are essential for living and working in today's world. Including:



What do we mean by STEM Awareness?

The focus of the Badge of Excellence is on raising awareness and excitement among students, teachers, parents and members of the public, of the role and value of STEM in everyday life and its application to real-world problem solving.

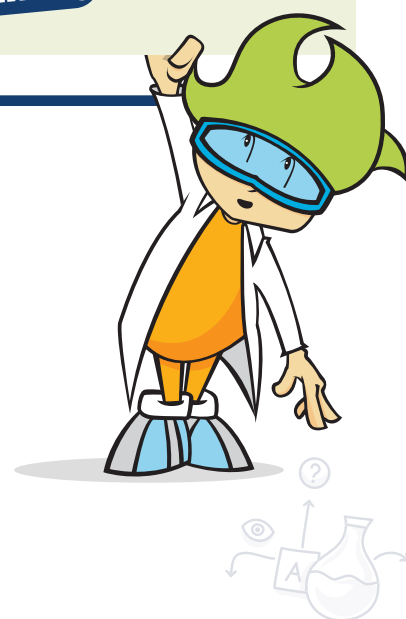
Who can apply?

To be eligible to apply for a Badge of Excellence for STEM Awareness the school must have achieved a plaque of STEM at least once previously.

How do you apply?

Through the online application system (SESAME) begin an application for a Plaque of STEM. On the first page, if you indicate that your school has previously achieved a plaque of STEM, a question will appear asking whether you want to participate in a pilot for the Badge of Excellence.

Please note that only 30 schools will be selected to participate in this pilot on a first come first served basis, and SFI will notify you if your school has been selected. If selected, two additional tabs will appear on your application form and SFI will provide you with further details and support. If not, please continue to complete your plaque application as normal.



What do you need to do?



For the plaque of STEM, you have told us about what you've done, for the badge we want you to show us what has changed and improved for pupils, teachers and parents i.e. the impact of what you have done.

To achieve the Badge of Excellence for STEM Awareness applicants will:

- 1 Complete the pre-Badge online form** outlining the outcome(s) relating to raising STEM Awareness your school would like to achieve and why. The deadline for submission of this element is Friday 26th February 2021.
- 2 Complete steps 1-5 in the same way as you would do if compiling your Log of Evidence** (for your Plaque of STEM).
- 3 Engage with the SFI facilitator assigned to your school** to support you in your application; schools that do this are far more likely to be successful.
- 4 Complete the full Badge form** outlining how your STEM work contributed to achieving your selected outcome(s) relating to raising STEM Awareness and what has changed and improved for pupils, teachers and parents as a result. This can be in the form of a powerpoint with **written reflections/quotes and photos, or a video of feedback** on what has changed or improved for them as a result of the work undertaken to achieve the outcomes described in your application form.

For example:

- ▶ What are pupils able to do now that they were not able to do before? How have STEM skills improved and been applied across the curriculum and in real life?
- ▶ What has changed for teachers? E.g. STEM teaching methods, teacher confidence, enthusiasm for STEM learning, increased collegial co-operation.
- ▶ What has changed for parents? E.g. More parental involvement in STEM learning, more enthusiasm for STEM learning, greater understanding of the relevance of STEM in real world context and/or possible STEM career pathways for their children.

Feedback and reflections can be gathered for teachers and pupils by using a series of questions in surveys or interviews (written, recorded or filmed), or at open days or other STEM showcases in the school.

What is an outcome relating to raising STEM Awareness?

To put it simply, an outcome is the result of an action i.e. what has improved and for whom as a result of what you have done.

In the case of the Badge of Excellence, we want you to select at least one outcome that will raise STEM awareness for **each of the three target groups:**

- 1. Pupils**
- 2. Teachers**
- 3. Parents and Guardians**



Then tell us what you did and how it contributed to an increase in STEM awareness and the achievement of your selected outcomes.

Selecting outcome(s)

Outcomes will be individual to each school and can relate to for example; developing children's STEM skills (curiosity, creativity, collaboration, communication and critical thinking skills); enhancing informal STEM learning in different contexts, or you may choose to focus on a enhancing a specific area like ICT or coding, more inquiry-based learning or promoting STEM to girls.

Here are some tips for selecting outcomes:

- ▶ Have you identified areas of STEM teaching and learning that the school would like to improve? Consider doing some research (surveys, focus groups) to establish a baseline of where you are now and what you want to improve.
- ▶ Now consider what outcomes you would like to achieve to address the needs you've identified.
- ▶ Make and implement a plan to achieve the outcomes.
- ▶ Gather reflections or feedback from pupils, teachers and parents about what has changed or improved as a result of the work you've done.

You can refer to the standards in the "**Looking at Our School 2016: A Quality Framework for Primary Schools**" or the **STEM Education Policy and Implementation plan** for ideas.

If a school does not meet the criteria to receive a Badge of Excellence, they may be offered the Plaque of STEM on the condition that they meet plaque requirements.

It is important to note that schools are required to demonstrate clear impact (changes/improvement) relating to raising STEM Awareness for each of the target groups.

Deadlines

- ▶ Fri 26th February 2021
- ▶ Weds 30th June 2021



Relevant deadlines

Application process

- ▶ Submission of the pre-Badge form
- ▶ Submission of all remaining element of Badge application form

Where to go if you need help?

We completely understand that this a new process for everyone so please do not hesitate to contact us if you need help or have any questions.

Email: primaryscience@sfi.ie
Phone: 01 607 3031

