



BT YOUNG SCIENTIST  
& TECHNOLOGY Exhibition

# EXHIBITION GUIDE



# 2022

## VIRTUAL

## 12-14 JANUARY



#BeyondLimits





# BT YOUNG SCIENTIST & TECHNOLOGY Exhibition

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## Portal

The 58th BT Young Scientist & Technology Exhibition has been transformed into a fully virtual science exhibition

Check it out at  
[portal.btyoungscientist.com](https://portal.btyoungscientist.com)









A message from

# Shay Walsh

Welcome to the 58th BT Young Scientist & Technology Exhibition. This week we're proud to bring you on a journey of discovery through the world of STEM as we shine a light on the talented young minds in schools across Ireland right now.

For the second year running, the Exhibition will be streamed out live across the world, but while challenges still remain, the show must go on. And what a show we have for you this week.

Firstly, our exhibiting projects. Despite all the odds, our students have impressed the judges with their creative ideas and deeply thought-out research into their projects. As expected, the major issues dominating society and the planet are very much to the forefront of their entries, from climate change to mental health to the global pandemic and our continued move into a digital world.

Alongside our projects is our spectacular celebration of the world of science and technology, from the latest innovations by our partners to mind-blowing special acts, as well as an insightful series of discussions for business leaders.

With something for people of all ages and interests, the 58th BT Young Scientist & Technology is a show for all. We at BT, are proud to be broadcasting it to a global audience so that more people than ever before can be captivated by STEM and the great young minds that will lead the world tomorrow. If there is one thing we can always feel assured of leaving the BTYSTE, it's that our future is in safe hands.

Enjoy the Exhibition and thank you for joining us.

**Shay Walsh**  
**Managing Director, BT Ireland**

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





Teachtaireacht ó

# Shay Walsh

Fáilte chuig an 58ú Taispeántas Eolaí Óg agus Teicneolaíochta BT. An tseachtain seo táimid brógúil as sibh a thabhairt ar aistear fionnachtana trí STEM agus sinn ag tabhairt léargais ar na meonta óga cumasacha i scoileanna ar fud na hÉireann anois.

Don dara bliain as a chéile, sruthófar an Taispeántas beo ar fud an domhain, ach cé go bhfuil dúshlán fós ann, caithfear leanúint ar aghaidh. Agus tá seó den scoth againn daoibh an tseachtain seo.

Ar dtús, tá tionscadail taispeántais againn. In ainneoin gach rud, chuaigh ár mic léinn i bhfeidhm ar na moltóirí lena smaointe cruthaitheacha agus an taighde doimhin a chuir siad isteach ina gcuid tionscadal. Mar a bheifí ag súil leis, tá na mórcheisteanna is mó atá i réim sa tsochaí agus sa phláinéad chun tosaigh go mór ina n-iontrálacha, ó athrú aeráide go meabhairshláinte go dtí an phaindéim dhomhanda agus ár n-aistriú leanúnach isteach i ndomhan digiteach.

In éineacht lenár dtionscadail, tá ár gceiliúradh iontach de dhomhan na heolaíochta agus na teicneolaíochta, ó na nuálaíochtaí is déanaí ag ár gcomhpháirithe go gníomhartha speisialta

dochreidte, chomh maith le sraith díospóireachtaí géarchúiseacha do cheannairí gnó.

Le rud éigin do dhaoine de gach aois agus suim, is seó do chách é an 58ú Taispeántas Eolaí Óg agus Teicneolaíochta BT. Táimidne ag BT, bródúil as a bheith ag craoladh do lucht féachana domhanda ionas gur féidir le níos mó duine ná riamh a bheith faoi gheasa ag STEM agus na meonta óga iontacha a bheidh ag treorú an domhain sa todhchaí. Má tá rud amháin ann gur féidir linn a bheith cinnte faoi i gcónaí agus sinn ag fágáil BTYSTE, is é sin go nach gá dúinn a bheith imníoch faoin todhchaí.

Bain taitneamh as an Taispeántas agus go raibh maith agaibh as ucht a bheith linn.

**Shay Walsh**  
**Stiúrthóir Bainistíochta,**  
**BT Éireann**

**Urraitheoir agus eagraí bródúil Taispeántas BT na nEolaithe Óga & na Teicneolaíochta**

# Exhibition partners

The **BT Young Scientist & Technology Exhibition 2022** is proudly sponsored and supported by;



An Roinn Oideachais  
Department of Education







# Awards



## Main awards

### BT Young Scientist & Technologist(s) of the Year 2022

#### 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:



### 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.



### Social & Behavioural Sciences

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

The prizes are:

 <b>1st prize</b> <b>€300/£270</b> for both Individual and Group projects	 <b>2nd prize</b> <b>€225/£202</b> for both Individual and Group projects	 <b>3rd prize</b> <b>€150 / £135</b> for both Individual and Group projects
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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\*.

#### Perrigo Student Award

Perrigo 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.

### 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.

### 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.

#### Perrigo Educator of Excellence - Biological and Ecological Sciences

The winner receives a bursary of €2,000 and a Perrigo 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.



### Founders medal

A medal will be awarded in the name of the co-founders of the exhibition, Dr Tony Scott and Fr Tom Burke, a €1,000 award will be made to an individual who has made a remarkable and long standing contribution to the BT Young Scientist and Technology Exhibition. This is chosen by the Co-Founder Dr Tony Scott.



# Special awards

We are pleased and proud to have a fabulous range of Special Awards at this year's Exhibition. Each award is industry-sponsored and details of each organisation and awards can be found on the Awards section of our website [www.btyoungscientist.com](http://www.btyoungscientist.com)

This year, Special Awards will be presented by our partner organisations. Special Awards recognise excellence in specific areas, examples include projects which have a focus on innovation in technology, physics, chemistry, sustainability, recycling, the environment, research or improving cancer awareness.

Full details of all the Special Awards and the criteria for each can be found on our website [www.btyoungscientist.com](http://www.btyoungscientist.com)

## Schools awards

Each year two school awards are made, one for Best School in Northern Ireland presented by BT and one for Best School in the Republic of Ireland presented by NAPD. These are presented on a points based system and cannot be won by the same school in a three year period.



Food Group



An Roinn Oideachais  
Department of Education



IOP Institute of Physics

INTELLECTUAL  
VENTURES®



REGENERON®



Trinity College Dublin  
Coláiste na Tríonóide, Baile Átha Cliath  
The University of Dublin







## Chemical, Physical & Mathematical Sciences

Prof. Claire Gormley  
Prof. Elaine O'Reilly  
Prof. Emma Sokell  
Dr Fergal O'Reilly  
Dr Graeme Horley  
Prof. Maria Meehan

Dr Martina Nolan-Jones  
Dr Nuala Caffrey  
Prof. Orla Feely  
Prof. Pádraig Dunne  
Prof. Pat Guiry  
Prof. Peter Lynch

Dr Rachel Quinlan  
Ronan McNulty<sup>★1985</sup>  
Prof. Sean Corish  
Prof. Stephen Connors  
Dr Tony Scott



## Technology

Aaron McCormack  
Anna-Marie Turley  
Barry Kennedy  
Prof. Bernie Capraro  
Brian O'Mara  
Dr Diarmuid O'Brien  
Dr Helen McBreen

Prof. John Dunnion  
Julie Spillane  
Leonard Hobbs  
Dr Linda Doyle  
Lorna Ross  
Noel King  
Ray Goggin

Prof. Sarah Jane Delany  
Stephen O'Brien  
Prof. Vincent Wade  
Jamie Cudden  
Prof. Eoin O'Neill



## Biological & Ecological Sciences

Prof. Ann Cullinane  
Dr Colin Kelleher  
Prof. Donal O'Shea  
Dr Eoin Lettice  
Prof. Evelyn Doyle  
Dr Fidelma Butler  
Prof. Fiona Wilson  
Prof. Geraldine Butler

Prof. Grace McCormack  
Dr Helen French  
Dr John Devaney  
Dr John Monahan<sup>★1965</sup>  
Prof. John O'Halloran  
Prof. John Morrissey  
Dr Karen Bacon  
Prof. Kathy O'Boyle

Prof. Ken O'Halloran  
Prof. Mark Crowe  
Prof. Mary Kelly-Quinn<sup>★1976</sup>  
Prof. Niall Moyna  
Prof. Paul McCabe  
Dr Richard O'Hanlon  
Dr Stephen Butler  
Dr Tadhg O Croinin



## Social & Behavioural Sciences

Aidan Ryan  
Annette Cahalane  
Prof. Anthony Staines  
Brendan O'Sullivan  
Prof. Ciara Greene  
Conor Faughnan  
David Silke  
Dr Desmond O'Mahony  
Dr Edel Higgins  
Prof. Elizabeth Nixon  
Prof. Eoin Devereux

Esther Doyle  
Fiona O'Callaghan  
Prof. Ian Robertson  
Prof. James O'Higgins Norman  
Prof. Jean Cushen  
Prof. Joe Barry  
Dr Jo-Hanna Ivers  
Prof. Jones Irwin  
Dr Katriona O'Sullivan  
Lynda Mc Sweeney

Dr Maeve Martin  
Dr Marion Palmer  
Dr Roisin Lyons  
Dr Sinead Smyth  
Siobhán Aherne  
Prof. Stephen Kinsella  
Dr Tadhg MacIntyre  
Prof. Tara Cusack  
Prof. Yseult Freeney



## BT Chairperson

Therese Gunning

## Special Awards Chairperson

Professor Eoin O'Neill

★ Young Scientist of the Year past winner

# 2022 Project Quick Search

## Project category

Chemical, Physical and  
Mathematical Sciences

1100 - 1604

Technology

2100 - 2607

Biological and  
Ecological Sciences

3100 - 3607

Social and Behavioural  
Sciences

4100 - 4704

## School name/County

### Antrim

St Dominic's High School	4103
St Louis Grammar School	2603

### Armagh

St Catherine's College	1407
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### Cavan

Breifne College	3607
Colaiste Dun an Ri	3413, 3535, 4567
St Patrick's College	4236

### Clare

Coláiste Mhuire Ennis	1524, 4557
Mary Immaculate Secondary School Lisdoonvarna	1105, 3102, 3104, 3108 3406, 3562, 4109
Meánscoil Na Mbráithre	2400, 2413, 4593
Rice College	3532
Scoil Mhuire	1216
St Anne's Community College	1603
St Joseph's Community College	3412, 4411
St. Joseph's Secondary School	2415, 3408

### Cork

Ardscoil Uí Urmoltaigh	1523, 3220, 3533
Beara Community School	4606
Bishopstown Community School	4569
Boherbue Comprehensive School	3537, 3538
Christ King Girls Secondary School	2100
Clonakilty Community College	2511, 2512, 3207 4217, 4546
Colaiste An Phiarsaigh	1100, 1401, 3400 4403, 4408
Coláiste An Spioraid Naomh	3530

Coláiste Choilm	1507, 3563, 4550, 4551 4572, 4588
Coláiste Chríost Rí	4112
Coláiste Muire Crosshaven	1112, 3226, 4200 4213, 4245
Coláiste Na Toirbhirte	4228
Colaiste Treasa	3201, 3539, 4203, 4204 4206, 4211, 4212
Cork Educate Together	2205
Douglas Community School	3526
Edmund Rice college	2218, 4111
Gaelcholáiste Charraig Uí Leighin	1505, 3505 4202
Kinsale Community School	1404, 2116, 3105, 3404 3415, 3513, 4100, 4214 4219, 4220, 4242, 4415, 4416, 4529
Mayfield Community School	2306
Midleton College	1116
Millstreet Community School	3555
Mount Mercy College	1110
Pobalscoil na Tríonóide	4113
Sacred Heart Secondary School	3524, 3548, 3564
Scoil Mhuire gan Smál Blarney	3300
Scoil na mBráithre Chríostaí	2206
Skibbereen Community School	3556, 4241, 4413
St Aloysius College Carrigtwohill	1518, 1519, 3214 4563, 4565
St Fanahan's College	1508, 1528, 3509, 4227, 4514
St Mary's High School	3522
St Mary's Secondary School	1512, 3512, 3516, 3528 4226, 4518, 4519, 4520, 4523, 4536, 4537, 4538
St Mary's Secondary School Mallow	1526, 4577
St Peter's Community School	4402





## School name/County

St. Brogan's College 3501, 4101, 4400  
4404, 4417, 4500

### Donegal

Abbey Vocational School 2110, 2214, 2217, 2406  
3215, 3231, 4304, 4585

Choláiste Cholmcille 2529

Coláiste Ailigh 4300

Loreto Convent 3600

St Columba's College 4583

St Columba's College 4597

The Royal and Prior School 2505

### Down

Abbey Christian Brothers School 4552

South Eastern Regional College  
- Bangor Campus 1308

### Dublin

Belvedere College 2300

Blackrock College 1213, 1522, 4110, 4246

Bremore Educate Together Secondary  
School 4533

Castleknock College 2403

Coláiste Cois Life 4589

Coláiste Mhuire 2201

Coláiste Phádraig 2412, 2503, 2504

Dominican College 4579

Edmund Rice College 1212, 3545

Gaelcholáiste an Phiarsaigh 4605

Gonzaga College 2104, 2520, 4240

Holy Faith Secondary School 4604

Home School 2108

Kingswood Community College 2305

Kishoge Community College 2304, 2604

Loreto College 3106, 3402, 3507, 4225  
4405, 4406, 4407, 4418, 4534

Loreto High School 1516, 2534, 3541, 3558

Loreto Secondary School,  
Balbriggan 1527, 3414, 3604, 3606,  
4105, 4598, 4599

Lucan Community College 3602

Malahide Community School 3601

Mount Sackville Secondary School 1218

Muckross Park College 1107, 1205, 3403  
3407, 4302

Nord Anglia International School Dublin 2111, 3103

Oatlands College 1104

Our Ladys School 1204, 1209

Portmarnock Community School 1202

Rockford Manor Secondary School 1307, 3529  
4410, 4561

Sandford Park School Ltd 2222, 2606, 3109

Sandymount Park Educate Together  
Secondary School 2407, 2408, 3542, 3550, 4238

St Andrew's College 1111, 2213, 2221, 2225  
3205, 3304

St Benildus College 3301

St Colmcille's Community School 4107

St Conleth's College 1203, 2106, 3515, 3568

St Joseph's Secondary School, Rush 1217, 1410  
2307, 2416, 2528, 3222, 3223, 3227, 4239, 4591

St Mary's Secondary School 2103, 2411, 4114, 4587

St. Aidan's C.B.S. 2310

St. Fintan's High School 1305

St. Kevin's Community College 4580

Stratford College 2302

Sutton Park School 2531, 4303

Synge Street CBS 1502

Tallaght Community School 4305

The Kings Hospital 2114

Wesley College 1302

### Galway

Coláiste Bhaile Chláir 4401

Coláiste Mhuire 3546

Coláiste Naomh Eoin 1409

Gaelcholáiste an Eachréidh 2309

Merlin College 4104

Presentation College Headford 2607

St Brigids College 2219

# 2022 Project Quick Search

## School name/County

### Kerry

Coláiste na Sceilge	4568
Gaelcholáiste Chiarraí	1113
Killarney Community College	4525
Mercy Secondary School	1106, 1210, 1306, 2605 3534, 4106, 4566, 4702
Pobalscoil Inbhear Scéine	1208, 1513, 2207 3510, 3603
Presentation Secondary School	1115, 4575
Presentation Secondary School, Castleisland	4510, 4511
St. Brigid's Secondary School	2515, 3525, 4223 4581
Tarbert Comprehensive School	2404, 4512

### Kildare

Clongowes Wood College	3221
Coláiste Lorcáin	1500
Coláiste Naomh Mhuire	2508, 2509
Cross And Passion College	4590
Newbridge College	3100
Patrician Secondary School	2602
St Wolstan's Community School	3544, 4594, 4595

### Kilkenny

Castlecomer Community School	3565, 4243 4509, 4571, 4609
Coláiste Pobal Osraí	3213, 4544
Loreto Secondary School	1200, 1506, 1533, 3511 4515, 4516, 4559, 4592
Meánscoil na mBráithre Criostaí	1211, 2525 4222, 4232, 4574
St Kieran's College	1301, 2501, 3203, 4209 4507, 4564

### Laois

Heywood Community School	3219, 4224
Mountrath Community School	4233, 4234

### Leitrim

Carrick-On-Shannon Community School	3302 4607
Mohill Community College	2209, 4221
St. Clare's Comprehensive School	4247

### Limerick

Ardscoil Ris	2208, 2530, 3228, 3552, 4596
Coláiste Chiaráin	1400, 2510
Colaiste Nano Nagle	2204, 4409, 4521, 4522
Desmond College	1600, 2101, 2102, 2502 2523, 2600, 2601, 3500
John The Baptist Community School	1510, 2202 3519, 4205, 4547, 4582
Laurel Hill Secondary School FCJ	2216, 3209 3230, 4218, 4549
Mungret Community College	1408, 4229, 4235 4248
Scoil Mhuire agus Íde	2402
Scoil Pól	1520, 1529, 4578, 4703

### Londonderry

St Mary's College	1102, 1300, 1403, 1405
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### Longford

Ardscoil Phadraig	1514, 4541
Lanesboro Community College	1201, 1207

### Louth

Bush Post Primary School	1517, 3531, 4562
Dundalk Grammar School	2200
Our Ladys College	3303
St Louis Secondary School	3523, 3605
St Vincent's Secondary School	4543
MayoColáiste Cholmáin	2109
Coláiste Pobail Acla	1601
Mount St Michael	2220
St. Gerald's College	4412

### Meath

Ashbourne Community School	2527
Beaufort College	2405
Boyne Community School	1501
Dunshaughlin Community College	2526
Enfield Community College	1109, 3409, 4108
Eureka Secondary School	3567, 4530, 4532
Laytown & Drogheda Educate Together Secondary School	4608
Loreto Secondary School	3557, 3559



## School name/County

Ratoath College	2303
St Ciaran's Community School	2203
St Patrick's Classical School	3566
St. Joseph's Secondary School	2513, 2514, 3210

### Monaghan

Largy College	1511
Our Lady's Secondary School	1503
Patrician High School	3536, 3553
St. Louis Secondary School	4535, 4539, 4540
St. Macartan's College	1114

### Roscommon

C.B.S. Roscommon	4560
Castlerea Community School	1304
Roscommon Community College	3502, 4501 4502, 4503, 4504 4505, 4556, 4610
Scoil Mhuire gan Smál	3204, 4216
Scoil Mhuire Strokestown	4700

### Sligo

Jesus & Mary Secondary School	1525, 4553
Sligo Grammar School	2212
Summerhill College	2522
Ursuline College	2518, 3218, 3554, 4554

### Tipperary

Borrisokane Community College	2223, 4201
C.B.S. Thurles	1206, 4513
Cashel Community School	4704
Cistercian College	2500, 4508, 4603
Colaiste Dun Iascaigh	4237
Coláiste Mhuire Co-Ed	4208
Loreto Secondary School	3560
Loreto Secondary School	4600
Patrician Presentation	4517
Presentation Secondary School	4545
St Joseph's College	2210, 2224, 2519, 2533
St. Anne's Secondary School	3410, 4231, 4555 4586
The Abbey School	4602

Ursuline Secondary School	4542
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### Tyrone

St Patrick's College	2227
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### Waterford

Ard Scoil Na Mara	3107
Blackwater Community School	4576
De La Salle College	2410
Gaelcholáiste Phort Láirge	3200, 3211, 3232, 3503
St Angela's	3225

### Westmeath

Athlone Community College	1504, 2211, 2516, 3206 3549, 4506, 4558, 4584
Colaiste Mhuire	1221, 2521
Loreto College	2524
Marist College	1521, 2506, 3520, 3540, 4524
Meán Scoil an Chlochair	3547
Moate Community School	2401, 2409, 3212, 3401 3405, 3506, 3508, 3518, 3521, 4548
Our Lady's Bower	1303, 2115, 2532
St Finian's College	1402, 2105

### Wexford

Creagh College	1101
Meanscoil Gharman	4244

### Wicklow

Arklow Community College	1531, 1604 4301, 4531
Educate Together Secondary School Wicklow (ETSSW)	3101
SEK Dublin International School	2414
St David's Secondary	2301, 3216, 3517, 3543
St Marys College	3202, 3514, 4207, 4210, 4526 4527, 4528

**PROJECT QUICK SEARCH IS ALSO AVAILABLE ON OUR MOBILE APP AND OUR 2022 VIRTUAL PORTAL...**





## JUNIOR INDIVIDUAL

1100

**Title:** An féidir frithghníomhuithe fisíolaíoch a tharlú ó dáthanna?

**Overview:** Chinn mise go dheanaim an turgnamh seo mar ceapaim go bhfuil sé turgnamh difrúil. Beidh sé shuimúil chun féacaint ar na torthaí.

**School:** Colaiste An Phiarsaigh

**County:** Cork

**Teacher:** Mr Caoimhín Buckley

**Student(s):** Ailís Ahmeti

1101

**Title:** Analysing our World from Scratch

**Overview:** Designed three Scratch games that's used to gather data on users. I use that data to improve our planet just a tiny bit better.

**School:** Creagh College

**County:** Wexford

**Teacher:** Ms Amy Murphy

**Student(s):** Balazs Gyurko

1102

**Title:** Investigating the effect of a range of fruit juices on the breakdown of protein

**Overview:** Some fruits contain enzymes that can digest proteins. This project investigates the effect of the same volumes of different juices on the protein, gelatine.

**School:** St Mary's College

**County:** Londonderry

**Teacher:** Mrs Ann Blanking

**Student(s):** Kaycee Deery

1104

**Title:** Did Deaths in my Local Area Increase in 2020 Due to Coronavirus? The Maths of Covid-19

**Overview:** Detailed analysis by gender of deaths in 26 of my local areas of Dublin to investigate increase in 2020 (with Coronavirus) over 2019 (without virus)

**School:** Oatlands College

**County:** Dublin

**Teacher:** Dr Avril Gaynor

**Student(s):** Conor Quigley

1105

**Title:** Does the Limestone in the Burren Keep it as Warm as People Say?

**Overview:** In this project, I am investigating if the heat holding ability of the Burren limestone is as good as people think it is.

**School:** Mary Immaculate Secondary School Lisdoonvarna

**County:** Clare

**Teacher:** Mr John Sims

**Student(s):** Anna-Mae O'Driscoll

1106

**Title:** Investigating the Structural Stability of 3d Objects Using Convex Hull and Center of Mass

**Overview:** I'll be investigating the stability of 3d objects using Convex Hull and the centre of mass. Then I'll 3d print them to check the results.

**School:** Mercy Secondary School

**County:** Kerry

**Teacher:** Mr Patrick Lyne

**Student(s):** Kai Seino

1107

**Title:** Can magnetic fields influence the trajectory of subatomic particles

**Overview:** To see if magnetic fields can repel subatomic particles with a view to stop radiation from entering the sensor of scientific or astrophotography cameras.

**School:** Muckross Park College

**County:** Dublin

**Teacher:** Dr Lisa Shine

**Student(s):** Eva Horkan Eustace

1109

**Title:** A device to turn water vapour into drinkable water.

**Overview:** my experiment is drawing drinkable water from air moisture this could help water scarcity around the world.

**School:** Enfield Community College

**County:** Meath

**Teacher:** Ms. Rebecca Kenneally

**Student(s):** Krish Maruthi

1110

**Title:** Can Gravity Be Converted to Electricity?

**Overview:** Can potential/kinetic energy be converted quickly and easily to electrical energy? It would be renewable and would not depend on location or weather.

**School:** Mount Mercy College

**County:** Cork

**Teacher:** Mr Aaron O'Sullivan

**Student(s):** Rachel Barry

1111

**Title:** How Would Using Non-Euclidean Paper Moulded from a Pseudosphere Transform Origami Tessellations?

**Overview:** I will mould paper on a pseudosphere and sphere to then fold it into origami models and I will analyse the changes to predict them.

**School:** St Andrew's College

**County:** Dublin

**Teacher:** Ms Emma Buckley

**Student(s):** Alois Plissonneau

1112

**Title:** A study of the implications of the use of white paints to tackle global warming in cities.

**Overview:** My project is about how the colour we paint our homes and buildings can have an affect on global warming and the world around us.

**School:** Coláiste Muire Crosshaven

**County:** Cork

**Teacher:** Ms Matilda Miniussi

**Student(s):** Ellen O'Donoghue

1113

**Title:** Nature takes on nature: investigating the effect of Juglone on Japanese Knotweed

**Overview:** To extract Juglone (an organic compound) from the hulls of the Black walnut tree and investigate its effect on the growth of Japanese Knotweed.

**School:** Gaelcholáiste Chiarraí  
**County:** Kerry  
**Teacher:** Mrs Tríona Uí Mhaolchatha  
**Student(s):** Grace Ni Iffernáin

1114

**Title:** An Investigation into the Physics of Gaelic Football  
**Overview:** For this investigation, the physics involved in the key areas of Gaelic football will be decided and studied. Two main areas will include: the force involved and the aerodynamics. It will be identified how these can be studied using physics, and then how they can impact the performance and results.  
**School:** St. Macartan's College  
**County:** Monaghan  
**Teacher:** Ms Helen Keenan  
**Student(s):** Cathan Nesbitt

1115

**Title:** Calculators x (Over Reliance + Over Usage = Utilisation at an Early Age) - Practicing of Mental Maths = Reduced Mental Arithmetic Skills = National Underperformance  
**Overview:** Calculators: A help or a Hindrance? My project will examine if calculator usage is negatively impacting the mental arithmetic skills of students in Ireland.  
**School:** Presentation Secondary School  
**County:** Kerry  
**Teacher:** Ms Helena madigan  
**Student(s):** Ciara Murphy

1116

**Title:** To Determine The Best Conditions For A Sideline-Cut in Hurling  
**Overview:** The purpose of my project is to determine the key elements for taking a good sideline-cut in hurling.  
**School:** Midleton College  
**County:** Cork  
**Teacher:** Ms Laura O Donovan  
**Student(s):** Ben Troy

## INTERMEDIATE INDIVIDUAL

1200

**Title:** Trash in the Skies: Towards the Prediction of Space Debris in Low Earth Orbit  
**Overview:** Using mathematical modelling methods to predict the debris environment in LEO. Assessing if mitigation methods have an effect on debris distribution over time.  
**School:** Loreto Secondary School  
**County:** Kilkenny  
**Teacher:** Mr Brendan Williams  
**Student(s):** Surabhi Sathish

1201

**Title:** How can physics be utilized in programming and can it be used to make video-games more entertaining?  
**Overview:** I will be attempting to incorporate different mathematical equations regarding physics into video-games and to investigate physics a make games more interesting.  
**School:** Lanesboro Community College  
**County:** Longford  
**Teacher:** Mr Fechin Heery  
**Student(s):** Edgars Veinbergs

1202

**Title:** An investigation into the effectiveness of various ventilation methods using CO<sub>2</sub> as a proxy for the spread of Covid-19 in both controlled and real life scenarios  
**Overview:** This project will investigate how effective commonly used ventilation methods are at reducing high CO<sub>2</sub> levels which correlate with increased airborne spread of Covid-19.  
**School:** Portmarnock Community School  
**County:** Dublin  
**Teacher:** Ms Mary O'Kane  
**Student(s):** Ross O'Boyle

1203

**Title:** Reducing the environmental HARM of the pHARMaceutical industry.  
**Overview:** I will be calculating the ratio of APIs to fillers and packaging and altering it to reach some of the UN Sustainable Development Goals.  
**School:** St Joseph's College  
**County:** Dublin  
**Teacher:** Ms. Michelle Dunne  
**Student(s):** Caoimhe Daffy

1204

**Title:** To investigate the use of essential oils as a means of decaying plastic  
**Overview:** My project aims to collect discarded plastics from around the school over a period of time. I aim to review which plastics can be dissolved by using different essential oils. I aim to further hypothesize how we could use this data to reduce plastic waste in our school environment  
**School:** Our Ladys School  
**County:** Dublin  
**Teacher:** Ms Emma Griffin  
**Student(s):** Emma Killian

1205

**Title:** Plotting the Stars  
**Overview:** I am going to attempt to predict where the constellation Orion will be in the future and the accuracy of observations needed to determine this.  
**School:** Muckcross Park College  
**County:** Dublin  
**Teacher:** Dr Lisa Shine  
**Student(s):** Melissa Dunne

1206

**Title:** Analyzing and improving the aerodynamics of foam based projectiles (darts) using CFD and CAD to decrease drag and other factors.  
**Overview:** I will be analyzing and improving the aerodynamics of plastic tipped foam projectiles (darts) with CFD and CAD, along with chronograph and slow motion testing.  
**School:** C.B.S. Thurles  
**County:** Tipperary  
**Teacher:** Ms Danielle Slattery  
**Student(s):** Darragh Noonan



# Chemical, physical & mathematical sciences

stripe

1207

**Title:** I wish to investigate the Tack and Green strength of glues that could have been used by people in my locality in the 19th century and compare them with ones that are available to

**Overview:** What did people in Ireland use as glue in the 19th century? Compare the Tack and Green strength of these glues with commercially available glues.

**School:** Lanesboro Community College

**County:** Longford

**Teacher:** Mr Michael Lyons

**Student(s):** Paul Lee

1208

**Title:** Fungal disposal strategy of plastic, into organic-matter.

**Overview:** To propagate exo-enzymatic fungi, line it in bins and hence metabolize- commonly dissipated synthetic polymers, into innocuous matter and mitigate such refuse at the source.

**School:** Pobalscoil Inbhear Scéine

**County:** Kerry

**Teacher:** Ms Sarah Abbott

**Student(s):** Gemma Meyer

1209

**Title:** Does the geometry and brand of a shuttlecock affect its trajectory.

**Overview:** Investigating the significance of shuttle shapes in relation to the path a shuttle follows.

**School:** Our Ladys School

**County:** Dublin

**Teacher:** Ms Emma Griffin

**Student(s):** Rachel Heather

1210

**Title:** Designing A Surgical Forceps Incorporating Frustrated Total Internal Reflection For Energy Efficient Sealing and Cutting of Tissue Using Light Energy

**Overview:** My project aims to incorporate optics to create conditions of frustrated total internal reflection to facilitate energy-efficient sealing and cutting of tissue using light energy.

**School:** Mercy Secondary School

**County:** Kerry

**Teacher:** Miss Eimear Nolan

**Student(s):** Rachel Feeley

1211

**Title:** Do gas densities affect electromagnetism?

**Overview:** Project involving the proposal as to if different gases affect electromagnetism, and if so how they affect electromagnetism.

**School:** Meánscoil na mBráithre Criostai

**County:** Kilkenny

**Teacher:** Mr. Eanna Collins

**Student(s):** AJ Challoner

1212

**Title:** Cities of the future - Designing flood proof city

**Overview:** In my project, I will be looking at ways to redesign Cork, in order to make it completely flood proof.

**School:** Edmund Rice College

**County:** Dublin

**Teacher:** Ms Kia Hanratty

**Student(s):** Sanidhya Arora

1213

**Title:** The Rate of Cooling of Beverages in Relation to their Heat Capacity

**Overview:** My project aims to find the rates of cooling of some beverages, and if heat capacity has any relation to a liquid's rate of cooling.

**School:** Blackrock College

**County:** Dublin

**Teacher:** Ms Katie Buckley

**Student(s):** Conor McCarron

1216

**Title:** What is the Best Optimal Path Algorithm?

**Overview:** I will be running and comparing optimal path algorithms against each other to find the best one.

**School:** Scoil Mhuire

**County:** Clare

**Teacher:** Ms Sue Ann Sheridan

**Student(s):** Alanna Hayes

1217

**Title:** 'The development of a reliable diagnostic application for the early detection of Color Blindness in children.'

