



SciFest



A Teacher's Guide to Organising a SciFest@School STEM Fair



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SciFest

*Where Innovation
Meets Creativity*

SciFest is a GAISCE AWARD Challenge Partner

TY students participating in a SciFest STEM fair can use their participation as the 'Personal Skill' element of their Gaisce Award.

TY students involved in organising SciFest events can use their activities to meet the 'Community Involvement' element of their Gaisce award.



What is a SciFest@School STEM Fair?

A SciFest@School STEM fair is where a second-level school hosts its own in-house SciFest STEM fair. Support for the event is provided by SciFest in the form of a SciFest STEM Fair Teacher's Pack and resources downloadable from the [SciFest](#) website. Other resources provided by SciFest include:

- advice on the organisation of the SciFest@School STEM fair
- certificates for participating students
- a number of prizes and rosettes for winning projects
- 'freebies' for participating students
- support on the day of the event

The SciFest STEM fair programme was set in up to provide a **free, inclusive and accessible** platform for students in Irish second-level schools to explore the STEM disciplines in an investigative way and to present their findings to a wider audience. The programme was launched nationwide in 2008 and up until 2011 it consisted of 15 regional STEM fairs hosted by the Institutes of technology and the University of Ulster, Magee Campus.

Participation in the SciFest programme grew and has continued to grow at a phenomenal rate year on year. In order to continue to expand and to provide an unforgettable STEM fair experience for all students two new levels of participation were introduced in 2011: a national final which takes place in Dublin each year and the SciFest@School strand. In 2014 in collaboration with Sentinus the Northern

Ireland SciFest was expanded to include a primary school fair and an industries hall, and was moved to St Mary's College in Derry/Londonderry. In 2016 the number of regional venues was increased to sixteen with the addition of DCU. In 2024 more than 15, 000 students from over 300 schools participated in the programme.

- **A SciFest@School STEM fair can take place at any time throughout the school year.**
- **A SciFest@School can be as big or as small as suits the teacher, one class, a year group or even the whole school.**
- **The teacher decides on the date and fills out a registration form online by going to the following [link](#).**
- **Registration is free.**

Why Organise a SciFest@School STEM Fair?

Organizing a SciFest@School STEM fair may seem like a daunting task, but it is definitely a rewarding one. On the day of the fair you will be amazed when you listen to your students talking to the judges and explaining the results of their investigations, at just how much they have learned.



A SciFest@School STEM Fair Encourages Students

- to take ownership of their work and to monitor their own personal progress
- to grow in confidence and develop their communication and presentation skills by exhibiting their work in a student-friendly environment
- who are sometimes reluctant learners in the classroom to become more positive about, and engaged in, their learning
- of all abilities and backgrounds to participate, lowering barriers and bringing the talents of diverse populations into the innovation pipeline
- to work collaboratively, to learn the value of diversity and to appreciate the value of cooperating to reach both collective and personal goals
- to engage in activities that link science, maths, engineering and technology to their everyday lives and to society
- to develop their skills in judging and discriminating between information types and sources and to develop strategies for organising information so that they can understand it and use it later

A SciFest@School STEM Fair

- raises the profile of STEM in a school
- showcases students' work
- encourages collaboration within the STEM department
- encourages cross curricular collaboration
- builds awareness within the school and outside the school of the exciting changes that are taking place in the teaching and learning of STEM
- creates valuable links with local industry
- creates opportunities for parents, retired teachers, local industry and past pupils to be more involved



Ten Steps to a Successful SciFest@School STEM Fair

SciFest recognises that each school is different and that as a result each SciFest@School will be different. The ten steps below are designed only as a guide to organising a SciFest STEM fair in your school. Don't worry if you cannot complete all of the 10 steps. SciFest is there to support you no matter how big or how small your STEM fair is.

If you would like to discuss any aspect of the organisation of your SciFest@School STEM fair, please contact SciFest through the [website](#) or email SciFest at info@scifest.ie.

1. Start Small

If you are running a STEM fair for the first time it is probably a good idea to confine the participants to a single year group. A SciFest@School is particularly suited to Transition Year students (see [‘Transition Year Science by Inquiry Module’](#)) as part of their TY programme. You may prefer to start with junior students. First or second years always enjoy being involved in something different (see [‘A Guide to doing a SciFest Project’](#)).

2. Don't Do it All by Yourself

Approach another science teacher for help. Better still involve the whole STEM department or plan a cross-curricular approach to make the fair more than just a STEM event. You could canvas the support of a number of departments, including art (designing posters), English (writing up report books), maths (data, results, graphs), computer studies, etc. The list is endless.

