BT | BT YOUNG SCIENTIST & TECHNOLOGY Exhibition

2023 FACT FILE

www.btyoungscientist.com

Check out some of our videos on the links below

BTYSTE 2022 highlights

https://www.youtube.com/embed/LzvEYs8bRmk

BTYSTE - What is it?

http://www.youtube.com/embed/tF4O3KKHb88

Why you should enter

https://www.youtube.com/embed/bHPsEHgk9_E

We have additional videos on our website **http://btyoungscientist.com/video-archive** and on our YouTube channel **https://www.youtube.com/user/BTYoungScientists**

Our website is your number one resource for everything you need to know about the BT Young Scientist & Technology Exhibition.

You can enter online, check out the latest news stories and access our social media channels through our website. Teachers and parents also have their own dedicated section on the site filled with useful resources. So check it out at **www.btyoungscientist.com**

From December you can get the app

Get all the latest information about the exhibition, events and updates direct to your mobile, absolutely free!

Features include Interactive Exhibition Map, Getting Here, Search Student Projects, Schedule of Events, Social Network, Awards, History, Past Winners, Photo Gallery and more...

This FactFile has been specifically prepared to help you and will prove invaluable as you prepare your project for the BT Young Scientist & Technology Exhibition. Of course, if you have any further queries, do not hesitate to contact us at:

BT Young Scientist & Technology Exhibition,
BT, Grand Canal Plaza,
Upper Grand Canal Street, Dublin 4
Freephone: **1800 924 362**

or

BT Young Scientist & Technology Exhibition Office,
BT, Riverside Tower, 5 Lanyon Place,
Belfast BT1 3BT
Freephone: **0800 917 1297**

Email: **BTYSTE@btyoungscientist.com**
Visit our website at: **www.btyoungscientist.com**

Will you be part of it?

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Ireland's favourite celebration of science and technology, the BT Young Scientist & Technology Exhibition (BTYSTE), returns this January 2023 to an in-person event for the first time in three years.

After embracing digital technology for the past two years to award students the opportunity to participate in the exhibition virtually due to COVID-19, we at BT Ireland could not be more excited to be back in person to welcome students from across the island of Ireland to the exhibition this coming January.

Now in its 59th year, the BTYSTE 2023 will throw open its doors to students blazing a trail with their creative takes on science, technology, engineering, and mathematics (STEM). The exhibition brings together the best and brightest of the STEM community in Ireland in a massive celebration of science, technology, and curiosity.

As the organiser of the event, BT Ireland has been privileged to help nurture the curious and innovative minds of Ireland's young people and witness first-hand the incredible number of talented students who have achieved huge success after entering a project in the BTYSTE.

BT Ireland is a company that was built by and today succeeds on this essential combination of ideas and the curious minds behind these ideas. It is the very reason that we organise this exhibition and why we are so passionate about getting people involved and taking part. Each year, I am inspired by the creativity and ingenuity of participating students, and I can't wait to see the innovative ideas from students' submissions this year.

Our mission is for every school in the country to either visit the exhibition or get involved by entering a project either as a group or individually. With over 200 awards to be won, there are so many opportunities to succeed and by getting involved you could get the chance to represent your school and community in Dublin this January.

We are really looking forward to BTYSTE 2023 and we will continue to work with our partners, sponsors, BT employee volunteers and the BTYSTE team to make sure the 2023 Exhibition will be back with a bang!

I would like to wish students the very best of luck with your projects and we look forward to receiving your entries over the coming weeks.

Shay Walsh
Managing Director, BT Ireland

Proud sponsor and organiser of the BT Young Scientist & Technology Exhibition

Teachtaireacht ó Shay Walsh

Tá an ceiliúradh is fearr in Éirinn ar eolaíocht agus ar theicneolaíocht, Taispeántas Eolaí Óg & Teicneolaíochta BT (BTYSTE), ar ais i mí Eanáir 2023 mar ócáid phearsanta don chéad uair le trí bliana.

Tar éis dúinn dul i ngleic leis an teicneolaíocht dhigiteach le dhá bhliain anuas chun deis a thabhairt do mhic léinn páirt a ghlacadh sa taispeántas go fíorúil mar gheall ar COVID-19, tá gach duine ag BT Ireland ar bís bheith ar ais go pearsanta chun fáilte a chur roimh mhic léinn ar fud oileán na hÉireann ag an taispeántas i mí Eanáir seo chugainn.

Anois agus é ina 59ú bliain, osclóidh BTYSTE 2023 a dhoirse do mhic léinn a bheidh ag dul chun cinn lena n-intinn chruthaitheach ar eolaíocht, teicneolaíocht, innealtóireacht agus matamaitic (STEM). Tugann an taispeántas na daoine is fearr agus is gile den phobal STEM in Éirinn le chéile i gceiliúradh ollmhór ar an eolaíocht, ar an teicneolaíocht agus ar an bhfiosracht.

Mar eagraí na hócáide, bhí sé de phribhléid ag BT Ireland cabhrú le meon fiosrach agus nuálaíoch dhaoine óga na hÉireann a chothú agus an líon dochreidte mac léinn cumasach a d'éirigh thar barr tar éis dóibh dul isteach i dtionscadal leis an BTYSTE a fheiceáil go pearsanta.

Is cuideachta é BT Ireland a bunaíodh agus a fhásann sa lá atá inniu ann ar an meascán riachtanach seo de smaointe agus an meon fiosrach taobh thiar de na smaointe seo. Sin é an fáth a n-eagraímid an taispeántas seo agus an fáth a bhfuilimid chomh paiseanta faoi dhaoine a bheith páirteach ann. Gach bliain, táim spreagtha ag cruthaitheacht agus seiftiúlacht na mac léinn a ghlacann páirt ann, agus ní féidir liom fanacht go bhfeicfidh mé na smaointe nuálacha ó aighneachtaí na mac léinn i mbliana.

Is é an misean atá againn ná go dtabharfaidh gach scoil sa tír cuairt ar an taispeántas nó go nglacfaidh siad páirt i dtionscadal mar ghrúpa nó ina n-aonar. Le breis is 200 duais le buachan, tá an oiread sin deiseanna ann chun rath a bhaint amach agus trí bheith páirteach d'fhéadfá an deis a fháil ionadaíocht a dhéanamh ar do scoil agus do phobal i mBaile Átha Cliath i mí Eanáir seo chugainn.

Táimid ag súil go mór leis an BTYSTE 2023 agus leanfaimid ar aghaidh ag obair lenár gcomhpháirtithe, ár n-urraitheoirí, oibrithe deonacha fostaithe BT agus foireann an BTYSTE chun a chinntiú go mbeidh Taispeántas 2023 ar ais le bang!

Ba mhaith liom gach rath a ghuí ar na mic léinn le bhur dtionscadail agus táimid ag tnúth le bhur gcuid iontrálacha a fháil sna seachtainí atá romhainn.

Shay Walsh
Stiúrthóir Bainistíochta, BT Ireland

Urraitheoir agus eagraí bródúil den Taispeántas Eolaí Óg & Teicneolaíochta BT

FOREWORD

A message from Norma Foley TD

Norma Foley, TD
Minister for Education

As Minister for Education I am honoured to wish you luck as you prepare your projects for the BT Young Scientist and Technology Exhibition 2023. This is a truly spectacular event, now in its 59th year, and it is particularly special for me to welcome back the in-person event after two years of the virtual competition.

During my time as Minister, the BT Young Scientist and Technology Exhibition stands out as one of the most inspiring, ingenuitive and impressive events that our students engage in. The passion, endeavour and dedication to creativity, innovation and invention is infectious. The range and scale of talent is phenomenal and the immediate impact these projects can have in society is equally as impressive.

My Department is proud of the strong partnership that we have with BT Young Scientist and Technology Exhibition. The calibre of entries every year, is a testament not only to the students behind them but to the vast support provided both in school and at home that makes all this possible. It is this constant high standard that makes BTYSTE one of the longest running, and most successful STEM events in Europe. The seamless change to a virtual exhibition during Covid-19 is a credit to the organisers, sponsors, teachers, parents and students. The resilience and adaptability of all involved has allowed this event not just to survive but to flourish.

As Minister, I believe that it is crucial that our students have a chance to have their voices heard; the BTYSTE is an excellent platform for students to do this, to raise the issues that matter to them and showcase their ideas. I am always astounded at the forward thinking projects and of the focus on key issues – these are the solutions to the problems of the future and it is so impressive to have them all in one place.

Those months of preparation are a superb platform for students to develop the key skills of researching, creativity and critical thinking. Innovation and investigation can always be seen in the diversity of projects entered in the competition and I am excited to experience this in person in the RDS in January.

The BTYSTE is a celebration of the partnerships between our students and their teachers, the ingenuity of our young people and the high calibre of science, technology and innovation in Ireland. I have no doubt the 2023 exhibition will be as memorable as ever. Being part of this event is extremely special, I wish all students the best of luck with their entries.

Teachtaireacht ó Norma Foley TD

Mar Aire Oideachais is mór an onóir dom gach rath a ghuí ort agus tú ag ullmhú do thionscadail do Thaispeántas na nEolaithe Óga agus na Teicneolaíochta BT 2023. Ócáid fíor-iontach é seo, atá anois ina 59ú bliain, agus tá sé an-speisialta dom fáilte a chur roimh an imeacht go pearsanta tar éis dhá bhliain den chomórtas fíorúil.

Le linn mo thréimhse mar Aire, seasann Taispeántas na nEolaithe Óga agus na Teicneolaíochta BT amach mar cheann de na himeachtaí is inspioráideacha, is seiftiúla agus is suntasaí a mbíonn ár gcuid mac léinn ag gabháil dóibh. Tá an paisean, an dícheall agus an tiomantas don chruthaitheacht, don nuálaíocht agus don chéadcheapadh tógálach. Is iontach an raon agus an scála tallainne agus is éachtach an tionchar láithreach a bhíonn ag na tionscadail seo ar an tsochaí.

Tá mo Roinn bródúil as an gcomhpháirtíocht láidir atá againn le Taispeántas na nEolaithe Óga agus na Teicneolaíochta BT. Is léiriú é caighdeán na n-iontrálacha gach bliain, ní hamháin ar na scoláirí taobh thiar díobh ach ar an tacaíocht ollmhór a chuirtear ar fáil sa scoil agus sa bhaile a fhágann gur féidir é seo a dhéanamh. Is é an t-ardchaighdeán leanúnach seo a fhágann go bhfuil BTYSTE ar cheann de na himeachtaí STEM is faide agus is rathúla san Eoraip. Is mór an chreidiúint don lucht eagraithe, urraitheoirí, múinteoirí, tuismitheoirí agus mic léinn an t-athrú saoráideach chuig taispeántas fíorúil le linn Covid-19. Mar gheall ar athléimneacht agus inoiriúnaitheacht gach duine a bhí páirteach, ní hamháin gur tháinig an imeacht seo slán, ach lean sé ar aghaidh faoi bhláth.