**Overview:** This project aims to develop and expand the current diagnosis for colour blindness to include younger children and evaluate their needs and challenges they face.

**School:** St Joseph's Secondary School, Rush

**County:** Dublin

**Teacher:** Mr Chris O'Connell

**Student(s):** Evan Pollard

1218

**Title:** The Relationship Between a Bridges Design and how force and environmental factors affect its structural integrity.

**Overview:** How different structural designs of bridges affect the amount of force it can withstand and how external environmental factors affect its structural integrity.

**School:** Mount Sackville Secondary School

**County:** Dublin

**Teacher:** Ms Caitríona Monaghan

**Student(s):** Orla Murphy

1221

**Title:** Rib Guard

**Overview:** My project is a top with a main purpose of minimizing injuries in contact sports, such as Rugby and canoe polo.

**School:** Colaiste Mhuire

**County:** Westmeath

**Teacher:** Dr Gerard Rafferty

**Student(s):** Micheál Geoghegan

## SENIOR INDIVIDUAL

1300

**Title:** A comparative investigation of the efficacy of sunscreens in providing protection against UV and High Energy Blue light

**Overview:** Investigating the ability of various sunscreens to provide protection against UV and High Energy Blue light.

**School:** St Mary's College

**County:** Londonderry

**Teacher:** Mrs Ann Blanking





**Student(s):** Aisling Campell

**1301**

**Title:** Temporal Mechanics: The Hidden Theoretical

**Overview:** Temporal Mechanics successfully describes the true nature of quantum mechanics. It defines a hybrid concept of quantum events through the perspective of time.

**School:** St Kieran's College

**County:** Kilkenny

**Teacher:** Mr David Hennessy

**Student(s):** Conor Fitzmaurice

**1302**

**Title:** Identifying Vector- Borne Diseases using Neural Networks

**Overview:** Uses artificial intelligence to identify whether an insect could potentially be a vector carrier of diseases.

**School:** Wesley College

**County:** Dublin

**Teacher:** Mr Seosamh O Braonain

**Student(s):** Emma Burgess

**1303**

**Title:** Cosmic Radiation Protection Simulation

**Overview:** This project uses a Geiger Counter to measure how effectively bricks formed from blends of different polymer & martian regolith simulants can block radiation.

**School:** Our Lady's Bower

**County:** Westmeath

**Teacher:** Ms Julie-Anne Greaney

**Student(s):** Clare Reidy

**1304**

**Title:** A temperature scanning calorimeter for the investigation of small organic samples.

**Overview:** I am building a temperature scanning calorimeter to investigate small samples of organic materials. Uses include measuring temperatures of phase transitions or identification of materials

**School:** Castlerea Community School

**County:** Roscommon

**Teacher:** Ms Yvonne Hanbury

**Student(s):** Joanna Wojcik

**1305**

**Title:** Investigating the Differences between Group and Gene Selection

**Overview:** I will investigate the differences between gene and group selection using a mathematical model.

**School:** St. Fintan's High School

**County:** Dublin

**Teacher:** Ms Marianne Gallagher

**Student(s):** Daniel Byrd

**1306**

**Title:** Minimising Packaging Waste Using Convex Hulls

**Overview:** An attempt to reduce excessive packaging waste through the use of a 3D scanner and using convex hulls to help find the minimum packaging needed.

**School:** Mercy Secondary School

**County:** Kerry

**Teacher:** Mr Patrick Lyne

**Student(s):** Coren Hughes

**1307**

**Title:** Which materials can cool metals?

**Overview:** In my project, I want to find a way to lower a metals ability to transfer and also to absorb heat to cool surfaces.

**School:** Rockford Manor Secondary School

**County:** Dublin

**Teacher:** Ms Tanja Puetz

**Student(s):** Elena Balmer

**1308**

**Title:** Investigating local water hardness and its connection to human health

**Overview:** To create a water hardness map and compare it to human health implications for the North Down area, for which there is no current data.

**School:** South Eastern Regional College - Bangor Campus

**County:** Down

**Teacher:** Mr Jonathan Cash

**Student(s):** Harrison Nesbitt

## JUNIOR GROUP

**1400**

**Title:** How Much Waste is in Leftover Condiment Bottles?

**Overview:** An investigation into how much waste is produced from 'empty' condiment jars and bottles used in the home.

**School:** Coláiste Chiaráin

**County:** Limerick

**Teacher:** Ms Edel Farrell

**Student(s):** Rosemary Lucey, Sarah - Jane Noonan

**1401**

**Title:** Báinne go dtí plaisteach

**Overview:** Beimid ag iarraidh an struchtúr den móilín casein atá ag báinne a athrú agus cas é go dtí cruth plaisteach ag usáid agéid.

**School:** Colaiste An Phiarsaigh

**County:** Cork

**Teacher:** Mr Caoimhín Buckley

**Student(s):** Liam Abernethy, Briain Mac Óda, Shane Ó hAnragáin

**1402**

**Title:** A Quantitative Analysis of Students' Exposure to PM 2.5 Particles on Various Modes of Transit to School.

**Overview:** A study to find what mode of students travelling to school has the least exposure to PM 2.5 particles.

**School:** St Finian's College

**County:** Westmeath

**Teacher:** Ms. Martina Roache

**Student(s):** Sarah Higgins, Donagh Carey

**1403**

**Title:** Investigating the ability of the earstrings on disposable face masks to cut through various materials

**Overview:** After seeing on facebook that the earstrings on disposal facemasks can cut through plastic chairs, we are investigating what other materials they may cut through.

**School:** St Mary's College

**County:** Londonderry

**Teacher:** Mrs Ann Blanking

**Student(s):** Charlotte Wilson, Orlaith Kelly, Danielle English



# Chemical, physical & mathematical sciences

stripe

1404

**Title:** Generation of Emergency Phone Charge from Body Heat Using the Seebeck Effect

**Overview:** Determine if it is possible to use the Seebeck effect in a device to transform excess body heat into power for an emergency phone call.

**School:** Kinsale Community School

**County:** Cork

**Teacher:** Mr Shaun Holly

**Student(s):** Joshua Smyth, Philip Hurley, Sam Grace

1405

**Title:** Investigating the effect of pH on hydrogels used as a drug delivery system

**Overview:** Investigating the effect of the pHs found in different parts of the digestive system on hydrogels used as a drug delivery system.

**School:** St Mary's College

**County:** Londonderry

**Teacher:** Mrs Ann Blanking

**Student(s):** Rebecca Connolly, Nikitta Morrison

1407

**Title:** Comparing the strengths of modern glues and bonding products on different surfaces

**Overview:** We plan to carry out a series of experiments compare the strength of various glues and bonding products that you can buy in DIY stores.

**School:** St Catherine's College

**County:** Armagh

**Teacher:** Mr Ciaran Connolly

**Student(s):** James Tennyson, Ethan Johnston-Caldas, Grace McDonald

1408

**Title:** Colour Changing Nail Polish

**Overview:** To gather primary data regarding people's attitudes towards hand washing and sanitation and furthermore produce a colour changing nail polish related to bacteria exposure.

**School:** Mungret Community College

**County:** Limerick

**Teacher:** Ms Jessica Heffernan

**Student(s):** Grace Kelly, Rachel McKenna

1409

**Title:** Cumhacht an dTonnta ar Inis Meáin

**Overview:** Ag úsáid foirmilí matamaitice chun réamhaisnéis na haimsire a thuairadh trí úsáid a bhaint as tomhais teocht agus cumhacht an dtonnta thar thréimhse ama.

**School:** Coláiste Naomh Eoin

**County:** Galway

**Teacher:** Ms Helen Ní Chríodáin

**Student(s):** Chloe Ní Chonghaile, Máirtín Ó Conghaile, Amy Ní Chléirigh

1410

**Title:** Py-Right Monitor

**Overview:** We want to design a device that detects early pyrite or structural damage by monitor movement in load-bearing walls of a home.

**School:** St Joseph's Secondary School, Rush

**County:** Dublin

**Teacher:** Mr Daryl Dunne

**Student(s):** Jack Howard, William McGann

## INTERMEDIATE GROUP

1500

**Title:** Does the use of a singing bin initiative decrease the amount of litter found in and around our secondary school grounds?

**Overview:** will people prefer to put their waist in a normal bin or an exotic singing bin

**School:** Coláiste Lorcáin

**County:** Kildare

**Teacher:** Ms Amy Sullivan

**Student(s):** Daire Phelan, Gabriel Polland-Curran, Peter Burke

1501

**Title:** How air pressure effects the flight of a football.

**Overview:** A study into the relationship between air pressure and the flight of a ball.

**School:** Boyne Community School

**County:** Meath

**Teacher:** Ms Aoife Fox

**Student(s):** Adam Curran, Tomás Brady

1502

**Title:** A New Method of Solving the Bernoulli Quadrisecution Problem

**Overview:** The Bernoulli Quadrisecution Problem is an old, but difficult problem in Euclidean geometry. We have devised a new method of solving this problem.

**School:** Synge Street CBS

**County:** Dublin

**Teacher:** Mr Ger Davin

**Student(s):** Aditya Joshi, Aditya Kumar

1503

**Title:** The Physics Behind Freekicks

**Overview:** We look at how players generate different types of movement, attempting to outsmart the opposing goalkeeper when striking a football from a free kick.

**School:** Our Lady's Secondary School

**County:** Monaghan

**Teacher:** Mr Kevin Nolan

**Student(s):** Matthew Ennis, Daniel Kerr

1504

**Title:** BPA (Ban Plastic ASAP)

**Overview:** We plan to test the students in our school's favourite drink bottles for the presence of Bisphenol A (BPA) after conducting a survey.

**School:** Athlone Community College

**County:** Westmeath

**Teacher:** Ms Emma Finneran

**Student(s):** Abbie Goode, Aashna Goel

1505

**Title:** An féidir le Pokémon áirithe rith agus cé chomh tapaidh gur féidir leo rith.

**Overview:** Tá fonn orainn fiosrú má tá Pokémon áirithe rith agus cé chomh tapaidh gur féidir leo rith, i gcomparáid lena chomhpáirt san fíor saol.

**School:** Gaelcholáiste Charraig Uí Leighin

**County:** Cork  
**Teacher:** Mr. Rónán Ó Muirí  
**Student(s):** Liam Ó Dubhgáin, Ewan Mac Maoláin, Ciarán Ó Dubhgáin

## 1506

**Title:** Methods of neutralising the acidic properties of nettles which cause the skin to sting  
**Overview:** Testing the best remedy to neutralise the acidic property of a nettle which causes the irritation of the skin using a titration experiment.  
**School:** Loreto Secondary School  
**County:** Kilkenny  
**Teacher:** Mr Brendan Williams  
**Student(s):** Rachel O'Neill, Áine Henriques, Ava May O'Meara

## 1507

**Title:** A Comparative Study of the Durability of Conventional Plastics and Seaweed Plastics for Use in Food Packaging  
**Overview:** We will compare the durability of conventional plastics and seaweed plastics, seeing how viable seaweed plastics are as an alternative for use in food packaging.  
**School:** Coláiste Choilm  
**County:** Cork  
**Teacher:** Mr Paudie Scanlon  
**Student(s):** Diarmaid Lane, Donnchadh Whelton, Éanna Whyte

## 1508

**Title:** Which Works Best – Ice Packs, Gel Packs or Instant Ice Packs  
**Overview:** We plan to investigate which is the most effective out of ice packs, gel packs and instant cold packs  
**School:** St Fanahan's College  
**County:** Cork  
**Teacher:** Mrs Karen Murphy  
**Student(s):** Donal Nolan, Billy O'Keeffe

## 1510

**Title:** Investigating how L-Cysteine is produced and used and whether the general population is aware of its widespread use in breads.  
**Overview:** Our aim is to find out how widespread the use of L-Cystine is in its use in bread.  
**School:** John The Baptist Community School  
**County:** Limerick  
**Teacher:** Ms Emma Donnelly  
**Student(s):** Dylan Moriarty, Hugh Murnane

## 1511

**Title:** Which Sanitizer Is Best For You?  
**Overview:** investigating which form of sanitizer is the most effective at removing germs  
**School:** Largy College  
**County:** Monaghan  
**Teacher:** Ms Holly May McGovern  
**Student(s):** Karolis Rute, Donna Burns, Rebecca Murphy

## 1512

**Title:** Investigating What Ice Cube is the Most Energy-Efficient  
**Overview:** To discover the most effective ice-cube by investigating what shape of ice chills liquid quickest and what material makes the best type of reusable ice-cube.  
**School:** St Mary's Secondary School

**County:** Cork  
**Teacher:** Mrs Jennifer Butler  
**Student(s):** Emer O' Connor, Kirsten Bonnar

## 1513

**Title:** Will planting mini seaweed farms reduce the pollution levels and acidification levels in polluted areas of the ocean in South Kerry.  
**Overview:** We aim to improve the quality of our local ocean water by seeing if seaweed can improve its acidification and pollution levels.  
**School:** Pobalscoil Inbhear Scéine  
**County:** Kerry  
**Teacher:** Ms Sarah Abbott  
**Student(s):** Clodagh Rochford, Grace O'Brien, Ayla O'Neill

## 1514

**Title:** Comparing a reusable battery versus a single use battery  
**Overview:** We will exploring to see which battery has a longer life whilst doing the same task.  
**School:** Ardscoil Phadraig  
**County:** Longford  
**Teacher:** Mr Michael Domican  
**Student(s):** Ciara McCormack, Charlotte Mcdonagh

## 1516

**Title:** Cleaning Confidence  
**Overview:** Testing the efficiency of various methods and forms of cleaning products on bacteria, and seeing which is better. We'll be using natural and chemical methods.  
**School:** Loreto High School  
**County:** Dublin  
**Teacher:** Ms Eimear Maloney  
**Student(s):** Niamh Mullane, Kim Moore, Isabel Murphy

## 1517

**Title:** A project on the optimum fruit to eat before a match  
**Overview:** Investigating the sugar levels in several fruits throughout the stages of ripeness and comparing and analysing the results of these fruits before a match.  
**School:** Bush Post Primary School  
**County:** Louth  
**Teacher:** Ms Jennifer Hand  
**Student(s):** Emily Tuohy, Sophie Hanlon, Niamh Holland

## 1518

**Title:** How safe is your water bottle?  
**Overview:** Our project is a comparative analysis of water bottle materials and their effect on the pH of the water within over time.  
**School:** St Aloysius College Carrigtwohill  
**County:** Cork  
**Teacher:** Mr Ryan Gallagher  
**Student(s):** Caoimhe Fitzgerald, Amelia Wilkinson-Hayden

## 1519

**Title:** To develop an environmentally friendly and inexpensive electrolyte for a battery cell using sodium alginate.  
**Overview:** The objective of this study is to develop and test an electrolyte composed of abundant, thermostable and biodegradable materials, with reduced environmental and safety risks.  
**School:** St Aloysius College Carrigtwohill  
**County:** Cork  
**Teacher:** Mr Ryan Gallagher  
**Student(s):** Sophie O Reilly, Robyn Sloane Lee





1520

**Title:** To investigate the electrolyte levels of different sports drinks for the rehydration of athletes .

**Overview:** Athletes produce sweat during exercise, sweat is primarily made up of water but also contains electrolytes. Electrolytes play an essential role in the body .

**School:** Scoil Pól

**County:** Limerick

**Teacher:** Ms Jennifer Kelly

**Student(s):** Sarah Blade, Olivia Donohoe

1521

**Title:** Electro Chemical Activation (ECA) technology to replace use of chemicals for sanitising and cleaning processes

**Overview:** The use of electro chemical activation (ECA) technology to develop solutions for use in an industrial environment for sanitising and cleaning processes to eliminate the use of traditional chemicals

**School:** Marist College

**County:** Westmeath

**Teacher:** Ms Julie Coyle

**Student(s):** Aindriu Lynam, Alex Ratcliffe, James Murray

1522

**Title:** Investigating the Effect of Concentration on Temperature in an Exothermic Reaction

**Overview:** We reacted two solutions together and measured the heat given off, we then repeated this changing the concentration of one of the solutions.

**School:** Blackrock College

**County:** Dublin

**Teacher:** Ms Katie Buckley

**Student(s):** Diarmaid Byrne, Simon Considine

1523

**Title:** Can you get a die to roll the same number every time

**Overview:** The aim of this project is to remove the variation in rolling a die to have give the same result every time.

**School:** Ardscoil Uí Urmoltaigh

**County:** Cork

**Teacher:** Mr John Fellowship

**Student(s):** Dara Ryan, Liam Twomey

1524

**Title:** An investigation into the bacterial levels and general hygiene of retainers

**Overview:** We will investigate the different retainer cleaning products on effectiveness, cleanliness, and cost. We aim to find a better solution.

**School:** Coláiste Mhuire Ennis

**County:** Clare

**Teacher:** Ms Nicola Meere

**Student(s):** Áine Jones, Aoibhínn Cullen, Jennifer Weston

1525

**Title:** What are the odds of winning 21

**Overview:** What are the chances of winning the card game 21

**School:** Jesus & Mary Secondary School

**County:** Sligo

**Teacher:** Ms Fiona McLoughlin

**Student(s):** Cian Dolly, Joseph O'Kane

1526

**Title:** An investigation into sports related cranial impacts and the design and development of wearable technology to better enable the measurement and recording of such head impacts.

**Overview:** To develop wearable technology to monitor, in real time, soccer related head-ball impacts and to use it as a way of modifying individual training programs.

**School:** St Mary's Secondary School Mallow

**County:** Cork

**Teacher:** Mr Rory Coote

**Student(s):** Sophie Creedon, Lydia Kelleher

1527

**Title:** How a new form of a cough drop can thicken saliva in order to prevent the spread of airborne diseases.

**Overview:** To produce a cough drop which will thicken saliva. Thicker particles will be heavier meaning they will fall rather than spread various airborne diseases.

**School:** Loreto Secondary School, Balbriggan

**County:** Dublin

**Teacher:** Mr Brian Higgins

**Student(s):** Grace Anderson, Aisling Song, Kayan Butt

1528

**Title:** The Anti-Bacterial Properties in Halogens

**Overview:** Testing to see if halogens have anti-bacterial properties like Chlorine does; and are they as effective in decontaminating dirty water.

**School:** St Fanahan's College

**County:** Cork

**Teacher:** Mrs Karen Murphy

**Student(s):** Jess Woodside, Mark Kent, Adrija Baltrunaite

1529

**Title:** What brand of bubble gum makes the best bubbles?

**Overview:** We will be buying multiple brands of bubble gum and testing them individually to see which brand makes the biggest bubbles

**School:** Scoil Pól

**County:** Limerick

**Teacher:** Ms Grace Garvey

**Student(s):** Robyn Finn, Leah Prunty, Niamh O'Connor

1531

**Title:** Sugar crystals

**Overview:** we are going to grow sugar crystals

**School:** Arklow Community College

**County:** Wicklow

**Teacher:** Ms Laura Sinnott

**Student(s):** Zara Ledwidge-Plunkett, Victoria Tarnogorska, Faith Bowes

1533

**Title:** CO<sub>2</sub> emissions from cars in Loreto Kilkenny

**Overview:** We will see how many cars enter Loreto and check the carbon emissions we will also check how many electric cars are in the school

**School:** Loreto Secondary School

**County:** Kilkenny

**Teacher:** Ms Elaine O Dwyer

**Student(s):** Eimear Phelan, Amy O Halloran, Ciara Foley

## SENIOR GROUP

1600

**Title:** Aeroacoustics of the swinging corrugated tube**Overview:** An investigation using Bernoulli's Principle to measure the velocity and pressured air flow passing through free end tube.**School:** Desmond College**County:** Limerick**Teacher:** Mr Donal Enright**Student(s):** Ethan Kirwan, Jack Kelly

1601

**Title:** Potential applications of quantum entanglement in communicating through binary.**Overview:** In our project we plan to research how quantum phenomena such as quantum entanglement could be utilized in sending data and communicating through binary.**School:** Coláiste Pobail Acla**County:** Mayo**Teacher:** Ms Edel Corcoran**Student(s):** Oran O'Reilly, Elliott McNea

1603

**Title:** An Investigation into the Effect of Water Temperature on the Degradation of Plastics Into Microplastics**Overview:** \*an investigation into the effect of water temperature on the rate of degradation of plastics into micro plastics\***School:** St Anne's Community College**County:** Clare**Teacher:** Miss Greta Hogan**Student(s):** Jack Fairfield, Eoin Gilmartin

1604

**Title:** Balloon Decibel Experiment**Overview:** We are testing to see if the size and the gas inside a balloon will effect the sound of the pop**School:** Arklow Community College**County:** Wicklow**Teacher:** Ms Laura Sinnott**Student(s):** Dylan Kelly, Grace Fleming, Charlotte Keene

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## JUNIOR INDIVIDUAL

### 2100

**Title:** Is an interactive mobile health app a feasible solution to tackle long paediatric occupational therapy waiting lists?

**Overview:** This project will analyse the experiences of Paediatric OTs and simulated patients using a novel mobile health app and will predict impact on waiting times.

**School:** Christ King Girls Secondary School

**County:** Cork

**Teacher:** Ms Denise Quilter

**Student(s):** Saanvi Kaushik

### 2101

**Title:** Alert System to Warn of Harmful UV Rays. "Mela No More"

**Overview:** A wearable early warning system for children using photochromic paint to alert them and their parents to the increased UV rays that cause skin cancer.

**School:** Desmond College

**County:** Limerick

**Teacher:** Mr Donal Enright

**Student(s):** Laura Brennan

### 2102

**Title:** E.A.T. "Eat Assistive Technology"

**Overview:** Height adjustable device that enables amputees or individuals with limited upper movement or any other disability that limits hand/ arm movement to feed themselves independently.

**School:** Desmond College

**County:** Limerick

**Teacher:** Mr Donal Enright

**Student(s):** Aoibhilinn Heath

### 2103

**Title:** Rewrite - The All-In-One Study Application for Secondary School Students

**Overview:** This project aims to reduce stress among students who are struggling during online learning because of the amount of work they were receiving.

**School:** St Mary's Secondary School

**County:** Dublin

**Teacher:** Ms Bronwyn Mulvey

**Student(s):** Viya Aramalla

### 2104

**Title:** Coding a simulation of a predator and a prey

**Overview:** I am coding a simulation of predators which hunt a prey and can find each-other and create a new prey. Which the predator will hunt.

**School:** Gonzaga College

**County:** Dublin

**Teacher:** Mr Stephen McGroggan

**Student(s):** Joe Molloy

### 2105

**Title:** Ball Or Nothing

**Overview:** A project to help retrieve lost sliotars, using an RF transmitter/receiver and an Arduino nano.

**School:** St Finian's College

**County:** Westmeath

**Teacher:** Ms. Martina Roache

**Student(s):** Noah Hill

### 2106

**Title:** Recycle the Mask, Save Our Environment

**Overview:** Discarded face masks are an environmental threat. My project is to recycle used face masks in the manufacture of concrete bricks to reduce environmental pollution.

**School:** St Joseph's College

**County:** Dublin

**Teacher:** Ms Courtney Fitzgerald

**Student(s):** Agnes Martin

### 2108

**Title:** Optimising the conversion of wave energy to boat propulsion

**Overview:** The up and down motion of ocean waves can be converted into forward motion to power a boat. My project investigates the optimal foil design.

**School:** Home School

**County:** Dublin

**Teacher:** Ms Orna Collins

**Student(s):** Fionnán Ó Baoighill

### 2109

**Title:** Tyrex

**Overview:** Tyrex is an interactive solution to tyre maintenance. Defective tyres play a significant role in road traffic collisions, in NCT failures and penalty points acquisition.

**School:** Coláiste Cholmáin

**County:** Mayo

**Teacher:** Ms Anne Mulkeen

**Student(s):** Cian Mangan

### 2110

**Title:** Ciotach clean

**Overview:** I will develop a left-hand smudge guard that is designed to fit on the page rather than available products which fit on the student's hand.

**School:** Abbey Vocational School

**County:** Donegal

**Teacher:** Ms Donna Furey

**Student(s):** Michael Masterson

### 2111

**Title:** MetaSec - Blockchain password manager

**Overview:** The first known password manager to use blockchain technology, all your passwords will be anonymously encrypted and stored on the blockchain.

**School:** Nord Anglia International School Dublin

**County:** Dublin

**Teacher:** Ms Eimear Scannell

**Student(s):** Xiang Xing

### 2114

**Title:** The Development of a wearable, fast moving object warning system for visually impaired people

**Overview:** My aim is to develop a device for visually impaired people, which will detect approaching fast moving objects, such as electric cars

**School:** The Kings Hospital

**County:** Dublin

**Teacher:** Mr Ciaran O'Connor

**Student(s):** Maura Moore-McCune





2115

**Title:** sCan you recycle?

**Overview:** An app on a mobile phone that can scan barcodes on waste and tell people which bin to put the waste in

**School:** Our Lady's Bower

**County:** Westmeath

**Teacher:** Ms Ellen Maguire

**Student(s):** Tanvisri Sirigineedi

2116

**Title:** The science of bacteria and virus control using energy efficient and environmentally friendly UV LEDs

**Overview:** My project will investigate an exciting new light technology which is made from semiconductor crystals and can be used to kill dangerous bacteria and viruses.

**School:** Kinsale Community School

**County:** Cork

**Teacher:** Mr Shaun Holly

**Student(s):** Conan O' Brien

## INTERMEDIATE INDIVIDUAL

2200

**Title:** iVision-A Convolutional Neural Network based Object Detection and Text Recognition Mobile Application for the Visually Impaired

**Overview:** My project is a form of assistive technology, to aid the blind by informing them of objects and text in their surrounding.

**School:** Dundalk Grammar School

**County:** Louth

**Teacher:** Mr Shane Lynch

**Student(s):** Solomon Doyle

2201

**Title:** Dara saol a thabhairt go dtí do sean-teicneolaíocht

**Overview:** Cad iad na Modhanna in a bhfuil tú in ann do sean-teicneolaíocht a athúsáid in ionad iad a caitheamh amach?

**School:** Coláiste Mhuire

**County:** Dublin

**Teacher:** Ms Maria Ní Ghóillidhe

**Student(s):** Kyle Ó Broin

2202

**Title:** Fundus Eye Scanner.

**Overview:** I intend to make a retina scanner compatible with several devices such as a phone, computer or laptop.

**School:** John The Baptist Community School

**County:** Limerick

**Teacher:** Ms Emma Donnelly

**Student(s):** Andy Bucur

2203

**Title:** Assemble your own computer

**Overview:** This is the first prototype of make your own mini computer to teach people about coding electrical engineering.

**School:** St Ciaran's Community School

**County:** Meath

**Teacher:** Mr Ciaran Dunne

**Student(s):** Niall O'Reilly

2204

**Title:** Eataware

**Overview:** Accessibility app for visually impaired people that allows them to shop for their groceries independently while keeping track of any dietary requirements they may require.

**School:** Colaiste Nano Nagle

**County:** Limerick

**Teacher:** Ms Kelly Walsh

**Student(s):** Maha Shahzadi

2205

**Title:** The design and development of a bipedal robot for home care

**Overview:** The design and development of a bipedal robot which dynamically adjusts to terrain, programmed to do tasks to assist the elderly and disabled at home

**School:** Cork Educate Together

**County:** Cork

**Teacher:** Mr Paul Hogan

**Student(s):** Harry O'Connor

2206

**Title:** Smart Yard: IoT monitoring of key farm metrics to reduce agricultural emissions

**Overview:** A monitoring system of farm metrics (slurry, concentrate, water, etc) to enable agriculture to reduce its emissions and carbon footprint while improving farm efficiencies.

**School:** Scoil na mBráithre Chríostaí

**County:** Cork

**Teacher:** Miss Maria Kelly

**Student(s):** Robert Troy

2207

**Title:** A Helping Hand

**Overview:** I going to 3D print and assemble a hand prosthetic to discover if it's as effective as one made out of an alloy.

**School:** Pobalscoil Inbhear Scéine

**County:** Kerry

**Teacher:** Ms Sarah Abbott

**Student(s):** Ana Parkes-Young

2208

**Title:** A case study investigating the performance of PV solar panels without a battery module over one calendar year

**Overview:** This case study project investigates the performance of PV solar panels without a battery module, in a residential household over one calendar year.

**School:** Ardscoil Ris

**County:** Limerick

**Teacher:** Mr Jack Corrigan

**Student(s):** Sam Hamilton

2209

**Title:** Can wind turbine blades be made more eco friendly and cost efficient?

**Overview:** I would like to make a more eco-friendly, inexpensive way to manufacture wind turbine blades without the use of fiber glass or any other toxic material.

**School:** Mohill Community College

**County:** Leitrim

**Teacher:** Ms Eileen Nertney

**Student(s):** Sara O'Beirne



## 2210

**Title:** New Showjumping Wings

**Overview:** Designing and using a lever at the top of Showjumping wings that will pull up the cups that the poles are on to increase safety and easiness.

**School:** St Joseph's College

**County:** Tipperary

**Teacher:** Ms Mary Gorey

**Student(s):** Ciara O'Brien

## 2211

**Title:** Sensor Based Intelligent Intervention in Independent Living

**Overview:** The Project involves motion sensors to monitor and analyse the movement of elderly individuals living within an independent environment and providing medical attention in time.

**School:** Athlone Community College

**County:** Westmeath

**Teacher:** Mr Gavin Beirne

**Student(s):** Inesh Mazumdar

## 2212

**Title:** Predator Detection and Prevention System

**Overview:** A solar powered system for poultry buildings on farms to scare potential predators and alert farmers of a disturbance via text to their mobile phone.

**School:** Sligo Grammar School

**County:** Sligo

**Teacher:** Miss Michelle Higgins

**Student(s):** Fionn Gavin

## 2213

**Title:** Climate-Net: can AI help fight against climate change?

**Overview:** Designing novel and cutting-edge deep learning architectures and applying them on global weather and geographical datasets to predict extreme weather events caused by climate change.

**School:** St Andrew's College

**County:** Dublin

**Teacher:** Ms Emma Buckley

**Student(s):** Weichen Huang

## 2214

**Title:** A personal mobile device holder for medical environments.

**Overview:** I aim to design a hands-free personal mobile device holder with long flexible polymer arms for use in hospital treatment rooms.

**School:** Abbey Vocational School

**County:** Donegal

**Teacher:** Ms Donna Furey

**Student(s):** Grace Masterson

## 2216

**Title:** Constructing A Self-Sustaining House

**Overview:** I'll do a model of a self-sustaining house

**School:** Laurel Hill Secondary School FCJ

**County:** Limerick

**Teacher:** Ms Karen Kinnerk

**Student(s):** Mar Matarín Romero

## 2217

**Title:** An app to improve writing in children with dysgraphia

**Overview:** I aim to develop a game to help children with dysgraphia write as there are very few available online/electronic resources for dysgraphia.

**School:** Abbey Vocational School

**County:** Donegal

**Teacher:** Ms Donna Furey

**Student(s):** Hughie McShane

## 2218

**Title:** Automatic Motorized Washing Line Cover

**Overview:** A washing line cover that extends to cover the washing line automatically using a motor and rain sensor.

**School:** Edmund rice college

**County:** Cork

**Teacher:** Ms Danielle O'Sullivan

**Student(s):** Daithí Broderick

## 2219

**Title:** How does Technology effect Humans' concentration

**Overview:** I am getting students to take a 40-minute Maths quiz, go on computer games, then take another 40-minute Maths quiz.

