



# SFI Discover Science & Maths Awards

Information session for Facilitators  
March 2021

# Discover Primary Science & Maths

## Teacher CPD and resources



### DPSM/ESERO CPD

- A whole school approach
- 3 workshops in school during Croke Park hours
- IBL teaching resources  
[www.primaryscience.ie](http://www.primaryscience.ie)
- Up to 150 schools annually
- Summer courses
- DPSM taster days in Colleges of Education

## Informal STEM learning



### SFI DISCOVER CENTRES

- Informal STEM Education opportunities
- Network of 60+ centres
- DPSM accredited STEM workshops / outreach
- Zoo, national parks, interpretive centres, observatories, aquariums, a fab lab

## STEM awards for schools



### SFI Discover Science and Maths Awards

- Recognition of schools STEM work
- 3 levels offer progression
- Circa 600 submit log of evidence schools annually
- Circa 50% schools have at least 1 award
- Online awards platform repository of work

# Three Levels of Award

- A **Certificate** of STEM work in School
  - At least **2 classes**
- A **Plaque** of STEM for deeper engagement, whole school involvement and external science engagement
  - Involve most classes i.e. more than half the number of classes in the school in some aspect
- **Badge** of Excellence for STEM Awareness
  - **Focuses on outcomes and impact** on pupils, teaches and parents (Set objectives & plan, complete Plaque steps, evaluate your progress)
  - Facilitator available for advice (30 schools)

# Five steps

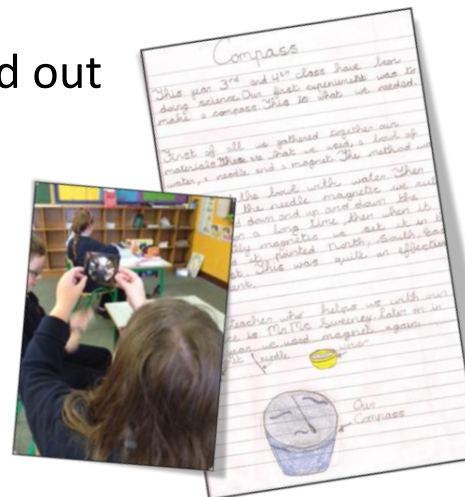
*Evidence of ...*

- Step 1: Science
- Step 2: Technology
- Step 3: Engineering
- Step 4: Maths
- Step 5: STEM show and tell

# Digital Log of Evidence

- **Register** on [www.primaryscience.ie](http://www.primaryscience.ie) and queries to [primaryscience@sfi.ie](mailto:primaryscience@sfi.ie)
- Schools can submit their log **online** (SESAME). You will receive an automated email (log-in & password) on registration (check Junk).
- Select your application form. Fill in and save as 'draft' as you go.
- Review and assessment process will be online.
- **Deadline for submission: 30<sup>th</sup> June 2021**  
*If you wish to receive your outcome before the end of the 2020/2021 academic year, submit by the 1<sup>st</sup> June 2021.*

- ✓ Learners' work, not the teacher! Teachers' written accounts alone do not suffice as evidence
- ✓ Written accounts/drawings of work carried out
- ✓ Photos
- ✓ Videos
- ✓ Certificates
- ✓ Booking confirmation



# Step 1: Science

Provide evidence of the learners investigating and applying their STEM knowledge and skills (**critical thinking, creativity, curiosity, collaboration, communication**) in science activities and inquiry indoors or outdoors

- **Certificate of STEM: 3 from any** of the four strands
- **Plaque of STEM Excellence: 4 with one from each** of the four strands.
  - Living things
  - Energy and forces
  - Materials
  - Environmental awareness and care



# Step 1: Science

**COVID-19: Schools are not required to complete in 2021, but may include details if they have managed to do any of the following:**

***For the Plaque only, choose from two or more of the following (Informal STEM learning)***

- ✓ Science speaker/visit a [Discover Centre](#) (in person/virtual)
- ✓ Science events or projects (virtual accepted)
- ✓ Attend/host a [Science Week](#) event (virtual accepted)
- ✓ Attend/host a [Space Week](#) event (virtual accepted)
- ✓ Participate in Science events or projects run by other organisations
- ✓ Show how pupils have used STEM skills in projects on environment or sustainability (Green-Schools, SEAI)
- ✓ Take part in Citizen Science Projects (ispot nature, Birdwatch Ireland)

# Step 2: Technology

Provide evidence of how the learners used technology as part of their activities. By technology we mean the use of ICT, coding, robotics or product design using materials (see list below).