Mar Aire, creidim go bhfuil sé ríthábhachtach go mbeadh deis ag ár gcuid mac léinn a nglór a chloisteáil; is ardán iontach é an Taispeántas do mhic léinn chun é seo a dhéanamh, chun na ceisteanna atá tábhachtach dóibh a tharraingt agus a gcuid smaointe a thaispeáint. Bíonn an-iontas orm i gcónaí mar gheall ar na tionscadail a bhíonn ag smaoineamh chun cinn agus a bhíonn fócas ar phríomhcheisteanna acu - is iad seo na réitigh ar fhadhbanna na todhchaí, agus is iontach an rud é iad go léir a bheith in aon áit amháin.

Is ardán iontach iad na míonna ullmhúcháin sin do mhic léinn chun na príomhscileanna taighde, cruthaitheachta agus smaointeoireacht chriticiúil a fhorbairt. Is féidir nuálaíocht agus fiosrúchán a fheiceáil i gcónaí in éagsúlacht na dtionscadal a chuirtear isteach sa chomórtas, agus táim ar bís taithí a fháil air seo go pearsanta san RDS i mí Eanáir.

Is ceiliúradh é an Taispeántas na nEolaite Óga agus na Teicneolaíochta BT ar na comhpháirtíochtaí idir ár ndaltaí agus a gcuid múinteoirí, ar intleacht ár ndaoine óga agus ar ardchaighdeán na heolaíochta, na teicneolaíochta agus na nuálaíochta in Éirinn. Níl aon amhras orm ach go mbeidh taispeántas 2023 chomh speisialta agus a bhí i gcónaí. Is rud fíor-speisialta é bheith páirteach san imeacht seo, guím gach rath ar na mic léinn go léir lena n-iontrálacha.

Norma Foley, TD
An tAire Oideachais

HOW IT BEGAN

Fr Tom Burke in the New Mexico desert

The BT Young Scientist & Technology Exhibition is the brainchild of two UCD physics researchers, a Carmelite priest, the Rev Dr Burke, and Dr Tony Scott.

In 1963 these two atmospheric physicists discovered the concept of 'science fairs' while conducting research in Socorro, New Mexico, USA. The local school science exhibitions culminated in state fairs and ultimately a national competition. The pair thought that this hands-on science approach was something that Irish students could really benefit from, by taking science outside the four walls of the classroom and showing that it is all around us.

And so the BT Young Scientist & Technology Exhibition was born. The first competition was held in 1965 in the Round Room of the Mansion House in Dublin and attracted 230 entries. The first ever winner was John Monahan from Kildare. The success and interest in the first event was such that the exhibition moved to the much larger venue of the RDS in 1966 and it has remained there ever since.

The early Young Scientist Exhibition involved individual student competitors, but in 1976 groups were introduced for the first time. Many more developments have happened over the fascinating 57 year history of this national institution, a few key milestones are listed opposite.

1963 The concept was born at a science fair in New Mexico, USA

1965 First ever Young Scientist exhibition was held at the Mansion House

1972 Schools from Northern Ireland participated for the first time

1976 Group projects introduced for the first time

1977 New range of categories introduced for projects

1983 Participated in International Science & Engineering Fair for the first time

1989 First year of the European Union Contest for Young Scientists (EUCYS), which Ireland has won 16 times!

2001 First year of the Primary Science Fair

2010 BT Business Bootcamp launched

2014 50th anniversary of the Young Scientist & Technology Exhibition

2020 BT's 20th year as custodian, sponsor and organiser

2021 First ever virtual exhibition, +7M views from 77 countries.

THE WHY

If you're wondering why you should get involved in the BT Young Scientist & Technology Exhibition, here are just a few of the **benefits**.

Getting the chance to represent your school/town at BTYSTE is a real privilege and an experience you will never forget.
Plus, if you're lucky enough to win, you'll go on to represent the competition at the European Union Contest for Young Scientists.

Although a love for science and technology lies at the heart of all the entries, we are sure everyone has an eye on the prizes.
There are over 200 prizes to be won, with a prize fund of over €35,000 (£31,000) with the overall BT Young Scientist(s) & Technologist(s) of the Year being awarded €7500.

It's a brilliant extra-curricular activity to put on your CV or university application.
It shows a real passion for science, maths, an ability to think for yourself along with time management and communication skills.

The rewards aren't just confined to entrants. Teachers will also see real, long-term benefits by getting involved.
It's a great way to get pupils fired up about the vital subjects of science and technology and a brilliant way to showcase your school's scientific pedigree. It also helps to inject a fun element into traditionally 'serious' subjects like science and maths.

Did you know, by participating you could receive a Gaisce, Presidents Award or a Duke of Edinburgh Award?
More details on our website.
www.btyoungscientist.com

Which category to enter

Please study the definitions closely and be careful to choose the correct project category.

Technology

For a project to be accepted into the technology category the core of the project must be the use of technology in new or improved applications, enhanced efficiencies, new innovations or better ways to do things. This category could include things related to the internet, communications, electronic systems, robotics, control technology, applications of technology, biotechnology, innovative developments to existing problems, computing and automation. Students are also expected to understand the basic science behind the technology so that they can get the most from the project.

Social & Behavioural Sciences

For a project to be accepted into this category it must cover social and behavioural sciences; economic, geographical, psychological or sociological studies of human behaviour, attitudes and experience, social analysis of environmental factors, demography, learning or perception. The study of attitudes and behaviour in relation to health, nutrition, work, leisure and living habits will also be considered. Projects on consumer affairs, effects on society, social anthropology and political science - provided they involve the use of scientific methods - are also eligible.

Biological & Ecological Sciences

For a project to be accepted into this category it must have a biological and/or ecological focus and investigate aspects of animal, human, microbial or plant biology. Typically, projects deal with the following areas of study: agriculture, anatomy, animal science, biochemistry, biotechnology, disease, ecology, environmental science, enzymology, forestry, food science, genetics, horticulture, medical science, metabolism, microbiology, molecular biology, physiology, physiotherapy, plant science or veterinary science.

Chemical, Physical & Mathematical Sciences

For a project to be accepted into this category it must be based on chemistry, physics, mathematics, applied mathematics, engineering, computer programming and language or electronics. Projects based on earth and space sciences such as meteorology, geophysics, geology and astronomy are also eligible.

THE HOW

This section details the important information on who can enter, how to enter and by when. So the first things to note are the **key dates**:

Who can enter

The competition is open to second-level students from Ireland, north and south, who are aged between 12 and 19 years on 31st October 2022.

Please note, students cannot enter if they are due to start University in September 2022.

Aged between
12-19
on 31st Oct. 2022

	JUNIOR	INTERMEDIATE	SENIOR
ROI	1st & 2nd year	3rd & 4th year	5th & 6th year
NI	Year 8, 9 & 10	Year 11 & 12	Year 13 & 14

INDIVIDUAL

GROUP*

Closing date for students and teachers
26 SEPT 2022

BTYSTE 2023
11-14 JANUARY

*A group is defined as comprising of no more than three people from the same school and the same age grouping. If a group is made up of students in different years, these students should be entered into the oldest member's group i.e. If a student in 4th year/Year 12 partners up with a student in 5th year/Year 13 this group should be entered into the Senior category.

GETTING STARTED

To help you decide on a topic, think about what you would like to study. Ideas might come from hobbies or perhaps problems you have observed that need a solution.

Research is the answer

Research is the process by which people create new knowledge about the world in which they live in order to answer a question or solve a problem. When choosing your topic, give careful thought to how your research might enhance the world and its inhabitants.

Questioning is probably the most important part of scientific creativity and is often followed by an "if...,then..." statement.

Questioning usually leads to observations or experiments.

Initial research

Visit your local library or use the internet to learn everything you can about your chosen subject.

Organise

Organise everything you have learned about your topic. At this point you should narrow your hypothesis by focusing on a particular idea.

Make a timetable

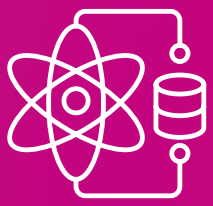
Choose a topic that not only interests you, but also can be done in the amount of time you have. And remember to leave time to write your report and put together an exhibit.

A good experiment may or may not answer the questions asked, but almost always leads to fresh questions which require new experiments or observations. The final hypothesis is often developed after you have run a number of preliminary experiments, analysed a body of results, and reached a tentative conclusion. By following the six stages listed below, you should be able to produce a superior scientific project.

Be curious, choose a limited subject, ask a question, identify or originate/define a problem

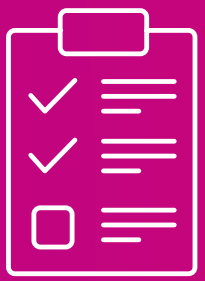
Review published materials related to your problem or question

Evaluate possible solutions and make your educated guess (hypothesis)



Challenge and test your hypothesis through experimentation (data collection) and analysis

Evaluate the results of your experiment and reach conclusions based on your data



Prepare your report and exhibit

ASK YOURSELF

Before you start ask yourself these questions

1. What am I trying to find out?
2. How am I going to do this?
3. Where can I get the help I need?
4. What do I expect to find out at the end of my research?
5. Have I access to the equipment needed to carry out the work?

Analyse your results

1. Are they organised in a meaningful way?
2. Have you obtained meaningful results?
3. Do the results relate to your topic?
4. How are you going to present the results?

Planning your project

1. Read as much as possible to get background material and an insight into the topic you want to investigate.
2. Start your project diary and record everything you do.
3. Plan and design the experiments you need to carry out.
4. Think about how you will collect your data.
5. Can you complete the work needed in time?

Making your conclusions

1. Are now ready to develop a theory to explain your findings?
2. Keep an open mind on the results you get and the conclusions you reach.
3. Are there areas you can highlight for further investigation?
4. What recommendations can you make?

Has the project been entered in any other exhibition or competition?

If so, be sure to mention this in your entry form for projects and in your project report.

Has the project been published previously in part or in full?

If so, give details in your project report.

Are you using potentially dangerous chemicals, organisms or equipment in your project?

If so, please discuss with your teacher to ensure that your project adheres to the correct safety regulations.