**School:** St Brigids College

**County:** Galway

**Teacher:** Ms Lisa Donlon

**Student(s):** Joshua McPhilbin

## 2220

**Title:** Sepsis Alert

**Overview:** An app to help people learn about sepsis as well as having a symptom log, and a checklist.

**School:** Mount St Michael

**County:** Mayo

**Teacher:** Ms Stephanie Hogan

**Student(s):** Aoibheann Mangan

## 2221

**Title:** Fungi and our food future: A study in how modelling the growth of Physarum polycephalum can help design smart food logistics systems

**Overview:** This project is a study of how the growth pattern of Physarum polycephalum can be used to help computers design smart food systems

**School:** St Andrew's College

**County:** Dublin

**Teacher:** Ms Emma Buckley

**Student(s):** Matthew O'Regan

## 2222

**Title:** Using AI and genetic algorithm to investigate the best deployment of control line in an agent-based forest fire simulation

**Overview:** An agent-based forest fire simulation that predicts fire spread and an AI model, trained by genetic algorithm, to deploy control lines to stop the spread.

**School:** Sandford Park School Ltd

**County:** Dublin

**Teacher:** Dr Dana Kilroy

**Student(s):** Alex Li



## 2223

**Title:** An Investigation into Solar Panels and their use

**Overview:** In this project I will gather opinions on solar panels. I hope to identify problems people have with solar panels and devise a potential solution.

**School:** Borrisokane Community College

**County:** Tipperary

**Teacher:** Ms Jacqueline Hayes

**Student(s):** Senan O'Brolchain

## 2224

**Title:** The Sensing Case

**Overview:** This is a condensed Fence Tester fitted to a phone case to make it more compact and easier to carry around.

**School:** St Joseph's College

**County:** Tipperary

**Teacher:** Ms Mary Gorey

**Student(s):** Joshua Kelly

## 2225

**Title:** The physics of GSM, what can you learn with a handheld spectrum analyser and why go 5G?

**Overview:** My project is about the GSM networks, investigating physical requirements/limitations (bandwidth, coverage, power consumption) and benefits (capacity, speed) of going from 2G to 5G technology.

**School:** St Andrew's College

**County:** Dublin

**Teacher:** Ms Emma Buckley

**Student(s):** Stanislav Stamenov

## 2227

**Title:** Lighting up our roads: How to utilise renewable energy.

**Overview:** The purpose of my project is to investigate how best to utilise kinetic energy from cars to produce light energy.

**School:** St Patrick's College

**County:** Tyrone

**Teacher:** Mrs Cara Mc Ginn

**Student(s):** Conor Deehan

## SENIOR INDIVIDUAL

## 2300

**Title:** Driving Decision Making Through Data Insights

**Overview:** This is a telecom-related Data Science project where I drove insights into network speed and consistency helping BT to pinpoint areas of concern and improvements.

**School:** Belvedere College

**County:** Dublin

**Teacher:** Mr Derek Kinsella

**Student(s):** Raj Aryan Upadhyaya

## 2301

**Title:** Snapstudy

**Overview:** an AI based revision app that uses proprietary & state-of-the-art Deep Learning models that allows students to generate flashcards from their notes for efficient revision

**School:** St David's Secondary

**County:** Wicklow

**Teacher:** Mr. Brian Ó Donnchadha

**Student(s):** Vagif Aliyev

## 2302

**Title:** A System For The Development And Execution Of Hybrid Classical/Quantum Tasks

**Overview:** An operating system coupled with a compiler for providing an effective mechanism for hybrid classical/quantum process development and execution.

**School:** Stratford College

**County:** Dublin

**Teacher:** Ms Helen O'Kelly

**Student(s):** Ayush Tambde

## 2303

**Title:** Electric Powered Jet Engine

**Overview:** This project describes a conceptual electric jet engine as a means of countering the growing problems of CO<sub>2</sub> emissions and the high cost jet fuel.

**School:** Ratoath College

**County:** Meath

**Teacher:** Mr Callum Leighburn

**Student(s):** Cathal Hayes

## 2304

**Title:** Augmented Reality glasses for the visually impaired

**Overview:** I have created a pair of glasses that uses artificial intelligence and machine vision to help interpret the world for the visually impaired.

**School:** Kishoge Community College

**County:** Dublin

**Teacher:** Mr Micheal Griffin

**Student(s):** Farsaad Ahmad Kamran

## 2305

**Title:** Fibronot Pro: New Fibromyalgia Detection System

**Overview:** The aim of my project is to design a device and an app that can be used to detect fibromyalgia in patients.

**School:** Kingswood Community College

**County:** Dublin

**Teacher:** Ms Ciara Cook

**Student(s):** Amy Carruth

## 2306

**Title:** Optic Based Object Tracking in 2D

**Overview:** To track the 2D position of an object on a flat surface at a high sampling rate. Using infrared cameras and infrared LEDs.

**School:** Mayfield Community School

**County:** Cork

**Teacher:** Ms Sinéad Halpin

**Student(s):** Barnabas Somodi

## 2307

**Title:** Slàinte - A.I Breast Cancer Detection

**Overview:** Using image classification and a self sufficient data engine to detect breast cancer in x-rays and mammograms for faster breast cancer screening and detection.

**School:** St Joseph's Secondary School, Rush

**County:** Dublin

**Teacher:** Mr Daryl Dunne

**Student(s):** Stephen Flynn



## 2309

**Title:** Arc: A Comprehensive Digital Journal

**Overview:** Arc is a comprehensive digital journal for computer and smartphone, with benefits for those with motor disabilities, dementia, anxiety, and more.

**School:** Gaelcholáiste an Eachréidh

**County:** Galway

**Teacher:** Ms Mary Ní Mhathúna

**Student(s):** Adam Cunningham

## 2310

**Title:** An Investigation into the Development of a Digital PR-STV Electoral Voting System using Blockchain Technologies

**Overview:** The investigation aims to identify improvements in the electoral voting system in Ireland and devise a fully-functional and scalable blockchain-backed voting implementation incorporating said improvements.

**School:** St. Aidan's C.B.S.

**County:** Dublin

**Teacher:** Ms Niamh O'Brien

**Student(s):** Andrei Florian

## JUNIOR GROUP

## 2400

**Title:** Nation Information App

**Overview:** We are writing an app about the countries of the world give gives information about each country which is interesting for geography students

**School:** Meánscoil Na Mbráithre

**County:** Clare

**Teacher:** Mr Sean Murphy

**Student(s):** James Blackwell, Oisín Coughlan

## 2401

**Title:** Coding the Solution to Ireland's Scam Call Issue

**Overview:** To design a mobile phone app that will identify phone numbers linked to scams and warn users upon receiving a call from an untrustworthy number.

**School:** Moate Community School

**County:** Westmeath

**Teacher:** Miss Irene O'Sullivan

**Student(s):** Fionn Campbell, Emma Keane

## 2402

**Title:** M.I.A (Motorists Ice Aid)

**Overview:** Our aim is to improve safety awareness on the roads by using thermochromic paint on road-signs. We hope to make motorists more aware of dangerous conditions.

**School:** Scoil Mhuire agus Íde

**County:** Limerick

**Teacher:** Ms Rebecca Phillips

**Student(s):** Caoimhe Byrne, Mai Flavin, Aoibhinn Ahern

## 2403

**Title:** Testing the strengths and limitations of non-Newtonian fluids as a form of protection against attacks

**Overview:** Our project is about testing the optimal temperature and recipe of non-Newtonian fluids to use in protective equipment

**School:** Castleknock College

**County:** Dublin

**Teacher:** Ms Siobhan (Yvonne) David

**Student(s):** Bogdan Iliescu, Conor McGuirk

## 2404

**Title:** CPR Pedal Chest Compression Device

**Overview:** CPR device involving manual peddles, cam rotations which deliver chest compressions to required depth without any power source. Suitable for Global South countries or anywhere.

**School:** Tarbert Comprehensive School

**County:** Kerry

**Teacher:** Ms Joanne Mulvihill

**Student(s):** Jim Culhane, Paula-Eve Culhane,

## 2405

**Title:** LocalChatter

**Overview:** LocalChatter is an application that allows residents to directly communicate to their county council and raise awareness around local issues.

**School:** Beaufort College

**County:** Meath

**Teacher:** Mr Sean Hughes

**Student(s):** Rohi Aluede, Justas Bambalas, Chibuikem Onwukaife

## 2406

**Title:** A dyslexia light with a difference

**Overview:** We aim to develop a light that will change colour to assist people with dyslexia while reading and writing.

**School:** Abbey Vocational School

**County:** Donegal

**Teacher:** Ms Donna Furey

**Student(s):** Micheál Deely, CJ Burke

## 2407

**Title:** How much data can be gathered on someone using just an image of their face?

**Overview:** We aim to show people how much personal information can be found about them using just their face on the internet.

**School:** Sandymount Park Educate Together Secondary School

**County:** Dublin

**Teacher:** Mr. Conor Maxwell

**Student(s):** Milo McCormack, Alexander Hayes Laydevant, Jackson Kaneswaran

## 2408

**Title:** Panacea

**Overview:** Panacea, our device, is easily accessible and works around the hindrances dealt with by persons' facing dementia along with their family members and carers.

**School:** Sandymount Park Educate Together Secondary School

**County:** Dublin

**Teacher:** Mr. Conor Maxwell

**Student(s):** Zara Ilyas, Aoibhinn Campbell

## 2409

**Title:** The Light-Belt: A Life-saving Belt

**Overview:** To create a detachable light-belt for a schoolbag which increases students visibility to drivers and alerts them to passing traffic as they walk/cycle to school.

**School:** Moate Community School

**County:** Westmeath

**Teacher:** Ms Mairead Cusack

**Student(s):** Diya Govindaraju, Sean Farrelly





## 2410

**Title:** Build an Anaerobic Digester (AD) suitable for domestic use  
**Overview:** AD's have been developed for large scale industrial/ agricultural enterprises. These are large and very expensive. Due to the current environmental situation we would like to develop a smaller affordable AD suitable for use in small scale housing developments, schools etc  
**School:** De La Salle College  
**County:** Waterford  
**Teacher:** Mr Mick Walsh  
**Student(s):** Rudi Galvin, Lenny Galvin, Rory Jacob

## 2411

**Title:** Free Kinaesthetic Energy to Power Schools. Sustainable Clean Energy Generated One Foot-Step At A Time.  
**Overview:** Creating and implementing a footpad that harnesses the kinaesthetic energy of student footsteps in our school environment and school pedestrian walkways.  
**School:** St Mary's Secondary School  
**County:** Dublin  
**Teacher:** Ms Eilish Coleman  
**Student(s):** Kasey Lawlor, Annarose Sijo

## 2412

**Title:** Kinetic Kicks  
**Overview:** My project is to make an innovative pair of shoes for people with feet problems that warms/cool the user's feet and creates electricity from walking.  
**School:** Coláiste Phádraig  
**County:** Dublin  
**Teacher:** Mr Kevin Carey  
**Student(s):** Joel Emmanuel, Rohit Tummala

## 2413

**Title:** Local Tourist Guide App  
**Overview:** this is a multimedia phone app for visitors to Ennistymon to find local restaurants/pubs, music venues, shops, sports facilities, walks, historical sites, etc.  
**School:** Meánscoil Na Mbráithre  
**County:** Clare  
**Teacher:** Mr Sean Murphy  
**Student(s):** Fionn McMahon, Cillian Osullivan

## 2414

**Title:** SignBot  
**Overview:** SignBot is an AI-bot that uses machine learning to enable a speech and hearing impaired person communicate effortlessly with someone who doesn't know sign language.  
**School:** SEK Dublin International School  
**County:** Wicklow  
**Teacher:** Mr Gareth Finn  
**Student(s):** Smaran Pandey, Adarsh Pandey

## 2415

**Title:** 1st Year App  
**Overview:** We will develop an app to help 1st Years transition to Secondary school  
**School:** St. Joseph's Secondary School  
**County:** Clare  
**Teacher:** Ms Leah Enright  
**Student(s):** Conor Neylon, Liam Rynne

## 2416

**Title:** Tick - A homework app for post-primary students.  
**Overview:** Tick is a homework organiser that aims to help students prioritise and complete their homework in the most efficient matter to reduce any associated stress  
**School:** St Joseph's Secondary School, Rush  
**County:** Dublin  
**Teacher:** Mr Daryl Dunne  
**Student(s):** Emma Keegan, Charley House, Saoire Taaffe

### INTERMEDIATE GROUP

## 2500

**Title:** Investigating the viability of hydroelectricity in our school as a renewable source of energy  
**Overview:** Our group aims to investigate the viability of implementing a hydroelectric turbine into our school river as a source of renewable electricity for our school.  
**School:** Cistercian College  
**County:** Tipperary  
**Teacher:** Ms Jennifer Denny  
**Student(s):** Robert Dunne, Harry Madden, Conor Kearney

## 2501

**Title:** Is hydrogen power usage within transport part of the solution for the current global climate crisis?  
**Overview:** This project explores the feasibility for broad scale use of hydrogen as a means to supplement wind and solar power, providing renewable global energy needs.  
**School:** St Kieran's College  
**County:** Kilkenny  
**Teacher:** Mr David Hennessy  
**Student(s):** Luke Phelan, Jake O'Brien

## 2502

**Title:** Chicken Motel  
**Overview:** An easily transportable environmentally friendly, safe mobile Chicken Coop that provides the animals with the space they need, whilst encouraging them to lay more.  
**School:** Desmond College  
**County:** Limerick  
**Teacher:** Mr Donal Enright  
**Student(s):** Edel McMahon, Róisín Solley-Ambrose

## 2503

**Title:** Using Bayes Theorem and Bayesian Optimization as a Method to Improve Crypto-Currency Trading  
**Overview:** We will create an AI that predicts future Crypto-Currency values using Bayes Theorem and Bayesian Optimization.  
**School:** Coláiste Phádraig  
**County:** Dublin  
**Teacher:** Mr Kevin Carey  
**Student(s):** Taha Fareed Farooqi, Jevin Joy

## 2504

**Title:** Safe School Mask  
**Overview:** Mask with tracker which lists people who come in close contact. This list then can be accessible if needed.  
**School:** Coláiste Phádraig  
**County:** Dublin  
**Teacher:** Ms Jacqueline Farrell  
**Student(s):** Aniruddh Sriram, Abhinav Sriram, Elvin Garcia



## 2505

**Title:** The Haz-Bin An Innovative Hazardous Waste Bin that removes the possibility of contamination, aimed for hospitals and health facilities.

**Overview:** The haz-bin is a dual compartment waste bin that maximizes safety after disposal in a hospital.

**School:** The Royal and Prior School

**County:** Donegal

**Teacher:** Mr Michael Healy

**Student(s):** Charlie Coyle, Hannah Tinney, Sarah McNeely

## 2506

**Title:** An Investigation in to The Feasibility of Locating and Reporting Road Damages Using Technology

**Overview:** Investigating the feasibility of using microprocessors, attached to vehicles to detect, and report, road damages to local authorities.

**School:** Marist College

**County:** Westmeath

**Teacher:** Ms Adele Browne

**Student(s):** Donal McDermott, Oisín Dolan

## 2508

**Title:** RecycleWise

**Overview:** Our project aims to create an accessible app that would inform the user of the correct disposal of an item, simply by scanning a barcode.

**School:** Coláiste Naomh Mhuire

**County:** Kildare

**Teacher:** Ms Nadine Hennessy

**Student(s):** Aoibhe McKevitt, Aisling Reilly

## 2509

**Title:** The development of a cost efficient add on to enable all whiteboards to be interactive

**Overview:** To create a cost-efficient interactive whiteboard with the materials already in most schools, using motion gesture sensors and a RGB camera.

**School:** Coláiste Naomh Mhuire

**County:** Kildare

**Teacher:** Ms Naoise Gallagher

**Student(s):** Saoirse Brine, Elizabeth Bizerra

## 2510

**Title:** ClimateActionHow.com

**Overview:** We will be designing a website that people of all ages can consult for making climate conscious decisions in their lives.

**School:** Coláiste Chiaráin

**County:** Limerick

**Teacher:** Ms Edel Farrell

**Student(s):** Seán O'Sullivan, Sarah O'Sullivan

## 2511

**Title:** Low Cost Air-Conditioning Kit

**Overview:** A low cost passive air conditioning unit using evaporative cooling derived from an ancient Egyptian technique. This will help cool houses in hot climates.

**School:** Clonakilty Community College

**County:** Cork

**Teacher:** Mr Patrick O Keeffe

**Student(s):** Neil O' Sullivan, Lyle Hatchett, Orrin Shanahan

## 2512

**Title:** Budget Smart Ventilation System (BSVS)

**Overview:** A Co2 monitoring system for automatic fresh air ventilation in classrooms

**School:** Clonakilty Community College

**County:** Cork

**Teacher:** Mr Patrick O Keeffe

**Student(s):** Charlie Stirling, Cameron Rose

## 2513

**Title:** To optimise domestic battery usage using a mobile phone app.

**Overview:** This project aims to prevent the discarding of viable batteries by optimizing domestic battery usage. We will achieve this by developing a mobile app.

**School:** St. Joseph's Secondary School

**County:** Meath

**Teacher:** Miss Bronagh Farrell

**Student(s):** Caoimhe Keyes, Lily Kilmartin-Gath

## 2514

**Title:** Bottomless Bucket

**Overview:** The Bottomless Bucket is a sensory device installed in a Lamlac bucket. You will receive a text when the bucket needs to be refilled.

**School:** St. Joseph's Secondary School

**County:** Meath

**Teacher:** Miss Bronagh Farrell

**Student(s):** Ciara Finnegan, Erin Gallagher, Faye Kellett Forde

## 2515

**Title:** My Carbon Buddy

**Overview:** My Carbon Buddy is an app which allows people to record their use of plastic, carbon and how they can be more sustainable.

**School:** St. Brigid's Secondary School

**County:** Kerry

**Teacher:** Ms Siobhán Ahern

**Student(s):** Keira Geaney, Abbie O' Sullivan

## 2516

**Title:** Creating a medicine container that helps people with memory problems

**Overview:** We want to create a medicine container that when the medicine is removed it triggers a sensor that sends a notification to a phone.

**School:** Athlone Community College

**County:** Westmeath

**Teacher:** Ms Sharon Kelly

**Student(s):** Aiveen Curley, Shauna Egan

## 2518

**Title:** CoolAid

**Overview:** A wearable waterproof device that can detect the initial stages of hypothermia to protect people while sea swimming

**School:** Ursuline College

**County:** Sligo

**Teacher:** Mr Anthony Carolan

**Student(s):** Anna Woodward, Alex Scott

## 2519

**Title:** Magnetic Motor

**Overview:** Magnetic motor that can provide free energy to charge a battery or feed an electric motor.

**School:** St Joseph's College



**County:** Tipperary  
**Teacher:** Ms Mary Gorey  
**Student(s):** Hugo Garcia Fernandez, Cosme González Delgado

## 2520

**Title:** Developing an application to test security using python and web technologies  
**Overview:** Using an app based on web technologies to test websites for basic vulnerabilities they might not realise they have.  
**School:** Gonzaga College  
**County:** Dublin  
**Teacher:** Mr Stephen McGrogan  
**Student(s):** Christian Barton Randall, Niall Morahan

## 2521

**Title:** A-Ok, an autism communication wristband.  
**Overview:** A digital communication aid between a student with autism and their teachers, coaches and mentors.  
**School:** Colaiste Mhuire  
**County:** Westmeath  
**Teacher:** Dr Gerard Rafferty  
**Student(s):** Robert Brennan, Hugh Murtagh, Peter Kennedy

## 2522

**Title:** Cover Up  
**Overview:** It is an A.I that can be used to detect whether people are wearing masks or not when they enter a shop.  
**School:** Summerhill College  
**County:** Sligo  
**Teacher:** Mr Fintan Whelan  
**Student(s):** Fraser Woodward, Diarmaid Taylor

## 2523

**Title:** Device to assist canines with phobias arising from thunderstorms and pyrotechnics  
**Overview:** "Using a combination of sounds/aromas build into a modified jacket and snood to reduce stress and assist canines with phobias arising from thunderstorms and pyrotechnics."  
**School:** Desmond College  
**County:** Limerick  
**Teacher:** Mr Donal Enright  
**Student(s):** Madison Brouder, Ciara Barrett

## 2524

**Title:** "Fetch Your Pet" - anti dog theft device  
**Overview:** A wearable device for a dog to notify the owner if the dog is driven away in a vehicle.  
**School:** Loreto College  
**County:** Westmeath  
**Teacher:** Mr Robert Masterson  
**Student(s):** Caoimhe Donohue, Emily Kiernan, Katie O'Connor

## 2525

**Title:** PTO Safety stopper  
**Overview:** We will investigate the use of a remote emergency stopper button to improve farm safety. In particular with the dangerous power take of shaft.  
**School:** Meánscoil na mBráithre Criostaí  
**County:** Kilkenny  
**Teacher:** Mr. Eanna Collins  
**Student(s):** Hugh Kavanagh, Larry Ryan, Cillian Hoyne

## 2526

**Title:** Hovering Holder  
**Overview:** We are making a hovering craft to hold drinks, for accessibility for the lesser abled. It will be controlled by an app or remote (unsure)  
**School:** Dunshaughlin Community College  
**County:** Meath  
**Teacher:** Dr Claire Tuttlebee  
**Student(s):** James McLean, Dean Cleary

## 2527

**Title:** 'T.O.F.A.S' The Outdoor Fire Alert System  
**Overview:** T.O.F.A.S is a device designed to help prevent forest fires by sending an alert to the fire brigade via SMS once smoke is detected.  
**School:** Ashbourne Community School  
**County:** Meath  
**Teacher:** Ms Niamh Dornan  
**Student(s):** Matthew Feane, Aaron Maher

## 2528

**Title:** GaelTalk - a virtual reality immersive Irish Language learning experience that can promote the practice of the Irish language.  
**Overview:** Can a virtual reality immersive Irish Language learning experience promote the practice and understanding of the Irish language?  
**School:** St Joseph's Secondary School, Rush  
**County:** Dublin  
**Teacher:** Mr Daryl Dunne  
**Student(s):** Aaron Dignam, Ciarán Leddy, Senan Byrne

## 2529

**Title:** How music affects video game performance  
**Overview:** We are measuring the impact music has on video game performance while creating our own music and video game.  
**School:** Choláiste Cholmcille  
**County:** Donegal  
**Teacher:** Mr fenton mchugh  
**Student(s):** James Gallagher, Daire McDevitt, Proinnsias Murray

## 2530

**Title:** "Row-tricity" - Design and development of a device to capture the potential energy of an ergometer (rowing machine) and a case study into the possibility to use it as a renewable energy source  
**Overview:** Our project aims to modify ergometers to utilize the energy produced and perform a case study to examine if it can power a rowing club.  
**School:** Ardscoil Ris  
**County:** Limerick  
**Teacher:** Mr Jack Corrigan  
**Student(s):** Patrick Stenson, Shane Rafferty, Colm Murphy

## 2531

**Title:** Comfort Crutches  
**Overview:** Redesigning Standard issue crutches to improve comfort and usability.  
**School:** Sutton Park School  
**County:** Dublin  
**Teacher:** Ms Joanne Hanratty  
**Student(s):** Vedh Kannan, Thomas Forbes, William Carkner



## 2532

**Title:** I'll Play It My Way – A Machine Learning Algorithm to Individualize Sensory Play Room Stimulation

**Overview:** A machine learning algorithm, body sensor wearable and sensory controller which can stimulate a user and learn the appropriate level of stimulation for individual needs

**School:** Our Lady's Bower

**County:** Westmeath

**Teacher:** Mrs Samantha Fox-Reilly

**Student(s):** Ciara Fallon, Amy McGovern, Martha McSharry

## 2533

**Title:** Actively combatting compass deviation in a marine setting

**Overview:** Practical compasses are interfered with by surrounding environments in a way that isn't currently countered and GPS equipment is required. We intend to change this.

**School:** St Joseph's College

**County:** Tipperary

**Teacher:** Ms Mary Gorey

**Student(s):** Oscar George, Pheobe Sage

## 2534

**Title:** 'You Go Girl' – a workout app designed for girls by girls

**Overview:** Can an app be used to maintain and increase the activity levels of girls that drop out of organised sports in secondary school?

**School:** Loreto High School

**County:** Dublin

**Teacher:** Ms Eimear Maloney

**Student(s):** Mia Minch, Isabella Riordan, Sophie O'Donnell

## SENIOR GROUP

## 2600

**Title:** Sanitation Station

**Overview:** 'Sanitation Station'. Using UV lights and timer, designed to help teachers not to have to quarantine pages for 72 hours before distributing them to students.

**School:** Desmond College

**County:** Limerick

**Teacher:** Mr Donal Enright

**Student(s):** Lucy Flaherty, Trevor O' Shea

## 2601

**Title:** Smart Ruler "Reduce errors due to ADHD and Dyslexia"

**Overview:** Using a colour filtration overlay system to reduce errors when reading scales on a ruler coupled with contrasting colours to highlight text to be read.

**School:** Desmond College

**County:** Limerick

**Teacher:** Mr Donal Enright

**Student(s):** Niamh O' Mahony, Alzbeta Barisova

## 2602

**Title:** Uscalt.com | Developing an Open Data Ecosystem

**Overview:** We're building an open data ecosystem for users and developers to control their data.

**School:** Patrician Secondary School

**County:** Kildare

**Teacher:** Mr Colin Doherty

**Student(s):** Fintan Lalor, Justin Cunningham

## 2603

**Title:** HSO - Helping Sensory Overload

**Overview:** An app and puck developed to help those with Sensory Overloads and ASD feel more confident in day to day life

**School:** St Louis Grammar School

**County:** Antrim

**Teacher:** Mr Patrick Trainor

**Student(s):** Bronagh Dempster, Daniel Montgomery, Liam Young

## 2604

**Title:** An embedded system for a "smart" cricket training bat

**Overview:** In this project we created a "smart" cricket bat which aims to improve your skills in the game, both for newcomers and professionals

**School:** Kishoge Community College

**County:** Dublin

**Teacher:** Mr Micheal Griffin

**Student(s):** Shawaiz Atif, Joshua Kannappilly, Subhan Tariq

## 2605

**Title:** Specs - A Wearable Smart Device for Dementia Patients

**Overview:** Specs is a wearable device, that, using computer vision software, prevents the discomfort dementia patients face when they're unable to recognise family members or friends.

**School:** Mercy Secondary School

**County:** Kerry

**Teacher:** Miss Eimear Nolan

**Student(s):** Dara Newsome, David Hughes, Conor Bradshaw

## 2606

**Title:** A Decentralised Audio Fingerprinting System for Detecting Illegally Streamed Video Content

**Overview:** Our project develops a robust audio fingerprinting tool that is resistant to audio manipulation for the detection of illegally streamed video content.

**School:** Sandford Park School Ltd

**County:** Dublin

**Teacher:** Dr Dana Kilroy

**Student(s):** Rohan Tewari, Benjamin Murray

## 2607

**Title:** 'Grade Easy' App

**Overview:** 'Grade Easy' is a mobile application that aims to provide its users with the opportunity to keep track of their potential Leaving Certificate grades.

**School:** Presentation College Headford

**County:** Galway

**Teacher:** Mr. John Toner

**Student(s):** Elana Monaghan, Ella Cook





## Looking for a specific project?

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Chemical, Physical and  
Mathematical Sciences

**1100 - 1604**

Technology

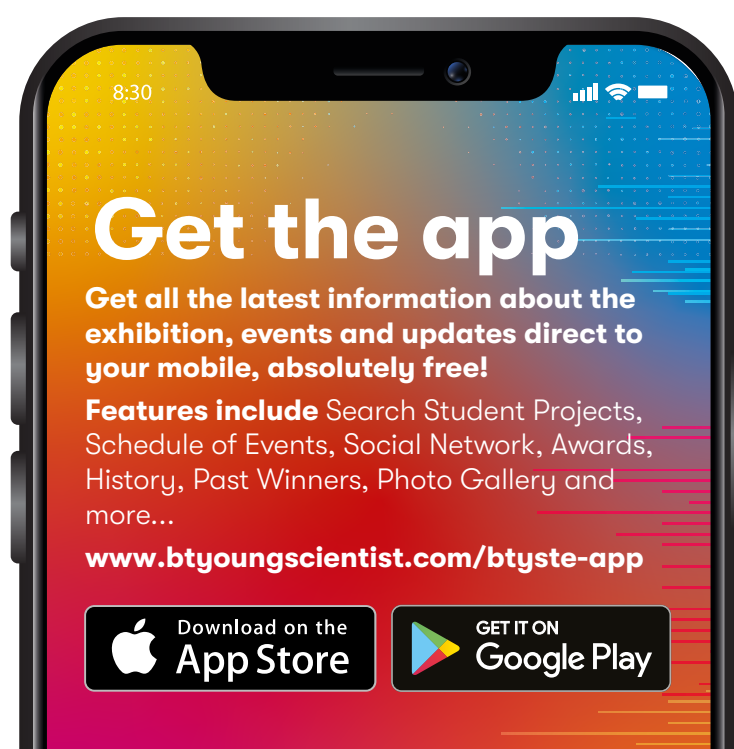
**2100 - 2607**

Biological and  
Ecological Sciences

**3100 - 3607**

Social and Behavioural  
Sciences

**4100 - 4704**





## JUNIOR INDIVIDUAL

3100

**Title:** Acid Rain/Superabsorbent Polymer Crystals

**Overview:** Seeing if polymer gel will absorb other liquids than water, and when they absorb acid rain I will see if the acid rain affects plants

**School:** Newbridge College

**County:** Kildare

**Teacher:** Ms Anne Marie Davis

**Student(s):** Rian Hearne

3101

**Title:** Are plant saponins better at removing stains as commercial laundry detergent.

**Overview:** I will make laundry detergent from plants containing saponins and use these to remove stains from fabrics. I will compare results with commercial detergents. I will use a reflectance meter to compare the stains left behind on the fabrics to determine which detergent removed the most stain..

**School:** Educate Together Secondary School Wicklow (ETSSW)

**County:** Wicklow

**Teacher:** Ms Alicia Devlin Byrne

**Student(s):** Daniel Monahan

3102

**Title:** An investigation into the effect of wind on tree shape

**Overview:** I am investigating the effect wind exposure has on the trunk and crown of four different species of tree found in the Burren.

**School:** Mary Immaculate Secondary School Lisdoonvarna

**County:** Clare

**Teacher:** Mr John Sims

**Student(s):** Oisín Jackson

3103

**Title:** Research into the composition of pestalotiopsis microspora that break down plastic.

**Overview:** My project will research and experiment the effects of enzymes that breaks down plastics.

**School:** Nord Anglia International School Dublin

**County:** Dublin

**Teacher:** Ms Eimear Scannell

**Student(s):** Ian Soto

3104

**Title:** An investigation into the level of microplastics on a number of beaches in the West of Ireland

**Overview:** I am looking to see the amount and type of microplastics found in sand in beaches in different parts of the west of Ireland.

**School:** Mary Immaculate Secondary School Lisdoonvarna

**County:** Clare

**Teacher:** Mr John Sims

**Student(s):** Ciara McDonnell

3105

**Title:** To encourage the adoption of battery hens so that people can prevent large scale egg production and help produce the overall carbon footprint

**Overview:** I aim to encourage adoption of battery hens to save the hens lives and benefit from their recycling food waste and free range egg production

**School:** Kinsale Community School

**County:** Cork

**Teacher:** Dr. Catherine Coughlan

**Student(s):** Miah O'Callaghan

3106

**Title:** Is Grey Water The Answer To The Worldwide Shortage Of Safe Drinking Water?

**Overview:** Investigate if Greywater is safe to use on crops, instead of treated water. Investigate any effects this water has on plant growth and fruit/vegetable production.