- **Certificate of Stem: 1 or more examples**
  - **Plaque of Stem: 2 or more examples**
- ✓ Record and analyse data collected e.g. a spreadsheet or graph.
  - ✓ Develop a blog, website or video.
  - ✓ Use electronic components to build simple circuits.
  - ✓ Use different materials for design and make projects.
  - ✓ Take part in coding and computer science projects e.g. Scratch, Hour of Code
  - ✓ Explore robotics e.g, First Lego League [www.firstlegoleague.org](http://www.firstlegoleague.org)
  - ✓ Game-based learning such as Minecraft.
  - ✓ Use microscopes during investigations.
  - ✓ Participate in Tech Week [www.techweek.ie](http://www.techweek.ie)
  - ✓ Explore renewable energy technologies e.g. Use solar energy kits, build simple windmills.
  - ✓ **COVID -19: using STEM related online resources and activities to connect with pupils at home**

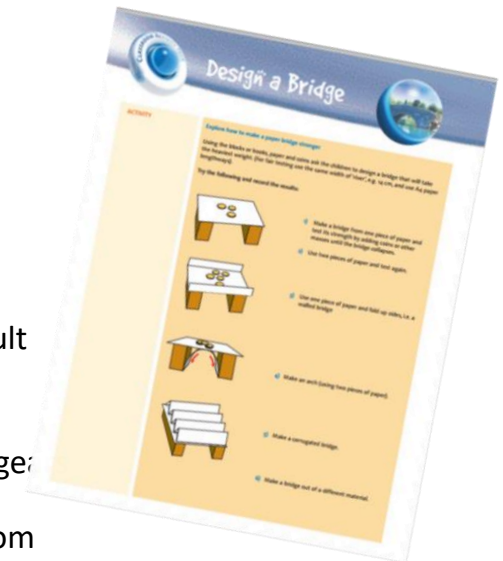




# Step 3: Engineering

**Learners** investigated engineering in class or in the local area by applying their STEM knowledge and skills (critical thinking, creativity, curiosity, collaboration, communication).

- Certificate of Stem: **1 or more examples**
- Plaque of Stem: **2 or more examples**
- ✓ Design and make activity e.g. making models (exploring, planning, designing, making, evaluating), making a bridge, a boat, a rocket, a water pump, a catapult
- ✓ Invite an engineer
- ✓ Investigate engineering in local area e.g. a bridge, a factory, a wind farm
- ✓ Investigate and develop an understanding of how everyday items e.g. bicycle gear work
- ✓ Organise an event during Engineers Week or use the Engineers Week classroom resources <https://www.engineersireland.ie/Schools/Engineers-Week>
- ✓ Participate in the STEPS Young Engineers Award [www.steps.ie](http://www.steps.ie)



# Step 4: Maths

Learners have applied their maths knowledge and skills in practical ways.

- Certificate of Stem: **1 or more examples**
- Plaque of Stem: **2 or more examples**
- ✓ Learners using Maths skills and knowledge as part of STEM/design and make, or other activities such as baking or gardening e.g. ordering, measuring distances, capacity, weight, recording and analysing data. Using Maths operations; ratio, percentages, averages
- ✓ Use Maths to record and analyse your science investigation results where appropriate
- ✓ Take part in Maths Week [www.mathsweek.ie](http://www.mathsweek.ie)
- ✓ Develop a Maths trail around your school
- ✓ Use Maths in practical ways to help explore and solve real world problems
- ✓ Other Maths projects: Khan Academy, Mathletes, Maths Eyes



Investigating Slopes	
Item	Distance
Table	160
Carpet	50
Hall	130
Table cloth	95

# Step 5: STEM Showcase

**COVID-19: Schools are not required to complete Step 5 in 2021, but may include details if they have completed**

**learners** presenting and explaining their STEM work to others beyond their own class.

- **Certificate of Stem /Plaque of Stem: 1 or more examples**
- ✓ Presenting work to other classes
- ✓ Science open day or evening
- ✓ Participate in a joint science event with another school where students showcase their work
- ✓ Take part in a Science fair where the learners present and discuss their work e.g. ESB Science Blast, delivered by RDS, Junior Lego League etc
- ✓ Written or visual displays alone do not count

## **Reflections new for 2020/2021**

- ✓ Please include in your log book examples of reflections from teachers about the STEM showcase. These could include:
  - Are pupils more excited about their STEM work?
  - Can learners clearly articulate what they have learned?
  - Evidence of reflections can include written feedback, videos, testimonials, surveys etc.

# Useful Links

- **Awards section of website with examples and video instructions:**

<https://www.sfi.ie/engagement/discover-primary-science-and-maths/award/steps-to-awards/index.xml>

- **Information sheets:**

**Certificate:** <https://www.sfi.ie/engagement/discover-primary-science-and-maths/award/steps-to-awards/Cert-Info-Sheet-2021.pdf>

**Plaque:** <https://www.sfi.ie/engagement/discover-primary-science-and-maths/award/steps-to-awards/Plaque-Information-Sheet-2021.pdf>

**Badge:** <https://www.sfi.ie/engagement/discover-primary-science-and-maths/award/steps-to-awards/Badge-Info-Sheet-2021.pdf> and <https://www.sfi.ie/engagement/discover-primary-science-and-maths/award/badge-of-excellence/>

# STEM Weeks 2021

- **Engineer's Week** 27<sup>th</sup> February – 5<sup>th</sup> March
- **Tech Week** 17<sup>th</sup> – 23<sup>rd</sup> April 2021
- **Biodiversity Week** Mid – Late May 2021
- **Space Week** 4<sup>th</sup> – 10<sup>th</sup> October 2021
- **Maths Week** 16<sup>th</sup> – 24<sup>th</sup> October 2021
- **Science Week** 7<sup>th</sup> – 14<sup>th</sup> November 2021

Further information on STEM Weeks will be available on the associated websites.