Once you have finished your work ask yourself:

- **Did you succeed in researching your topic?**
- **Do your conclusions support your original hypothesis?**
- **Have you added to the body of knowledge through your research?**

COMMON MISTAKES

The judges have identified the most common weaknesses in projects at the initial entry stage. These weaknesses could result in the project **not qualifying** for the exhibition in January. **Please review before submitting your project.**

1. **Lack of original primary research**
   Some studies are little more than a description of what is already known about the topic. Researching the existing body of knowledge is only the first stage of any scientific study.
2. **Unreliable experimental methods**
   Frequently, projects state a particular method for data collection, which simply cannot collect the data required. Suppose the aim of the project was to find out which washing powder was most effective. All too often students write that they will gather this information via questionnaire. This only allows them to collect attitudes and opinions about the most effective washing powder, but what is really required for a scientific study is a chemical experiment.
3. **Vagueness/unfocused objectives**
   A study which aims to find out all about the ozone layer is not a realistic scientific study as no-one could be expected to find this out in the given time. Scientific research requires you to be very specific about what you wish to find out and setting measurable objectives is the only way to present scientific investigation. For example a project that looks at the effects of industrial activity on wildlife would have to focus on a very specific issue, as this topic is so broad. Much thought should be given to which category best suits your project.
4. **Lack of clarity in describing scientific methods**
   This information should be given on the project details form and/or the one page proposal. The judges need to know exactly what experiments are being carried out, in terms of specific experimental processes, materials or the who and how of a social survey.
5. **Lack of originality**
   The specific question raised in a project must be one that has not been posed and recorded by any previous scientist. However, this is not to say that twenty projects on the topic of, for example, radon gas or water pollution, could not be original, if they will deal in different ways with different aspects of the topics.
6. **Unsuitability of topic**
   A topic must be able to be scientifically proven or disproved by research methods available to second level students. A project on whether or not Jupiter is inhabited by living creatures is really not a suitable topic.
7. **Lack of scientific content**
   Often proposals are submitted that are not scientific projects, but literature reviews. These proposals are information collection exercises and not scientific studies.
8. **Safety issues**
   Projects which put the students themselves or others at risk of physical injury or disease will not be accepted for the Exhibition.
9. **Ethical issues**
   Projects which put the students or others at risk psychologically or emotionally will not be accepted for the Exhibition.
10. **Investigation period**
    Sometimes students propose a project that is weak because the period over which the project is being carried out is too short. Judges need to be convinced that the student has enough time to complete the project for the Exhibition.

550 **project places will be available for the Exhibition next January. However, each category is allocated a finite number of places based on the number of projects entered in that category. It is possible that some projects may not qualify if the quota for a category has been filled with higher ranked projects.**

Data collection

Data can be collected in four ways

1 Documentary sources

Documents can be used to set an idea in a historical context or as the basis for an entire study. A wide variety of documents can be used, e.g. the Census of Population (available from the Central Statistics Office), personal documents, photographs and maps.

2 Observations

This is one of the primary methods of collecting data, but care must always be taken to ensure that the data is observed in an unbiased way.

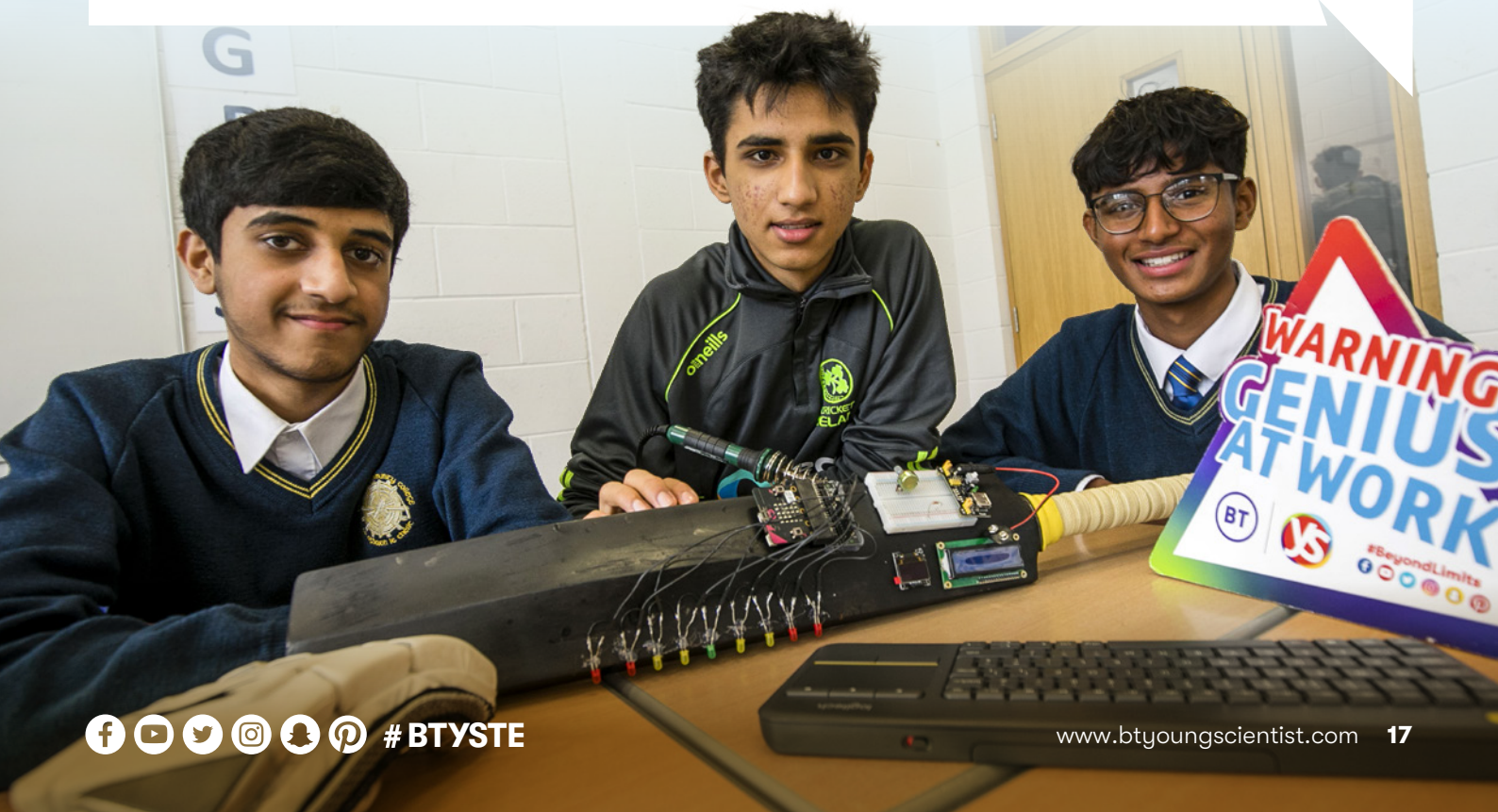
The observer's senses may not be able to record everything. Also, if the observer is watching people, animals or other organisms whose behaviour changes because they are being observed, the results may be invalid.

3 Surveys

Questionnaires, interviews and schedules are some of the techniques used in conducting survey work. Questionnaire design merits great attention. It is very important to think through how you are going to analyse the results you will get. Your questions should be clear, concise and should gather the relevant information.

4 Tests, measurements and experiments

These should only be used if they are relevant to your research and if you are capable of doing and understanding them yourself. Particular attention should be given to the design of experiments, the requirement for controls, sufficient replication and repeat experiments where appropriate. Ensure that any testing or experimentation you undertake is not dangerous i.e. it does not put yourself or others at risk of injury or disease.



Guidelines on sampling

Remember to use a representative sample.

Random sampling
A random sample means that every member of a population had an equal chance of being chosen, e.g. pulling numbers from a hat.

Case studies
These look at a small number of individuals and a particular context in depth, may be useful in helping us understand how a particular process works.

Stratified sampling
The idea of using groups or classes within the population being analysed.

Quota sampling
If you want to interview, for example, 200 people about shopping, you could go to a particular part of town where you could meet shoppers.

Systematic sampling
A systematic sample takes every "nth" member from a population.

Guidelines on statistics

What techniques can you use to analyse data?

You could summarise your data

This procedure means what it says. It is a way of reducing the bulk of data to a more manageable size, as well as seeing some patterns emerging.

You could try to explain patterns which emerge, using comparison techniques

These techniques are widely used to compare variables.

You could carry out a significance test e.g. a t-test

Significance tests are used to make sure that results from comparing data sets are not the result of chance.

Important information

Please read carefully

Plagiarism

Plagiarism is using others' ideas or words without clearly acknowledging the source of that information.

You must give credit to sources whenever you use:

- ✔ another person's idea, opinion, or theory
- ✔ quotations of another person's actual spoken or written words
- ✔ any facts, statistics, graphs, drawings or any piece of information that is not common knowledge
- ✔ paraphrase of another person's spoken or written words

These guidelines apply irrespective of the source of the information.

Plagiarism of any kind will result in immediate disqualification from the competition (see Rule 1.13 on Page 38).

External help - is it allowed?

It is expected that all or the majority of the work for a project will be conducted either in the school, home or the outside environment. Understandably, some projects may involve visiting distant locations.

Students may seek advice or information about their project from sources beyond their school, such as on the web, government organisations, universities, institutes of technology or other experts. However, it is recommended that the majority of students' work should be conducted under the supervision of their relevant teachers with, where appropriate, suitable levels of involvement by parents, guardians or other responsible adults.

Where experimental/research work is conducted by the students themselves, or on their behalf, in a laboratory that is external to their school (e.g. in a local university, a hospital or an industry) then that work should be clearly identified and acknowledged within the project report book and presentation.

In addition, it is a requirement that a cover letter from the external facility, describing the extent of the assistance provided and the work done by the students within that facility or undertaken on their behalf, will be included in the project report book.

Ethics

Scientific and technological investigations and applications must be undertaken with integrity through the use of rigorous methods.

Participating students must ensure that the involvement of people in their research is always fully justified and if so, there is a duty to protect the wellbeing, dignity and privacy of those individuals. The welfare of any animals subject to investigation must always be respected and likewise, any experimentation carried out in the natural environment must avoid having adverse impacts.

Timescales

"Sounds great, but we wouldn't have the time...."

A common misconception regarding the BT Young Scientist & Technology Exhibition is the enormous, unmanageable, and overwhelming time commitment required. And it is exactly that - a misconception.

Here is a clear guide to exactly what is required and by when...

26 SEPTEMBER 2022 - 5PM

Students:
One page proposal, entry form for projects & project details form (completed by the student)

Teachers:
Teacher assessment form (completed by the teacher)

18 OCTOBER 2022

Results will be made available online to teachers.

This is when you find out if your school projects have made it through to the final exhibition.

Completed confirmation forms should be returned by 28th October 2022

11-14 JANUARY 2023

The Exhibition

Required:

3 minute video will need to be uploaded in December. The project diary and report book will need to be available on your stand prior to the commencement of the first round of judging on the 11th January.