**School:** Loreto College

**County:** Dublin

**Teacher:** Mr Seamus Hayes

**Student(s):** Chloe Kelleher

3107

**Title:** Rewilding Ireland - Could Glenveagh National Park sustain a Grey Wolf population?

**Overview:** My project aim is to find out if Glenveagh National Park could sustain a viable wolf population through population modelling and environmental data.

**School:** Ard Scoil Na Mara

**County:** Waterford

**Teacher:** Ms Niamh Shannon

**Student(s):** Cian Ó Cadhla

3108

**Title:** The effect of wind on leaf morphology on two species of tree in the Burren.

**Overview:** I am looking to see if exposure to wind has an affect on the morphology of two species of tree that grow in the Burren

**School:** Mary Immaculate Secondary School Lisdoonvarna

**County:** Clare

**Teacher:** Mr John Sims

**Student(s):** Alana McKinnon

3109

**Title:** How long can we have health?

**Overview:** A statistical analysis of Healthy Life Years, their patterns, their influences, and their future in medicine.

**School:** Sandford Park School Ltd

**County:** Dublin

**Teacher:** Mr Alan Smith

**Student(s):** Aoife Duggan

## INTERMEDIATE INDIVIDUAL

3200

**Title:** An méadaíonn deoch fuinnimh do fuinneamh i ndáiríre?

**Overview:** Táim ag féiceaint ar an meadaíonn deoch fuinneamh do fuinnemh in ndáiríre mar ní cheapaim nuair a ólaínn mé céann méadaíonn sé mo fuinneamh.

**School:** Gaelcholáiste Phort Láirge

**County:** Waterford

**Teacher:** Mrs. Claire Joyce

**Student(s):** Daniel Ó Foghlú

3201

**Title:** Infectivity of the entomopathogenic nematode *Steinernema feltiae* at different temperatures

**Overview:** This investigation aims to determine the most effective temperature for nematode (*Steinernema feltiae*) infectivity in test host



larvae (*Galleria mellonella*.)

**School:** Colaiste Treasa

**County:** Cork

**Teacher:** Ms. Joanne Corkery

**Student(s):** Johannah Pigott

## 3202

**Title:** A biological solution to local pollution

**Overview:** Investigating if local town and farm practices negatively impact the surface waters in my local Ballyduff river; and propose solutions to prevent this from happening.

**School:** St Marys College

**County:** Wicklow

**Teacher:** Ms Joanne English

**Student(s):** Mary Kelly

## 3203

**Title:** Finding an easier way to peel egg shells

**Overview:** My project is trying to find out if a person can make it easier to peel the shells off of boiled eggs using different substances.

**School:** St Kieran's College

**County:** Kilkenny

**Teacher:** Mr David Hennessy

**Student(s):** Charlie FitzGerald

## 3204

**Title:** Adrenaline Auto Injectors (AAls) save lives, Equitable and accessible training for all

**Overview:** To raise awareness of Adrenaline Auto injectors and change government policy to ensure there is equitable and accessible training in its use for all.

**School:** Scoil Mhuire gan Smál

**County:** Roscommon

**Teacher:** Ms Niamh Brogan

**Student(s):** Anna Corcoran

## 3205

**Title:** Can seaweed help combat acid reflux

**Overview:** My project is to investigate whether alginates found in brown *Alaria esculenta* seaweed can be extracted and used to relieve acid reflux symptoms.

**School:** St Andrew's College

**County:** Dublin

**Teacher:** Ms Emma Buckley

**Student(s):** Ellie Walsh

## 3206

**Title:** The investigation of enzymatic browning

**Overview:** To investigate the antioxidant properties of Green tea on enzymatic browning on fresh cut apples and potatoes.

**School:** Athlone Community College

**County:** Westmeath

**Teacher:** Mr Niall Carty

**Student(s):** Cillian McCormack

## 3207

**Title:** Lawn, are we doing it wrong?

**Overview:** I wish to investigate an alternative to grass lawns, using Olivine sand and alternative plants that sequesters more carbon than grass

**School:** Clonakilty Community College

**County:** Cork

**Teacher:** Mr Patrick O Keeffe

**Student(s):** John Munday

## 3209

**Title:** Lockdown in Ballina Tipperary and the future of working remotely

**Overview:** A study on a typical commuter town working habits during and post Covid lockdown and Carbon emissions

**School:** Laurel Hill Secondary School FCJ

**County:** Limerick

**Teacher:** Ms Karen Kinnerk

**Student(s):** Faye Pican

## 3210

**Title:** Soil O two

**Overview:** I will investigate the carbon content of soil with different uses and various factors affecting it. My project will be centered around the soil in Meath.

**School:** St. Joseph's Secondary School

**County:** Meath

**Teacher:** Miss Bronagh Farrell

**Student(s):** Gráinne Hanly

## 3211

**Title:** Cén tionchar atá ag cineálacha difriúl feamainn ar fás plandaí

**Overview:** Ag déanamh staidéar ar fás plandaí chun an feamainn is éifeachtaí mar leasachán a aimsiú.

**School:** Gaelcholáiste Phort Láirge

**County:** Waterford

**Teacher:** Mrs. Claire Joyce

**Student(s):** Síofra Bartels-Nic an Ghearr

## 3212

**Title:** Seeing Sweetness

**Overview:** To utilise the way in which the brain perceives colour and the sweetness to develop low-sugar palatable drinks.

**School:** Moate Community School

**County:** Westmeath

**Teacher:** Ms Mairead Cusack

**Student(s):** Grainne Kelly

## 3213

**Title:** An féidir caisearbhan a cúir chun cinn i gcomhair saothrú san Afraic fho-Shahárach?

**Overview:** Turgnamh chun féachaint an féidir le caisearbhan cabhrú le na fadhbanna san Afraic fho-Shahárach.

**School:** Coláiste Pobal Osraí

**County:** Kilkenny

**Teacher:** MS Julia Coffey

**Student(s):** Lily-mae Ní Bhraonáin

## 3214

**Title:** Restoring honeybee populations by optimising hedgerow layout.

**Overview:** To investigate optimal hedgerow design and composition in intensive farms for the restoration of honeybee populations by using a spatial modelling framework.

**School:** St Aloysius College Carrigtwohill

**County:** Cork

**Teacher:** Mr Ryan Gallagher

**Student(s):** Margaret Whelan-Curtin



3215

**Title:** An investigation into the optimum microbial activity of nanoparticles.

**Overview:** I am to investigate the antimicrobial activity of different size nanomaterials on gram positive and negative bacteria.

**School:** Abbey Vocational School

**County:** Donegal

**Teacher:** Ms Donna Furey

**Student(s):** Ciara Cannon

3216

**Title:** Covid Killing Face Mask

**Overview:** My Project Aims to significantly reduce the risks of Covid19 by reinventing the face mask and making it out of antiviral materials that kill Covid19

**School:** St David's Secondary

**County:** Wicklow

**Teacher:** Ms Aisling Keaveney

**Student(s):** Matthew Lawless

3218

**Title:** Pump it up

**Overview:** I am doing my project on researching ways to improve an insulin pump for type 1 diabetes by introducing glucose administration to the pump

**School:** Ursuline College

**County:** Sligo

**Teacher:** Mr Anthony Carolan

**Student(s):** Sophie Plunkett

3219

**Title:** We know that sugar increases energy, but does sugar intake increase speed?

**Overview:** We as a group chose this topic because we are interested in sports and athletics and think it would be interesting to see if sugar has a positive or negative affect on the human body in relation to speed. We wondered if sugar was consumed would it increase our energy and speed levels during athletics or another sport. We hope that the information we are going to collect would be useful and helpful to many sports people. We hope to find out the difference between someone that runs without eating sugar and then with sugar. We also hope to investigate whether the sugar intake impacts either gender more or less than the other. Given the significant physical developmental changes in these age groups we wish to observe any differences between the four age groups.

**School:** Heywood Community School

**County:** Laois

**Teacher:** Ms Breda McGrath

**Student(s):** Eabha Mills

3220

**Title:** Improving the decomposition rate of compost using yeast and alternating the levels of the various ingredients used.

**Overview:** my project will be centered around decomposition, and different ways to speed it up and make it more efficient.

**School:** Ardscoil Uí Urmoltaigh

**County:** Cork

**Teacher:** Mr John Fellowship

**Student(s):** Daniel Sheehan

3221

**Title:** Canine Colour Psychology; "An Investigation into whether a dog's colour preferences are influenced by the time of the day"

**Overview:** An Investigation to determine if food preferences is influenced by colour or the time of day.

**School:** Clongowes Wood College

**County:** Kildare

**Teacher:** Ms Yvonne Nolan

**Student(s):** Tom Groome

3222

**Title:** Occupational Therapy in VR - a new approach to improve hand dexterity.

**Overview:** My project aims to create enticing occupational therapy experiences to improve fine hand motor skills in children/teens with Duchenne Muscular Dystrophy by means of VR.

**School:** St Joseph's Secondary School, Rush

**County:** Dublin

**Teacher:** Mr Daryl Dunne

**Student(s):** Stephen Boyle

3223

**Title:** Lettuce : An investigation into some growing medium alternatives.

**Overview:** This project will gather data to support moving away from the unsustainable use of peat moss in the growing of lettuce on my family farm.

**School:** St Joseph's Secondary School, Rush

**County:** Dublin

**Teacher:** Ms Helen Teehan

**Student(s):** Evan Archer

3225

**Title:** Would bioluminescence help disguise bacteria from bacteriophages?

**Overview:** infecting bioluminescent e. coli with bacteriophages to see if bioluminescence helps to protect the bacteria.

**School:** St Angela's

**County:** Waterford

**Teacher:** Mr Seamus Hearne

**Student(s):** Katelyn Boyle

3226

**Title:** Check for VTEC

**Overview:** In this project I'm going to relate the increase in VTEC infection with rainfall data across seasons for the past ten years in the south-west.

**School:** Coláiste Muire Crosshaven

**County:** Cork

**Teacher:** Ms Bridget Lehané

**Student(s):** Christian O'Leary

3227

**Title:** An Investigation Into The Acute Effects Of Post-Activation Performance Enhancement In Male and Female Athletes

**Overview:** I wish to investigate whether the use of post activation potentiation exercises can be used to enhance neuromuscular performance in Hurling.

**School:** St Joseph's Secondary School, Rush

**County:** Dublin

**Teacher:** Mr Daryl Dunne





**Student(s):** Niall Rudden

## 3228

**Title:** Copying Nature's Homework: An analysis of tardigrades' use of cryptobiosis and other animal hibernation and their applications in human medicine.

**Overview:** An Investigation into the applications of cryptobiosis and other forms of animal hibernation and their applications in human medicine

**School:** Ardscoil Ris

**County:** Limerick

**Teacher:** Mr Jack Corrigan

**Student(s):** Paul Cullinane

## 3230

**Title:** The physical impact of Covid-19 on athletes in both the professional and amateur sport.

**Overview:** My project is based on examining how the global pandemic effected athletes susceptibility to injury and to examine the variance between professional and amateur sportspeople.

**School:** Laurel Hill Secondary School FCJ

**County:** Limerick

**Teacher:** Ms Karen Kinnerk

**Student(s):** Lauren Slater

## 3231

**Title:** Treating psoriasis with snail slime.

**Overview:** A comparison of the treatment of psoriasis with an emollient cream and a mucin (snail slime) enhanced emollient cream.

**School:** Abbey Vocational School

**County:** Donegal

**Teacher:** Ms Donna Furey

**Student(s):** Robyn Given

## 3232

**Title:** An bhfuil sé níos éifeachtach chun foghlaim le carta daite?

**Overview:** Táimid ag iarraidh a fháil amach an bhfuil sé níos éifeachtach do daltaí foghlaim le cárta daite. Chun é seo a deanamh beimid ag déanamh turgnamh.

**School:** Gaelcholáiste Phort Láirge

**County:** Waterford

**Teacher:** Mrs. Claire Joyce

**Student(s):** Eimear Rose Ní Mheara

## SENIOR INDIVIDUAL

## 3300

**Title:** The Air We Breathe - An Investigation Into Which Subgroups Within The Population Of Cork Are More Susceptible To Prolonged Illness And Premature Death Due To Poor Air Quality

**Overview:** My project aims to investigate which sub-groups within Cork's population are susceptible to prolonged illness and premature death due to long-term poor air quality exposure.

**School:** Scoil Mhuire gan Smál Blarney

**County:** Cork

**Teacher:** Ms Marguerite O'Donoghue

**Student(s):** Miriam Murphy

## 3301

**Title:** An Investigation into improving the longevity of flowers using household materials

**Overview:** Investigate how the lifespan of flowers can be prolonged by testing 8 different factors and to develop a cheaper homemade recipe which could increase longevity.

**School:** St Benildus College

**County:** Dublin

**Teacher:** Mrs Therese Byrne

**Student(s):** Sean Doolan

## 3302

**Title:** Unearthing the hidden potential of Irish dung beetles; Aphodius Fimetarius, Aphodius Prodrumus and Aphodius Fossor

**Overview:** Exploring the impact of dung beetles on soil organic matter content and water infiltration rate by establishing and managing a controlled dung beetle environment.

**School:** Carrick-On-Shannon Community School

**County:** Leitrim

**Teacher:** Ms Sinead Creegan

**Student(s):** Hannah Stenson

## 3303

**Title:** An investigation of Ash dieback (*Hymenoscyphus fraxineus*)

**Overview:** A recently diseased Ash tree (*Fraxinus excelsior*) at the school gate has led to investigate the disease, Ash dieback caused by the pathogen (*Hymenoscyphus fraxineus*)

**School:** Our Ladys College

**County:** Louth

**Teacher:** Ms Frances O' Regan

**Student(s):** Denise Ivare

## 3304

**Title:** Noise Pollution's Effect on the Migration of Insects

**Overview:** Observing the effect of the sounds produced by an urban environment on wood lice and their reactions to it compared to a natural environment.

**School:** St Andrew's College

**County:** Dublin

**Teacher:** Ms Emma Buckley

**Student(s):** Carter Horner

## JUNIOR GROUP

## 3400

**Title:** Cén ghníomhaíocht a mhoillíonn do ráta croí is mó.

**Overview:** turgnamh chun a fháil amach conas do ráta croí a mhoilliú go tapa ag úsáid gníomhaíochtaí réchúiseacha.

**School:** Colaiste An Phiarsaigh

**County:** Cork

**Teacher:** Mr Caoimhín Buckley

**Student(s):** Aoife Ní Chlúmháin, Alannah Nic Fhannchadha Nic Fhinn

## 3401

**Title:** Fruit Fresh: An Eco-Friendly Alternative to Chemical Cleaners

**Overview:** Our project aims to make an environmentally friendly spray that kills bacteria and cleans surfaces.

**School:** Moate Community School

**County:** Westmeath

**Teacher:** Ms Mairead Cusack



**Student(s):** Hannah Higgins, Katie Creggy, Aoife Ross

## 3402

**Title:** Tackling the jellyfish crisis.

**Overview:** We are exploring reasons for increased jellyfish numbers in Irish waters, different species found, the social and environmental impact and ways to reduce the numbers.

**School:** Loreto College

**County:** Dublin

**Teacher:** Ms Laura Tobin

**Student(s):** Cate McMahon, Jessica Morrin, Anna Brereton

## 3403

**Title:** Do the colours of people's eyes affect how they see?

**Overview:** Do the colours of people's eyes affect how they see? We will be testing people's eyesight according to their eye colour to find out.

**School:** Muckross Park College

**County:** Dublin

**Teacher:** Dr Lisa Shine

**Student(s):** Megan Sheehy, Alannah O'Keeffe

## 3404

**Title:** A Comparative Study of Environmentally Friendly and Chemical-based washing up liquids

**Overview:** Our project aims to examine if environmentally friendly washing up liquids work as effectively as chemical-based washing up liquids e.g. Fairy Liquid.

**School:** Kinsale Community School

**County:** Cork

**Teacher:** Mr Shaun Holly

**Student(s):** Isabelle Boyce, Emma Barry, Emer Ryan

## 3405

**Title:** Nature's Solution to Foot Rot

**Overview:** To make a sheep feeder which will administer an antibacterial foot soak comprised of native Irish plants to suppress the onset of foot rot.

**School:** Moate Community School

**County:** Westmeath

**Teacher:** Ms Mairead Cusack

**Student(s):** Jack Nally, Leah Connell, Lucy Hamilton

## 3406

**Title:** Predicting the spread of hazel scrub in the Burren

**Overview:** We are looking to see if there is a pattern to the spread of hazel in the Burren in order to prevent further encroachment.

**School:** Mary Immaculate Secondary School Lisdoonvarna

**County:** Clare

**Teacher:** Mr John Sims

**Student(s):** Kim Forde, Ella Campbell

## 3407

**Title:** Which tomato has the most lycopene?

**Overview:** Testing types of tomatoes (cheap, expensive, frozen, cooked etc.) for a nutrient called lycopene to see if all forms carry the same amount of lycopene.

**School:** Muckross Park College

**County:** Dublin

**Teacher:** Dr Lisa Shine

**Student(s):** Lisa Guiry, Susannah Pike

## 3408

**Title:** Hot Plants

**Overview:** Investigating the use of limestone as a bedrock to grow plants normally grown in hot climates.

**School:** St. Joseph's Secondary School

**County:** Clare

**Teacher:** Ms Catherine Clair

**Student(s):** Megan Downes, Tiegán Hehir

## 3409

**Title:** A comparison of fitness and flexibility of Irish dancers versus non-Irish dancers

**Overview:** We are going to compare the fitness by measuring heart rate of Irish dancers compared to non-Irish dancers. We will also measure their flexibility.

**School:** Enfield Community College

**County:** Meath

**Teacher:** Ms. Rebecca Kenneally

**Student(s):** Lily O'Reilly, Yasmin Callaghan, Ellarose Meade

## 3410

**Title:** Fermented foods and their effect on the gut

**Overview:** Our Project is looking at fermenting foods to see what effect they will have on our gut health.

**School:** St. Anne's Secondary School

**County:** Tipperary

**Teacher:** Ms Deirdre Mullins

**Student(s):** Emma Donnelly, Áine Kinane, Orla O'Donnell

## 3412

**Title:** Coastal Coverings

**Overview:** Our project aim is to construct a biodegradable face mask from seaweed fibres, that prevents acne, skin disease and reduces the spread of respiratory disease.

**School:** St Joseph's Community College

**County:** Clare

**Teacher:** Ms Laura Egan

**Student(s):** Liam Ferguson, Hana Haggag, Ava Walsh

## 3413

**Title:** Anti-bacterial sprays vs. Anti-bacterial wipes

**Overview:** Our project aims to compare the effectiveness of antibacterial sprays and antibacterial wipes to determine which is the most effective for disinfecting kitchen surfaces.

**School:** Colaiste Dun an Rí

**County:** Cavan

**Teacher:** Ms Siobhan Hamill

**Student(s):** Aoibhe Byrne, Sophie Williams, Millie Burns

## 3414

**Title:** Do seagulls divert from the colour red?

**Overview:** To investigate if red is a deterrent of seagulls by examining the number of seagulls who approach students and food associated with the colour red.

**School:** Loreto Secondary School, Balbriggan

**County:** Dublin

**Teacher:** Ms Chloe White

**Student(s):** Hazel Larkin, Katie Mallon



### 3415

**Title:** An exploratory study of what the carbon footprint impact of driving on rough road surfaces against smooth surfaces is

**Overview:** Carry out a study to measure the difference in energy requirements between driving on rough and smooth surfaces, and link to Carbon footprint impact.

**School:** Kinsale Community School

**County:** Cork

**Teacher:** Mr Shaun Holly

**Student(s):** Hannah Collins, Edel Ryle

## INTERMEDIATE GROUP

### 3500

**Title:** "Self-Watering Plants"

**Overview:** People frequently forget to water their plants, this compromises their health and over watering can drown plants/ erode soil and nutrients whilst wasting precious water.

**School:** Desmond College

**County:** Limerick

**Teacher:** Mr Donal Enright

**Student(s):** Emma Greaney, Faye Murphy

### 3501

**Title:** The effect of multispecies vs monoculture on economic and environmental sustainability

**Overview:** Multispecies vs monoculture grass swards and the economic sustainability, practicality and the environmental sustainability as a result.

**School:** St. Brogan's College

**County:** Cork

**Teacher:** Ms Laura O'Regan

**Student(s):** Maighread Kiely, Muireann McCarthy, Kelly-Anne O'Sullivan

### 3502

**Title:** An investigation into a novel alternative to synthetic fertilisers for a future of sustainable agriculture in Ireland

**Overview:** To find a more sustainable and cost-effective method of keeping nutrients in the soil, compared to the use of artificial fertilizers

**School:** Roscommon Community College

**County:** Roscommon

**Teacher:** Ms Elizabeth Glancy

**Student(s):** Sean Allen, Dylan Treacy

### 3503

**Title:** cad é an tionchar ar teas feabhraí

**Overview:** Cad é an tionchar ar teas feabhraí ar do shúile. An bhfuil aon dáinséirí bainte leis?

**School:** Gaelcholáiste Phort Láirge

**County:** Waterford

**Teacher:** Mrs. Claire Joyce

**Student(s):** Abbie Ní Chathasaigh, Aleesha De Róiste

### 3505

**Title:** An bhfuil do measc sábháilte?

**Overview:** Táimid chun mapaireacht a dhéanamh ar masc agus fás baitéar as. Feicimid an cé mhéad baictéar a bhfuil ann agus an bhfuil sé sábháilte.

**School:** Gaelcholáiste Charraig Uí Leighin

**County:** Cork

**Teacher:** Ms Niamh Furlong

**Student(s):** Stephen O'Donovan, James Mac Uait, Adam Ó Floinn

### 3506

**Title:** Developing modified Buffer Strips to Increase Biodiversity and Water Quality in Grassland

**Overview:** Our project aims to develop plant buffer strips which efficiently absorb nutrient run-off while supporting local biodiversity.

**School:** Moate Community School

**County:** Westmeath

**Teacher:** Miss Irene O'Sullivan

**Student(s):** Dara Shortall, Dean Burns, Eoin Murphy

### 3507

**Title:** Is human spit the answer to our plastic problem?

**Overview:** An investigation into the effect of amylase on PLA bioplastics and how PLA is manufactured, decomposed, and its effects on the environment.

**School:** Loreto College

**County:** Dublin

**Teacher:** Ms Laura Tobin

**Student(s):** Aoife Lynn, Juliette Kelleher, Honor Lynch

### 3508

**Title:** Biodegradable Weed Barrier

**Overview:** Our project aims to develop a biodegradable weed barrier which can sufficiently inhibit weeds while supporting both soil and plant biodiversity.

**School:** Moate Community School

**County:** Westmeath

**Teacher:** Miss Irene O'Sullivan

**Student(s):** Aoife Lacey, Abbie Coolahan

### 3509

**Title:** The harmful effects of earphones and headphones on the eardrum?

**Overview:** To investigate the difference in damage caused by earphones and headphones on the eardrum.

**School:** St Fanahan's College

**County:** Cork

**Teacher:** Mrs Karen Murphy

**Student(s):** Anna Roche, Sandra Carton, Carlotta Thiel

### 3510

**Title:** Environmentally friendly weed killer Vs Commercial weed killer

**Overview:** We will carry out an experiment to learn, out of three environmentally friendly weed killers and one commercial weed killer, which one is most efficient

**School:** Pobalscoil Inbhear Scéine

**County:** Kerry

**Teacher:** Mr John O Sullivan

**Student(s):** Rachel O'Sullivan, Adena Clifford, Rhiannon Bartlett

### 3511

**Title:** Does Copper Eliminate Microbes on Used Face Masks?

**Overview:** We would like to investigate how effectively copper eliminates microbes on used face masks.

**School:** Loreto Secondary School

**County:** Kilkenny

**Teacher:** Mr Brendan Williams

**Student(s):** Emma Corr, Séarlait O'Callaghan



3512

**Title:** The Effects Of Natural Fertilizers vs Chemical Fertilizers On The Germination Of Cress

**Overview:** In our project, we will investigate the effects of natural fertilizer versus chemical fertilizer on the lab plant cress.

**School:** St Mary's Secondary School

**County:** Cork

**Teacher:** Ms Shannen Foley

**Student(s):** Anna O'Mahony, Lily Murphy

3513

**Title:** The evaluation of horse manure as a sustainable alternative to peat compost.

**Overview:** We aim to compare and analyze the growth of various winter vegetables and the physical properties in both the horse manure and peat.

**School:** Kinsale Community School

**County:** Cork

**Teacher:** Dr. Catherine Coughlan

**Student(s):** Momo Sheehy, Isabelle Linehan, Lucy McCarthy

3514

**Title:** Carbon Captures: Is Seaweed a Silent Superhero in the battle against Climate Change?

**Overview:** Compensating National Carbon Emissions by Aquaculture Bioremediation. "Imagine we could take as much CO<sub>2</sub> out of the atmosphere as Ireland can produce"

**School:** St Marys College

**County:** Wicklow

**Teacher:** Ms Joanne English

**Student(s):** Lauren Raftery, Ciara Kelly

3515

**Title:** Analyzing and Examining the effect Phototropism has on Root Growth

**Overview:** Our project will look at root growth in two different plant families and see how phototropism affects root growth when these plants are exposed to light and complete darkness.

**School:** St Joseph's College

**County:** Dublin

**Teacher:** Mr Leo Quinn

**Student(s):** Juan Azad, Sharon Jayaseelan

3516

**Title:** What impact will switching to natural deodorant from antiperspirants have on feminine health?

**Overview:** Our project aims to find out about the negative effects of antiperspirants on feminine health and why we should switch to a natural alternative.

**School:** St Mary's Secondary School

**County:** Cork

**Teacher:** Mrs Jennifer Butler

**Student(s):** Aoibhe Kelleher, Natalia Raba, Róisín Buckley

3517

**Title:** Can kombucha be considered a probiotic?

**Overview:** In our project, we shall be making our own kombucha while comparing it to shop bought samples and testing for probiotic levels.

**School:** St David's Secondary

**County:** Wicklow

**Teacher:** Ms Aisling Keaveney

**Student(s):** Alicia Fay, Aoibh Anderson

3518

**Title:** Investigating the Potential Use of Native Irish Plants in Green Fire Breaks

**Overview:** Our project aims to design a green fire-break from native Irish species that will suppress and slow the spread of wildfires while contributing to biodiversity

**School:** Moate Community School

**County:** Westmeath

**Teacher:** Ms Mairead Cusack

**Student(s):** Alex Roche, Eimear Keenan

3519

**Title:** What impact does healthy eating have on the environment?

**Overview:** We want to research and compare the impacts different 'healthy' diets are having on the environment and compare to the impact of a 'normal' diet

**School:** John The Baptist Community School

**County:** Limerick

**Teacher:** Ms Emma Donnelly

**Student(s):** Meadhbh Hurley, Sive Hourigan

3520

**Title:** RUN!!!

**Overview:** An investigation into the fundamentals and factors that affect running.

**School:** Marist College

**County:** Westmeath

**Teacher:** Ms Julie Coyle

**Student(s):** James Heaslip, Killian Redmond

3521

**Title:** High Frequency To Save Food

**Overview:** This project aims to design a food storage box that uses high frequency sounds to maintain freshness in milk and other perishable foods.

**School:** Moate Community School

**County:** Westmeath

**Teacher:** Miss Irene O'Sullivan

**Student(s):** Sive Brady, Poppy Hennessy

3522

**Title:** The History of Irish Blood - factors that have changed the frequency of particular blood types

**Overview:** We'll investigate why certain blood types(O+ B+ A-) found commonly in Irish people are more frequent in Ireland compared to other parts of the world.

**School:** St Mary's High School

**County:** Cork

**Teacher:** Ms Veronica McCourt

**Student(s):** Lillian Foley, Anna Nestor, Chloe Lane

3523

**Title:** Testing Homemade Natural Remedies for Stomach Aches

**Overview:** We're going to test homemade natural remedies for stomach aches by conducting titration experiments to find the most effective remedy.

**School:** St Louis Secondary School

**County:** Louth

**Teacher:** Ms Anne Marie Kirk

**Student(s):** Megan Reilly, Brianna Keene, Natalia Gómez Salcines





3524

**Title:** Can Clonakilty bay clean itself and also reduce methane emissions from cattle?

**Overview:** Could denitrification of Clonakilty bay sea water reduce algae blooms and simultaneously reduce ruminant methane emissions in the local environment by growing asparagopsis armata?

**School:** Sacred Heart Secondary School

**County:** Cork

**Teacher:** Ms Claire Holland

**Student(s):** Sinéad O'Mahony, Grace Murphy, Éabha Egan

3525

**Title:** Vertical Farming- The Future for Eco Friendly Schools Worldwide

**Overview:** We want to investigate if a vertical farming unit from locally sourced recyclable materials could be built for use in schools globally.

**School:** St. Brigid's Secondary School

**County:** Kerry

**Teacher:** Ms Miriam Malone

**Student(s):** Ali O'Donoghue, Eilís Mullane

3526

**Title:** The relationship between rodent population and garden bird feeders

**Overview:** In this study, we are investigating the relationship between the use of Garden Feeders and the prevalence of rodents (particularly *Crocidura russula*) in our area.

**School:** Douglas Community School

**County:** Cork

**Teacher:** Mr Cian O Mahony

**Student(s):** Kaushik Akash Gomathi Kalirajan, Jack Gleeson, Ronan Murray

3528

**Title:** What are the effects of cosmetic bleach on the tensile strength of different hair types?

**Overview:** We are investigating if using cosmetic bleach effects the tensile strength of different hair types.

**School:** St Mary's Secondary School

**County:** Cork

**Teacher:** Ms Shannen Foley

**Student(s):** Donna Regan Murphy, Alyisha Forde

3529

**Title:** A statistical analysis of the influence of female siblings on developing early onset puberty in younger female siblings.

**Overview:** This project will attempt to find out if precocious puberty will develop in younger females if they live with developed female siblings.

**School:** Rockford Manor Secondary School

**County:** Dublin

**Teacher:** Ms Kelly Ryan

**Student(s):** Leah Carraher, Sarah Campbell

3530

**Title:** An investigation into the effectiveness of aeroponic plant cultivation compared to conventional cultivation techniques

**Overview:** To compare growth and yield of aeroponic grown seedlings to soil grown ones, assess the effect of LED lighting and also explore sustainable substrate alternatives

**School:** Coláiste An Spioraid Naoimh

**County:** Cork

**Teacher:** Ms Aileen O Mahony

**Student(s):** Jack Twomey, Ruaidhri White, Jack Healy

3531

**Title:** What sugar does yeast like best?

**Overview:** We will test multiple different sugars against yeast too see what reacts best

**School:** Bush Post Primary School

**County:** Louth

**Teacher:** Ms Sharon Boyle

**Student(s):** Larlaith Connolly, Cillian Keenan, Jamie Hynes

3532

**Title:** A comparative investigation into the antimicrobial effects of different elderberry products

**Overview:** We wish to compare different elderberry products and their ability to kill microorganisms

**School:** Rice College

**County:** Clare

**Teacher:** Miss Caoimhe Mc Namara

**Student(s):** Michelle Callinan, Luke Coffey

3533

**Title:** Comparing microplastic pollution in cattle farming and the fish industry.

**Overview:** We will be comparing microplastic pollution in the fish industry and cattle farms. We also will investigate how much plastic waste they are creating.

