



**BT YOUNG SCIENTIST
& TECHNOLOGY Exhibition**



Driven by innovation, delivered by BT



Entry details 2015

THE WHAT, WHY AND HOW

CELEBRATING 51 YEARS OF INNOVATION



BT YOUNG SCIENTIST & TECHNOLOGY Exhibition



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The what

Do you want to get involved in something that you will remember for the rest of your life? Celebrating its 51st year, the BT Young Scientist & Technology Exhibition is much more than a competition; it is an unforgettable experience for all the students who take part.

The exhibition itself is the final stage in the competition which is open to all second level students from Ireland, both North and South.

As well as the 550 student projects on display, there are four exhibition halls filled with exciting and innovative science and technology-based exhibits and entertainment, making it a thrilling event for those who enter and for general visitors too.

Check out the highlights...

<http://www.btyoungscientist.ie/media-centre/video-library/2014-Video>

The history

In 1963 two physics researchers from the University College Dublin, Rev. Dr. Tom Burke and Dr. Tony Scott, came across the concept of 'Science Fairs' while conducting research in New Mexico, America. The pair decided that this type of hands-on science was something from which students in Ireland could benefit, by taking science outside the four walls of the classroom and showing that it is all around them. And so the Young Scientist Exhibition was born with the first event taking place in 1965.

BT

BT has been the proud organiser and sponsor of the BT Young Scientist & Technology Exhibition for 15 years. The essence of the exhibition is the spirit and ingenuity demonstrated by the students who participate. As a leader in innovation and technology, BT is delighted to cultivate and nurture the talent of our future scientists and engineers both through the exhibition itself and through the BT Young Scientist Business Bootcamp about which you will read more later. We also are delighted that over 200 of our own people volunteer to visit schools to talk about the exhibition or work at the event itself in the RDS each January.

The BT Young Scientist & Technology Exhibition 2015 is supported by:



Department of
Education
www.deni.gov.uk
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MANNYSTRE O
Lear

Celebrating 51 years of innovation, the BT Young Scientist & Technology Exhibition is one of the largest and longest-running exhibitions in the world.

Getting started

You're reading this, so you must have some interest in the BT Young Scientist & Technology Exhibition 2015. That's a good start.

But if you're wondering why you should get involved, here are just some of the benefits:

It's a brilliant extra-curricular activity to put on your CV or application form for university. It shows a real passion for science and maths and an ability to think for yourself.

Getting the chance to represent your school/town at the exhibition is a real buzz and an experience you will never forget.

And although a love for science and technology lies at the heart of all the entries, we're sure everyone also has an eye on the prizes!

There are over 120 prizes to be won, including the prestigious BT Young Scientist & Technologist of the Year Award and the chance to represent Ireland at the European Union Contest for Young Scientists.

And the rewards aren't just confined to entrants. Teachers will 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 put the fun back into subjects which are viewed by some as a bit 'dry'.

But don't just take our word for it

Teachers and pupils leave the BT Young Scientist & Technology Exhibition enthused and invigorated. Here are a few quotes from some people who were involved in previous events.

“ The BT Young Scientist and Technology Exhibition has the right mix, in that students often quote that they have “room to go outside the box” and that they are participating in “science that interests young people” while still having “the craic”.

Every year, as educators, we are humbled by the maturity, creativity, initiative, self-confidence and excellent communication skills demonstrated by all participants.

Our whole school community looks forward to being dazed by the brilliance on show in the RDS by students in the BT Young Scientist and Technology Exhibition 2015 and returning to school invigorated and looking forward to the next terrific instalment! ”

John White

St. Vincent's Secondary School, Dundalk.

“ I was absolutely amazed at the entire event! Unbelievable quality from start to finish from students, teachers, judges, organisers, red coats, caterers. I have never seen an awards ceremony with so much fun and energy - it was fantastic and well done to the two presenters.

I can honestly say that I have never seen my children evolve so much in such a short space of time. I'm sure that is true for many parents. The whole experience gives them a real opportunity to shine. Irrespective of prizes, the development that took place was incredible and, at times, my own children were unrecognisable in terms of confidence and demeanour!