Additional Tips

- Some of the work could potentially be completed during class time
- Time at school science clubs could be used to work on projects
- Good planning across the 14 weeks between the closing date and the exhibition can ensure the work is manageable

That's 14 whole weeks to get projects ready for the exhibition in January!

ONLINE APPLICATION

You must include:

Entry form for projects (completed by students)

In addition to other information, you will give your project a title on this form. The project title should accurately reflect the scientific content of the project. Avoid using what you may think is a smart or catchy title; such titles are generally misleading and do not necessarily impress the judges. The title you choose is the one that will appear on your stand, should your project progress to the exhibition.

Project details form (completed by students)

On this form you should detail your project, how you intend to approach it and the work you have carried out to date.

One page proposal (completed by students)

This very important document forms a crucial part of the process by which the screening judges decide whether your project is accepted or not. It should explain to the judges what your project is all about and will help them decide whether or not you have already carried out some research. Care should be taken in preparing your proposal.

More information on how to complete your one page proposal and examples can be found online at **http://btyoungscientist.com/submission-process/**

Teacher assessment form (completed by teachers)

This needs to be completed online by teachers by midday 28th September. Late entries will not be accepted.

Entry Fee

An entry fee of €20 / £18 per student is preferably payable online by credit or debit card but can also be paid by cheque/bank draft or postal order. Cash will not be accepted. Results of the project screening phase will not be released without full payment being made.

Already entered a science or technology competition?

If your students have already completed projects in another science/technology/innovation/ entrepreneurship competition, why not get some more mileage from them and enter the BT Young Scientist & Technology Exhibition?

Who knows? You could already have the winning project.

All you have to do is tick the appropriate box on your Entry Form for Projects.

Good luck!

WHAT HAPPENS NEXT?

Your entry is considered by a panel of screening judges who carefully consider every project. Following their decision, you will be informed whether or not your project has qualified.

The judges may also request further information at this stage. This screening process should take around four weeks to complete, so please be patient.

QUALIFIED

Teachers will receive an email when results are available, they will log back into the system to view their students results and acknowledge that they have informed the student of the result. Students will be emailed a confirmation form which must be completed to accept your place.

QUERIED

If your project is queried, the judges will send you or your teacher an email. With your teacher's assistance you must answer this query as soon as possible.

NOT QUALIFIED

The judges may decide not to accept a project. This means that you will not present your project at the Exhibition in January. The reason for non-qualification is available to your teacher when they log into the system to view results.

N.B. The submission of a project does not automatically mean that the project will qualify for the Exhibition in January. The judges' decisions are final in all cases and neither BT nor its employees have any influence.

GAISCE
The President's Award

Put your BTYSTE project work towards a Gaisce Award!

The BT Young Scientist & Technology Exhibition is an official Gaisce Challenge Partner. Are you over 15 and taking part in BTYSTE this year? Does your school, or an organisation you're involved with, offer Gaisce – The President's Award?

Make the most of your BTYSTE project work by putting it towards the Personal Skills challenge area, one of four areas you will undertake as part of the Gaisce programme.

Gaisce is a personal development programme for young people aged 15-25 that encourages you to find your passion, get active and make a difference in your community!

For further information

visit www.gaisce.ie/btyste or ask the President's Award Leader (PAL) at your school.

THE DUKE OF EDINBURGH'S AWARD

The BT Young Scientist and Technology Exhibition has teamed up with The Duke of Edinburgh's Award/Joint Award Initiative to enable young people (aged 14-24) who are planning and preparing a project for entry to the BT Young Scientist and Technology Exhibition to use their participation to count towards the Skills section of the Bronze Duke of Edinburgh's Award.

(In Northern Ireland, under a Joint Award Initiative any young person who meets the standards of The Duke of Edinburgh's Award has a choice of certification. They can choose a Duke of Edinburgh's International Award, a Gaisce – The President's Award or a Duke of Edinburgh's Award certificate).

AWARDS

Main awards

BT Young Scientist & Technologist(s) of the Year 2023

Individual or Group

- BT Young Scientist(s) of the Year Trophy (perpetual)
- Cheque for €7,500 / £6,750
- The chance to represent Ireland at the European Union Contest for Young Scientists

Best Individual or Best Group

- BT Trophy (perpetual)
- Cheque for €2,400 / £2,160

Runner-up Individual and Runners-up Group

- BT Trophy (perpetual)
- Cheque for €1,200 / £1,080

Please note if the BT Young Scientist & Technologist of the Year is awarded to an Individual, a Best Group Award will also be made.

If the BT Young Scientist of the Year is awarded to a Group, a Best Individual Award will also be made.

Category awards

There are 36 prizes for individuals and 36 prizes for group projects. The prizes take the form of 1st, 2nd and 3rd in Junior, Intermediate and Senior sections of each of the four categories:

Social & Behavioural Sciences
e.g. economic, geographical, psychological or sociological studies of human behaviour, nutrition, social anthropology, political science.

Chemical, Physical & Mathematical Sciences
e.g. chemistry, physics, mathematics, applied mathematics, geology, engineering, computer programming, meteorology, astronomy.

Technology
e.g. communications, electronic systems, robotics, computing, control technology, applications of technology, biotechnology, automation.

Biological & Ecological Sciences
e.g. agriculture, anatomy, biochemistry, biotechnology, ecology, horticulture, physiology, medical science, veterinary science.

The prizes are:

1st prize	2nd prize	3rd prize
€300/£270	€225/£202	€150 / £135
for both Individual and Group projects	for both Individual and Group projects	for both Individual and Group projects

In the event of a tie in any category, the prize money will be split equally. A number of highly commended and display awards will also be awarded in each category by the panel of judges.

Gold Partner awards

Student awards

Analog Devices Student Award

Analog Devices will present an award in the Technology category to the best placed project for outstanding work exhibited in the Technology category, either group or individual, except where the project has been selected as BT Young Scientist & Technologist(s) of the Year. The winning project will be awarded €2,000. In addition, Analog Devices will donate €2,500 to the school of the winning student(s) as a contribution towards its science laboratory equipment fund*.

Horizon Student Award

Horizon will present an award in the Biological and Ecological category to the best placed project, either group or individual, except where the project has been selected as BT Young Scientist & Technologist(s) of the Year. The winning project will be awarded €2,000.

RTÉ Student Award

RTÉ will present an award in the Social and Behavioural Sciences category to the best placed project, either group or individual, except where the project has been selected as BT Young Scientist & Technologist(s) of the Year.

Stripe Student Award

An award will be presented in the Chemical, Physical and Mathematical category to the best placed project, either group or individual, except where the project has been selected as the BT Young Scientist & Technologist(s) of the year.

*Analog Devices will contact winner with details, terms and conditions.

Educator of excellence awards

These awards will be presented to the teachers whose commitment and encouragement have consistently enabled their students to participate successfully in all categories of the exhibition.

Analog Devices Educator of Excellence Award - Technology
The winner receives a bursary of €2,000 and an Analog Devices Trophy.

Horizon Educator of Excellence - Biological and Ecological Sciences
The winner receives a bursary of €2,000 and a Horizon Trophy.

Stripe Educator of Excellence - Chemical, Physical & Mathematical Sciences
The winner receives a bursary of €2,000 and a BT trophy.

BT Educator of Excellence - Social and Behavioural Sciences
The winner receives a bursary of €2,000 and a BT Trophy.

Rev Dr Tom Burke bursary

Fr Tom was one of the co-founders of the project and sadly passed away in 2008. In memory of his contribution to the project, a €1,000 bursary is awarded in his name to an individual participant who is deemed by the judges to be the best communicator. This will be paid on application to a student to help them in their second/third level education.

This bursary will be open to participants of all categories across all age groups, but the winner cannot be either the overall Individual Winner or Runner Up.

Special awards

We are proud to have a fabulous range of special awards at this year's Exhibition presented by our partner organisations. Special awards recognise excellence in specific areas. Examples include projects with a focus on innovation in technology, physics, chemistry, sustainability, recycling, the environment, research or improving cancer awareness. Each award is industry-sponsored and details of each organisation and the awards can be found on the Awards section of our website **www.btyoungscientist.com**

QUALIFIED PROJECTS

Confirmation/Acceptance Card

The first item is your **confirmation/acceptance card**. You will be sent a link once your teacher confirms you have been advised of the screening results for your project. It is important that you complete this form as soon as you get it. As most entrants are under 18, we need parental consent for you to compete at the event in January, so this form requires a parent/guardian's signature and a teacher's signature. For a group entry, all members must complete the confirmation/ acceptance card. The deadline for completing this task is **28th October 2022**.

Uploading Files

As the exhibition is returning to a face to face event we will only need **two items uploaded per project**, a photo of the students and a 3 minute video.

Key Dates

18th November 2022
Upload photo of the students

16th December 2022
Upload of 3-minute video

11th January 2023 – 3pm to 6pm
Round 1 Judging

12th January 2023 – 9am to 1pm
Round 2 Judging

12th January 2023 – 2pm to 6pm
Round 3 Judging

13th January 2023 – 9am to 12pm
Round 4 Judging (if needed)

YOUR PROJECT

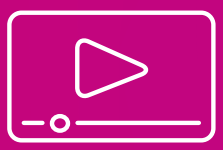
The FOUR main elements

When waiting to hear if your project has qualified it is important to continue working on your project.

Report book

Project diary

Visual display



Video

Project Diary

All entries must keep a diary

This is a much shorter document than your Project Report. It should contain day-to-day records of how the project is progressing, a full record of the names of sources you have looked up and all the people/ institutions you have contacted. Record everything in your diary and use it as an information store for writing your report. You can write personal comments about how your project is progressing.

Include anything relevant eg:

October
We just found out we were accepted to the BTYSTE 2023 Finals!

November 7th
We discussed different ways to conduct our experiments and settled on X.

November 24th
Conducted experiments today but disappointingly results are not working in our favour.

If you are working as a group, appoint a leader who should keep all relevant information and appoint a group member to keep the diary.

Visual Display

Your display is a summary of your project. Do not try to display your entire project, cover just the main points and highlights.

Plan your display well in advance. Use a plan to help you make the best use of your space. Work out the dimensions of everything you want to include. How your project is displayed on your stand will be taken into consideration by the judges when reaching their decision.

Your charts or other display material should fit within your project space, you cannot place any parts of your display on the floor in front of your stand for health and safety reasons. The dimensions of the display stand are as follows:

- The back display panel is A0 landscape format (1189mm wide by 841mm high) and the worktop is 1200mm wide by 600mm deep. Your exhibit must fit within these dimensions. Cardboard sheets, sized to fit the back panels, will be available on site if required.