**School:** Ardscoil Uí Urmoltaigh

**County:** Cork

**Teacher:** Mr Michael Murphy

**Student(s):** Pádraig McCarthy, Paudie Hickey

3534

**Title:** Distinguishing between pond Algae and Seaweed as a substitute for non biodegradable materials.

**Overview:** our project will be an investigation on whether or not pond algae and seaweed could be used as an alternative to plastic

**School:** Mercy Secondary School

**County:** Kerry

**Teacher:** Miss Eimear Nolan

**Student(s):** Seán Warr, Sean Thibaud

3535

**Title:** The effect of different coloured lights on Phototropism

**Overview:** Our project is on the effect of different coloured lights on phototropism, We want to see if plants growth is affected by different coloured lights

**School:** Colaiste Dun an Rí

**County:** Cavan

**Teacher:** Ms Lorraine Hickey

**Student(s):** Callum Johnston, Nerijus Andriekus

3536

**Title:** How much bacteria are on our Computers?

**Overview:** Our Project is about how much bacteria our computers and school computers have, and how effective our schools cleaning solutions are.

**School:** Patrician High School

**County:** Monaghan



**Teacher:** Ms Deirdre Uí Liatháin

**Student(s):** Markuss Snepsts-Cilinskis, Joe Murphy

## 3537

**Title:** Freshwater Invertebrates, The Good, the Bad, the CSSI

**Overview:** word

**School:** Boherbue Comprehensive School

**County:** Cork

**Teacher:** Ms Joanne Hamilton

**Student(s):** Gearoid O'Sullivan, Jack Twomey

## 3538

**Title:** A study of the watercourses in Duhallow Region using CSSI index

**Overview:** Assessing water quality using CSSI, testing if prediction of water quality based on appearance and land use is accurate when compared with the CSSI index.

**School:** Boherbue Comprehensive School

**County:** Cork

**Teacher:** Ms Joanne Hamilton

**Student(s):** Diarmuid Murphy, Donal Murphy

## 3539

**Title:** Investigating the range expansion of the Greater White-Toothed Shrew(*Crocidura russula*) in our local area(Duhallow)

**Overview:** This project will investigate the range expansion of the Greater White-Toothed Shrew(*Crocidura russula*) in our local area(Duhallow) by analysing Barn Owl(*Tyto alba*) pellets.

**School:** Colaiste Treasa

**County:** Cork

**Teacher:** Ms. Joanne Corkery

**Student(s):** Rory Lynn, Joe McAuliffe

## 3540

**Title:** Are Disposable or Reusable Masks More Effective?

**Overview:** We will be researching are Disposable or Reusable Masks More Effective against COVID-19.

**School:** Marist College

**County:** Westmeath

**Teacher:** Mrs Georgina Clear

**Student(s):** Conor Slevin, Oisín Byrne, Dylan Farrell

## 3541

**Title:** Games of the heart

**Overview:** Our aim is to investigate the affects of video games on the heart rate. We will record heart rate using smart watches

**School:** Loreto High School

**County:** Dublin

**Teacher:** Ms Eimear Maloney

**Student(s):** Jenna Cronin, Ella Conlon, Róisín Cawley

## 3542

**Title:** Are You Ready To Tumble? Protecting oceans from the microplastics in our laundry

**Overview:** We aim to develop a product to catch and filter microplastics during washing.

**School:** Sandymount Park Educate Together Secondary School

**County:** Dublin

**Teacher:** Mr. Conor Maxwell

**Student(s):** Greta Whipple, Sarah Boissier

## 3543

**Title:** An investigation into making a natural alternative to chemical fertiliser by creating a seaweed based fertiliser, and seeing how effective it is.

**Overview:** We are investigating into making a seaweed based fertiliser and seeing how effective it is by using it on plants.

**School:** St David's Secondary

**County:** Wicklow

**Teacher:** Ms Aisling Keaveney

**Student(s):** Kate Finnerty, Alison Finnerty

## 3544

**Title:** To Investigate the Antibacterial Properties of Different Types of Honey

**Overview:** We will investigate the antibacterial properties of different honeys by measuring the zone of inhibitions due to honey on agar plates exposed to microorganisms.

**School:** St Wolstan's Community School

**County:** Kildare

**Teacher:** Mr Thomas Kiely

**Student(s):** Aoibhe Kerins, Maisy Brady, Eve Byrne

## 3545

**Title:** Confusing Calories

**Overview:** What physical attributes affect the amount of calories burned during physical activity?

**School:** Edmund Rice College

**County:** Dublin

**Teacher:** Ms Debbie Connolly

**Student(s):** Sarah Lekan, Aoibheann O'Connor, Isabella Coppinger-Dusa

## 3546

**Title:** How music affects your brain

**Overview:** In our project we investigate how different sound waves produced in music affect different states of the brain.

**School:** Coláiste Mhuire

**County:** Galway

**Teacher:** Mr Conor Delaney

**Student(s):** Eva Finneran, Shauna Carty, Cassie Gately

## 3547

**Title:** Does Makeup Damage The Skin?

**Overview:** We aim to investigate damage and effects popular cosmetic products and the chemicals in said products have on the skin and raise awareness of them.

**School:** Meán Scoil an Chlochair

**County:** Westmeath

**Teacher:** Mr Padraic Earley

**Student(s):** Isabell Hayden, Martha Egan

## 3548

**Title:** Would you like to go out with a Bang?

**Overview:** For our project we will be investigating the physiological effects of energy and sports drinks.

**School:** Sacred Heart Secondary School

**County:** Cork

**Teacher:** Ms Claire Holland

**Student(s):** Téa Cronin, Alanah O'Donovan, Jane Beechinor

3549

**Title:** A Growing Problem**Overview:** We are investigating the effect of different manure fertilizers on grass growth and to calculate an efficient cycle to keep farming profitable and environmentally friendly.**School:** Athlone Community College**County:** Westmeath**Teacher:** Ms Fiona Kelly**Student(s):** Aoife Ni Leochain, Brendan Murphy

3550

**Title:** The Effect of Different Water on Plant Growth on the Dublin Coastline**Overview:** Documenting the effect of coastal water on plant life/growth along the south Dublin coastline**School:** Sandymount Park Educate Together Secondary School**County:** Dublin**Teacher:** Mr. Conor Maxwell**Student(s):** Olivia Woods, Feá Maher

3552

**Title:** An Investigation of the efficacy of biochar to increase soil fertility and crop yields in Irish agricultural enterprises.**Overview:** This project focuses on 3 different home manufactured biochar and effects they have on the growth of crops compared to traditional fertilizer and no fertilizer.**School:** Ardscoil Ris**County:** Limerick**Teacher:** Mr Jack Corrigan**Student(s):** J.J. O'Reilly, Robert Stafford

3553

**Title:** The Effects of Different Energy Drinks on Our Body**Overview:** We have selected popular energy drinks and tested their effects on the human bodies heart rate and blood pressure.**School:** Patrician High School**County:** Monaghan**Teacher:** Ms Deirdre Uí Liatháin**Student(s):** Declan Lynch, Killian Leegan

3554

**Title:** Posture and its Effects on the Presence of Asthma**Overview:** Investigating whether excessive inclination (40°+) of the upper back results in increased cases of asthma in secondary school students. Comparing variables of age and gender.**School:** Ursuline College**County:** Sligo**Teacher:** Mr Anthony Carolan**Student(s):** Ciara O'Conallain, Siofra McCarthy, Ellie Healy

3555

**Title:** The Relation between Scairbhín and El Niño**Overview:** To investigate whether or not the scairbhín becomes more or less unpredictable when El Niño occurs on the same year.**School:** Millstreet Community School**County:** Cork**Teacher:** Mr Shane Guerin**Student(s):** Stewart Daly, Jack Ring, Brian Fitzgerald

3556

**Title:** Eyes Vs Ears; Testing Visual Reactions Vs Aural Reactions in Teenagers.**Overview:** To test whether teenagers react faster to a visual stimulus or an aural stimulus by testing students in our school and what factors effect this.**School:** Skibbreen Community School**County:** Cork**Teacher:** Ms Mags Breen**Student(s):** Mark Keating, Ava Minihane

3557

**Title:** A study into whether mixed species sward grazing has an effect on the potential yield of milk.**Overview:** A study into the possible effects that mixed sward grazing has on the potential yield level of dairy cows, as opposed to traditional monoculture intensive grazing.**School:** Loreto Secondary School**County:** Meath**Teacher:** Dr Lisa Darley**Student(s):** Clodagh McGauran, Caoimhe O' Grady

3558

**Title:** Climate change isn't a future problem, it's a now problem: Investigating leaf stomata to find out how much air pollution there is in different districts across Dublin.**Overview:** We are going to gather data from the stomata in leaves that will teach us about air pollution levels around Dublin.**School:** Loreto High School**County:** Dublin**Teacher:** Ms Eimear Maloney**Student(s):** Aoife Copeland, Ciara Aherne

3559

**Title:** How pre-game warm up affects reaction time.**Overview:** We will collect and analyse information to see what warm ups have the greatest improvement on the players reaction time.**School:** Loreto Secondary School**County:** Meath**Teacher:** Dr Lisa Darley**Student(s):** Carla Keogh, Rebecca Doherty, Hannah Stewart

3560

**Title:** Is Vaping actually better for you than smoking?**Overview:** Our project aims to find out if vaping is better for you than smoking and what the long-term effects are from smoking and vaping.**School:** Loreto Secondary School**County:** Tipperary**Teacher:** Ms Ciara Tyrrell**Student(s):** Holly Whiteley, Selen Slattery, Isabelle Browne

3562

**Title:** The Use of Tiger Worms as Biological Indicators**Overview:** Thinking of our future we know how important soil quality is and now Tiger worms that we find in compost bins are very important indicators.**School:** Mary Immaculate Secondary School Lisdoonvarna**County:** Clare**Teacher:** Dr Patricia Cusack**Student(s):** Katie Woods, Emily Moloney



3563

**Title:** How music affects our perception of food

**Overview:** In our project we will be studying the effect of music on different types of taste perception, and whether this could influence restaurant's music choices.

**School:** Coláiste Choilm

**County:** Cork

**Teacher:** Mr Paudie Scanlon

**Student(s):** Thomas Kelly, Darragh Greene, David Lesiak

3564

**Title:** Keep Clean, Replace the Bean

**Overview:** Investigating the Environmental Benefits of replacing Soya Beans Meal with Native biorefinery protein concentrate as an alternative feed for monogastric animals.

**School:** Sacred Heart Secondary School

**County:** Cork

**Teacher:** Ms Claire Holland

**Student(s):** Keri O Donovan, Kate Llewellyn, Aoife Whelton

3565

**Title:** Can food waste from restaurants be used to increase organic matter and as a result worm population in soils.

**Overview:** Can food waste from restaurants be used to increase organic matter and as a result worm population in soils.

**School:** Castlecomer Community School

**County:** Kilkenny

**Teacher:** Ms Nora Henderson

**Student(s):** Emma Lawlor, Aoife Dunne, Cora Dooley

3566

**Title:** Consumption of micro plastics

**Overview:** A look into how much micro plastics people eat and how to reduce the amount you consume.

**School:** St Patrick's Classical School

**County:** Meath

**Teacher:** Ms Sinead O'Sullivan

**Student(s):** Daniel McDermott, Dylan Fitzsimons

3567

**Title:** Never Refuse to Reuse

**Overview:** We will study the effect plastic bottles have on the environment and create a biodiversity-promoting wall of repurposed water bottles in our school.

**School:** Eureka Secondary School

**County:** Meath

**Teacher:** Mr Leo Murphy

**Student(s):** Ella McEllin, Aoife Muldoon

3568

**Title:** "ULTRA VIOLENT": Can UV light kill bacteria on our masks?

**Overview:** We aim to investigate the effectiveness of UV light against bacteria, and to see if reusing disposable masks could be within reach.

**School:** St Joseph's College

**County:** Dublin

**Teacher:** Ms D Doherty

**Student(s):** Kerryn Mathews, Eva Colton

## SENIOR GROUP

3600

**Title:** Microplastics in water and fish guts

**Overview:** Our project is based on investigating the presence of microplastics in water and animal guts.

**School:** Loreto Convent

**County:** Donegal

**Teacher:** Ms Margaret O'Reilly

**Student(s):** Csenge Bodnar, Petra Bodnar, Lakshmi Shaji

3601

**Title:** UV or not UV, that is the question? Can UV light disinfection reduce the likelihood of contracting infections in a school environment?

**Overview:** Is it possible and cost effective to use UV sanitisation to reduce infections in schools in the context of the covid 19 pandemic.

**School:** Malahide Community School

**County:** Dublin

**Teacher:** Ms Orla Rooney

**Student(s):** Lara Scanlan, Ava Dolan

3602

**Title:** How the Pandemic has Positively Affected the Air Quality in Lucan and What We can Do to Sustain these Levels

**Overview:** By doing this experiment in different locations around the school, we found that the pandemic has changed the air quality in Lucan for the better.

**School:** Lucan Community College

**County:** Dublin

**Teacher:** Ms Clare Healy

**Student(s):** Jessica Power, Clodagh McDonnell, Keelah Sisk

3603

**Title:** Biodegradable Microplastics

**Overview:** Making alternatives to microplastics eg. seaweed and oat flour and testing their biodegradability and functionality

**School:** Pobalscoil Inbhear Scéine

**County:** Kerry

**Teacher:** Ms Sarah Abbott

**Student(s):** Leah Harrington, Elisha Murphy, Rachel O'Brien

3604

**Title:** See ya later ALiGAETor

**Overview:** We aim to investigate if plants relying on nitrogen and phosphorus to photosynthesise reduce algae growth. We will test sphagnum flexuosum, Ranunculus aquatilis and potamogeton.

**School:** Loreto Secondary School, Balbriggan

**County:** Dublin

**Teacher:** Ms Chloe White

**Student(s):** Keeva O'Reilly, Aimee Morris

3605

**Title:** A renewable and electricity-free cooling system for food refrigeration that can combat world hunger

**Overview:** We aim to investigate the effects of a renewable cooling system (driven by sunlight and saltwater) on food refrigeration which could help end world hunger.

**School:** St Louis Secondary School

**County:** Louth

**Teacher:** Ms Orla Muldoon

**Student(s):** Jona Garcia, Claudine Mulihano, Iman Shittu



## 3606

**Title:** Ants face the maze: light pollution's effect on *Camponotus nicobarensis*' navigational compass.

**Overview:** To investigate the effect of exposure to different types of artificial lighting on the Carpenter Ants' navigational compass.

**School:** Loreto Secondary School, Balbriggan

**County:** Dublin

**Teacher:** Ms Chloe White

**Student(s):** Erica OBrien Murray, Jane Oakley

## 3607

**Title:** How has rubbish disposal increased or decreased in the past five years and what are the causes.

**Overview:** We aim to find out whether rubbish being disposed of has increased or decreased in the past five years, and what has caused this.

**School:** Breifne College

**County:** Cavan

**Teacher:** Ms Nadine Birt

**Student(s):** Ava Craig, Oliwia Gajor



## Looking for a specific project?

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Chemical, Physical and  
Mathematical Sciences

**1100 - 1604**

Technology

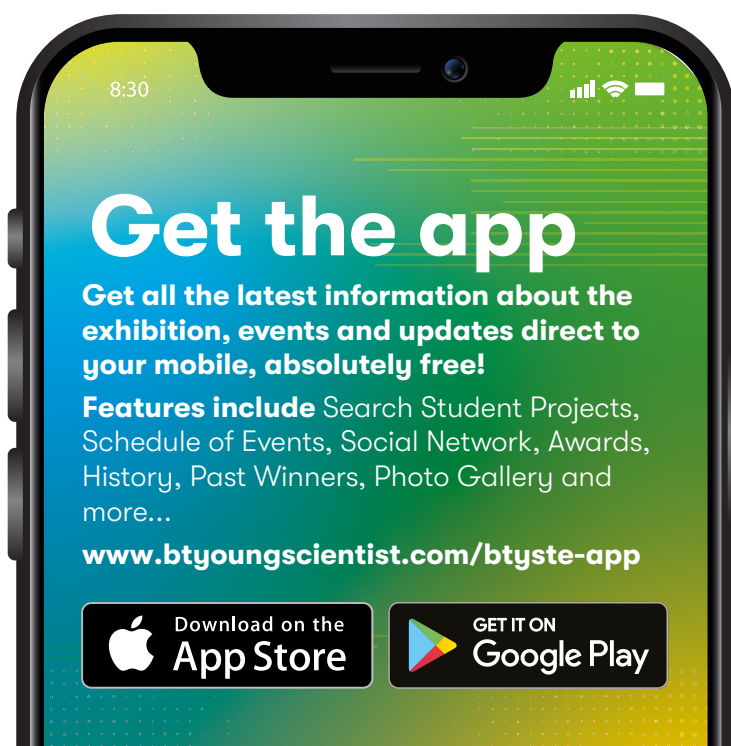
**2100 - 2607**

Biological and  
Ecological Sciences

**3100 - 3607**

Social and Behavioural  
Sciences

**4100 - 4704**





## JUNIOR INDIVIDUAL

4100

**Title:** An analysis of the level of awareness of the link between heading the ball and increased risk of dementia in later life.

**Overview:** My project aims to increase awareness of the link between heading a soccer ball and developing dementia in later life.

**School:** Kinsale Community School

**County:** Cork

**Teacher:** Mr Shaun Holly

**Student(s):** Jessica O'keeffe

4101

**Title:** A statistical study into public attitudes towards animal testing

**Overview:** To raise awareness of the ongoing issue of animal cruelty and to analyse attitudes of adolescents towards this industry.

**School:** St. Brogan's College

**County:** Cork

**Teacher:** Ms Laura O'Regan

**Student(s):** Tegan McCarthy

4103

**Title:** Can learned food associations help combat Obesity?

**Overview:** Food has been manipulated creating a sensory confusion resulting in individuals choosing / fabricating options that don't exist based on learned associations and placebo effect.

**School:** St Dominic's High School

**County:** Antrim

**Teacher:** Mr James Geddis

**Student(s):** Ava McGurk

4104

**Title:** An investigation into Irish driver's awareness of distractions whilst driving and vehicle safety measures?

**Overview:** Aim: I want to spread awareness of road safety and vehicle safety on Irish roads so I can reduce Vehicle fatalities in Ireland.

**School:** Merlin College

**County:** Galway

**Teacher:** Ms Sarah Clarke

**Student(s):** Albert Saji Thomas

4105

**Title:** A study into terrariums' influence on mental wellbeing of young teenagers.

**Overview:** Can the introduction of nature, even on a small scale, make positive contributions to the mental health of a vulnerable portion of the population?

**School:** Loreto Secondary School, Balbriggan

**County:** Dublin

**Teacher:** Mr Brian Higgins

**Student(s):** Aoibheann Meally

4106

**Title:** A study into motivational quotes and their effects on the mental health of teenagers.

**Overview:** A study looking at the impact that motivational quotes have on teenagers using mixed research methods, to find out their effectiveness.

**School:** Mercy Secondary School

**County:** Kerry

**Teacher:** Miss Eimear Nolan

**Student(s):** Áine Newsome

4107

**Title:** Electric Cars - are they the future?

**Overview:** To research electric cars, and to understand their advantage and disadvantages and what might help more people to consider buying one.

**School:** St Colmcille's Community School

**County:** Dublin

**Teacher:** Ms Roisin Weldon

**Student(s):** Emily Gibney

4108

**Title:** The effect of carbon dioxide on a student's concentration.

**Overview:** I will determine if the carbon dioxide concentration in the classroom will affect a student's concentration levels during a strop test.

**School:** Enfield Community College

**County:** Meath

**Teacher:** Ms. Rebecca Kenneally

**Student(s):** Robert Griffin

4109

**Title:** How the farmers of North Clare see the future of Farming in their area.

**Overview:** I want to see how the present farmers in North Clare envisages the future of farming in the North Clare area.

**School:** Mary Immaculate Secondary School Lisdoonvarna

**County:** Clare

**Teacher:** Mr John Sims

**Student(s):** Aisling Vaughan

4110

**Title:** Would a three-day weekend improve mental health and stress levels in Ireland

**Overview:** My project aims to find out what people would think of a three-day weekend and see if it would improve their mental health and mood

**School:** Blackrock College

**County:** Dublin

**Teacher:** Ms Katie Buckley

**Student(s):** James Donohoe

4111

**Title:** An Investigation into how dog owners in Ireland feel Covid-19 lockdowns affected their dogs.

**Overview:** How the lockdown effected pet dogs in Ireland, and how dogs are coping out of lockdown and to investigate strategies taken to resolve any issues.

**School:** Edmund rice college

**County:** Cork

**Teacher:** Ms Danielle O'Sullivan

**Student(s):** Chloe Nagle

4112

**Title:** The water cost of covid-19

**Overview:** To investigate the handwashing habits of my school community since the pandemic began and study the impact on water usage in student's daily lives.

**School:** Coláiste Chríost Rí

**County:** Cork

**Teacher:** Ms Ciara McGrath

**Student(s):** Tawhid Alam

4113

**Title:** Ad Astra per Aspera – the impact of including space exploration on the Junior Cycle Science curriculum

**Overview:** A mixed methods research study on the impact of including space exploration on the junior cycle science curriculum

**School:** Pobalscoil na Tríonóide

**County:** Cork

**Teacher:** Ms. Mary O'Neill

**Student(s):** Danny King

4114

**Title:** The little multilingual

**Overview:** It is a children's book that contains basic words in 3 to 4 languages to help facilitate communication between pre-school teachers and children

**School:** St Mary's Secondary School

**County:** Dublin

**Teacher:** Ms Bronwyn Mulvey

**Student(s):** Nada Ayornu

## INTERMEDIATE INDIVIDUAL

4200

**Title:** I read the news today, oh boy!

**Overview:** An investigation into the link between social media and Covid-related anxiety in the early days of the Covid-19 pandemic.

**School:** Coláiste Muire Crosshaven

**County:** Cork

**Teacher:** Ms Martina McMahon

**Student(s):** Niamh Enright

4201

**Title:** How healthy is healthy? Does creating "good" exercise/eating habits as well as increased pressure in sports directly link with the development of eating disorders

**Overview:** the idea/obsession behind constantly keeping good exercise/food Habits and how also taking part in sports links with the development of eating disorders

**School:** Borrisokane Community College

**County:** Tipperary

**Teacher:** Ms Jacqueline Hayes

**Student(s):** Adam Ryan

4202

**Title:** Eolas agus meon déagóirí na hÉireann faoi na vacsaíní COVID-19

**Overview:** Suirbhé ar eolas, glacadh agus dearcadh i leith vacsaíníú COVID-19 sna seachtainí tosaigh ó infhaighteacht vacsaíne do dhéagóirí Éireannacha.

**School:** Gaelcholáiste Charraig Uí Leighin

**County:** Cork

**Teacher:** Ms Niamh Furlong

**Student(s):** Aileen Ní Charra

4203

**Title:** An investigation into the potential adoption of anaerobic digestion for energy production on farms in the Duhallow region in Cork.

**Overview:** This investigation will determine whether Anaerobic Digesters can reduce environmental impact of livestock agriculture in Duhallow while ascertaining willingness of farmers for an AD plant.

**School:** Colaiste Treasa

**County:** Cork

**Teacher:** Ms. Joanne Corkery

**Student(s):** Aisling Browne

4204

**Title:** Adolescent's well-being during a cancer diagnosis- A quantitative study to investigate the availability and accessibility of supports to this student group

**Overview:** To investigate the effects on the well-being of adolescents who've a parent with a cancer diagnosis, what supports are available and to what degree accessed.

**School:** Colaiste Treasa

**County:** Cork

**Teacher:** Ms Brid Anne O'Donoghue

**Student(s):** Ciara Brennan

4205

**Title:** "Investigating the Benefits and Cognitive Advantages of being Bilingual or Multilingual as Opposed to being Monolingual"

**Overview:** My project will investigate the social, emotional, and economic advantages of being multilingual as opposed to being monolingual through a research, surveying and an experiment.

**School:** John The Baptist Community School

**County:** Limerick

**Teacher:** Ms Brid O'Dwyer

**Student(s):** Jack Gleeson

4206

**Title:** Towards the development of a program of interventions for the reduction of stress among junior doctors

**Overview:** The aim of this project is to design and implement an intervention for stress reduction among junior doctors.

**School:** Colaiste Treasa

**County:** Cork

**Teacher:** Ms. Joanne Corkery

**Student(s):** Hannah Walsh

4207

**Title:** Pandemic Procrastination "For Another Time"

**Overview:** My aim is to identify what the main cause of procrastination during COVID-19 was and how procrastination has affected diverse groups of people after lockdown.

**School:** St Marys College

**County:** Wicklow

**Teacher:** Ms Joanne English

**Student(s):** Martyna Gabriel

4208

**Title:** Achieving the "Impossible" and Overcoming Mental Boundaries

**Overview:** My project aims to discover how to overcome and grow through our mental boundaries in order to enhance our sporting performance.

**School:** Coláiste Mhuire Co-Ed

**County:** Tipperary

**Teacher:** Ms Emma Carey

**Student(s):** Sarah Murphy

4209

**Title:** The impact of contactless payments on consumer spending.

**Overview:** An investigation into the effects of contactless payment technology on Irish consumers spending habits and whether this



trend has been accelerated due to COVID-19.

**School:** St Kieran's College

**County:** Kilkenny

**Teacher:** Mr David Hennessy

**Student(s):** Alexis FitzGerald

## 4210

**Title:** Building Beats-How do pop songs become famous by repeating 4 core beats?

**Overview:** A statistical analysis of how pop songs succeed by repeating just 4 beats, also known as 4/4 time signature, and what musical features compliment it.

**School:** St Marys College

**County:** Wicklow

**Teacher:** Ms Joanne English

**Student(s):** Alanna Duggan

## 4211

**Title:** An investigation into consumer and farmer attitudes towards the use of insect protein in animal feed

**Overview:** I am investigating whether sociodemographic characteristics affect the willingness of farmers to feed their animals insect protein and consumers to consume animals fed insect protein.

**School:** Colaiste Treasa

**County:** Cork

**Teacher:** Ms. Joanne Corkery

**Student(s):** Sarah Humphreys

## 4212

**Title:** Can I actually change your mind about E.V's?

**Overview:** To investigate the influence of confirmation bias on the Irish population's uptake of electric vehicles.

**School:** Colaiste Treasa

**County:** Cork

**Teacher:** Ms Ellen Condon

**Student(s):** Eoin O Keeffe

## 4213

**Title:** Bringing your screen to life

**Overview:** An analysis of how media can affect our views of minorities and hate crime.

**School:** Coláiste Muire Crosshaven

**County:** Cork

**Teacher:** Ms Martina McMahon

**Student(s):** Inga Roman

## 4214

**Title:** Effects Of Fatigue In The Workplace

**Overview:** My project aims to explore the dangers and productivity rate of being fatigued in the workplace

**School:** Kinsale Community School

**County:** Cork

**Teacher:** Ms Aisling Kelleher

**Student(s):** Aaron Courtney

## 4216

**Title:** Touch and Productivity

**Overview:** I want to understand how touch deprivation affects productivity in teenagers.

**School:** Scoil Mhuire gan Smál

**County:** Roscommon

**Teacher:** Ms Niamh Brogan

**Student(s):** Lucia Fabbri

## 4217

**Title:** Effects of Colour on Brain Development & Mental Health

**Overview:** How colour can effect brain development-including memory and concentration along with attention spans. How it effects colour association and mental health in the classroom.

**School:** Clonakilty Community College

**County:** Cork

**Teacher:** Mr Patrick O Keeffe

**Student(s):** Lavie Olupona

## 4218

**Title:** Human Instincts?

**Overview:** The investigation of what is an instinct based on a psychological opinion and evaluation

**School:** Laurel Hill Secondary School FCJ

**County:** Limerick

**Teacher:** Ms Karen Kinnerk

**Student(s):** Angel Alfred

## 4219

**Title:** An investigation into the prospect of including boxing into the Paralympics and raising awareness of the sport within my own community.

**Overview:** My project aims to research and survey the reasons as to why boxing has not yet been included in the Paralympic games.

**School:** Kinsale Community School

**County:** Cork

**Teacher:** Mr Shaun Holly

**Student(s):** Paidi O' Farrell

## 4220

**Title:** To investigate the world of fast-fashion and how to incentivise mending clothes instead of discarding them

**Overview:** An investigation into fast-fashion and how to get the general public to start mending their clothes when they get damaged instead of throwing them away.

**School:** Kinsale Community School

**County:** Cork

**Teacher:** Ms Aisling Kelleher

**Student(s):** Lilian Gleave

## 4221

**Title:** The effects of functional neurological disorder on my everyday life as a student compared to a neurotypical student

**Overview:** My project is about functional neurological disorder (neurodivergent) compared to a neurotypical student

**School:** Mohill Community College

**County:** Leitrim

**Teacher:** Ms Eileen Nertney

**Student(s):** Niamh Cummins

## 4222

**Title:** Exploring Irish Children's Cognitive Development Through An Analysis Of Their Conceptualisation of Conservation of Quantity Across Age, Gender and Socio-Economic Background

**Overview:** To explore Irish children's understanding of conservation of quantity, if there are any differences across age, gender or socio-economic background and correlation with mathematical ability.

**School:** Meánscoil na mBráithre Criostaí

**County:** Kilkenny



**Teacher:** Miss Dairine O'Connor

**Student(s):** Oisín Farrell

## 4223

**Title:** A comparative study: VSCO vs. Instagram and how they affect the self-esteem/mental health of adolescents.

**Overview:** I will be researching the effect of like counts and followers on social media on the mental health of adolescents.

**School:** St. Brigid's Secondary School

**County:** Kerry

**Teacher:** Ms Siobhán Ahern

**Student(s):** Anna Moynihan

## 4224

**Title:** Are we desensitized to homophobia and misogyny

**Overview:** An investigation into our desensitization to homophobia and misogyny in everyday life using verbal and visual approaches to answer my hypothesis.

**School:** Heywood Community School

**County:** Laois

**Teacher:** Mr Brian Keane

**Student(s):** Niamh Tunney

## 4225

**Title:** If we taught health education differently, would it promote positive eating habits and body image?

**Overview:** My Project focuses on how we can teach health education while trying to prevent negative perceptions around food, overexercising, body dysmorphia and eating disorders.

**School:** Loreto College

**County:** Dublin

**Teacher:** Mr Seamus Hayes

**Student(s):** Amelia Trenaman

## 4226

**Title:** An investigation into whether girls feel safer in a mixed gender school or an all girls school

**Overview:** For my project I am doing an investigation to whether girls feel safer in a mixed gender school or an all girls school.

**School:** St Mary's Secondary School

**County:** Cork

**Teacher:** Mrs Jennifer Butler

**Student(s):** Eimear Dineen

## 4227

**Title:** Simplifying information using sustainable visual aids to help farmers implement scientific information?

**Overview:** My project aims to provide visual aids based on scientific research done in Teagasc more park to simplify and implement this scientific research to farmers.

**School:** St Fanahan's College

**County:** Cork

**Teacher:** Mrs Karen Murphy

**Student(s):** Aoibhe O'Brien

## 4228

**Title:** To analyse if positive reinforcement methods designed for canines are applicable to equines

**Overview:** I am going to observe my horses behaviour throughout a period of time in which they are being trained using positive reinforcement training methods.