An amazing experience all round and we shall return next year. ”

Parent



The how

Who can enter?

The competition is open to second-level students from across the island of Ireland, north and south, who are aged between **12 and 19 years on 31st October 2014**.

You can enter your project as an individual or share the work as a group. A group is made up of no more than three people from the same school and the same age group, and all group members must be finalised by 1st October. To give everybody an equal chance of winning, there are three age groups in which to enter.

Please note: 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.

Age Groups	Rep of Ireland	Northern Ireland
Junior	1st & 2nd Year	Year 8, 9 & 10
Intermediate	3rd & 4th Year (junior & transition)	Year 11 & 12
Senior	5th & 6th Year	Year 13 & 14

The category choice

Students can enter projects in one of four categories:

- Biological and Ecological Sciences
- Chemical, Physical and Mathematical Sciences
- Social and Behavioural Sciences
- Technology

When?

The BT Young Scientist & Technology Exhibition takes place from **7th to 10th January 2015**, at the RDS in Dublin.

How to Enter

Entries may be submitted in either English or Irish. You can enter online only at www.btyoungscientist.com

A detailed 'One Page Proposal' outlining your project idea, together with completed entry forms and fees, must be submitted online by **Wednesday 1st October 2014**.

Your application must include:

1. Entry Form for Projects
2. Project Details Form
3. One Page Proposal
4. Entry Fee (€20/£18)
5. Teacher Assessment Form

The Accommodation Grant Scheme

BT provides a grant scheme under which schools can apply for assistance towards accommodation costs if they have to stay overnight in Dublin. This grant scheme underlines BT's commitment to making the exhibition accessible to schools from all parts of Ireland. A school may receive up to €1,500/£1,350 through this scheme, if it meets certain criteria. Visit the website for further information.



Where to get your idea

To help you decide on your topic, try to get an idea of what you want to study. Ideas come from all around us and the best ones are often the simplest. Is there something that really annoys you about everyday life? Have you spotted a problem that needs a solution or could you do a project related to one of your hobbies?

Perhaps there is an issue that has touched you in some way. You don't have to set out to change the world, but ideas that have a wide or far reaching impact tend to do well in the competition.

Use any contacts you have to discuss some possibilities – like your family doctor, dentist or a vet. The most important thing to do though, is to discuss your idea with your teacher and parents.

Initial research

Visit your local library or use the Internet to learn everything you can about your chosen topic. Write to or email companies for specific information. Talk to professionals in the field and consult your teacher and parents. The trick is to research and research over and over again until you are an expert on the topic.

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 finished in the amount of time you have. And remember to leave time to write your report and put together an exhibit.

Prepare a One Page Proposal

When you have decided on a project and carried out some research and trial experiments, it is time to write your One Page Proposal. This helps you not only to organise your thoughts but also to prepare the case for your project. The proposal should be word processed, in the region of 500 words and limited to an A4 sheet.

Remember to mention any institutes or people you have contacted for information. This concise description of your thoughts about the project and of the work that you intend to carry out is essential to the screening process. A decision on whether or not a project qualifies for the exhibition in the R.D.S. in January, will be made on the basis of your initial application, so the One Page Proposal is very important.



The Categories

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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 or demography. Learning and perception as well as the study of attitudes and behaviour in relation to health, nutrition, work, leisure and living habits are all included here. Also eligible are projects on consumer affairs, effects on society, social anthropology and political science provided they involve the use of scientific methods.

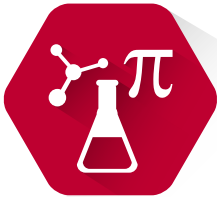


Technology

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. The 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 or automation. Students are also expected to understand the basic science behind the technology so that they can get the most from the project.



1,116 students from all over Ireland, covering 550 projects from 218 schools competed for the coveted title 'BT Young Scientist & Technologist of the Year 2014.'



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. Also eligible are projects based on earth and space sciences such as meteorology, geophysics, geology and astronomy.

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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.





A record-breaking 2,000 entries were received for the BT Young Scientist & Technology Exhibition 2014.



Tips from the judges

The following advice and tips from our panel of judges might make your job a little easier when writing your project.