When finalising the planning of your display, ask yourself: Will the judges/visitors be able to move through my project, step by step, from background onto methods and from there to results and conclusions? Is the text big enough to be easily read by both the judges and the public?

Project Report Book

Your report book should be no more than 50 pages of text (typed) plus appendices and references. Please being two printed copies of your report book with you to the RDS.

It should be organised under the following sections:

- **Title page**
  This contains the names of the project, school and student(s).
- **Comments page**
  A page which may be signed by a judge.
- **Contents page**
  Includes the sections and page numbers of the report.
- **Summary/Abstract**
  Essential part of your project. It should be about two pages long and include a short summary of your project.

  When someone reads this summary they should understand what you were setting out to achieve and what your main results and conclusions are.
- **Introduction**
  This should set the scene for your report. Why did you do the project and what did you hope to achieve?

  In this section you should also refer to surveys, experiments, questionnaires and the part they played in your project. Make sure you refer to previous research in this area.
- **Experimental methods**
  This section should describe the experiments you carried out. Keep in mind the value of diagrams and illustrations.
- **Results**
  You should include a good sample of your measurements and all of your important results in this section. You can include the bulk of your readings and measurements in appendices.
- **Conclusions and recommendations**
  Comment on the results of your work in this unit, be CLEAR and CONCISE.

  How...
  ..does your work compare with existing theories?
  ..accurate is the data you got from your study?
  ..might your work be extended and improved?
  What...
  ..are the strong and weak points of your methods?
  Does...
  ..your project contribute to scientific knowledge and research?
- **Acknowledgements**
  At the end of your report, acknowledge any help you received during the project for example, teachers, companies, institutions and parents.
- **Appendices**
  Additional information, reports and any letters/ correspondence.
- **References**
  List any books, articles, web pages and references that helped you in your project.

Important notes: when you arrive at the RDS please make sure that you write your stand number on the front of your report book as this will identify the stand to which it needs to be returned.

The judges will collect your report book for a closer look at your project. This will not be returned to you until the end of the exhibition. However, be assured that each report book will be studied carefully by the assigned judges in the judging rooms. Also please note that not all assigned judges will sign your report book. In some cases only the first judge will sign your book, but this does not indicate in any way that your project is weak. You will need to have two copies of your report book, one for the judges and the other on display at your stand.

The 3 Minute Video

This is what the public will see at your virtual stand. So, explain your project as if you are doing so to a member of the general public, not a judge. You should include what you set out to do, how you did it and a few results.

It must be a maximum of 3 minutes long – any longer than 3 minutes will not upload through the link you will be sent, and therefore will not be used – and the video should be called **"Stand XXXX Video"**. Make sure to have a plain background with no branding please. (By plain we mean without distractions eg, do not have the rest of you class in the background.) You could use your PowerPoint presentation as the background if you wish. Please be aware that **any copyrighted music is prohibited** – even if you purchase the right to use the music that only covers you using it in a private setting. This video will be uploaded to the BTYSTE Portal to be viewed by the public and BTYSTE will not have the right to share that music. Any music at the start should be less than 3-4 seconds (if your music clip can be recognised by software such as Shazam, then your clip is too long). **Product placement and advertising is not allowed in the video**. You will want to practise beforehand to make sure you are speaking slowly and concisely!

All videos will be viewed for approval before being uploaded to the BTYSTE portal. We have given as late a deadline to upload the video as possible, but this will mean that if we encounter any issues with your video the request for you to make any changes will be very close to the exhibition and may delay your video being uploaded to the BTYSTE Portal so please review your video for quality prior to submitting it.

Helpful hints for a good display

1. A good title

Your title is an extremely important attention-grabber, which should simply and accurately present your research. The title should make the casual observer want to know more. Ensure you do not use brand names in your title.

2. Take photographs

Many projects involve elements that may not be safely exhibited at the exhibition, but are an important part of the project. Take photographs of important parts/phases of your experiment to use in your display. (Photographs or other visual images of human test subjects must have informed consent.)

3. Be organised

Make sure your display is logically presented and easy to read. A glance should permit anyone (particularly the judges) to locate quickly the title, experiments, results and conclusions. When you arrange your display, imagine that you are seeing it for the first time.

4. Eye-catching

Make your display stand out. Use neat, colourful headings, charts, and graphs to present your project. Homebuilt equipment, paper and use of colour are excellent for project displays. Pay special attention to the labelling of graphs, charts, diagrams and tables, each item must have a descriptive title. Anyone should be able to understand the visuals without further explanation. Make sure that the text is large enough to be read easily.

5. Correctly presented and well constructed

Be sure to adhere to the size limitations and safety considerations when preparing your display. Make sure your display is sturdy, as it will need to remain intact for quite a while. Do not hesitate to ask for advice from adults if you need it. It is very important to check the spelling!

Student display board dimensions

1189mm wide x 841mm high

NB. Table top is curved maximum depth 600mm as indicated. Your charts or other display material should fit within your project space, you cannot place any parts of your display on the floor in front of your stand for health and safety reasons.

AT THE EXHIBITION

Judging

Your project will be judged at least three times by three different judges.

Before each judging session you will be given an appointment card which will indicate the approximate time the judge will arrive at your stand. Please be patient as your judge may be delayed while judging another project. The judges can only spend approximately 15 minutes at your stand, so be prepared when they arrive. They will ask you to tell them about your project and then move on to more specific questions. Make sure any mobile phones are turned off during the judging times.

If you are part of a group entry, make sure that each person from your team does some of the talking. The group leader should introduce all members and explain what sections each team member will be talking about. Teacher, parents or other students should not be at your stand during judging.

The judges have the right, should they see fit, to reassign your project to another category during assessment at the exhibition.

- Once you arrive at the RDS Main Hall in Dublin and register for the exhibition, you will receive your exhibition pass and student pack.
- After registration, security will allow you to bring bulky projects into the exhibition.
- Set up your project in the space provided. Make sure you bring everything you need to display your project e.g. sticky tape, scissors, stapler etc.
- Security will not allow anyone to gain entrance without an exhibition ID pass.
- If you have any questions or queries, ask any BT Redcoat. They will do whatever they can to assist you.

Preparing for the judging

Judges look for well thought out research. They look at how significant your project is within its field, and how thorough your research was. Did you leave something out? Did you start with four experiments and finish with only three?

Good communication

Judges applaud those students who can speak freely and confidently about their work. They are not interested in memorised speeches - they simply want to talk with you about your research to see if you have a good grasp of your project from start to finish. Besides asking the obvious questions, judges often ask questions to test your insight into your projects such as 'What was your role?', 'What didn't you do?' and 'What would be your next step?'

Remember a little enthusiasm goes a long way!

The judges will also look for:

- Creative ability
- Thoroughness
- Skill
- Teamwork
- Scientific thinking and approach
- Clarity

Judges focus on:

- How well you followed scientific methodologies
- The detail and accuracy of research as documented in your report book and diary
- Whether experimental procedures were used in the best possible way

Remember

Your project will be part of the exhibition until it closes at 5.30 p.m. on Saturday 14th January 2023. Projects **must not be removed** before this time and early removal of projects will jeopardise your school's involvement in the project in future years.

You must be at your stand during judging times and have one representative of your team/school present at all times while the exhibition is open to the general public.

BT cannot take responsibility for any items that are lost, stolen or misplaced during the exhibition.

Tips from the judges:

When it comes to being successful at the BT Young Scientist & Technology Exhibition, there really is no substitute for hard work. That being said, we want to give you as much help as we can along the way. The following advice and tips from our panel of judges might make your job a little easier.

1. **Start to work on your project as soon as you can. Some projects take a lot longer to complete than you thought when you started.**
2. **For you to succeed, you have to be interested and involved from the word 'go'.**
3. **Don't leave things to chance or guesswork. Research your project well. That way you'll be able to deal comfortably with any queries that come your way, whether from the judges or members of the public.**
4. **Keep a detailed Project Diary of your work. We all forget things and this may help you answer judging queries at a later date.**
5. **Accurate use of scientific methods counts for a lot when judging begins, so take your time and make sure that all your facts and figures are correct. Don't be afraid to ask your teacher if you are unsure about something.**
6. **The project title should accurately reflect the aims of the project.**
7. **Be original. Make your project stand out from the crowd by giving good solid reasons for your choice of subject.**
8. **Make your exhibit as attractive as possible. Presentation may not be everything but clear, concise work shown in an attractive manner can only benefit you when judging takes place.**

Timetable of activities

Below is the outline of what will happen during the week of the exhibition in the RDS.
This is subject to change.

Tuesday 10 January

2.00 p.m. - 7.00 p.m.	Registration and setting up of Dublin projects only

Wednesday 11 January

9.00 a.m. - 12 noon	Registration and setting up of all other projects
2.00 p.m. - 2.45 p.m.	Official Opening Ceremony in the BT Arena
3.00 p.m. - 6.00 p.m.	First round of judging
8.00 p.m. - 10.30 p.m.	Evening entertainment in the Students' Club

Thursday 12 January

9.00 a.m. - 1.30 p.m.	Second round of judging
9.30 a.m. - 5.30 p.m.	Doors open to all school groups and general public
2.00 p.m. - 5.30 p.m.	Third round of judging
8.00 p.m. - 10.30 p.m.	Evening entertainment in the Students' Club

Friday 13 January

9.00 a.m. - 1.00 p.m.	Final judging
9.30 a.m. - 5.00 p.m.	Doors open to all school groups and general public
5.30 p.m. - 7.30 p.m.	The Awards Ceremony in the BT Arena
8.30 p.m. - 11.00 p.m.	Evening entertainment in the Students' Club

Saturday 14 January

9.30 a.m. - 5.30 p.m.	Doors open to all school groups and general public
11.30 a.m. - 12.30 p.m.	Teachers' feedback session
5.30 p.m.	*Exhibition closes
8.30 p.m. - 12.30 a.m.	Farewell disco

*** N.B. Students must not remove their project or leave the Exhibitions Hall before 5.30 p.m. on Saturday 14th January.**

Information for teachers

Please make sure you are familiar with all rule changes and the closing date for entries.

School visits

Why not celebrate your school's participation in the competition by encouraging your colleagues to bring a class along; or if you are not participating this year why not bring your class along to experience the buzz around the event and encourage them to enter the 2024 competition? More information will be sent to schools in October/November with regard to booking school visits. Early booking is advisable.

Withdrawal of qualified projects

When a student confirms that they will exhibit a project, one of the available stand spaces will be allocated against that project. It is the teacher's responsibility to check with students on an ongoing basis and especially before the Christmas holidays to confirm that they are still planning to participate.