**School:** Coláiste Na Toirbhirte

**County:** Cork

**Teacher:** Ms Emily Aherne

**Student(s):** Holly O'Flynn

## 4229

**Title:** To Investigate the attitude of Irish people towards the Irish language

**Overview:** This project aims to research and discover the attitudes of Irish people towards their native language and the reasons associated with their attitudes.

**School:** Mungret Community College

**County:** Limerick

**Teacher:** Ms Jessica Heffernan

**Student(s):** Aadith Cheruppumpullil

## 4231

**Title:** How defined are traditional stereotypes in the designation of household chores?

**Overview:** I aim to investigate if household chores are still determined by gender.

**School:** St. Anne's Secondary School

**County:** Tipperary

**Teacher:** Ms Jacqueline Hayes

**Student(s):** Kelly Ryan

## 4232

**Title:** The Effects of Lockdown on Introverted and Extroverted People

**Overview:** I will be conducting research to find out how lockdown effected introverts and extroverts and if there was a significant difference.

**School:** Meánscoil na mBráithre Criostaí

**County:** Kilkenny

**Teacher:** Mr. Eanna Collins

**Student(s):** Rían Barcoe

## 4233

**Title:** To investigate the views of different Irish youths on flags and symbols

**Overview:** The aim of this project is to investigate any trends between a young Irish persons demographic and how they perceive different symbols and flags

**School:** Mountrath Community School

**County:** Laois

**Teacher:** Mr John Joe Ryan

**Student(s):** Luke Carroll

## 4234

**Title:** A statistical analysis on the influence of anti- racist education on TY students

**Overview:** My project aims to investigate racial attitudes amongst TY students and to measure the impact of anti-racist workshops on these students using likert scale survey.

**School:** Mountrath Community School

**County:** Laois

**Teacher:** Mr John Joe Ryan

**Student(s):** Courtney Chambers

## 4235

**Title:** To investigate the changing attitudes and prejudice against Islam and Muslims

**Overview:** I will be investigating whether or not recent events in the media have altered people's perception of Islam and Muslims



**School:** Mungret Community College  
**County:** Limerick  
**Teacher:** Ms Jessica Heffernan  
**Student(s):** Adeel Mujahid

## 4236

**Title:** How the opinions and behaviour of other people influence how humans think and perform.

**Overview:** I want to do a series of social experiments to determine how human behaviour is influenced by the actions and attitudes of other people.

**School:** St Patrick's College  
**County:** Cavan  
**Teacher:** Ms Amanda Sheils  
**Student(s):** Dara Flood

## 4237

**Title:** The effect of COVID-19 on soccer

**Overview:** How soccer and different soccer teams were affected by COVID-19, what they did during the pandemic and how did fans affect it

**School:** Colaiste Dun Iascaigh  
**County:** Tipperary  
**Teacher:** Ms Shauna Burke  
**Student(s):** Jack Moloney

## 4238

**Title:** A comparison of the reliability of the Myers Briggs personality test and the Enneagram test

**Overview:** I will review the reliability of two of the most popular personality tests used in hiring practices: the Myers-Briggs type indicator (MBTI) and the Enneagram.

**School:** Sandymount Park Educate Together Secondary School  
**County:** Dublin  
**Teacher:** Mr. Conor Maxwell  
**Student(s):** Méabh Lunn

## 4239

**Title:** Sans Eyes, Sans Ears: Does incorporating a dual-coding element in second language learning improve working memory retention in aural exams?

**Overview:** This project applies dual-coding and multimedia learning to support students in the context of aural exams, aiming to improve results for students with learning difficulties.

**School:** St Joseph's Secondary School, Rush  
**County:** Dublin  
**Teacher:** Ms Helen Teehan  
**Student(s):** Emma McCann

## 4240

**Title:** Blendlab

**Overview:** A free online service to help students learn experiments and a study to find the effectiveness of this service

**School:** Gonzaga College  
**County:** Dublin  
**Teacher:** Mr Stephen McGrogan  
**Student(s):** Joe O'Grady

## 4241

**Title:** What Qualities in Teachers bring out the best in secondary school students?

**Overview:** My goal in this study is to find out; what qualities/

attributes do students appreciate and benefit from, in teachers.

**School:** Skibbereen Community School  
**County:** Cork  
**Teacher:** Ms Mags Breen  
**Student(s):** Emily O'Sullivan

## 4242

**Title:** A statistical study into the stigma around menstruation in schools

**Overview:** The aim of my project is to survey how the stigma around menstruation in schools and the lack of menstrual education affects students.

**School:** Kinsale Community School  
**County:** Cork  
**Teacher:** Dr. Catherine Coughlan  
**Student(s):** Isobel Bergin

## 4243

**Title:** Personality and film taste

**Overview:** I intend to find out if there is a connection between someone's personality and their taste in film.

**School:** Castlecomer Community School  
**County:** Kilkenny  
**Teacher:** Dr Robert Morris  
**Student(s):** Saoirse Wilson

## 4244

**Title:** Na hÉifeachtaí A Bhaineann Le Teiripe Ealaíne, Illustrating A Brighter Future

**Overview:** My project will try to figure out if dedicating time to artistic activities improves a person's overall mental health.

**School:** Meanscoil Gharman  
**County:** Wexford  
**Teacher:** Ms Elaine Níe Reamoinn  
**Student(s):** Eric Nangle

## 4245

**Title:** The Musical Mystery To Greater Growth - An investigation into the effects of sound waves on spider plant growth

**Overview:** To investigate the effects of different genres of music on plant life i.e. LoFi (A gentle music generally used as background noise) versus heavy metal.

**School:** Coláiste Muire Crosshaven  
**County:** Cork  
**Teacher:** Ms Bridget Lehane  
**Student(s):** Aoife O'Donovan

## 4246

**Title:** Effects of Social Media on Teenagers' Behavior

**Overview:** I aim to understand what the effects of social media on teenagers' behavior are and how social media is controlling teenagers in many ways.

**School:** Blackrock College  
**County:** Dublin  
**Teacher:** ms Katie Buckley  
**Student(s):** Ishaan Pandey

## 4247

**Title:** Community Resource App

**Overview:** Our proposal is to develop a community resource app for use by a small group of people who live within approx 20km of each other.

**School:** St. Clare's Comprehensive School  
**County:** Leitrim  
**Teacher:** Ms Edel Mc Phelim  
**Student(s):** Lasairíona Scarff

## 4248

**Title:** To Investigate Whether Or Not Irish Teenagers Are Desensitised to Violence

**Overview:** We plan on investigating whether or not Irish teenagers are desensitised to violence by carrying out an investigation consisting of literature review and case study

**School:** Mungret Community College

**County:** Limerick

**Teacher:** Mr John McCarthy

**Student(s):** Cathal Carmody

### SENIOR INDIVIDUAL

## 4300

**Title:** An dearcadh agus eolas atá ag diagoiri i dtreo Éire aontaithe.

**Overview:** My project aims to find out what young people's attitudes towards a united Ireland.

**School:** Coláiste Ailigh

**County:** Donegal

**Teacher:** Mr Michael Gibbons

**Student(s):** Iseult Ní Mhathúna

## 4301

**Title:** Can the brain get attached to fictional characters

**Overview:** I will be looking at if the brain can get attached to a fictional character.

**School:** Arklow Community College

**County:** Wicklow

**Teacher:** Ms Laura Sinnott

**Student(s):** Lydia Keogh

## 4302

**Title:** Are introverts more concerned about germs than extroverts?

**Overview:** An examination of whether introverts are more concerned about germs than extroverts and whether introverts will not adapt as well as the pandemic eases.

**School:** Muckross Park College

**County:** Dublin

**Teacher:** Dr Lisa Shine

**Student(s):** Megan Humphreys

## 4303

**Title:** Looking towards a cashless society - the future of payments!

**Overview:** Developing a conceptual model for a cashless society. Examining the results of surveys to determine the factors that influence people to adopt cashless payment systems.

**School:** Sutton Park School

**County:** Dublin

**Teacher:** Ms Joanne Hanratty

**Student(s):** David Smith

## 4304

**Title:** Do subject ambassadors promote uptake of subjects at leaving cert?

**Overview:** I want to investigate if students know subject ambassadors are they influenced by this in their subject choices at leaving cert.

**School:** Abbey Vocational School

**County:** Donegal

**Teacher:** Ms Donna Furey

**Student(s):** Eadaoin Murphy

## 4305

**Title:** Solving the Housing Crisis, the good, the bad and the lazy

**Overview:** Housing after Climate change is Ireland's biggest problem yet we're doing jack. Here's what we can do to beat this beast.

**School:** Tallaght Community School

**County:** Dublin

**Teacher:** Ms Kate O'Gorman

**Student(s):** Joshua Idugboe

### JUNIOR GROUP

## 4400

**Title:** Stop getting scamed! How Can We Prevent Scamming In Our Community.

**Overview:** We aim to stop people in our community from being scammed by conducting a survey and creating a short booklet with tips from younger people.

**School:** St. Brogan's College

**County:** Cork

**Teacher:** Ms Sara Hurley

**Student(s):** Doireann Walsh, Caoimhe Ryan

## 4401

**Title:** A Breath of Fresh Air

**Overview:** We want to find out if the air has an effect on concentration. Using an oximeter to measure blood oxygen throughout the day.

**School:** Coláiste Bhaile Chláir

**County:** Galway

**Teacher:** Ms Eleanor Nolan

**Student(s):** Hannah Keighrey, Sadhbh Ward, Áine Noone

## 4402

**Title:** Our Environment, Your Litter: A Mixed Methods Approach for Understanding Commuter Littering Behaviour

**Overview:** Employing both quantitative and qualitative methods to assess the behaviour amongst commuter populations.

**School:** St Peter's Community School

**County:** Cork

**Teacher:** Mr Daniel Hurley

**Student(s):** Éadaoin Farrell, Ethel D'Alton Bateman

## 4403

**Title:** Na héifeachtaí ag dianghlaisíl ar shaol an déagóra

**Overview:** Táimid ag iarraidh eolas a bhailiú faoin tionchar a bhí ag an dianghlaisíl ar an gnáth déagór go meabhrach, fisiciúil, hacadúil agus go sóisialta.

**School:** Colaiste An Phiarsaigh

**County:** Cork

**Teacher:** Mr Caoimhín Buckley

**Student(s):** Seán Mac Craith, Caoimhín Ó Murchú, Stiofán de Búrca

## 4404

**Title:** Has Covid-19 impacted the social skills of teenagers?

**Overview:** The purpose of this study is to examine if Covid-19 has impacted the social skills of teenagers.

**School:** St. Brogan's College



**County:** Cork  
**Teacher:** Ms Roisin Kingston  
**Student(s):** Cathal Buttimer, Oran O'Leary, Maitiu Deasy

4405

**Title:** Are there benefits from reading a book compared to listening to audio books for primary school children?

**Overview:** For our project, we will send survey questions from the Elf and the Shoemaker book to 2nd to 6th class children and analyse their comprehension.

**School:** Loreto College

**County:** Dublin

**Teacher:** Ms Katie Kinkaid

**Student(s):** Alice McVey, Heidi O'Donoghue

4406

**Title:** Are Fidget Toys Beneficial for Neurotypicals?

**Overview:** Our science project is about fidget toys for people who are considered neurotypicals and whether they are beneficial or just a trend.

**School:** Loreto College

**County:** Dublin

**Teacher:** Ms Eimear Hourican

**Student(s):** Chloe Drury Byrne, Alison Heeney, Evelyn Roche

4407

**Title:** The impact of gender and age on handwriting and perception.

**Overview:** Gender roles in handwriting. The perception of a person based on their handwriting, how age and gender impacts your handwriting.

**School:** Loreto College

**County:** Dublin

**Teacher:** Ms Laura Tobin

**Student(s):** Holly Loughnane, Hope Gallagher, Zihan He

4408

**Title:** An Tionachar atá ag Domhandú ar Blasanna

**Overview:** Ag déanamh staidéar ar an tionachar atá ag domhandú ar blasana daoine agus an slí go bhfuil balasanna daoine ag athrú.

**School:** Colaiste An Phiarsaigh

**County:** Cork

**Teacher:** Mr Caoimhín Buckley

**Student(s):** Sadhbh Ní Chróinín, Anna Ní Luasa, Rebecca Ní Chróinín

4409

**Title:** There's no pride in prejudice

**Overview:** Our project is based on how teacher's opinions can affect a student. These opinions can impact a student's learning, behaviour, participation in class, and more.

**School:** Colaiste Nano Nagle

**County:** Limerick

**Teacher:** Ms Samantha Prior

**Student(s):** Kristina Vitina, Laila Tomczyk, Millie Malone

4410

**Title:** Does hearing information through someone wearing a face mask effect information processing in students in post-primary education ?

**Overview:** This project aims to see if information given orally wearing a mask can be understood and processed by students with interest in students with AEN.

**School:** Rockford Manor Secondary School

**County:** Dublin  
**Teacher:** Ms Kelly Ryan  
**Student(s):** Dibyashree Mistree, Annalise McNinch

4411

**Title:** 'The Future of the Loop Head Peninsula'

**Overview:** Our project aim is to investigate the declining population of the Loop Head Peninsula and propose strategies to ensure a sustainable population for the future.

**School:** St Joseph's Community College

**County:** Clare

**Teacher:** Ms Laura Egan

**Student(s):** Aine Bonfil, Matylda Williams, Ella Nagle

4412

**Title:** Sea Swimming: Improving awareness of the benefits for young people

**Overview:** This project aims to raise more awareness of the social and health benefits of sea swimming for young people today

**School:** St. Gerald's College

**County:** Mayo

**Teacher:** Mr Sean Curran

**Student(s):** Nevan Lynch, Niall Mellett, James Curran

4413

**Title:** How has Covid-19 and its subsequent lockdowns affected the mental health of secondary school students in Ireland

**Overview:** The evidence of the effects that covid-19 had on secondary school students in Ireland

**School:** Skibbereen Community School

**County:** Cork

**Teacher:** Ms Mags Breen

**Student(s):** Anna-Sofie Haffner, Laragh Bradburn

4415

**Title:** An Intergenerational Study of Diets and Awareness of the Effects they have on Health and the Environment

**Overview:** A survey to compare diets of teenagers versus older adults to discover who has a greater awareness of dietary impacts on both health and environment.

**School:** Kinsale Community School

**County:** Cork

**Teacher:** Mr Shaun Holly

**Student(s):** Martha O'Sullivan, Aoibh Kirwan

4416

**Title:** How does coding affect other subjects in the Irish post primary schooling?

**Overview:** My project aims to understand whether the Irish post primary school system teaches the coding in a way that promotes creativity and logical thinking.

**School:** Kinsale Community School

**County:** Cork

**Teacher:** Mr Shaun Holly

**Student(s):** Daniel Jones, Beckett Wallace

4417

**Title:** Unlocking the potential for low emissions beef production through education.

**Overview:** To assess the knowledge and attitudes of beef farmers on genomics and sustainable farming methods and to educate them on how to improve their practices.



**School:** St. Brogan's College  
**County:** Cork  
**Teacher:** Ms Laura O'Regan  
**Student(s):** Sarah Teape, Alison Darcy

## 4418

**Title:** Representation in children's television  
**Overview:** Our project aims to improve awareness on the lack of representation in children's television including problems, affects and solutions  
**School:** Loreto College  
**County:** Dublin  
**Teacher:** Ms Katie Kinkaid  
**Student(s):** Erin Sharp, Faye Cunningham

## INTERMEDIATE GROUP

## 4500

**Title:** A statistical analysis into the pursuit of happiness  
**Overview:** The analysis and measurement of happiness as a sense of well-being.  
**School:** St. Brogan's College  
**County:** Cork  
**Teacher:** Ms Laura O'Regan  
**Student(s):** Joshua Ross, Harry Ross, Tommy Nolan

## 4501

**Title:** Dream Recall and the link to Aptitudes  
**Overview:** We wish to investigate whether dream recall is linked with one's aptitude levels with the use of CAT4 testing.  
**School:** Roscommon Community College  
**County:** Roscommon  
**Teacher:** Ms Elizabeth Glancy  
**Student(s):** Lyndsey Gibbons, Rachel Trimble

## 4502

**Title:** How best to shatter the glass ceiling: An analysis of the impact of gender quota introduction in local elections with Roscommon County Council as a case study  
**Overview:** Looking at how gender quotas could work in Roscommon County Council, and would it help with women being more influential in political decisions.  
**School:** Roscommon Community College  
**County:** Roscommon  
**Teacher:** Ms Elizabeth Glancy  
**Student(s):** Brian Mannion, Izidro Ribas

## 4503

**Title:** An investigation into improving the recovery process of adolescents when moving from the Sympathetic Nervous System to the Parasympathetic Nervous System during times of stress  
**Overview:** To determine the most efficient and effective techniques for adolescents in moving from the Sympathetic Nervous System to the Parasympathetic Nervous System during elevated stress.  
**School:** Roscommon Community College  
**County:** Roscommon  
**Teacher:** Ms Elizabeth Glancy  
**Student(s):** Mairéad Lohan, Tommy Morris

## 4504

**Title:** Turning out in force: An experimental and statistical analysis of the potential to replace the PR-STV with the FPTP voting system to increase voter turnout in Ireland  
**Overview:** Analysing the Voting system used in Irelands elections, particularly looking to see if switching voting systems would drastically alter the voting turnout in Ireland  
**School:** Roscommon Community College  
**County:** Roscommon  
**Teacher:** Ms Elizabeth Glancy  
**Student(s):** Daniel Hegarty, Heather O'Sullivan

## 4505

**Title:** An investigation into what makes a yawn contagious in the context of Covid-19. Does mask wearing break contagion, or is primal instinct at play?  
**Overview:** Our Project is going to investigate what makes a yawn contagious and what impact Covid-19 has on contagious yawning in a school environment  
**School:** Roscommon Community College  
**County:** Roscommon  
**Teacher:** Ms Elizabeth Glancy  
**Student(s):** Elliot Greal, Josh Reddington

## 4506

**Title:** Are you being radicalised?  
**Overview:** To investigate the rate of political radicalization amongst teens.  
**School:** Athlone Community College  
**County:** Westmeath  
**Teacher:** Ms Emma Finneran  
**Student(s):** Oisín Johnston, Conor Gavin, David Fox

## 4507

**Title:** How has covid-19 affected GAA players injuries, fitness and health  
**Overview:** We will be investigating the affects covid-19 had on GAA players fitness and injuries. We have decided on this as it's relevant to today's society  
**School:** St Kieran's College  
**County:** Kilkenny  
**Teacher:** Mr David Hennessy  
**Student(s):** Tomás Roche, Joe Hughes, Jeff Neary

## 4508

**Title:** Government approach to COVID 19, Spain vs Ireland  
**Overview:** Our project is about the comparative between Spain and Ireland in the gestion of the COVID 19 crisis  
**School:** Cistercian College  
**County:** Tipperary  
**Teacher:** Ms Jennifer Denny  
**Student(s):** Francisco de la Parte, Alfonso Ortiz, Cristopher Ruiz

## 4509

**Title:** Investigation of the prominence of long term covid-19  
**Overview:** Investigation of the prominence of long term covid-19  
**School:** Castlecomer Community School  
**County:** Kilkenny  
**Teacher:** Ms Fiona Morrissey  
**Student(s):** Aaron Fanning, Michael Brennan



4510

**Title:** A study into the behavioural changes of young children because of Covid.

**Overview:** Young children probably don't have memories from before Covid so we are going to research if the lack of interaction will effect them lon

**School:** Presentation Secondary School, Castleisland

**County:** Kerry

**Teacher:** Ms Tracey Dooley

**Student(s):** Megan Dennehy, Julia Curtin, Clodagh Coffey

4511

**Title:** Moody Foody

**Overview:** 3 members of the project will participate in 3 different diets and see how their food choices will effect performance and wellbeing.

**School:** Presentation Secondary School, Castleisland

**County:** Kerry

**Teacher:** Ms Tracey Dooley

**Student(s):** Emma Keane, Ciara Cahill, Katie Walshe

4512

**Title:** Does a persons opinion on the covid vaccine affect their relationships with others

**Overview:** have peoples personal lives changed as a result of them being for or against the covid vaccine. for example their relationship's in their work place.

**School:** Tarbert Comprehensive School

**County:** Kerry

**Teacher:** Ms Rachael O'Donoghue

**Student(s):** Millie Sheehan, Chloe O Halloran, Barbara Puig

4513

**Title:** Voting Patterns

**Overview:** We aim to find out if there is a correlation between people's voting patterns and the way that they collect their information.

**School:** C.B.S. Thurles

**County:** Tipperary

**Teacher:** Mr Patrick Dunne

**Student(s):** Louis Ryan, Patrick Mohn, Justine Geronimo

4514

**Title:** Cool 2 Carpool

**Overview:** We gathered information on how many singular people travel to work in one car so we can reduce these numbers to slow down global warming.

**School:** St Fanahan's College

**County:** Cork

**Teacher:** Mrs Karen Murphy

**Student(s):** Mackenzie Hickey, Ella Barry, Ruby Finn

4515

**Title:** You may be left handed, but are you always right?

**Overview:** An investigation into whether being left or right handed influences intelligence or creativity due to using different sides of the brain.

**School:** Loreto Secondary School

**County:** Kilkenny

**Teacher:** Mr Brendan Williams

**Student(s):** Clodagh Duggan, Laura Cairns

4516

**Title:** An investigation into how a new scent can affect your memory.

**Overview:** In our project we are investigating how a new scent can affect your memory

**School:** Loreto Secondary School

**County:** Kilkenny

**Teacher:** Mr Brendan Williams

**Student(s):** Aoibhín Timmons, Millie Barcoe

4517

**Title:** How have our pets helped us cope during the Covid pandemic?

**Overview:** To study the benefits of keeping pets on our mental health and physical health, and pet therapy to human health and well being.

**School:** Patrician Presentation

**County:** Tipperary

**Teacher:** Ms Lauren Dowling

**Student(s):** Maryann Fitzgerald, Amy Morrissey

4518

**Title:** How has a UN Women UK survey affected Irish adolescents' views on the topic of sexual harassment?

**Overview:** We aim to survey Irish adolescents on their knowledge and understanding of Sexual Harassment since the results of the UN survey were released.

**School:** St Mary's Secondary School

**County:** Cork

**Teacher:** Ms Shannen Foley

**Student(s):** Gemma Munro, Sarah Cuddihy

4519

**Title:** An investigation into how photo editing apps affect body image and self esteem of teenage girls and young adults.

**Overview:** Our project aims to examine how photo editing apps affect body image and self esteem of teenage girls and young adults.

**School:** St Mary's Secondary School

**County:** Cork

**Teacher:** Ms Shannen Foley

**Student(s):** Laura O'Sullivan, Grace Kiernan

4520

**Title:** The Left Hand Ability

**Overview:** How correct is the statement 'left handed people are more creative and mathematical than their right handed counterparts'?

**School:** St Mary's Secondary School

**County:** Cork

**Teacher:** Ms Shannen Foley

**Student(s):** Karina Falvey, Una Madden, Méabh Bradley

4521

**Title:** Raising The Bar For Irish Female Athletes

**Overview:** To investigate how the support of successful sports women; promotion and donation by businesses increases the number of young women in sports in Ireland.

**School:** Colaiste Nano Nagle

**County:** Limerick

**Teacher:** Ms Kelly Walsh

**Student(s):** Allannah Purcell, Kelliece Dillon, Sarahlouis Allen

4522

**Title:** 65 Roses



**Overview:** Creating and developing an app to aid people with Cystic Fibrosis and to educate those who aren't fully aware of the Chronic Illness.

**School:** Colaiste Nano Nagle

**County:** Limerick

**Teacher:** Ms Kelly Walsh

**Student(s):** Jadine Fitzpatrick, Colleen Bromell, Katelynn Naughton

## 4523

**Title:** Are the School Rules Outdated?

**Overview:** We propose to survey people of different nationalities, gender and educational level/occupation on their opinion of school rules

**School:** St Mary's Secondary School

**County:** Cork

**Teacher:** Ms Shannen Foley

**Student(s):** Nora Twomey, Amy Sheehan

## 4524

**Title:** Why are steroids being used by young people and what are the consequences of using them?

**Overview:** In our project we hope to find out why young people are using steroids and what are the consequences of using them?

**School:** Marist College

**County:** Westmeath

**Teacher:** Mrs Georgina Clear

**Student(s):** Matthew Fallon, Patrick Egan, Callum Kelly

## 4525

**Title:** How quarantine and home office affect our psyche

**Overview:** We will investigate the psychological effect that being locked down during Covid has had on students and teachers by carrying out interviewing and Questionnaires.

**School:** Killarney Community College

**County:** Kerry

**Teacher:** Ms Maire Spillane

**Student(s):** Rabea Fluegel, Angelina Kendel

## 4526

**Title:** Why are we so afraid of something we can't see?

**Overview:** Our project aims to investigate if people are more fearful now that we are coming out of the pandemic.

**School:** St Marys College

**County:** Wicklow

**Teacher:** Ms Joanne English

**Student(s):** Cara Íosa Wixted Morris, Doireann Hurley

## 4527

**Title:** Do we as a society vilify femininity?

**Overview:** Our aim is to investigate whether femininity is demonised in our society in this day and age.

**School:** St Marys College

**County:** Wicklow

**Teacher:** Ms Joanne English

**Student(s):** Thinara Haljothi, Shannon Castro

## 4528

**Title:** Do Brighter walls lead to Brighter minds

**Overview:** Our project aim is to investigate whether the buildings, shapes, and colours around us affect how students work in schools.

**School:** St Marys College

**County:** Wicklow

**Teacher:** Ms Joanne English

**Student(s):** Lillie O'Brien, Emma Porter Fitzgerald

## 4529

**Title:** A Statistical Analysis of Gender Difference in ADHD Diagnosis

**Overview:** ADHD is a neurological disorder most diagnosed in boys. In this project, we will look at ways schools could make ADHD diagnosis more gender diverse.

**School:** Kinsale Community School

**County:** Cork

**Teacher:** Ms Cliona O'Shaughnessy

**Student(s):** Giulia Moretto, Rachel Bogue

## 4530

**Title:** How Does Technology Affect Our Brains?

**Overview:** We are investigating the effects that technology and screens have on our physical and mental health, and our social skills and behaviours.

**School:** Eureka Secondary School

**County:** Meath

**Teacher:** Ms Chloe Sheridan

**Student(s):** Claire Smith, Emma Finnegan, Kathlyn Donegan

## 4531

**Title:** What is the difference between Boys Mental Health in the first lockdown compared to the second lockdown

**Overview:** Our project aims to find out the difference between boys mental health in the first lockdown compared to the second lockdown due to Covid 19.

**School:** Arklow Community College

**County:** Wicklow

**Teacher:** Ms Laura Sinnott

**Student(s):** Noah Furlong, Liam Monaghan

## 4532

**Title:** Has lockdown affected young girls fitness levels

**Overview:** We want to know whether lockdown has positively or negatively affected young girls fitness levels.

**School:** Eureka Secondary School

**County:** Meath

**Teacher:** Ms Robin Ward

**Student(s):** Caragh Cleary, Onora Macken, Alicia Daly

## 4533

**Title:** What background noise is best for concentration amongst students in Bremore ETSS?

**Overview:** Our study is test the best noises for concentration or see if any noise hinders concentration.

**School:** Bremore Educate Together Secondary School

**County:** Dublin

**Teacher:** Ms Emma Sheeran

**Student(s):** Rowan Shine, Rory Singleton, Niall King McDonnell

## 4534

**Title:** Who Do You Think You Are Talking To?

**Overview:** To investigate the phenomenon of mask fishing and to map what the average person expects a stranger to look like below their mask.

**School:** Loreto College

**County:** Dublin

**Teacher:** Ms Eimear Hourican

**Student(s):** Ella Cowman, Zoe Moore, Anna Daly



4535

**Title:** An investigation into the gendered nature of Irish apprenticeships

**Overview:** An investigation into finding the reasons why only 5% of Ireland's apprentices are female.

**School:** St. Louis Secondary School

**County:** Monaghan

**Teacher:** Mr Niall Mooney

**Student(s):** Georgina McKenna, Rachel McKenna

4536

**Title:** How working from home during the pandemic effected individuals in different ways

**Overview:** Our project's based on the effect working from home had on people across the world. We focused in on specific areas such as capital etc.

**School:** St Mary's Secondary School

**County:** Cork

**Teacher:** Mrs Jennifer Butler

**Student(s):** Shauna Lehane, Méabh Kelleher, Ruth Creed

4537

**Title:** Men's situation

**Overview:** We want to investigate how much Irish men know about menstruation and their attitude towards it.

**School:** St Mary's Secondary School

**County:** Cork

**Teacher:** Mrs Jennifer Butler

**Student(s):** Lauren Barrett, Alexandra Savage, Harriet Scott

4538

**Title:** How sleep affects the performance of sport

**Overview:** Our project is about finding out if the amount of sleep a person gets affects their performance in sport. We will gather a sample of 10 people from our class which will be chosen at random. We will then ask them to record their sleeping schedule on the night.

**School:** St Mary's Secondary School

**County:** Cork

**Teacher:** Mrs Jennifer Butler

**Student(s):** Grace O'Riordan, Ciara O'Riordan

4539

**Title:** Need or Belief? Do students actually need energy drinks to give them energy or is believing that they have energy all they need?

**Overview:** We're going to investigate if the placebo effect can influence students' energy levels throughout the school day and compare results to a 'Monster' energy drink

**School:** St. Louis Secondary School

**County:** Monaghan

**Teacher:** Mr Niall Mooney

**Student(s):** Mar Rodriguez Fernandez, Aoife O'Gara, Jenna McQuaid

4540

**Title:** The effects of music on exercise performance on teenage girls

**Overview:** We will investigate if music influences how people perform during exercise.

**School:** St. Louis Secondary School

**County:** Monaghan

**Teacher:** Mr Niall Mooney

**Student(s):** Karen Johnston, Kayla McCann, Sabine Gormley

4541

**Title:** Sleep 2 music ?

**Overview:** Investigating how music effects our sleep patterns

**School:** Ardscoil Phadraig

**County:** Longford

**Teacher:** Mr Michael Domican

**Student(s):** Clodagh Deneher, Aoibhinn Lynch

4542

**Title:** How Can People Adapt to a World Where Facial Expressions may be Invisible?

**Overview:** We will investigate the impact of wearing masks. In particular, we will explore how ones initial perception of another is inhibited by wearing a mask.

**School:** Ursuline Secondary School

**County:** Tipperary

**Teacher:** Mr David O' Heney

**Student(s):** Hannah O'Mahoney, Rachel Regan, Kate Carr

4543

**Title:** A comparison between people's attitudes towards different vaccinations

**Overview:** We want to recognise people's opinions on certain vaccinations and investigate why/why not people choose to take certain vaccines/some vaccines and not others.

**School:** St Vincent's Secondary School

**County:** Louth

**Teacher:** Mr John White

**Student(s):** Sarah Dorgan, Sona Maria Sani, Bláthnaid Rafferty

4544

**Title:** Animal welfare during covid/ leasainmhithe I ndiaidh covid

**Overview:** We are going to see how many animals have been homed during the covid lockdown and we are going to see how healthy they are.

**School:** Coláiste Pobal Osraí

**County:** Kilkenny

**Teacher:** MS Julia Coffey

**Student(s):** Elle Hayden, Jada Power

4545

**Title:** Barriers to Home Owners energy retrofitting their homes to a nZe home

**Overview:** Our project investigates the barriers to home owners energy retrofitting their homes to a nZe home, why and what could be done to improve this.