Organise a meeting of all interested teachers. Be sure and let the principal know what you intend to do. Have a workable plan prepared before you approach the principal.

If you are organising the fair on your own or just involving a small number of teachers make sure your colleagues in other departments know about the STEM fair in plenty of time. Students thrive on praise. Invite other teachers to bring their classes to view the projects.

3. Draw up a Plan and Decide:

- **When** – A SciFest@School STEM fair can be held at any time during the school year but bear in mind that the final date for entries to SciFest@College is usually early in March. Schools sometimes use their SciFest@School to select winners to go forward to compete at regional level. Check the school calendar for a suitable date.

Suggestions:

- ✓ Transition Year night
 - ✓ During the mock exams – a lab might be free
 - ✓ Open-day
 - ✓ Science week
 - ✓ Just before parent teacher meeting – leave the projects on show
- **Where** – Calculate the number of projects and decide on the most suitable venue. Somewhere you can leave them up for a couple of days is ideal.

4. Register your SciFest@School with SciFest

In order for us to support your SciFest@School event it's important that you complete a registration form. To access the registration form please click [here](#). The form is available in both Irish and English. To select your preferred version please select from the drop-down menu in the top right hand corner of the form.

- Create an information sheet to distribute to students and parents about the STEM fair stating the date, general information and the project guidelines. Be sure to stipulate any safety related restrictions.
- Prepare a letter to be sent out to the parents informing them that a SciFest@School will be taking place and, if possible, inviting them to view the projects.



SciFest@School
Swords Community College

5. Recruit Judges

Begin to recruit judges as soon as possible.

Suitable Judges – Retired STEM teachers, past pupils studying a STEM subject or qualified in the STEM area, the local pharmacist, parents with a STEM qualification, etc. all make excellent judges. Contact your local institute of technology or university or invite a representative from a local industry.

Keep the judges updated via email and send them copies of the ‘SciFest-Guidelines for Judges’ (This booklet contains copies of the score sheets) a couple of days beforehand. These resources are also downloadable from the [SciFest](http://www.scifest.ie) website.

At the end of the day ask the judges if they would be willing to judge again and begin to compile a judges’ database for future years.

6. Awards and Prizes

SciFest supplies a small number of awards and rosettes for winning projects but the majority of schools usually add a small number of school sponsored prizes. Each participating student receives two SciFest promotional items (pen, wristband, etc.) and a SciFest@School certificate (available from SciFest). The certificates can be given out at class assemblies or in the case of Transition Years added to their folders at the end of the year.

It is a good idea to present the awards at the end of the day. It makes the event more special for the students if the principal or a year head is on hand to present the awards. It is also a good idea if you have a representative from a local industry on the judging panel to invite their company to sponsor an award which they can present at the end of the day.

7. Publicity

Publicity is always important. Contact your local newspaper well in advance and ask them to include an article and pictures in their paper about your students and their projects. SciFest provides you with a template for a press invite and press release. If local newspapers don’t have funds budgeted to send out a photographer, ask if you can submit some of your own after the event.

Be sure to take some photographs. Post details of the STEM fair before and after the event on the school website. SciFest provides you with a SciFest@School website template.

8. Before the STEM Fair

It is a good idea to have a checklist to ensure that nothing is forgotten. As the day of the STEM fair draws close

- Put together a timetable for the day/½day. Remember to factor in a short judges’ meeting before the judging begins, two judging sessions for each project and time to select winners.
- Invite the principal/assistant principal/year head to open and close the event/present the awards.
- Talk to the school caretaker about the provision of tables, chairs and poster boards.
- Organise a room for the judges. The SciFest representative can bring badges, clipboards and pens for the judges if not available in the school. If the judges are there for a full day, check if the school can provide lunch.



- Enlist volunteers with setting up chairs and tables. Decorate the hall with SciFest balloons (provided).
- Compile a list of the project titles and student names. Assign each project a stand number. Have copies of this list for all the judges.
- The stand numbers should be clearly displayed. This makes it much easier for the judges to identify the projects.
- Photocopy two score sheets per project and a few extra.
- Meet with the other STEM teachers and arrange a schedule for class visits to view the projects. If possible, allow some time for at least one round of judging with no visitors.
- Identify any student helpers who will meet, greet and guide your judges and visitors.
- Enlist a student to take photographs.
- Enlist volunteers to help you tidy up.