If a project has to be withdrawn, please let us know immediately in writing to BTYSTE@btyoungscientist.com

Teacher facilities at the exhibition

When you arrive at the RDS, register with the BT team at the Teachers' Desk where you will receive your exhibition ID pass. It is imperative that you wear this at all times for security reasons. Tea and coffee will be served throughout the day in a designated teachers' area on the main hall balcony. You will receive complimentary lunch vouchers when you register and these can also be used in the teachers' area. Parents and students are not permitted in the teacher area.

Please note that students must not take down their project or leave the hall before 5.30 p.m. on Saturday 14th January 2023 as members of the public will be visiting the exhibition. If you, as the participating teacher, are not attending the RDS for any reason and need to send a substitute supervisor in your place, this must be confirmed in writing by your school so that the change may be recorded, by 16th December 2022. If the teacher's name is not on the registered teacher list, they will not be permitted entry to the exhibition.

Judging

Judging will commence on Wednesday 11th January 2023 from 3.00p.m. and will continue all day Thursday. Final judging will be completed on Friday morning.

New to the BT Young Scientist & Technology Exhibition?

We are delighted to welcome new teachers to the BT Young Scientist & Technology Exhibition.

Help is on hand if you run into any problems. Just call our freephone helpdesk - we will be happy to answer any questions and put you in touch with other teachers who have experienced the Exhibition. Also check out the teachers section of our website: **www.btyoungscientist.com** to see our teachers' advice blog, full of useful hints and tips.

Freephone **1800 924 362** from the Republic of Ireland
or **0800 917 1297** from Northern Ireland
or email: **BTYSTE@btyoungscientist.com**

Information for parents and guardians

Your child will need your support over the coming months as they plan and prepare their project.

Where

Royal Dublin Society (RDS), Ballsbridge, Dublin 4

When

Tuesday 10th – Saturday 14th January 2023.

Non-Dublin based schools will need to register by 12 p.m. on Wednesday 11th January.

Closing date for students and teachers

26 SEPT

All online entries must be completed by Monday 26th September 2022 by 5pm, including teacher assessment and entry fee.

NB: Please remember that the judges' decisions are final in all cases and that BT and its employees have no influence over the judges.

A good way to get to grips with the exhibition is to thoroughly read our website, but we've also included a key facts summary below:

Entry fees

The cost to enter online is €20 / £18 per student. Entry will open online at **www.btyoungscientist.com**

Projects will not be notified whether they have qualified or not or receive their code for a complementary ticket if these fees have not been paid in full.

Money

Please make sure your child has enough pocket money to pay for meals, drinks and other expenses throughout the week. There are food facilities as part of the exhibition where they can buy food and drink. BT cannot take responsibility for items that may be lost or stolen.

Main awards ceremony

The award ceremony will be held on Friday 13th January 2023 from 5.30 p.m. and will be attended by a very special guest of honour. Seats will not be available for parents in the arena for this ceremony but we will be streaming it live in another part of the RDS. There will be entertainment for the students in the Students' Club following the ceremony.

Tickets

Each student entering the exhibition will be sent a code for a complimentary ticket for the event. This will allow admission to two people during ONE of the public days of the exhibition - 12th, 13th and 14th January 2023.

Please note that the code is redeemable on the ticketing site and is to be used to book a ticket. The code alone cannot be used to gain entry to the exhibition. Please make sure to book well in advance to avoid disappointment.

Acknowledgement

BT will acknowledge your child's entry upon receipt.

It will then be forwarded to the screening judges who will decide which projects will qualify for the exhibition in the RDS.

Accommodation

There are a number of hotels and B&B's in close proximity to the RDS. Sites like hotels.com and booking.com can be a good resource when trying to find accommodation.

The following advice is given to ensure that the students you accompany to the exhibition are your primary focus and that they have a strong sense of support and security.

- Adults should set a good example and serve as role models, not only for students that they accompany but for all young people at the exhibition.
- Adults should know where their students are at all times and students should know where their teacher/parent is at all times.
- Adults should oversee project set-up and be available to assist students with any complications that may arise.
- An adult should be available to cover or to arrange cover for students, especially those entered in the Individual section. All students should be given breaks from their stands.

Additional student information

The use of tobacco products, alcoholic beverages and illegal drugs/substances is prohibited.

All mobile phones must be switched off while judging is taking place at your stand.

BT takes no responsibility for mobile phones that are lost or stolen during the week of the exhibition.

Neat dress is essential. **School uniforms must be worn during the week of the exhibition and at the Awards Ceremony.**

Exhibiting students, or a nominated representative from the school, should be at their stand during the exhibition: Wednesday 11th - Saturday 14th January 9.30 a.m. - 5.30 p.m.
The exhibiting students must be at their stand for judging:

- Wednesday 11th January from 3.00 p.m. until your project has been judged.
- Thursday 12th January from 9.00 a.m. until your project has been judged. (Remember, your project will be judged twice on Thursday).
- Friday 13th January from 9.00 a.m. until your project has been judged.
- All participating students must attend the Awards Ceremony in the BT Arena at 5.30 p.m. on Friday 13th January.
- Be respectful and considerate to others at all times. Remember that you have been selected to represent your school and your region.
- The judges' decisions are final. Participating students, teachers and parents/guardians should be aware of the rules (found on page 38) and also the statements pertaining to plagiarism and ethics.

EDUCATOR HUB

The educator's hub is a dedicated space available to teachers around the isle of Ireland to avail of on the BT Young Scientist and Technology Exhibition website.

Within this area of the website, it has been specifically and carefully developed to meet the needs of the teacher. It provides resources that can be utilized inside and outside of the classroom to give everyone the best possible opportunity to support their students in encouraging them to reach their full potential. This past year has been a challenging one, and what it has shown is that educators across the globe have a skillset beyond their previous understanding.

It has highlighted an ability to adapt quickly and seamlessly, it has shown strength to keep a positive and motivating mindset throughout the changing circumstances, a resilience to change and passion to ensure their students achieve to the best of the ability.

BTYSTE team understand the needs of a teacher and we're committed to providing teachers with a platform which is a dedicated and resourceful space, filled with useful materials. The team are dedicated to our mission which is to develop Science and Technology by providing a platform for research, discovery, and critical thinking, celebrating those that choose to take part in the annual event.

THE PRIMARY SCIENCE FAIR

THE PRIMARY SCIENCE FAIR
BT YOUNG SCIENTIST & TECHNOLOGY Exhibition

The Primary Science Fair has been an exciting part of the BT Young Scientist & Technology Exhibition for over 15 years and allows those students in primary school with an interest in science and technology to be an integral part of one of the world's leading and longest-running school science exhibitions.

Rules

This is not a competition, all schools will receive participation certs to distribute to their students and will also receive a plaque to say that they have been part of The Primary Science Fair at the BT Young Scientist and Technology Exhibition 2023. Max number of pupils is 30 per project and where possible should be made up of a full class group. For smaller schools multi grade classes can put a project forward and they should be a combination of 3rd to 6th class only. We may accept more than one project per school dependent on availability of spaces. All ideas will go through a quick screening process which will be undertaken by judges from the BT Young Scientist & Technology Exhibition as we may receive more applications than we can accept.

For more information, visit our website
https://btyoungscientist.com/the-primary-science-fair-at-btyste

LIVING THINGS | MATERIALS | ENVIRONMENTAL AWARENESS AND CARE | ENERGY AND FORCES

BT YS BUSINESS BOOTCAMP

Programme for students

A number of the exhibiting intermediate and senior students from the 2023 BT Young Scientist & Technology Exhibition will be invited to take part in a BT Young Scientist Business Bootcamp in February/March next year where they will experience the world of technology commercialisation and entrepreneurship.

(Above) Taha Fareed Farooqi (age 15), Hannah Walsh (age 17), Sophie Creedon (16), Harry O'Connor (age 16) and Claudine Mulihano (age 17) were named as the overall "Best Group" for the work on their project "Ahead of the Curve". (Right) Isabelle Linehan (age 17) was presented with the title overall "Best Individual".

We have created this programme to encourage further innovation by our young scientists and provide them with commercialisation skills to carry forward into their careers and lives.

The bootcamp is expect to be held at UCD, subject to Covid-19 guidelines.

BT YS Bootcamp 2022 highlights
https://www.youtube.com/embed/JzRKGLoo7dE

in association with UCD Innovate

THE BT YOUNG SCIENTIST
BUSINESS BOOTCAMP

Expanding Business Leadership

As an extension of the BT Young Scientist & Technology Exhibition, the BT Young Scientist Business Bootcamp has enabled BT to take a national leadership role in economic development. BT is collaborating with key private and public sector organisations to create an opportunity to mentor the next generation of Irish innovators and entrepreneurs.

Igniting Entrepreneurial Spirit

We at BT believe that the BT Young Scientist Business Bootcamp helps to bridge the gap between the worlds of education and business and mentor the next generation of young innovators and entrepreneurs.

The Bootcamp experience has been life changing. I feel it has really opened up doors for me in regards to career options, developing my project and communicating better with people. I have met and heard from some amazing and inspiring people and I feel I have become more creative and innovative in the way I think.

RULES

Rules of Entry Applicable to the BT Young Scientist & Technology Exhibition 2023 (the "Exhibition"). Rules are correct at time of print, final rules in relation to the exhibition can be found at **www.btyoungscientist.com/rules**

The following rules are designed to ensure that the BT Young Scientist & Technology Exhibition is conducted as fairly and as efficiently as possible and are subject to change at any time at the sole discretion of BT. Infringement of any of the rules listed below may lead to exclusion, at any time, of individuals or schools from present and/or future participation in the BT Young Scientist & Technology Exhibition.

BT will and requires that participants will at all time comply with HSE Guidelines as may be issued from time to time during the Covid-19 pandemic, and reserves the right to make changes at any time to the below rules as may be necessary to ensure such compliance.

1. General rules

1.1 The BT Young Scientist & Technology Exhibition is organised and sponsored by BT Communications Ireland Limited ("BT") whose decision on all matters relating to the Exhibition will be final.

1.2 A non–refundable entry fee of €20/£18 per student is required. Entries and all associated paperwork must be submitted on-line. A project will not be considered for judging unless payment has been made in full.

1.3 Postal entries will not be considered.

1.4 The closing date for receipt of completed on–line entries is by 5pm on Monday 26th September 2022 including teachers assessment. Under no circumstances will late entries be accepted.

1.5 Second Level students aged between 12–19 years on 31st October 2022, resident in any part of Ireland, are eligible to enter.

1.6 Students can only win the title BT Young Scientist(s) & Technologist(s) of the Year once. Previous winners of the title are not eligible to re–enter the competition in subsequent years.

1.7 Projects that have been entered in other competitions can be accepted as entries to the BT Young Scientist & Technology Exhibition, provided that this information is stated in the relevant area on the entry form and provided there is no 3rd party restriction on entry.