**School:** Presentation Secondary School

**County:** Tipperary

**Teacher:** Ms Serena Moloney

**Student(s):** Kate O'Hara, Mairead Collins

4546

**Title:** A Statistical Analysis into How Awareness Levels on Internet Security Varies Across Different Age Groups

**Overview:** An analysis of how the awareness of internet security varies across different age groups in our community and how to improve internet security for all.

**School:** Clonakilty Community College

**County:** Cork

**Teacher:** Mr Patrick O Keffe





**Student(s):** Bence Redmond, Ray Crowley

**4547**

**Title:** Sexual consent: Exploring the lack of consent education in Irish Secondary Schools

**Overview:** Our aim is to find out what education is given to young people in Ireland on sexual consent and young people's own knowledge on consent.

**School:** John The Baptist Community School

**County:** Limerick

**Teacher:** Ms Emma Donnelly

**Student(s):** Alice Joy O'Regan, Claire Wolfe, Una Dennehy

**4548**

**Title:** A Statistical Analysis of the Use of Americanisms by Local Schoolchildren and Parents

**Overview:** To determine whether the prevalence of American TV and media is significantly impacting our everyday language.

**School:** Moate Community School

**County:** Westmeath

**Teacher:** Ms Mairead Cusack

**Student(s):** Grace O'Flaherty, Claire O'Donohoe, Eabha Greville

**4549**

**Title:** Is there link between product marketing and obesity rates?

**Overview:** In this project we aim to find out if there is a link between how a product is marketed and obesity rates.

**School:** Laurel Hill Secondary School FCJ

**County:** Limerick

**Teacher:** Ms Karen Kinnerk

**Student(s):** Aaliyah Coughlan, Chloe Keane

**4550**

**Title:** Fast Fashion: The Influence of Climate Change vs. The Influence of Social Media

**Overview:** We are using research and data that we have gathered to investigate the influence of social media and climate change in relation to fast fashion.

**School:** Coláiste Choilm

**County:** Cork

**Teacher:** Ms Caroline O'Sullivan

**Student(s):** Quig O'Connor, Claire Lyons

**4551**

**Title:** Who can compete? An investigation into public opinion on how to separate male and female athletes

**Overview:** We wish to gather information from the public as to what their perception on how to differentiate between the male and female sex in sport

**School:** Coláiste Choilm

**County:** Cork

**Teacher:** Ms Caroline O'Sullivan

**Student(s):** Sorcha Monahan O'Sullivan, Abbie Dorney, Sarah Jordan

**4552**

**Title:** Is caffeine necessary? An examination regarding whether neuromuscular/ mental tiredness is a state of mind.

**Overview:** This study will use the 'placebo effect' to determine if tiredness is a state of mind; raising awareness about caffeine's negative health impacts.

**School:** Abbey Christian Brothers School

**County:** Down

**Teacher:** Ms Sarah Kee

**Student(s):** Ben Mooney, John-Pauling McGreevy

**4553**

**Title:** How music affects teenagers heart rate during sleep.

**Overview:** Most Teenagers sleeping heart rate average between 60-100, we want to find out if listening to music while sleeping affects teenagers heart rate

**School:** Jesus & Mary Secondary School

**County:** Sligo

**Teacher:** Ms Fiona McLoughlin

**Student(s):** Roisin Foody, Sinead Sweeney, Aisling Lynott

**4554**

**Title:** The pen doesn't fall far from the tree.

**Overview:** This project is an investigation into where we get our personal style of handwriting from and why we have similar handwriting to our family.

**School:** Ursuline College

**County:** Sligo

**Teacher:** Mr Anthony Carolan

**Student(s):** Roisin O'Toole, Róisín Fitzpatrick, Michelle Devaney

**4555**

**Title:** An Investigation to Compare the Psychological Wellbeing of Individual Sports Athletes and Team Sports Athletes

**Overview:** To compare the Psychological Wellbeing of Individual Sports Athletes and Team Sports Athletes and to find any trends occurring which affect an Athletes Mental Health.

**School:** St. Anne's Secondary School

**County:** Tipperary

**Teacher:** Mr Patrick Kivlehan

**Student(s):** Lucy Fitzgerald, Emma Doocey, Emma Murphy

**4556**

**Title:** The Myth of Physical Disability. Perception v Reality

**Overview:** Our project is going to demonstrate what people's perception of what a physical disability is in relation to people with and without disabilities.

**School:** Roscommon Community College

**County:** Roscommon

**Teacher:** Ms Elizabeth Glancy

**Student(s):** Archie Naughton, Evan Hennessy

**4557**

**Title:** Investigating the Relationship Between Risk and Happiness.

**Overview:** Does engaging in regular low-risk activities improve happiness? Our project aims to investigate limitations places on activities deemed risky, are affecting our happiness levels.

**School:** Coláiste Mhuire Ennis

**County:** Clare

**Teacher:** Ms Nicola Meere

**Student(s):** Anna Browne, Emma Cantillon, Gemma Hannon

**4558**

**Title:** To Investigate the Prevalence of Mild OCD Symptoms in Secondary School Students

**Overview:** We want to investigate if there is an increase of OCD symptoms among young people, influenced by covid/social media by conducting surveys.

**School:** Athlone Community College

**County:** Westmeath



**Teacher:** Mr Gavin Beirne

**Student(s):** Molly Lennon, Emma Maguire

4559

**Title:** The effectiveness of high and low complexity video games on experienced pain.

**Overview:** Study to assess whether playing high complexity games would significantly distract participants from pain stimulation more than playing low complexity games via cold water test.

**School:** Loreto Secondary School

**County:** Kilkenny

**Teacher:** Mr Brendan Williams

**Student(s):** Ellie Murray, Orla Moore

4560

**Title:** Investigating the student experience of learning during a pandemic

**Overview:** This is an investigation into the impact of Covid-19 lockdowns on the education of Irish post-primary school students, and looking at what factors effected this learning.

**School:** C.B.S. Roscommon

**County:** Roscommon

**Teacher:** Ms Anne-Marie Callaghan

**Student(s):** Brian O'Connor, Adam Murphy, Thomas Joseph Smyth

4561

**Title:** Is being attractive a get out of jail free card?

**Overview:** This project will find out if a defendant's attractiveness influences judicial decisions to give a guilty/not guilty verdict and sentence duration to the accused defendant.

**School:** Rockford Manor Secondary School

**County:** Dublin

**Teacher:** Ms Kelly Ryan

**Student(s):** Manna Mathew, Sharal D'Costa

4562

**Title:** Is the Chinese government correct in limiting video game use in under 18s?

**Overview:** We will investigate the effects that video games have on people under the age of 18 and see the effect they have on academic performance.

**School:** Bush Post Primary School

**County:** Louth

**Teacher:** Ms Jennifer Hand

**Student(s):** Elizabeth Gillen, Rebecca Bothwell

4563

**Title:** Is too much choice a bad thing?

**Overview:** An investigation into testing if too much choice is a positive/negative implement.

**School:** St Aloysius College Carrigtwohill

**County:** Cork

**Teacher:** Mr Ryan Gallagher

**Student(s):** Lucy Kiely, Claire Kiely, Eve Ahern

4564

**Title:** Does music help cows to produce more milk?

**Overview:** We are investigating to see if music does help cows to produce more milk and which genre of music is best to produce more milk.

**School:** St Kieran's College

**County:** Kilkenny

**Teacher:** Mr David Hennessy

**Student(s):** John Hayes, John Davis

4565

**Title:** Does your body type affect the sports you pursue

**Overview:** Our project aim is to find out if a person's body type affects the choice they make regarding the sports they choose to pursue.

**School:** St Aloysius College Carrigtwohill

**County:** Cork

**Teacher:** Mr Ryan Gallagher

**Student(s):** Sarah Casey, Iuliana Ciolacu, Abbie Norton

4566

**Title:** Has online schooling stunted students' ability to learn?

**Overview:** Our project aims to investigate the impact online learning has had on student's ability to intake knowledge compared with more traditional forms of learning.

**School:** Mercy Secondary School

**County:** Kerry

**Teacher:** Miss Fiona O'Connor

**Student(s):** Julian McCormack, Milena Ustianowska, Abidat Babatunde

4567

**Title:** The Impact Social Media had during the Covid-19 Pandemic

**Overview:** A look into the impact of social media during the covid-19 pandemic.

**School:** Colaiste Dun an Ri

**County:** Cavan

**Teacher:** Ms Lorraine Hickey

**Student(s):** Molly McKeon, Jenny Morris

4568

**Title:** Does coloured paper make learning easier?

**Overview:** We want to find out whether coloured paper or white paper is easier to learn off through an investigation we are carrying out at school

**School:** Coláiste na Sceilge

**County:** Kerry

**Teacher:** Ms Marie O Sullivan

**Student(s):** Julie Nugent, Cate Conway

4569

**Title:** Breakfast anyone?

**Overview:** To see if there is any correlation between breakfast habits and nationalities and highlighting its importance.

**School:** Bishopstown Community School

**County:** Cork

**Teacher:** Ms Michelle O'Brien

**Student(s):** Aleksa Lajic, Carlotta Ferrieri Caputi

4571

**Title:** Does the amount of time teenagers spend online affect their internet safety

**Overview:** Our project involves a series of surveys to see if the amount of time if teenagers spend online affects their internet safety.

**School:** Castlecomer Community School

**County:** Kilkenny

**Teacher:** Ms Nora Henderson

**Student(s):** Nicholas McDonald, Michael Joyce, Aidan Brumby

## 4572

**Title:** Differences in phone usage across generations

**Overview:** investigating the differences in behaviours when using phones across generations

**School:** Coláiste Choilm

**County:** Cork

**Teacher:** Ms Caroline O'Sullivan

**Student(s):** Aifric Daly, Leah Carroll, Aideen Carberry

## 4574

**Title:** An analysis of the effect of social cliques on male adolescents today: a key aspect of society or a detriment to identity?

**Overview:** We plan to survey male students in our school to create an analytical report of their opinions on the effect of cliques on adolescents today.

**School:** Meánscoil na mBráithre Criostaí

**County:** Kilkenny

**Teacher:** Miss Dairine O'Connor

**Student(s):** Rohan Matthias Vargas, Joel Mathew

## 4575

**Title:** Any News?

**Overview:** A quantitative study of secondary school students' engagement with current affairs news.

**School:** Presentation Secondary School

**County:** Kerry

**Teacher:** Mr Daniel McKenna

**Student(s):** Aoibhe Horan, Luisne Corcoran

## 4576

**Title:** The effects of plants on the concentration and overall performance of secondary school students.

**Overview:** Our project will investigate how having plants in the classroom affects students' concentration. It will use a curated concentration test to hopefully, prove our hypothesis.

**School:** Blackwater Community School

**County:** Waterford

**Teacher:** Mr Paul Joyce

**Student(s):** Sylvie Topps, Karina Hartnett, Nan Farrow

## 4577

**Title:** Sexist Subject Stereotypes Suppress the Development of STEM Skills

**Overview:** We plan to develop a test that will see if students who study Metalwork, Woodwork and Technical Graphics have better cognition and other STEM skills.

**School:** St Mary's Secondary School Mallow

**County:** Cork

**Teacher:** Mr Rory Coote

**Student(s):** Clodagh Lehane, Camille Ní Shúilleabháin

## 4578

**Title:** An investigation into the effects of gaming among 12-18 year olds

**Overview:** Our group wants to determine if gaming disorder is a growing problem. We want to investigate the effects of gaming on general health

**School:** Scoil Pól

**County:** Limerick

**Teacher:** Ms Grace Garvey

**Student(s):** Conor Ó Regan, Cillian O Riordan, Joseph Fitzgerald

## 4579

**Title:** The effects of the COVID-19 pandemic on children with special needs

**Overview:** We'll be examining and researching the effects of the COVID-19 pandemic on children with disabilities, how lockdown and homeschooling affected their social & behavioural skills.

**School:** Dominican College

**County:** Dublin

**Teacher:** Ms Olivia Brien

**Student(s):** Alexandra Balasca, Sarah McLoughlin, Leah Robertson

## 4580

**Title:** Did COVID-19 increase anxiety in school students?

**Overview:** We are students in a DEIS school and found that students here thought that the environment from learning at home was challenging.

**School:** St. Kevin's Community College

**County:** Dublin

**Teacher:** Ms Aisling Guiney

**Student(s):** Ciara Byrne, Emily Do

## 4581

**Title:** What factors influence the perceived rate of exertion on students?

**Overview:** We are hoping to investigate the factors that affect the perceived rate of exertion on students such as music and group physical activity.

**School:** St. Brigid's Secondary School

**County:** Kerry

**Teacher:** Ms Siobhán Ahern

**Student(s):** Olivia Gaffey, Clodagh Lucey

## 4582

**Title:** How Covid-19 has impacted young athletes' mental health due to the lack of sport during lockdowns.

**Overview:** Our project aims to discover if team sports are more beneficial than other activities for the mental and physical health of young people

**School:** John The Baptist Community School

**County:** Limerick

**Teacher:** Ms Brid O'Dwyer

**Student(s):** Jean Donovan, Ciara Ryan, Ebony Gorski

## 4583

**Title:** Fighting Fast Fashion for our Future

**Overview:** To determine if an awareness campaign on the ethical and environmental impacts of fast fashion can change teenagers attitudes towards it.

**School:** St Columba's College

**County:** Donegal

**Teacher:** Mr Brian McCrea

**Student(s):** Theresa McMenamin, Cathal Cannon, Charis O'Donnell

## 4584

**Title:** Differences between boys and girl emotions during covid 19

**Overview:** This will investigate the difference between boys and girls emotions during covid 19 in a Irish perspective

**School:** Athlone Community College

**County:** Westmeath

**Teacher:** Mr Niall Carty



**Student(s):** Cian Mubiru McCormack, Frank Creavin, Thanh Mccay

**4585**

**Title:** The most effective method of reducing anxiety in secondary school students post covid

**Overview:** We aim to investigate which in school activities are most effective in reducing post covid return to school anxiety in students.

**School:** Abbey Vocational School

**County:** Donegal

**Teacher:** Ms Donna Furey

**Student(s):** Jane Faulkner, Amy McGroary, Jayne Glenn

**4586**

**Title:** Different Factors Affecting Participation in Sport Across Different Ages

**Overview:** We aim to investigate the different factors as to why people from all levels of society keep on, give up, or start sport.

**School:** St. Anne's Secondary School

**County:** Tipperary

**Teacher:** Ms Lorraine O Dwyer

**Student(s):** Aoife Culbert, Orla Kissane, Aoife O'Shea

**4587**

**Title:** Do school uniforms impact the rate of genderqueer or gender non conforming students getting hatecrimed or bullied ?

**Overview:** An investigation into the usage, acceptance and implementation of school uniforms by genderqueer and non-conforming students in secondary schools.

**School:** St Mary's Secondary School

**County:** Dublin

**Teacher:** Ms Eilish Coleman

**Student(s):** Jessica Bateson, Aline Azubike

**4588**

**Title:** Can you close the phishing door to ransomware?

**Overview:** Identifying people's likelihood of falling victim to a phishing attack and proposing a method of education to help foil these attacks.

**School:** Coláiste Choilm

**County:** Cork

**Teacher:** Mr Paudie Scanlon

**Student(s):** Sam O Riordan, Adam English, Caleb De Búrca

**4589**

**Title:** Staidéar ar cad a mheallann daoine óga chun bheith mar veigeatóir

**Overview:** Tá ár tionscainimh ag iarraidh fháil amach cad a mheallann daoine óga bheith mar veigeatóireachas, veigeaneachas nó ag laghdú an mead feoil a ithtear.

**School:** Coláiste Cois Life

**County:** Dublin

**Teacher:** Ms Rachel Holbrook

**Student(s):** Siofra Nic Reamoinn, Caoilfhionn Sheary

**4590**

**Title:** Explaining and simplifying the Covid-19 vaccine

**Overview:** We're using our project to better simplify and explain the COVID-19 vaccine for teens as we believe that the HSE's explanation is far too complicated.

**School:** Cross And Passion College

**County:** Kildare

**Teacher:** Mr Denis Dennehy

**Student(s):** Charlotte Darby, Emma Cremin

**4591**

**Title:** Periods, an analysis of the lived experience of menstruation for girls.

**Overview:** An investigation to discover if there is still a stigma surrounding menstruation, what interventions are possible and when should these interventions take place.

**School:** St Joseph's Secondary School, Rush

**County:** Dublin

**Teacher:** Ms Helen Teehan

**Student(s):** Karla McGee, Erin Daly, Rejoice MacHanson

**4592**

**Title:** How Cancel Culture Influences Irish Teenagers

**Overview:** The aim of our project is to investigate the effect of cancel culture on teenagers.

**School:** Loreto Secondary School

**County:** Kilkenny

**Teacher:** Ms. Laura Whelan

**Student(s):** Jade Bourke, Hannah O'Brien

**4593**

**Title:** Brain gaming and training.

**Overview:** This project will investigate the effect of brain games on memory training. Age will be considered as a factor that may impact the training process.

**School:** Meánscoil Na Mbráithre

**County:** Clare

**Teacher:** Ms Louise Kennedy

**Student(s):** Daniel Vaughan, Derry Lavender-Duncan

**4594**

**Title:** Deciphering Dyslexia: A Study in Orthographic Processing

**Overview:** We are investigating the orthographic processing level of dyslexic students to see if their education could be improved on from phonetic reading.

**School:** St Wolstan's Community School

**County:** Kildare

**Teacher:** Ms Paula Kirrane

**Student(s):** Charlotte Stevens, Maja Wirkus, Rachel McMahon

**4595**

**Title:** The Truth of Knowledge

**Overview:** We aim to find where young people get their information and whether or not they are aware of the reliability and credibility of their sources.

**School:** St Wolstan's Community School

**County:** Kildare

**Teacher:** Ms Louise Ward

**Student(s):** Orla Glennon, Cathy Manning

**4596**

**Title:** Online learning: An analysis of its effects on the mental health and academic performance among Irish secondary school students.

**Overview:** With our project, we aim to find out how online schooling affected the mental health and academic performance of Irish secondary school students.

**School:** Ardscoil Ris

**County:** Limerick

**Teacher:** Mr Jack Corrigan

**Student(s):** James Corcoran, Daniel McDonagh, David Moore



4597

**Title:** How does the influence of viral social media trends affect behaviour in a school environment?

**Overview:** How does the influence of viral social media trends affect behaviour in a school environment? A comparison between Primary and Transition Year students.

**School:** St Columba's College

**County:** Donegal

**Teacher:** Mr Brian McCrea

**Student(s):** Corey McCloskey, Cormac Morris, Grace O'Connor Donoghue

4598

**Title:** The Impact of Covid-19 on the Mental Wellbeing of Teenage Girls.

**Overview:** To investigate the effects of lockdown on teenage girls aged 13-17 and the ways in which it has affected their wellbeing.

**School:** Loreto Secondary School, Balbriggan

**County:** Dublin

**Teacher:** Mr Brian Higgins

**Student(s):** Laetitia Nouaha, Sidra Shahzad, Melissa Asare

4599

**Title:** How do parasocial relationships affect the wellbeing of teenage girls between ages 12-17?

**Overview:** Our project aims to investigate if parasocial relationships affect the well-being of teenage girls negatively or positively.

**School:** Loreto Secondary School, Balbriggan

**County:** Dublin

**Teacher:** Mr Brian Higgins

**Student(s):** Divine Eugene, Clarisse Kanku, Deborah Emeh

4600

**Title:** How do sensory products affect children on the Autism Spectrum?

**Overview:** Our project aims to find out if sensory products benefit children with autism and if so, what are these benefits?

**School:** Loreto Secondary School

**County:** Tipperary

**Teacher:** Ms Ciara Tyrrell

**Student(s):** Róisín O'Brien, Caoimhe Berrigan, Lucy Quirke

4602

**Title:** How does playing sport affect your mental health in your daily life

**Overview:** We are trying to find out how playing sport effects our mental health in are daily lives and does it have a positive or negative impact.

**School:** The Abbey School

**County:** Tipperary

**Teacher:** Ms Niamh McCarthy

**Student(s):** Phillip O'Neill, Joseph O Dwyer, Michael Gleeson

4603

**Title:** GPS Technology in Sports

**Overview:** We are looking specifically at the advantages and disadvantages of GPS tracking. How it can help players to be in the perfect condition to perform.

**School:** Cistercian College

**County:** Tipperary

**Teacher:** Ms Diane Armitage

**Student(s):** Dan Punch, James Liffey

4604

**Title:** The effect water quality has on the public's desire to sea swim

**Overview:** The purpose of our project is to determine if water quality affects the publics' desire to sea swim.

**School:** Holy Faith Secondary School

**County:** Dublin

**Teacher:** Ms Laura Tierney

**Student(s):** Amisha Dhele, Sophie Kilcullen, Livia Garg-Holohan

4605

**Title:** A tionchar a bhfuil ag Tim Tok ar déagóirí

**Overview:** Is é an tionscanamh a roghnaíamar ná an Tionchar a Bhfuil ag Tiktak ar déagóirí. Béamaid ag cruthú chun tuairimí déagóirí a fháil

**School:** Gaelcholáiste an Phiarsaigh

**County:** Dublin

**Teacher:** Bean Fionnuala Mhic an Bhreithimh

**Student(s):** Jerry de Faoite, Caitríona Ní Loinsigh, Yseult Nic Lochlainn

4606

**Title:** Does community matter?

**Overview:** We want to find a study on the impact of rural vs urban life on covid-19 compliance of Irish teenagers

**School:** Beara Community School

**County:** Cork

**Teacher:** Miss Cassandra Cremin

**Student(s):** Anna Downing, Molly Sullivan

4607

**Title:** How far are we from equality for LGBTQI+ people?

**Overview:** In our project we want to find how far Ireland really is from equality between sexualities and genders, and how far we are from equality.

**School:** Carrick-On-Shannon Community School

**County:** Leitrim

**Teacher:** Ms Anna-Marie Kelly

**Student(s):** Maria (Ria) Fallon, Amy McManus, Zemyna (Zoe) Zasytyte

4608

**Title:** Covid-19- Fake News VS Real news

**Overview:** Our project aims to find out how Covid-19 has affected social media

**School:** Laytown & Drogheda Educate Together Secondary School

**County:** Meath

**Teacher:** Ms Kayleigh Murray

**Student(s):** Raul Hoxha, Anemona Lazeta

4609

**Title:** How Supermarkets Attempt To Manipulate Their Customers

**Overview:** We discover the different ways supermarkets attempt to manipulate their customers by using sensory and psychological tricks on consumers while they are in the shop.

**School:** Castlecomer Community School

**County:** Kilkenny

**Teacher:** Ms Fiona Morrissey

**Student(s):** Thomas Daly, Evan O'Shea, Niall Kavanagh



4610

**Title:** The effects of make-up in Ireland

**Overview:** Our project is about the effects make-up can have on physical and mental health, and how it effects our views on social media.

**School:** Roscommon Community College

**County:** Roscommon

**Teacher:** Ms Elizabeth Glancy

**Student(s):** Olivia Croghan, Saoirse Croghan

## SENIOR GROUP

4700

**Title:** More Stress Less Success! A Statistical Analysis of Attitudes to the Leaving Certificate Post Covid-19

**Overview:** Stress and anxiety are infamously associated with the Irish Leaving Certificate. We will investigate the attitudes of parents, students, teachers to the Leaving post Covid.

**School:** Scoil Mhuire Strokestown

**County:** Roscommon

**Teacher:** Ms Mairead Glynn

**Student(s):** Kate Wallace, Katie-Tara English

4702

**Title:** An investigation into suicide rates in EU countries and the factors that affect them.

**Overview:** A Statistical Analysis And Psychological Study On Suicide Rates In Different EU Countries And How Different Factors Affect Them.

**School:** Mercy Secondary School

**County:** Kerry

**Teacher:** Miss Eimear Nolan

**Student(s):** Paula Holmes, Aoife Bourke

4703

**Title:** Are you SAD or have you S.A.D?

**Overview:** investigate seasonal affective disorder by varying lux values on different people. We will carry out surveys and aim to develop a Seasonal Affective Disorder lamp.

**School:** Scoil Pól

**County:** Limerick

**Teacher:** Ms Aisling O Connor

**Student(s):** Shane Shinnors, Aisling Daly, Daniel Gammell

4704

**Title:** Investigating the links between prenatal trauma, traumatic childbirth and adolescent mental health

**Overview:** A 5,000 people survey of the parents of 5 to 18 year old children investigating links between prenatal trauma, traumatic birth and adolescent mental health.

**School:** Cashel Community School

**County:** Tipperary

**Teacher:** Mr TJ Quinn

**Student(s):** Ava Abbott, Megan Kirby





## Young Scientist & Technology of the Year Limited

The BT Young Scientist and Technology Exhibition is the main activity of a charitable trust, Young Scientist and Technology Exhibition Limited. The charitable trust which has been in existence since 2003 and was set-up in order to create a separate corporate entity to protect and act as custodian for the YS&TE. The Company aims to build on the successful track record of the Young Scientist and Technology Exhibition ("Exhibition") and maintain and develop the integrity and identity of the Exhibition.

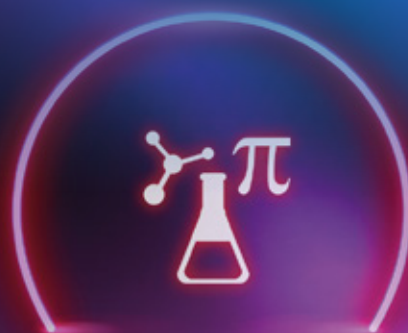
The trust has worked with some important entities outside and has granted licensing arrangements to stakeholders in Tanzania, Kenya and the United Arab Emirates to allow them to operate the Young Scientist model in these countries.

The first Young Scientist Tanzania took place in 2011. In 2018 the first Young Scientist Kenya was held in Nairobi and in 2019 the first United Arab Emirates edition took place.





# On stage



## SUSTAINABLE OUTER SPACE



There are currently more than 1,800 individual spacecraft which are orbiting our planet today and new, private companies are launching more and more of these craft to provide us with access to space.

Satellites have become essential to our everyday lives; we need them for a range of services - from banking to GPS navigation and from data transfer to internet and mobile phones. It is because satellites can look back at our planet that they provide us with valuable information on our weather and essential data so that we can monitor global issues such as climate change.

So, why does space sustainability matter? If outer space is not safe, secure, and peaceful, the ability to use it could be denied to every citizen of planet Earth. Our activities in space have created a field of debris and rubbish in space that threaten our access to space. This debris can stay in orbit for decades, even centuries. Astronauts on board the International Space Station must watch out for debris that could damage and potentially cripple the spacecraft. Space Weather can damage electrical components both in space and on the ground, disrupting our communications and navigation systems.

This highly visual presentation will explore sustainability in space topics and how humanity is beginning to address this problem in order for us to continue our open exploration and access to space for generations to come.



## PHYSICS OF ROLLERCOASTERS - TAYTO PARK ADVENTURE

Take off on an adventure to Ireland's only theme Park and Zoo, and discover the scientists and engineers who use their understanding of the natural world, to create out of this world experiences! Come along for the ride with Mark Langtry, the Science Guy on his journey to discover the science behind our thrills and meet some amazing animals!





## THE SCIENCE OF RAP THE KABIN IN THE NEIGHBOURHOOD

The Kabin studio, Cork. A community space that has grown out of a love for hip hop & original music.

Discover the music production process, the science and technology that fuels our creative expressions and meet some of the young people creating their own path in life, through a process of self expression, discovery and innovation. Mark Langtry, the Science Guy, joins forces with Garry McCarthy, aka GMC Beats to embark on a fusion of science and song writing.



## WORLD CUP PHYSICS

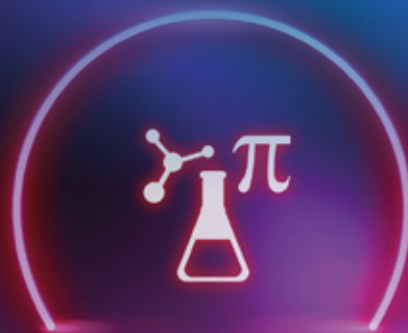
The beautiful game on the World's Biggest Stage! Epic goals, screaming fans, last minute winners & nail biting penalties! Lace up your boots, pull up your socks, and discover the physics at play in World Cup 2022, with physicist and professional footballer, Mark Langtry, the Science Guy at Explorium.



## PSYCHOLOGI-SCIENCE MAGIC WITH DAVID MEADE

Join BBC's David Meade for a roller coaster ride through the mind blowing ways your brain works. Do we all see the world in the same way? Can our eyes really deceive us? He'll boggle your mind with perception twisting illusions and jaw dropping demonstrations – and you'll even learn some of his tricks of the trade! Don't miss this once in a lifetime opportunity to lift the lid on your magical mysterious brain, and learn how the science of magic has truly changed the world!

# On stage



## SELF HELP AFRICA - FOOD FOR THOUGHT AND FOOD PRODUCTION

This On Stage slot will look at Climate Change in relation to Food Production, Edward Meleki our acting Country Director based in Malawi will lead the presentation, Edward is the Global Climate Change Agro Forestry and Natural Resource Management Advisor at Self Help Africa. The focus is on the Climate Emergency and the impact on countries in Africa, the challenge of climate change and food production globally and Self HelpAfrica's work in the area of Climate Smart Agriculture as well as other methods of reducing emissions and what the future of food production could look like.



## 'SPACE 2021: UPDATE AND HIGHLIGHTS'

The Space Round-Up Show will highlight some of the main space stories that hit the headlines in 2021 including Blue Origin and Virgin Galactic achievement of first crewed suborbital space flights, the launch of the James Webb Space Telescope and the landing of the Mars Perseverance mission. Interviews included in the show: Dr. Jancy McPhee, Director and Founder of SciArt Exchange, a space non-profit awarded \$1million from Blue Origin's Club for the Future in 2021; Dr. Morgan Fraser, Assistant Professor in School of Physics in University College Dublin, who tells us about the importance of the James Webb Space Telescope and what it means for the scientific community; Finally Kevin Nolan, Lecturer in Physics in TU Dublin, volunteer for the Planetary Society and author of 'MARS A Cosmic Stepping Stone' who explains the significance of the Mars Perseverance mission and how it relates to life here on Earth.

ESA/Hubble





### **INTERVIEW SERIES: CORMAC HARRIS & ALAN O'SULLIVAN**

2020 BT Young Scientists & Technologists talk about their winning project about Gender Bias which went on to win 1st place in the European Union Contest for Young Scientists.



### **INTERVIEW SERIES: GREG TARR**

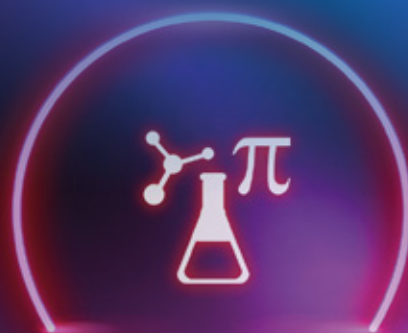
2021 BT Young Scientist & Technology winner Greg Tarr talks about his year since winning the Top Prize.



### **INTERVIEW SERIES: MARI CAHALANE**

Head of the BT Young Scientist & Technology Exhibition talks about the project and her involvement over the last 20+ years.

