

Awards of Science & Maths Excellence

2014-2015

Discover Primary
Science and Maths
www.primaryscience.ie



All primary schools which meet the criteria can apply for an Award of Science & Maths Excellence in 2014/15.

Over the last number of years a gap has arisen between schools completing the minimum requirement to meet the award criteria, and those carrying out more extensive work in science, technology, engineering and maths (STEM). To reflect this divide DPSM will make two awards in 2014/15.

→ **A Certificate of STEM work in the school.**

→ **A Plaque of STEM Excellence** for deeper engagement; whole school involvement, external science engagement e.g. collaboration with other schools, visits to centres, events or speakers visits to school.

The adjudication panel will make the final decision on which will be awarded to each school.

Process

From January 5th until March 20th 2015 you can register your school's intention to apply for an AoSME on the website (www.primaryscience.ie). This is to give us an indication of how many schools will be participating in the coming year. We will be asking at that stage whether you intend to apply for the Certificate of STEM **or** the Plaque of STEM Excellence.

Immediately after the Easter holidays you will receive an application form (*if you have registered*) which **must** accompany your Log of Evidence. Closing date for receipt of Logs of Evidence accompanied by the application form is **5pm on Wednesday 13th May 2015.**

Logs of Evidence

- Logs are simply evidence that the STEM work has been carried out. Your log should provide only the evidence that the adjudication panel needs to demonstrate that your school meets all the criteria required.
- The evidence included can be students' accounts of work carried out, photos, videos, etc.
- Logs can be paper based or electronic. For the sake of the planet we recommend electronic!
- We will give details of how to submit your electronic logs (to a file sharing site) on the application form. Logs will **NOT** be accepted by email.
- Logs should be divided, and marked clearly into sections as per each Step of the Criteria (eg *Step 1 – Science, Step 2 – Technology, Step 3 – Engineering, Step 4 – Maths, Step 5 – STEM Showcase*).

Note: While we celebrate your effort, we don't need to see everything the school has done - just that each criterion has been met.

Tips from previous schools which received the Award of Science & Maths Excellence

- ✓ Take a whole-school approach - The AoSME criteria are part of the science and maths curriculum anyway but it is a great incentive to receive an award for your efforts.
- ✓ Be organised and plan the programme with class teachers at the beginning of the school year.
- ✓ Assign different tasks to different classes - Remember if each class meets one or two of the criteria the load is shared!
- ✓ Start early and keep an account of all the STEM you do during the school year, building up the documentation slowly and consistently.
- ✓ Remember to document everything you do so you can easily synthesise when preparing your Log of Evidence. Photos and pictures can tell as much as or more than long written accounts.
- ✓ Nominate one person to compile the Log of Evidence and ensure that it is ready for submitting in time for the deadline!

DPSM CERTIFICATE OF STEM	DPSM PLAQUE OF STEM EXCELLENCE
2 classes	Involve most classes i.e. more than half the number of classes in the school in some aspect of the steps outlined below e.g. investigations, using ICT and maths, trips, speaker visits, presenting at or attending the science open day in the school or other events.

STEP 1 SCIENCE: Provide evidence of the children engaging in hands-on science investigations in school (indoors or outdoors). You can come up with your own ideas for investigations. You can use the DPSM classroom activities guide www.primaryscience.ie/teacherplanningguide or **any other resources** available to you.

DPSM CERTIFICATE OF STEM	DPSM PLAQUE OF STEM EXCELLENCE
3 hands-on science investigations	6 hands-on science investigations, with at least one from each of the four strands
<p>These can be from any of the four strands:</p> <ul style="list-style-type: none"> → Living things → Energy and forces → Materials → Environmental awareness and care 	<ul style="list-style-type: none"> → Living things → Energy and forces → Materials → Environmental awareness and care <p>AND (choose from one or more of the following)</p> <ul style="list-style-type: none"> → Invite a science speaker to your school or visit a Discover Centre www.primaryscience.ie/discovercentres → Participate in science events or projects run by other organisations, see www.primaryscience.ie/outreach for some examples → Attend or host a Science Week event (www.scienceweek.ie)

STEP 2 TECHNOLOGY (ICT): Provide evidence of how the children used technology as part of their school work. By technology in this step we mean Information Communications Technologies [ICT].

DPSM CERTIFICATE OF STEM	DPSM PLAQUE OF STEM EXCELLENCE
1 example of the children using ICT	2 or more examples of the children using ICT
<p>The following are some examples of ICT:</p> <ul style="list-style-type: none"> → Participate in the Irish Computer Society Scratch programme at www.ics.ie/scratch → Develop a Blog, website or video → Use technology to record and analyse data collected e.g. a spreadsheet or graph → Use Skype to collaborate with children in another school(s) or to interview a scientist or engineer → Use technology to access a range of science/engineering/maths information → Evidence of the children developing a PowerPoint presentation 	

STEP 3 ENGINEERING: Provide evidence of how children investigated engineering in class or in the local area.

DPSM CERTIFICATE OF STEM	DPSM PLAQUE OF STEM EXCELLENCE
1 example of the children investigating engineering in class or in the local area	2 or more examples of the children investigating engineering in class or in the local area
<ul style="list-style-type: none"> → Design and make activity e.g. making models (exploring, planning, designing, making, evaluating). For sample activities like design a bridge, a boat, a rocket, a water pump, a catapult see www.primaryscience.ie/designandmake → Invite an engineer to the school to speak to the children about their work → Investigate engineering in your local area e.g. a bridge, a factory, a wind farm → Attend or host an Engineers' Week event in 2015 (www.engineersweek.ie) 	

STEP 4 MATHS: Provide evidence of how the children used their maths skills.

DPSM CERTIFICATE OF STEM	DPSM PLAQUE OF STEM EXCELLENCE
1 example of the children using their maths skills as part of their science work	2 or more examples of the children using their maths skills as part of their science work
<ul style="list-style-type: none"> → Using maths skills and knowledge as part of science e.g. measuring distances, capacity, weight, recording and analysing data. Using maths operations; ratio, percentages, averages. Activities can be found here www.primaryscience.ie/activitysearch → Attend a Maths Week event in October 2014 → Develop a maths trail around school, see www.primaryscience.ie/mathstrail for examples 	

STEP 5 STEM SHOWCASE: Provide evidence that the children shared their science work with others.

DPSM CERTIFICATE OF STEM	DPSM PLAQUE OF STEM EXCELLENCE
Choose one of the following:	Choose one of the following:
<ul style="list-style-type: none"> → Have a science display in the school or present work to other classes → Hold a science open day or evening to present your work for the school, parents or the wider community → Participate in a joint science event with another school where students showcase their work → Take part in any science fair where the children can present and discuss their work eg RDS Science Fair, Limerick Education Centre Junior Scientist Science Fair etc. 	