9. During the STEM Fair

- On the morning of the exhibition put two score sheets on each table. Ask the students to write their name/s and project title on both sheets. Each judge collects a score sheet when they visit a stand. Have extra blank sheets on hand.
- Check halfway that all projects have been judged once. Each project should be judged a minimum of two times so check again at the end of the second round of judging.
- Award the main prizes at the end of the day. If you have a large number of students involved it is better to give the certificates to the relevant STEM teacher to fill out. The certificates may then be presented to the students during a class assembly.
-

Stand Numbers
clearly displayed



SciFest@School
St Wolstan's
Community School

10. After the STEM Fair

- If possible, have a chat with some of the judges before they leave to see how the projects might be taken to the next level.
- Have a meeting afterwards with your colleagues to discuss and evaluate how things went.
- Talk to the students and ask them what they think worked well or what needs to be changed in the future.
- Thank the judges by email and invite them to judge again the following year.
- Write a short piece for the school website (see SciFest template).



Student helpers, SciFest@School
Coláiste Chraobh Abhann

SciFest STEM School Awards

The ‘SciFest STEM School Awards’ recognise the support and commitment of school principals, teachers and leadership teams in second-level schools who in collaboration with SciFest have implemented the SciFest@School STEM fair programme.

The ‘SciFest STEM School Awards’ set a standard for all second-level schools in Ireland to achieve best practice and to empower young people to recognise the value of STEM in their everyday lives and future career choices.

The aim of the awards is to raise awareness of STEM education in schools and to encourage students through participation in SciFest to build on their 21st century skills of communication, presentation, collaboration and creativity and engage in self-directed inquiry-based learning.

General Requirements

To qualify for the awards a school must be registered with SciFest and have hosted five SciFest@School STEM fairs (Silver Award) and ten SciFest@School STEM fairs (Gold Award). External judges should be employed and the fairs must operate under the SciFest Guidelines. Students and teachers must be aware of these guidelines before they begin projects.

SciFest STEM School Awards

Schools qualifying for the awards will receive a framed certificate and an official SciFest STEM School Award digital badge which can be posted on the school website after five years (Silver Award) and after 10 years (Gold Award).



awarded to



awarded to

In recognition of the school's commitment to participation in SciFest@School and to empowering young people to recognise the value of STEM in their everyday lives and future career choices.



Sheila Porter
Sheila Porter
Founder and CEO of SciFest



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Sheila Porter
Sheila Porter
Founder and CEO of SciFest



Some Special Touches

SciFest@School was first introduced in 2011 and over the years I have enjoyed visiting the various schools, meeting with students and staff and seeing the terrific work being done to promote STEM every day in our second-level schools. I am always impressed by the interest the students have in their projects and their willingness to explain their findings to me. They approach what almost seems like an impossible problem and come up with an innovative solution. Once encouraged, their creativity and enthusiasm knows no bounds.

Below are some of the extra special touches I have noticed along the way.

- In one school where science was not compulsory the science and home economics teachers collaborated to include all students in the SciFest@School. A poster competition for the home economics students with the theme 'healthy eating' ran alongside the science project competition. The visiting judges also judged the posters.
- In a second school where science was not compulsory the non-science first year students baked buns and made sandwiches, etc. for the judges. They then served the judges and received lots of praise for their hard work.
- The art department is often canvassed to design banners and posters.
- Junior groups are sometimes assigned TY student mentors/buddies to help them with their projects. (NOTE: SciFest is a Gaisce Challenge Partner).
- Students who don't wish to present a project help supervise the setting up of the projects or taking names at the registration desk.
- Some schools provide the judges with sheets of coloured stickers or sticky notes. When a judge has judged a project, he/she then sticks a sticker on the top right-hand corner of the poster. This makes it obvious as to whether a project has been judged or not. Also, if one judge gets delayed another judge can do a few extra projects.
- One school always invites a reporter from the local newspaper as a guest judge. This means that the event will get a write-up in the paper the following week!
- A number of schools invite in the pupils from the local primary schools to view the projects.
- Some schools include a primary section in their SciFest@School fair.
- A number of schools set up Biology/Physics/Chemistry tables in the centre of the room. Fifth/Sixth year students carry out interactive demonstrations to show the junior students what it's like to study the STEM subjects in senior cycle.
- Some schools do a SciFest@School early in second year to promote the skills that the students will need to complete their CBAs.
- One school encourages their TY students to put on a science show for the participating students and some of the pupils from the local primary school.
- A couple of schools include STEM Career talks as part of the day. Others invite past pupils studying STEM to talk to the students.