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 reflect accurately 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.

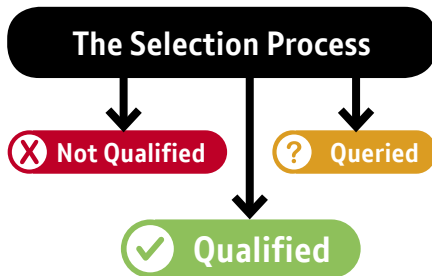


What happens next?

More information is available online at www.btyoungscientist.com

The selection process

Your One Page Proposal is considered by a panel of screening judges who carefully consider every project. You will be told whether your project has qualified or not qualified in November 2014.



N.B. The submission of a project does not automatically mean that the project will qualify for the exhibition in the RDS in January 2015.

Need some help with your project?

Check out the website for more information. www.btyoungscientist.com



Remember

1. Your project can make a huge difference to you, your school and even the world of science!
2. Applications must be received by the **1st October 2014**
3. Our website address is www.btyoungscientist.com
4. Our helpline numbers are:
ROI - 1800 924 362
NI - 0800 917 1297
5. e-mail: youngscientist@bt.com
6. We'll be sending you more detailed information to your school in the coming months.

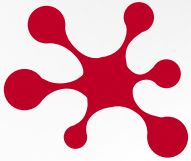
We have covered a lot of information in this booklet and you should now have everything you need to get started on your project. So get your thinking cap on. We're looking forward to seeing innovation and creativity from this year's projects. Good luck and enjoy the rest of the year in school and also your summer holidays!



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THE BT YOUNG SCIENTIST BUSINESS BOOTCAMP

Driven by innovation, delivered by BT



BT is delighted to announce our sixth programme for students.

We are returning to the Innovation and Technology hub at Nova UCD (www.ucd.ie/nova) for four days of fun and business development workshops.

30 intermediate and senior students from the 2014 BT Young Scientist & Technology Exhibition will experience the world of technology commercialisation and entrepreneurship. We have created a programme to provide a critical link in the innovation process and will also provide our young scientists with commercialisation skills to carry forward into their careers and lives.

The 2012 Bootcamp was captured on film for RTE's The Science Squad - thesciencesquad.ie



A short video of the Bootcamp can be watched here: <http://url.ie/gcy7>



The 2012 Bootcamp was captured on film for RTE's The Science Squad - <http://url.ie/gcy8>

Expanding Business Leadership

As an extension of 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. Bridging this gap is critical and urgent if Ireland is to be a competitive player in the global economy.



Bringing it all together



BT is the world's oldest communications company, with a direct line of descent from the first national telecommunications undertaking in the world. Incorporated in 1846, it was the first anywhere to develop a nationwide communications network exploiting leading edge telegraphy technology. Within ten years an international network had been developed, making communications possible within minutes and hours instead of days and weeks. The consequences for every aspect of society were dramatic and profound.

Fast forward to today and technology is more central to BT's business than ever before as it builds on the foundation of the digital era to create the information age. Innovation - the combination of technical know-how and commercial acumen becomes even more crucial in a competitive world.

BT has gone on to become one of the world's leading communications services companies. Every day we touch the lives of thousands of people on the island of Ireland, helping them communicate, do business and be entertained and informed. In Northern Ireland, we continually lead the way in bringing 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. In the Republic of Ireland, BT has grown from a challenger brand to a highly successful company with a breadth of services that we believe is unrivaled. We operate the 999/112 emergency call answering service on behalf of the Irish State, connect ATMs for banking institutions, build networks for other communications companies, process millions of transactions through our data centres, train thousands in our ICT Training Centre - and the list goes on.

And then there is our role in the community. We believe we have a responsibility to give something back to the communities in which we operate - over €1m in time, cash and in-kind support here on the island of Ireland. And the BT Young Scientist & Technology Exhibition - which we organise ourselves in BT - is something we are very proud of as it continues to flourish under our stewardship.

If you'd like to learn more about BT and how we strive to make a positive impact on the organisations and people we work with every day, visit www.btireland.com and www.btplc.com.

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