1.8 Submission of an entry will not ensure the acceptance of a project for the Exhibition. A panel of screening judges will select the projects to go forward for the Exhibition and their decisions are final. The Exhibition will take place in person in from 11th to the 14th of January 2023 and to take part, candidates must accept and comply with the Exhibition Rules which will be made available on notification of acceptance.

1.9 Students educated at home in the Republic of Ireland, i.e., not attending a registered school or college, are eligible to enter, provided that they are registered with the National Education Welfare Board (Republic of Ireland) and supply a copy of the registration certificate with their entry form. Students from Northern Ireland in similar circumstances should telephone 0800 917 1297 for guidance.

1.10 Entries can be made in the following three age groups:

- Junior
- Intermediate
- Senior

Age group is determined by the year in which the student(s) is studying at the time of the Exhibition (January 2023) and as specified in page 11 of the Factfile.

1.11 Students attending Primary Schools or Third Level Colleges are NOT eligible to enter.

1.12 Projects can be submitted in one of the following four categories by 26th September 2022: -

1. Biological & Ecological Sciences
2. Chemical, Physical & Mathematical Sciences
3. Social & Behavioural Sciences
4. Technology

1.13 Notwithstanding the classification a student(s) assigns to its project, the judges will have the right to decide its appropriate classification.

1.14 Plagiarism is prohibited. Plagiarism is the presentation of someone else's work as a student's own without appropriate attribution. Whether done deliberately or inadvertently it is unacceptable and applies not just to text, but to graphics, tables, formulae, or any representation of ideas in print, electronic or any other media in addition to computer software and algorithms, which could be implied as being the work of the student. As part of the application students are required to sign a declaration that the project is wholly their own work except where this is clear acknowledgment and appropriate reference to the work of others. To maintain the integrity of the competition, where the judge's suspect plagiarism, they are entitled to exclude a project at any stage of the competition and the student(s), the student(s)'s parents, and/or the student(s)'s school may be notified.

Individual/group projects

Projects must be submitted as either an Individual or Group Project.

1.15 A student **may only participate in and enter one project** into the competition, whether they are entering as an individual or as part of a group.

1.16 Individual projects may be submitted in any one of the four categories specified at 1.12 above (see also Factfile page 10 section 'What category to enter') and once submitted cannot be re–classified as a Group Project. In addition, if a student enters an individual project which fails to qualify, they are not eligible to transfer to a qualified group project at any time.

1.17 Group Projects may be submitted in any one of the four categories specified at 1.12 above. Groups will consist of either two or three members, where possible in the same age group (Junior, Intermediate or Senior), who must be from the same school. Once a project has been accepted as a Group Project and has qualified to compete in the RDS, it cannot be re–classified as an Individual Project. In cases where groups are constructed from students who are not in the same age group, the age category in which the project is entered must align with the age group of the oldest student.

1.18 Each group must appoint a group leader who will direct the work and later act as a spokesperson. All group members must be in attendance at the Exhibition and fully participate in the judging interviews.

1.19 All members of a group should be fully involved, share the work and be familiar with everything that is presented in the report book and poster. The final work should reflect the co–ordinated efforts of all group members.

1.20 In exceptional circumstances groups may wish to decrease or increase the number of people participating in their accepted Group Project team. Any such proposed changes need to be submitted by email to BT (BTYSTE@btyoungscientist.com) before the 1st December 2022 detailing the proposed change(s) and the exceptional circumstances necessitating them.

Failure to do so will lead to the proposed changes being rejected and the project being judged in the original grouping in which it was entered. BT's decision as to whether such changes are acceptable will be final. The total group size cannot exceed three students.

1.21 Students whose projects involve studies of live animals must ensure that such studies are carried out in accordance with the statutory regulations. Further information can be found here https://www.hpra.ie/homepage/veterinary/scientific-animal-protection or https://www.hpra.ie/docs/default-source/default-document-library/directive-2010-63-eu-1.pdf?sfvrsn=0

BT reserves the right at its sole discretion to exclude any such projects from the Exhibition.

1.22 The nature of a project will determine the equipment used in the project. The merit of a project will lie in the use made of scientific apparatus and in an exhibitor's understanding of its functions, not in the equipment itself.

1.23 Before a project involving potentially dangerous, pathogenic, toxigenic or allergenic organisms (animals/insects, plants or microorganisms) is undertaken/entered, a competent expert must be consulted to advise on health and safety issues. The potential use of any such organisms must be clearly identified on the Project Details Form, and the advice of the competent expert who has been consulted made available for review by BT on request. BT reserves the right at its sole discretion, to exclude any such projects from the Exhibition.

1.24 Projects involving the use of chemicals must list those to be used as part of the exhibit in the RDS in the Project Details form. BT reserves the right at its sole discretion, to exclude any such projects from the Exhibition.

1.25 It is expected that all or the majority of the work for a project will be conducted either in the school, home or the outside environment. However, we understand that some projects may require visiting distant locations. Students may seek advice or information about their project from sources beyond their school, such as on the 'web' or from government organisations, or from universities, institutes of technology or other experts. However, the majority of students' work should be conducted under the supervision of their relevant teachers, with, where appropriate, suitable levels of involvement by parents, guardians or other responsible adults. Where experimental /research work is conducted by the students themselves, or on their behalf, in a laboratory that is external to their school (e.g. in a local university, a hospital or an industry) then that work should be clearly identified and acknowledged within the project report book and presentation. In addition, it is a requirement that a cover letter from the external facility, describing the extent of the assistance provided and the work done by the students within that facility or undertaken on behalf of the student(s), will be included in the project report book.

1.26 **A student may be part of only one project**. If a student having entered a project has not qualified, they cannot be added to a qualified group project at any time.

2. Qualified projects

Applicable only to projects qualifying to exhibit at the Exhibition.

2.1 Some students who have had their project accepted for exhibition may find themselves unable to complete it. It is very important that the organisers are immediately notified of this. If a project has to be withdrawn the organisers must be notified immediately by e–mail to BTYSTE@btyoungscientist.com

Schools failing to notify the organisers of a withdrawal in writing, a minimum of four weeks in advance of the Exhibition, will be liable to a charge of €100 to cover administration costs.

2.2 Project content and material remains the property of the exhibitors but may be used by BT for exhibition or publication and will be exhibited at the Exhibition. If students have a project with elements that have commercial potential, it is recommended that they consider patent protection. Please see the BT Young Scientist & Technology Exhibition website and Factfile for further information on patents.

2.3 Projects shown at previous BT Young Scientist & Technology Exhibitions will not be accepted unless the project has undergone significant further development. Projects that represent a continuation of previously entered work in the BT Young Scientist & Technology Exhibition should have a significant amount of new material. Previously presented data must be clearly indicated as such in the report books and in the display.

2.4 The Overall BT Young Scientist(s) of the Year may not represent any other country or organisation in respect of this science/technology project until the following year's prizewinner(s) are announced. The BT Young Scientist(s) may not represent themselves as BT Young Scientists at any time without the prior written consent of BT.

2.5 The Overall BT Young Scientist(s) of the Year will be the only project that will be eligible to be entered by the National Organiser for Ireland in the EU Young Scientist competition each year.

2.6 The judges reserve the right to withhold awards in the event of projects not reaching a satisfactory standard.

2.7 If a project has not adhered to all the rules and regulations of this competition, the judges have the right to withhold awards or exclude the project at any stage during the judging process.

2.8 The judges' decision in all matters relating to the award of prizes will be final. BT and other sponsors will have no input into the judges' decisions.

3. Display of exhibits at the RDS

Refers only to projects that qualify to participate at the Exhibition.

It is anticipated that the 2023 YSTE will take place in person at the RDS and Exhibitors should be prepared to be physically present between 11th – 14th January (inclusive). If exceptional circumstances require changes

to be made to these arrangements (due to Covid-19 restrictions or other exceptional circumstances), Exhibitors will be notified as soon as possible and amended Exhibition rules may be issued accordingly.

3.1 BT provides exhibition stands of uniform size and design. Exhibits must be within the limits of the stand dimension. Back display panel is 1189mm wide by 841mm high and the worktop is 1200mm wide by 600mm deep. Projects not conforming to this regulation size may be disqualified.

3.2 Exhibitors will be responsible for transporting their projects to and from the Exhibition Hall within the time allocated and to supply all ancillary apparatus and mountings used for the display of their projects.

3.3 Exhibitors will be required to assemble their own projects in the RDS Main Hall within the time allocated.

3.4 BT will NOT accept responsibility for damage to, or loss of, exhibits or personal belongings. Exhibitors are advised to remove valuable equipment from unattended stands.

3.5 Exhibits MUST be safely designed and constructed and MUST NOT use as part of the display, any dangerous equipment or open flames, any toxic, flammable, explosive or irritant chemicals, or any pathogenic, toxigenic or allergenic organism (animals/ insects, plant or microorganisms). Live mammals, birds, amphibians or reptiles MAY NOT be presented in exhibits.

3.6 Exhibitors are asked to refrain from using brand names of firms/sponsors in their display or in the title of their project. Reference to brands or firms must be confined to report books.

3.7 Exhibiting students must be present at their stands during all rounds of judging of projects at the RDS.

3.8 Exhibiting students must remain at their stands during the Exhibition to speak with the visiting public about their projects. They must not leave the Exhibition venue before 5.30 p.m. on any day of the Exhibition without prior arrangement with the organisers.

3.9 BT will NOT be responsible for any expenses incurred by the exhibitors in traveling to or from the Exhibition, or during their stay outside those offered in the Accommodation Grant Scheme.

3.10 Each exhibitor should write his/her name on all equipment, charts and report books. Students should bring two copies of their report book with them, as judges will take one copy during the first round of judging, and it will not be returned until Saturday morning.

3.11 BT will provide wireless Internet access only.

3.12 Students will be required to submit a short video (no longer than 3 minutes) summarising their project. This video will be used by the judges in initial reviews and will also be available in non-downloadable format on the YSTE exhibition platform as part of the public exhibition. Consent to use of personal data for this propose will sought on the consent form.

4. Grant scheme

4.1. The Accommodation Grant Scheme (the 'Grant Scheme') means the availability, subject to compliance with the rules contained herein and those generally applicable to the Exhibition, of grants of €150/£135 payable to a school in respect of each individual pupil project entry and grants of €300/£270 payable to a school in respect of each group project entry, subject always to a maximum aggregate grant payment under the Grant Scheme per school of €1,500/£1,350 (and subject to section 4.8 below). If the Fund is exceeded, the above payments will be made on a pro rata basis.