SciFest@School – A Sample Judging Schedule for 24 Projects



Number of projects	Recommended number of judges
24	4

Sample schedule

		Time allocation	Projects to be judged
Judges' meeting	<ul style="list-style-type: none"> ▪ Timeline and allocation of time ▪ Allocation of projects ▪ Guidelines for judges ▪ Number of awards 	15/20 mins	
First and second rounds of judging	Judges 1 and 2	Approx. 6 mins per project Approx. 1hr 30mins	Projects no. 1 to 12
	Judges 3 and 4		Projects no. 13 to 24
Judges' meeting	Each pair of judges meet and select their top two/three projects.	10 mins	
Judges' meeting	All judges meet and compile list of top projects.	15 mins	
Third round of judging	Judges view the top projects that they have not already seen. It is a good idea that when the top projects have been judged to maybe visit a few other projects so that it will not be obvious as to who the winners are.	30 mins Time will vary depending on the number of projects to be visited.	
Judges' meeting	Selection of winning projects	15 - 20 mins	

First and second rounds of judging – Time per project: 6 minutes

Round 1	Judge 1	Project No.	1	2	3	4	5	6	7	8	9	10	11	12
Round 2	Judge 2	Project No.	12	11	10	9	8	7	6	5	4	3	2	1
Round 1	Judge 3	Project No.	13	14	15	16	17	18	19	20	21	22	23	24
Round 2	Judge 4	Project No.	24	23	22	21	20	19	18	17	16	15	14	13

Third round of judging – Time per project: 5 minutes

	Project number	Comment/Ranking
Round 3 Judge 1		

	Project number	Comment/Ranking
Round 3		
Judge 2		

	Project number	Comment/Ranking
Round 3		
Judge 3		

	Project number	Comment/Ranking
Round 3		
Judge 4		

Judges' meeting	Selection of winning projects	15-20 mins
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Results

Award	Project Number	
SciFest Best Project Award		
SciFest Runner-up Best Project Award		
EirGrid Climate and Delivering a Cleaner Energy Future Award		
SciFest Award – May be given for Innovation, Best Display, Best Physics Project, etc.		

Useful Links and Resources

- Learn about SciFest on the [SciFest website](#)
- Like [SciFest on Facebook](#)
- Follow [SciFest on X](#)
- Watch [SciFest on YouTube](#)
- View [SciFest on Flickr](#)
- Read about SciFest on [Issuu](#)
- [SciFest Project Ideas](#)
- [Useful Websites](#)
- [Tips for Exhibiting at SciFest](#)
- [Report Book and Presentation](#)
- Project ideas: [Free Science Fair Projects](#), [Science Fair Buddies](#),
[The European Space Agency](#) and [Salters Chemistry Club](#)

Finally

Congratulations to all the science teachers and their colleagues who organise SciFest@School STEM fairs in addition to their normal teaching hours.



REMEMBER
Log on to
www.scifest.ie

SciFest

The SciFest science fairs programme is a national initiative founded by Sheila Porter in 2006 to encourage a love of science, technology, engineering and maths (STEM) through active, collaborative, inquiry-based learning. Following two successful pilot SciFest science fairs hosted by the Institute of Technology Tallaght the programme was launched nationwide in 2008. SciFest expanded rapidly and today encompasses four distinct levels of participation: SciFest@School, SciFest@College, SciFest National Final and SciFest International.

SciFest is accessible, inclusive and free to enter. Participation in the programme offers an innovative way to expose second-level students to, and enhance their understanding of, STEM subjects. Own choice of topic, collaboration, hands-on activities, presentation skills and recognition of work done are all attractive aspects of the programme. The emphasis on real-world problems helps make STEM relevant to all students. They grow in confidence, develop their critical thinking, problem solving and communication skills and become aware of the variety of exciting careers associated with a STEM qualification.

SciFest is funded primarily by Intel Ireland, Boston Scientific, EirGrid, Mallinckrodt and the Department of Education. It is supported by a number of other partners and sponsors, including DkIT, TU Dublin, SETU, ATU, MTU, TUS, DCU and St Mary's College, Derry, the Department of Foreign Affairs and Trade, the Technological Higher Education Association, Regeneron, Huawei, Henkel, TE Connectivity, Dawn Meats, Bottletop Media, IOP, ISTA, ESERO Ireland, and the Business Excellence Institute (BEX). The programme thus creates a valuable link between the second and third level education sectors and between education and industry. SciFest is affiliated to the Regeneron International Science and Engineering Fair (ISEF) and is a Gaisce, The President's Award, Challenge Partner.

See www.scifest.ie for more details.

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