4.2 In order to be eligible for any grant under the Grant Scheme, a school must be located (i) in the Republic of Ireland or Northern Ireland, and (ii) more than 70 kilometres from the RDS Showgrounds in Ballsbridge, Dublin 4 (measured in accordance with the service on www.aaireland.ie/routes).

4.3 An application for a grant under the Grant Scheme from a school in respect of a project must be submitted by the teacher on behalf of the school (in the on-line Teacher Assessment Area) at the same time as submission of the application for entry of that project. In accordance with the general rules for submission of projects, application for all project entries must be received by BT on or before Monday 26th of September 2022. Late applications for grants will not be processed (save at the absolute discretion of BT). It is important therefore that all grant applications be returned by Monday 26th of September 2022.

4.4 The Grant Scheme only applies to the BT Young Scientist & Technology Exhibition 2023.

4.5 Eligibility of a school for consideration for any grant in respect of a project under this Grant Scheme is conditional upon that project entry application from that school for the Exhibition having successfully progressed through the Exhibition screening process and having qualified to take part in the finals of the Exhibition.

4.6 Any grant(s) paid to a school hereunder must be used entirely by the school to fund in whole or in part the travel and/or accommodation expenses only of those pupils in respect of whose project(s) the grant(s) was paid.

4.7 BT shall endeavour to pay grants awarded to schools in accordance with and subject to these rules on or before 20th January 2023 but BT shall have no liability for failure to pay any such grant on or before such date. In the event that a school has not received a grant payment, which it has been awarded by BT under these rules by such date, it should contact the BT Young Scientist Organisers' Office during the Exhibition by email a request for payment to: BTYSTE@btyoungscientist.com

4.8 Notwithstanding anything else stated herein, the Grant Scheme is subject always to a total limit on the amount of grants payable under the Grant Scheme of €75,000 (the 'Fund') and the Fund will be allocated on a pro rata basis to qualifying applicants of the scheme.

4.9 In the event that a project, in respect of which BT has either paid a grant to a school hereunder, or, confirmed to a school that a grant shall be paid to it hereunder, does not subsequently participate as an entrant in the Exhibition for any reason whatsoever or howsoever arising, the grant shall be reimbursed by the school to BT within thirty (30) days of BT requesting reimbursement of same where the grant has already been paid, and the grant shall be deemed not payable where a grant has not yet been paid.

4.10 BT's decision on eligibility of a school or a project entry for a grant hereunder is final.

5. BT Young Scientist Business Bootcamp

5.1 If a project is to be considered for inclusion in this programme then the student must indicate this by ticking the opt in box on the project details form. Failure to do this will mean exclusion of the projects for consideration from the Business Bootcamp programmes.

6. Prize money

6.1 Prize money will be paid by bank transfer to the successful individual or to the team leader BT will request bank account details with 7 days of the event finishing. BT shall endeavour to pay prize money in accordance with and subject to these rules on or before 30th March 2023 but BT shall have no liability for failure to pay prize money on or before such date. All bank details will be deleted once payments have been made.

7. Privacy

(Content, Photography and Film)

7.1 BT will comply with its obligations as a data processor in accordance with the General Data Protection Regulation (GDPR) and the Data Protection Act 2018. BT will use your personal information only as set out in our privacy notice which you can find here www.btyoungscientist.com/privacy. If you have any further questions or comments concerning your privacy, wish to access your personal data held about you, delete, or update information we hold about you, the relevant details are here https://btyoungscientist.com/privacy/

7.2 The BT Young Scientist & Technology Exhibition will commission a photographer to take photographs of the BT Young Scientist & Technology Exhibition. BT retains the right to use any photograph taken of participants in the BT Young Scientist & Technology Exhibition in accordance with our privacy notice.

7.3 Such content may be used on the BTYSTE website and for BT marketing purposes in accordance with our privacy notice.

N.B. BT is under no obligation to make use of any content provided.

7.4 BT also retains the right to publish information in regards to all projects entered into the BT Young Scientist & Technology Exhibition in accordance with our privacy notice.

7.5 As media partner of the BT Young Scientist Exhibition, RTÉ will be at the event interviewing and filming footage for use on its broadcast channels, online, in social media and for marketing purposes. All successful candidates must complete an RTÉ release form prior to the event, with parental consent required in respect of minors under the age of 18.

8. Intellectual property rights

8.1 If your project comprises of functional or technical elements it may qualify for patent protection. In order to be granted a patent, an invention must be:

- New
- Something that can be made and used in industry including agriculture.
- Have an inventive step – an invention is considered as involving an inventive step if it is not obvious to a person skilled in that area of technology, having regard to the state of the art.

8.2 All intellectual property rights either pre-existing or created in relation to or as part of the Exhibition shall remain the absolute property of that party or its licensors.

9. European Union Contest for Young Scientists (EUCYS)

9.1 The host country for EUCYS will pay the travel and accommodation expenses of qualified contestants.

9.2 The host country for EUCYS will pay travel and accommodation expenses of one adult escorting person per country. For the Irish delegation this will be the Irish National Organiser, who is the head of the BT Young Scientist & Technology Exhibition. Any others that wish to travel to EUCYS will travel solely and fully at their own expense.

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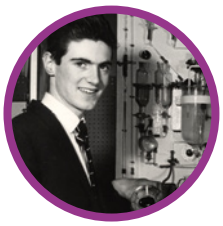
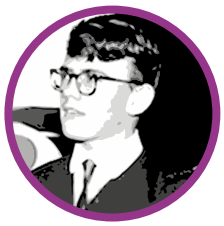


1965
John Monahan

1966
Máire Caitríona Ní Dhomhnaill / Mary Finn



1967
Walter Hayes R.I.P.

1968
George Andrew Reynolds

1969
Luke Drury

1970
Maria Edgeworth

1977
Micheal Og O'Briain

1978
Donald P McDonnell

1979
Jervis Good

1980
Karen Ruddock

1981
Catherine Conlon

1982
Martynn Sheehan

1989
Grace O'Connor, Sinead Finn

1990
Anna Minchin-Dalton

1991
Barry O'Doherty, Daniel Dundas

1992
Elizabeth Dowling, Jean Byrne R.I.P.

1993
Donal Keane, Rodger Toner

1994
Jane Feehan

2001
Shane Browne, Peter Taylor, Michael O'Toole

2002
David Michael O'Doherty

2003
Adnan Osmani

2004
Ronan Larkin

2005
Patrick Collison

2006
Aisling Judge

2013
Ciara Judge, Emer Hickey, Sophie Healy-Thow

2014
Paul Clarke

2015
Ian O'Sullivan, Eimear Murphy

2016
Diana Bura, Maria Louise Fufezan

2017
Shane Curran

2018
Simon Meehan

NNOVATION

1971
Peter Short

1972
Seán Mac Fheorais

1973
Tadgh Begley

1974
Richard Elliott

1975
Noel Boyle

1976
Mary Kelly-Quinn

1983
William Murphy, Gareth Clarke, Turan Mirza

1984
Eoin Walsh

1985
Ronan McNulty

1986
Breda Maguire, Niamh Mulvaney

1987
Emma Donnellan, Henry Byrne

1988
Siobhan Lanigan O'Keeffe

1995
Brian Fitzpatrick, Shane Markey

1996
Elsie O'Sullivan, Rowena Mooney, Patricia Lyle

1997
Ciara McGoldrick, Emma McQuillan, Fiona Fraser

1998
Raphael Hurley

1999
Sarah Flannery

2000
Thomas Gernon

2007
Abdusalam Abubakar

2008
Emer Jones

2009
John D. O'Callaghan, Liam McCarthy

2010
Richard O'Shea

2011
Alexander Amini

2012
Eric Doyle, Mark Kelly

2019
Adam Kelly

2020
Alan O'Sullivan, Cormac Harris

2021
Greg Tarr

2022
Aditya Joshi, Aditya Kumar

2023
Winner announced Friday 13th January

HOW IT'S GOING

Our second virtual exhibition in 2022 was a great success, 226,000 visitors from 68 countries with the BTYSTE portal getting over 7.75 Million hits. They were awed by the quality and ingenuity of the projects that took part.

Social media reach

FaceBook
77.3K

LinkedIn
24.3K

Instagram
245.2K

Twitter interactions
734K

"I really enjoyed my experience at BTYSTE and I think it is a wonderful opportunity for anyone who has an interest in science."

"I want to say a big thank you to all involved! It was an amazing experience that I will take with me forever."


BT
YS

BT's origins date back to the very first communications company, the Electric Telegraph company, founded in 1846. Today BT is one of the world's leading providers of communications services and solutions, serving customers in 180 countries and our technologies are used to help keep economies online and secure.

BT's purpose is as simple as it is ambitious: we connect for good. There are no limits to what people can do when they connect. We are proud to organise the BT Young Scientist & Technology Exhibition (BTYSTE) because we are passionate about increasing youth engagement in science and technology. We want to provide students with a platform to showcase innovative ideas nationally and internationally so that all participants can tackle the biggest challenges and "connect for good".

BT in Ireland

We employ over 650 people in the Republic of Ireland where we partner with organisations that use our portfolio of end-to-end technology solutions.
Our job is to help companies to solve and manage their complex communication needs using our global network. We process millions of transactions through our state-of-the-art data centres, develop agile contact centres, pre-empt and solve emerging cyber threats, build networks for other communications companies and much more.

We also serve major public sector organisations, operating the 999/112 emergency call answering service on behalf of the Irish state.

Sustainability in BT

BT's "connect for good" purpose helps make the world a better place. We're committed to respecting and supporting the human rights and freedoms of all those touched by our business – our colleagues, customers, supply chain workers and wider communities.

We are a leader on climate and sustainability action. Our ambition is to adopt a sector-leading approach to climate action, with a target to become a net zero carbon emissions business by 2045.

Just like our global colleagues, our Irish employees support numerous good causes and we work hard to make a positive impact on society through volunteering, fundraising and financial contributions. Each year, BT employees are allocated three days volunteering leave, some of which will be used to organise BTYSTE.

In 2018, BT Ireland was awarded the Business Working Responsibly Mark®, the official standard of excellence for sustainability and corporate social responsibility. We were one of the inaugural Irish signatories of the Low Carbon Pledge® and, in 2021, the first signatory in Ireland of a new Inclusive Workplace Pledge®.

We are also recognised as one of Ireland's healthiest places to work. A Healthy Place to Work® is one where people understand the purpose of their work and how it aligns with the organisation; are part of a learning environment where they are able to adapt and grow; have connections with others and the organisation that allow them to be at their best; and where people have the energy to sustainably deliver on their and the organisation's objectives.

Northern Ireland

BT is one of the largest private sector employers in Northern Ireland. We are leading the way in delivering exciting new services to our customers - everything from TV to high speed fibre broadband to IT services for some of the largest organisations in the market.

Find out more at:
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