# On stage



## INTERVIEW SERIES: DAN HOBBS AND CIARAN O'MARA

An interview with BTYSTE & Bootcamp Alumni Dan Hobbs and Ciaran OMara who have cofounded a company together called Protex AI. Dan & Ciaran have been part of BTYSTE for well over 15 years, taking part in the Priamry Science Fair, BTYSTE and Bootcamp.



## INTERVIEW SERIES: YOUNG SCIENTIST KENYA

Interview with Fionnuala Quinlan - Ambassador of Ireland to Kenya and 2021 winners of YSK and Rehma and Mitchell about how Young Scientist Kenya works and what was it like winning the 2021 exhibition



## A DAY IN THE LIFE...

A day in the Life follows 4 real scientists undertaking their work on a daily basis - get a real behind the scences look at John Downey; Ketan Madane; Aaron O'Sullivan & Maria Ferreira Monteiro in action.



## METaverse – HYPE OR REALITY

Join BT's Dr. Nicola Millard and a team of young innovators from our global innovation headquarters in Adastral Park as they delve into the metaverse and what the world of augmented reality holds in store for us now, and in to the future.





connecting  
women in  
technology

## Bright Futures in Technology

### CWIT TECH STARTER

CWIT – Connecting Women in Technology and BT Young Scientist present a panel of inspiring people with the most diverse roles you can find in tech! Join us to learn about their careers, successes, challenges, and advices and discover the endless opportunities of a career in tech. Speakers: - **Nicola Millard** (BT) on the Future of work; - **Jostein Birkeland** (HPE) on sustainability; - **Liana Tomescu** (Microsoft) on Cyber Security; - **Lisa Simpson** (Deloitte) on Blockchain on Cloud; - **Rowan Kavanagh** (IBM) on Automation Our event will be emceed by Jess Kelly, Technology Correspondent and Presenter of Tech Talk on Newstalk.

### STRONG WOMEN SCIENCE FROM CIRCUS 250

A helter skelter performance from Strong Women in Science from Circus250 is dedicated to bringing circus to new audiences in unusual places. They make circus an t accessible of art forms, for everyone. Even in these challenging times, they work with you to bring invention and joy. they bring circus together with science, as we believe when science meets circus, anything's possible.

## Get the app

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

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



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# Exhibition hall



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AHEAD OF WHAT'S POSSIBLE™

## Analog Devices International (ADI)

Analog Devices International (ADI) was one of the first US high-tech companies to establish a presence in Ireland. Now employing 1,200 people at its original and main Irish hub, Analog Devices in Limerick is home to ADI's European Research and Development Centre, and Ireland global operations manufacturing facility and now also has established engineering centers in Cork and Dublin.

Analog Devices is a global leader in high-performance semiconductors for signal processing applications, and provides complete high-performance solutions that 'sense, measure, interpret, power and connect' across a wide variety of applications, including:

- Communications - Analog Devices is creating the next generation communications that will connect us regardless of where or how remote we are.
- Healthcare - Analog Devices is creating rapid disease detection technology that can quickly identify and prevent the spread of disease beyond patient zero.
- Automotive - Analog Devices' technology enables our customers design safer, greener, and more comfortable cars of the future.
- Consumer - Analog Devices improves people's lifestyles with technologies that seamlessly interface and interpret human senses to create immersive user experiences that help redefine the way people work, live, and engage.
- Industrial - Analog Devices is transforming industry to be more human and less industrial.
- Energy - Analog Devices' battery management systems are helping bring renewable energy to areas without electricity.

[www.analog.com](http://www.analog.com)



Supporting LGBTI+  
Young People in Ireland

## BeLong To Youth Services

BeLong To Youth Services is the national organisation supporting lesbian, gay, bisexual, transgender, and intersex (LGBTI+) young people in Ireland. Since 2003, we have worked

with LGBTI+ young people, between 14 and 23 years, to create a world where they are equal, safe, and valued in the diversity of their identities and experiences. We also advocate and campaign on behalf of young LGBTI+ people, and offer a specialised LGBTI+ youth service with a focus on mental and sexual health, alongside drug and alcohol support. We respond to the needs of LGBTI+ young people in Ireland and we help them thrive.

[www.belongto.org](http://www.belongto.org)



## BT

We connect for good! BT is one of the UK's biggest telecommunications and network providers. We've also got a global presence providing customer solutions in 180 countries.

[bt.com](http://bt.com)



## CISCO

We are Cisco

Cisco didn't just build the Internet. We keep building it. And while our technology helps to connect the unconnected and inspires the world — that's not where our edge comes from.

It comes from our people.

We don't just dream it, we do it every day at Cisco. And we're doing it faster than ever before, in ways no one else can.

To find out more about a career at Cisco visit:

[www.cisco.com/c/en/us/about/careers/we-arecisco.html](http://www.cisco.com/c/en/us/about/careers/we-arecisco.html)



## Cook Medical

Since 1963, Cook Medical has worked closely with physicians to develop technologies that eliminate the need for open surgery. Today we invent, manufacture, and deliver a unique portfolio of medical devices to the healthcare systems of the world. Serving



patients is a privilege and we demand the highest standards of quality ethics, and service. We have remained family owned so that we have the freedom to focus on what we care about: our patients, our employees, and our communities.

Find out more at **CookMedical.eu** and for the latest news, follow us on Twitter, Facebook and LinkedIn.



## Central Statistics Office

The Central Statistics Office (CSO) is Ireland's national statistical office. Formed in 1949, our mission is to:

Provide high quality information, both for evidence-based decision-making and to support accountability.

The CSO regularly takes general and specific surveys of households, individuals and businesses such as the Survey on Income and Living Conditions, the Labour Force Survey, the Household Budget Survey, the National Travel Survey and the Household Finance and Consumption Survey.

Using the data collected, we produce over 300 releases & publications each year. Some of our general statistical publications include the Statistical Yearbook of Ireland, Measuring Ireland's Progress and Women and Men in Ireland.

Our Values are:

- Independence, objectivity and integrity are core values
- We ensure absolute adherence to the legal guarantee of confidentiality and all activities comply with statistical and data protection legislation
- We drive innovation throughout all our business and organisational processes
- We are professional, reliable and trusted
- We have respect for our data providers and are committed to finding new ways to reduce the demands placed on them
- We constantly strive to provide excellent service to our customers
- We value our staff and strive to provide an environment in which staff meet their full potential and flourish at work

The CSO is an independent Office and the Director General of the CSO has sole responsibility in relation to professional statistical matters.

**www.cso.ie**

## connecting women in technology

### Connecting Women in Technology (CWIT)

Connecting Women in Technology is a network of Irish based technology companies who all share a common goal to support the development of women in the technology industry. Founded by Accenture, Dell and Microsoft in 2009, the network today spans over 20 leading multinational technology companies, who all collaborate to attract, promote and encourage women in STEM careers.

Through our Education and Early Career pillars we support and run a number of programmes aimed at encouraging young females to understand what a career in a technology company looks like and the many opportunities available to them by studying a STEM subject.

**STEM Teacher Internships.** The objective of the programme is to provide pre-service teachers with first-hand experience of working in technology sector, dispel any misconception they may have about what type of people work in the sector and expose them to sheer variety of roles that exist and career paths that people take.

**Tech Starter.** A panel discussion style event organised delivered in universities to STEM students. The aim of Tech Starter is reduce the numbers of female dropouts from STEM degrees and increase the number of students who enter STEM/technology roles after graduation.

**Digital Futures** is a program developed to raise students' awareness of the diverse nature of career opportunities in the technology sector and promote STEM careers throughout Ireland. The program consists of an interactive presentation designed to be delivered in secondary schools and is ideally suited for Transition year students (Age 15-18), before they choose their Leaving Cert subjects.

We also partner with Teen-Turn to influence course decision-making processes, inform participants on education and career options and combat stereotypes by strategically changing how girls identify with technology career environments through work placements and after school activities.

**contact@cwit.ie**  
**www.cwit.ie**





## Dublin City University

Welcome to the DCU Faculty of Science and Health.

A place to discover, problem solve, experiment and explore. An inclusive environment that serves to innovate and inspire. Our internationally recognised centre of excellence thrives on the enthusiasm and dynamism of its people.

Our Mission is to foster and deliver education, research, and professional and practice development in science and health that is of national and international significance. Together the seven Schools and Centres provide a unique set of synergies to advance education and research in science and health and to support DCU to pursue its goals to transform lives and society. Staff in the Faculty have strong links to industry and also work closely with a range of community, health, and education organisations within the local community.

[www.dcu.ie/science-and-health](http://www.dcu.ie/science-and-health)

*Lilly*

## Eli Lilly Kinsale Ltd

Lilly was founded in 1876 by Colonel Eli Lilly, a man committed to creating high-quality medicines that met real needs in an era of unreliable elixirs peddled by questionable characters.

More than 140 years later, we remain committed to his vision through every aspect of our business and the people we serve starting with those who take our medicines, and extending to health care professionals, employees and the communities in which we live.

Lilly has been operating in Ireland since 1978 and today the company employs almost 2,000 people, with an additional 500 outsourced and contract staff involved in the provision of day-to-day support services for the company's operations here.

Lilly's first investment in Ireland began in 1978, with the purchase of a farm in the West Cork countryside, near Kinsale. Today, that site has grown to a vast high-technology manufacturing campus that employs over 900 people and uses complex chemical synthesis and biotechnology manufacturing processes to make active ingredients for Lilly medicines.

Established in 2010, our Global Business Solutions (GBS) centre in Little Island, Cork city has evolved from shared service provider to global business partner across many of Lilly's key business units.

Through the centralisation, standardisation and optimisation of complex processes, GBS Cork provides innovative solutions that add value in a number of diverse areas including finance, supply chain, HR data management, customer support, clinical trial capabilities and more. Currently it employs over 800 employees across 38 nationalities, speaking 35 languages.

Lilly was named the Cork Chamber of Commerce "Cork Company of the Year" in May 2021, with a winning joint submission by Kinsale manufacturing and the Cork Global Business Solutions centre.

The accolade was awarded to Lilly based on a combined 50 years of investment, innovation and positive impact within the Cork region.

[www.lilly.ie](http://www.lilly.ie)



**Geological Survey**

Suirbhéireacht Gheolaíochta  
Ireland | Éireann

## Geological Survey Ireland

Founded in 1845, Geological Survey Ireland is Ireland's public earth science knowledge centre and is a division of the Department of the Environment, Climate and Communications.

We are committed to providing free, open and accurate data and maps on Ireland's subsurface to landowners, the public, industry, and all other stakeholders, within Ireland and internationally.

In addition, we act as a project partner in interpreting data and developing models and viewers to allow people to understand underground.

We deal with a diverse array of topics including bedrock, groundwater, seabed mapping, natural disasters, and public health risks.

Geological Survey Ireland also provides a Duty Geologist service to the public to address geological queries and concerns, please email [duty.geologist@gsi.ie](mailto:duty.geologist@gsi.ie).

[www.gsi.ie](http://www.gsi.ie)





## Greencoat Renewables

Greencoat Renewables PLC is an investor in euro-denominated renewable energy infrastructure assets. Initially focused solely on the acquisition and management of operating wind farms in Ireland, the Company is now also investing in wind and solar assets in certain other European countries with stable and robust renewable energy frameworks. It is managed by Greencoat Capital LLP, an experienced investment manager in the listed renewable energy infrastructure sector.

[www.greencoat-renewables.com](http://www.greencoat-renewables.com)



## .IE

.IE is the national registry for .ie domain names and the trusted and progressive guardian of Ireland's unique online .ie address. Our purpose is to enable and empower people, communities, and businesses across Ireland to thrive online.

We operate the domain name system (DNS) for the .ie namespace, facilitate an independent dispute resolution service, and operate a public WHOIS lookup service for .ie domains.

In cooperation with our Registrars, technical partners, and stakeholders, we help advance Ireland's internet ecosystem. Good governance is evidenced in our policy development process for the .ie namespace, which follows a bottom-up, consensus-driven approach through a multi-stakeholder Policy Advisory Committee.

At .IE we are committed to digital advocacy for SMEs and for local communities. Through stakeholder engagement initiatives such as .IE Digital Town, we work with and support SME organisations to improve their members' online presence and e-commerce capabilities so they can unlock the power of the internet to boost sales to local consumers.

We also produce fact-based research for the business community and policymakers, such as the .IE Domain Profile Report and the .IE Tipping Point, which charts the attitudes to digital of Irish SMEs and consumers during the Covid-19 pandemic.

There are over 329,000 .ie domain names registered. Since March 2018, it is easier and faster to register a .ie domain. As part of the domain registration process, every applicant must provide tangible evidence of a connection to Ireland.

[www.weare.ie](http://www.weare.ie)

## IOP Institute of Physics

### Institute of Physics

Physics uncovers the secrets of the world around us and addresses some of the biggest challenges facing society today. How can we design buildings that make our cities healthier and more sustainable? Digital technology is in our pockets and built into our homes but how does it actually work? How can we use physics to better understand the environment around us?

The Institute of Physics (IOP) is a leading scientific society promoting physics and bringing physicists together for the benefit of all.

For physics • For physicists • For all

[www.iop.org/explore-physics](http://www.iop.org/explore-physics)



Oifig Maoine  
Intleachtúla na hÉireann  
Intellectual Property  
Office of Ireland

## Intellectual Property Office of Ireland

The Intellectual Property Office of Ireland, IPOI (formally Patents Office) is a statutory office and operates under the aegis of the Department of Enterprise, Trade and Employment. The role of IPOI is to provide an efficient and effective system of industrial property protection. This is to be achieved through the protection of industrial property rights in the fields of patents (for inventions, function), trade marks (name, logo, slogans) and designs (appearance, shape & configuration). For more information on intellectual property, you can check out [www.ipoi.gov.ie](http://www.ipoi.gov.ie) or follow us on Facebook.

[www.ipoi.gov.ie](http://www.ipoi.gov.ie)



## Irish Aid

Welcome to the Irish Aid virtual stand!

Students and teachers are welcome to join the Irish Aid Centre to participate in a series of virtual interactive workshops and have a look at our new post-primary resources available at <https://www.irishaid.ie/teaching-and-learning/postprimary/>. The workshops are guided by experienced facilitators using activities to explore the work of Irish Aid and the UN Sustainable Development Goals.

Irish Aid, Ireland's development cooperation programme aims to reduce poverty, hunger and humanitarian need, with a particular focus on sub-Saharan Africa. By supporting long term development and providing humanitarian assistance in over eighty countries, on behalf of the Irish people, we are helping to build better futures for some of the world's poorest communities.

A Better World, Ireland's policy for international development, provides the framework for Ireland's expanding development cooperation programme in the decade ahead. It charts a clear way forward to achieve our ambition of a more equal, peaceful and sustainable world, shaping and protecting our stability, our prosperity, our shared interests and our common future.

Ireland's international development priorities, as outlined in A Better World, are: Reducing Humanitarian Need, Climate Action, Gender Equality and Strengthening Governance. We focus on areas where Ireland has proven expertise and can make a real difference, including in conflict prevention and resolution, humanitarian action, agriculture and nutrition, health, social protection and education.

Ireland is playing its part in addressing poverty, injustice and damage to our planet, achieving the Sustainable Development Goals, while at all times, trying to focus our efforts on reaching those furthest behind first.

[www.irishaid.ie](http://www.irishaid.ie)



## Irish Science Teachers' Association

The Irish Science Teachers' Association (ISTA), is the Professional Association for the Teachers of Science in the Republic of Ireland. ISTA was founded in 1961 and has over 1400 members from all sectors of education in fourteen Branches nationwide. The ISTA functions as a body dedicated to the professional development of its members and the advancement of science teaching.

Membership is open to teachers of science and others involved in science education. The Association works to develop co-operation between teachers of science at all levels. It aims to keep members up to date with changes in their subjects and with new ideas in teaching, learning and assessment. The ISTA helps members to promote a positive attitude amongst their students towards science and technology in society.

[www.ista.ie](http://www.ista.ie)



## Maynooth University

Maynooth University is an internationally recognised institution located 25 kilometres outside of Dublin, Ireland, and is the nation's fastest growing university.

One of four constituent universities of the National University of Ireland, Maynooth University in 2021 placed #88 in the global top 100 universities under 50 years old in the Times Higher Education World University Rankings.

On 16 June 2017, Maynooth University celebrated its 20th birthday, having been formally established as an autonomous university in 1997. Yet, it traces its origins to the foundation of the Royal College of St. Patrick in 1795, drawing inspiration from a heritage that includes over 200 years of education and scholarship.

Today, Maynooth University is a place of lively contrasts—a modern institution, dynamic, rapidly growing, research-led and engaged, yet grounded in historic academic strengths and scholarly traditions.

With 14,000 students from more than 90 countries, Maynooth offers a range of programmes at undergraduate, Master's and PhD level in the humanities, science and engineering, and





social sciences, including business, law, and education. The University also offers a range of international programmes and partnerships.

Maynooth's unique collegial culture fosters an interdisciplinary approach to research, which its worldclass academics bring to bear in tackling some of the most fundamental challenges facing society today. The University's research institutes and centres consolidate and deliver this impact as vibrant communities of learning, discovery and creation. Research at Maynooth also is very much central to its teaching, and the University prides itself on placing equal value on its research and teaching missions.

In addition to being named in THE's Top 100 Under 50, Maynooth University is recognised among the top 350 universities in the world, the top 200 European universities, and as one of the top 200 universities for international connections and outlook.

[www.maynoothuniversity.ie](http://www.maynoothuniversity.ie)



## Perrigo

Perrigo Company plc is a leading provider of Quality, Affordable Self-Care Products and over-the-counter (OTC) health and wellness solutions that enhance individual well-being by empowering consumers to proactively prevent or treat conditions that can be self-managed. Led by its consumer self-care strategy, Perrigo is the largest store brand OTC player in the U.S. in the categories in which it competes through more than 9,000 SKUs under customer 'own brand' labels. Additionally, Perrigo is a Top 5 OTC company by revenue in Europe, where it markets more than 200 branded OTC products throughout 28 countries. The Company also commercializes and manufactures generic prescription products in the U.S.

Visit Perrigo online at [www.perrigo.com](http://www.perrigo.com)



## RTÉ | Raidió Teilifís Éireann

Ireland's National Public Service Multimedia Organisation

**Website:** [www.rte.ie/learn](http://www.rte.ie/learn) | **Email:** [info@rte.ie](mailto:info@rte.ie)



## Sightsavers Ireland

Founded in 2003, Sightsavers Ireland envisions a world where no one is blind from avoidable causes and where people with disabilities participate equally in society. Sightsavers Ireland works with Sightsavers globally, through an affiliate agreement, to eliminate avoidable blindness and promote the rights of people with disabilities in 30 countries focussing on Africa and Asia. We seek to contribute to the Sightsaver's global mission through the provision of steady and dependable funding from the Irish market, securing and managing funding from the Irish government, and engaging and influencing the Irish public and policy/decision makers on matters relating to eye health and social inclusion in low and middle-income countries.

[www.sightsavers.ie](http://www.sightsavers.ie)



## Self Help Africa

Self Help Africa is an Irish based international development organisation that works through agriculture and agri-enterprise to lift rural poor households out of poverty.

The approach is of 'a hand up and not a hand out,' and of working in collaboration with communities and local partners to increase the productivity and profitability of small farms, and support households to access markets where they can sell their produce.

For more than 35 years, Self Help Africa has been assisting rural poor households to grow more, to diversify what they grow, and to develop opportunities that can allow them to generate an income from their efforts.

### SCIENCE FOR DEVELOPMENT AWARD

For more than 15 years, Self Help Africa has attended the BT Young Scientist and Technology Exhibition, and in collaboration with Irish Aid, the Irish government's overseas development agency, has presented the 'Science for Development Award.'

This award is a special category prize that is presented by the adjudicators each year to a student entry that addresses a challenge affecting people in countries of the Global South. Past winners of the award have included student entries that have looked at solar water purification methods, dairy pasturisation,



fuel-saving cooking devices, seed planting devices, and at issues of health.

Since its inception the Science for Development Award has enabled prize-winning students and their teachers to travel with Self Help Africa to countries in sub-Saharan Africa to deliver peer presentations of their work, and to undertake further research into their projects. These visits are made possible thanks to a travel bursary prize awarded by Irish Aid.

## SSPC

### SSPC

SSPC, the Science Foundation Ireland (SFI) Research Centre for Pharmaceuticals, is a hub of Irish research expertise developing innovative technologies to address key challenges facing the pharmaceutical and biopharmaceutical industry. The aim of SSPC is to deliver industry-relevant technical solutions, which result in job growth and retention within this sector in Ireland and grow the skills base of qualified scientists and engineers.

The research carried out by SSPC crosses the pharmaceutical production chain from molecule to medicine, with the objective of gaining a better understanding of mechanisms, controlling processes, and predicting outcomes for the efficient and environmentally sustainable production of safe medicines.

The SSPC Education and Public Engagement (EPE) programme plays a key role in communicating the importance and value of science to the wider society in Ireland.

SSPC's EPE programmes incorporate customised, context-based activities for each stage of the Irish primary and post-primary educational systems. Additional programmes designed for third/fourth level students, industry, and the general public also play a role in the EPE strategy to promote engagement with SSPC's research, as well as to create a dialogue among all participants about Science, Technology, Engineering, Mathematics and Medicine (STEMM), particularly in the area of chemistry and pharmaceutical manufacturing.

## stripe

### Stripe

Stripe is a technology company that builds economic infrastructure for the internet.

Businesses of every size—from new startups to public companies—use our software to accept online payments and run technically-sophisticated financial operations in more than 140 countries.

Stripe helps new businesses to get started and grow their revenue, and works with established companies to accelerate into new markets and launch new business models. Over the long term, Stripe aims to increase the GDP of the internet.

Stripe Press is an imprint by Stripe that publishes books about economic and technological advancement.

We partner with millions of the world's most innovative businesses, and these businesses are the result of many different inputs. But perhaps the most important ingredient is "ideas".

Stripe Press is a way for us to highlight ideas that we think can be broadly useful. Some of our books contain entirely new material, some are collections of existing work that have been reimagined, and others are re-publications of previous works that have remained relevant over time or have renewed relevance today.

To celebrate this year's exhibition, we are gifting 1,000 books to eligible students. You can browse the magazine rack to enter the book giveaway and read the first chapter of some of our favourite Stripe Press titles right here in our exhibition stand.

Learn more about Stripe and our users at [stripe.com](https://stripe.com)



### Teagasc - Agriculture and Food Development Authority

Teagasc – the Agriculture and Food Development Authority – is the national body providing integrated research, advisory and training services to the agriculture and food industry and rural communities in Ireland.

We invite you to find out more about the research we do and the education courses we offer at BTYSTE 2022.







The Teagasc special award at BTYSTE 2022 is presented to the project that best demonstrates a thorough understanding of the science of agricultural or food production, or the use of science to improve technologies available to agricultural or food production.

[www.teagasc.ie](http://www.teagasc.ie)



## Trinity College Dublin

### Science, Technology, Engineering and Mathematics at Trinity College Dublin

We believe that Science, Technology, Engineering, and Mathematics (STEM) have the power to change the world. Our mission at Trinity is to enable our staff, students and graduates to harness that power to tackle the global challenges facing society and help us all to live better, more fulfilling lives on a healthy planet.

Trinity College Dublin is ranked 1st in Ireland and in the top 100 world universities by the QS World University Rankings. At Trinity you will learn from professors who are global leaders in their research fields and inspiring teachers. You can choose a range of undergraduate degree courses in disciplines such as Computer Science, Engineering, Genetics, Biological, Chemical, Physical and Environmental Sciences Courses. Course details can be found at <https://www.tcd.ie/study/assets/PDF/TCDUndergrad-Prospectus-2021.pdf>. What we offer is rigorous and internationally recognised training in your chosen field, along with demonstrated transferable skills.

In STEM all our undergraduate students undertake a capstone research project either in Trinity, via international placement or in industry. We train our graduates using state-of-the-art facilities and equipment. Our graduates become the thought-leaders and entrepreneurs of the future.

E3: Representing Engineering, Environment and Emerging Technologies, E3 is a radically new type of collaboration between the Schools of Computer Science and Statistics, Engineering and Natural Science. E3 graduates across all its constituent disciplines will share an experience of having learnt and worked in a multidisciplinary environment, been educated by world-leading experts in areas of their specialisation and benefitted from best-in-class pedagogy. E3 graduates will be flexible, adaptable and creative individuals who bring deep disciplinary knowledge and problem-solving expertise to any

problem they are presented with. Further details on E3 can be found at [www.tcd.ie/e3/](http://www.tcd.ie/e3/)

If you have any further questions please contact Ms. Gobnait O'Shaughnessy EU Student Recruitment Manager, [gosaugh@tcd.ie](mailto:gosaugh@tcd.ie)

[www.tcd.ie](http://www.tcd.ie)



## VEI Global

VEI Global is a market leader in providing innovative technology services and solutions for our clients. We excel in delivering multi-site IT deployment projects across all sectors around the globe. Our focus is on providing the best support service capabilities for our clients, where all requests are managed day or night.

We specialise in the delivery of IT and Telecoms solutions including; WiFi, LAN/WAN/SD WAN, IPT, Contact Centre, UC&C, Circuit Connectivity. Our clients include some of the largest Global Service Providers and Systems Integrators. We have completed Digital Transformation and Network upgrade Projects for some of the most recognised brands in the world.

VEI Global continuously focus on upskilling and training our teams so we have the skillsets required to deliver the best technology and solutions for our clients. We specialise in providing white label services for clients in a trusted partnership approach. VEI staff are an extension of our client partner's support teams for their own end-customers.

We provide our global clients with expert outsourced managed services in a range of engagement models from Outsourced Helpdesk Support to Multi-Channel Support Services to Security and Expert Placements.

We are actively recruiting talented professionals to join our rapidly growing team. We have several opportunities to work from our Irish headquarters or internationally. Our Irish headquarters in Naas, Co Kildare, is just 20 minutes from Dublin City Centre.

[www.vei.global](http://www.vei.global)





## Introducing Patrons, our BT YSTE 2022 portal challenge!

The BT Young Scientist & Technology Exhibition is a rich source of project entries, STEM talks and shows, partner and exhibitor showcases, and lots more.

Due to the pandemic, it's all sitting on our virtual portal, enabling you to access it for free wherever you are in the world.

By way of a thank you for registering for the exhibition, we've added Patrons, our portal challenge, giving visitors, like you, the chance to be in the draw for prizes as you make your way around the jam-packed virtual exhibition.

### HOW IT WORKS

- When you register on the portal to take part in our Patrons challenge, you can collect points as you move around the virtual site
- You earn 100 points by even registering, so that's a good start!
- If you visit some of our amazing exhibitor stands, you could earn another 100 points, and visits to certain On Stage shows could earn you up to 150 points
- On each day of the exhibition (12th-14th January), we will randomly pick winners from a list of people who earned 1,000 points that day. The prize money for the three names picked out of the virtual hat in the following order is: 1st - €500, 2nd - €350, 3rd - €150
- And to top it all off, the super surfers who earn 1,000 on each of the three days of the exhibition, will have the opportunity to be part of an overall draw held on the 19th January. The lucky winner gets €1,000 prize money!

Go to [portal.btyoungscientist.com](https://portal.btyoungscientist.com)





# DRIVEN BY I



**1965**

John Monahan



**1966**

Máire Caitríona Ní  
Dhomhnaill / Mary Finn



**1967**

Walter Hayes R.I.P.



**1968**

George Andrew  
Reynolds



**1969**

Luke Drury



**1975**

Noel Boyle



**1976**

Mary Kelly-Quinn



**1977**

Micheal O'G'Brain



**1978**

Donald P McDonnell



**1979**

Jervis Good



**1980**

Karen Ruddock



**1987**

Emma Donnellan,  
Henry Byrne



**1988**

Siobhan Lanigan  
O'Keefe



**1989**

Grace O'Connor,  
Sinead Finn



**1990**

Anna Minchin-Dalton



**1991**

Barry O'Doherty,  
Daniel Dundas



**1992**

Elizabeth Dowling,  
Jean Byrne R.I.P.



**1999**

Sarah Flannery



**2000**

Thomas Gernon



**2001**

Shane Browne,  
Peter Taylor,  
Michael O'Toole



**2002**

David Michael  
O'Doherty



**2003**

Adnan Osmani



**2004**

Ronan Larkin



**2011**

Alexander Amini



**2012**

Eric Doyle,  
Mark Kelly



**2013**

Ciara Judge,  
Emer Hickey,  
Sophie Healy-Thow



**2014**

Paul Clarke



**2015**

Ian O'Sullivan,  
Eimear Murphy



**2016**

Diana Bura,  
Maria Louise Fufezan

# INNOVATION



**1970**

Maria Edgeworth



**1971**

Peter Short



**1972**

Seán Mac Fheorais



**1973**

Tadgh Begley



**1974**

Richard Elliott



**1981**

Catherine Conlon



**1982**

Martynn Sheehan



**1983**

William Murphy,  
Gareth Clarke,  
Turan Mirza



**1984**

Eoin Walsh



**1985**

Ronan McNulty



**1986**

Breda Maguire,  
Niamh Mulvaney



**1993**

Donal Keane,  
Rodger Toner



**1994**

Jane Feehan



**1995**

Brian Fitzpatrick,  
Shane Markey



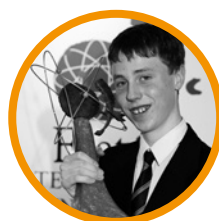
**1996**

Elsie O'Sullivan,  
Rowena Mooney,  
Patricia Lyle



**1997**

Ciara McGoldrick,  
Emma McQuillan,  
Fiona Fraser



**1998**

Raphael Hurley



**2005**

Patrick Collison



**2006**

Aisling Judge



**2007**

Abdusalam  
Abubakar



**2008**

Emer Jones



**2009**

John D. O'Callaghan,  
Liam McCarthy



**2010**

Richard O'Shea



**2017**

Shane Curran



**2018**

Simon Meehan



**2019**

Adam Kelly



**2020**

Alan O'Sullivan,  
Cormac Harris



**2021**

Greg Tarr



**2022**

Winner announced  
Friday 14th January

# THE PRIMARY SCIENCE FAIR

BT YOUNG SCIENTIST  
& TECHNOLOGY Exhibition

The Primary Science Fair has been an integral part of the BT Young Scientist & Technology Exhibition since it was developed in conjunction with the Department of Education and Skills in the early 2000's. The Primary Science Fair is designed to showcase the wonderful work undertaken in schools through the social, environment and scientific education primary curriculum. The curriculum is a wonderful way of teaching primary pupils how to explore the world around them through research and discovery. Why not check out the content available on our Educator Hub!

Are your 3rd, 4th, 5th and 6th class students going to be exploring the curriculum and having fun with science? If so, then why not consider entering a class project in The Primary Science Fair @BTYST. For your students, it is an opportunity to get them excited about STEM and encourage them to harness their creativity in an interesting and practical way. For teachers, it is an opportunity to showcase the high standard of science activities in your school to parents, students, and your community.

The Primary Science Fair is set to take place on Tuesday 29th and Wednesday 30th March 2022.

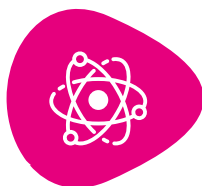
We encourage your school and pupils to be part of this brilliant platform for inspiring young students and fostering a lifelong interest in STEM. We'd like them to present their ideas based on the curriculum and follow a simple application process which is outlined on our dedicated Primary Science Fair website.

We will update you with more information in January 2022.

**GET YOUR APPLICATION READY AND  
BE PART OF THE MAGIC!**



LIVING THINGS



MATERIALS

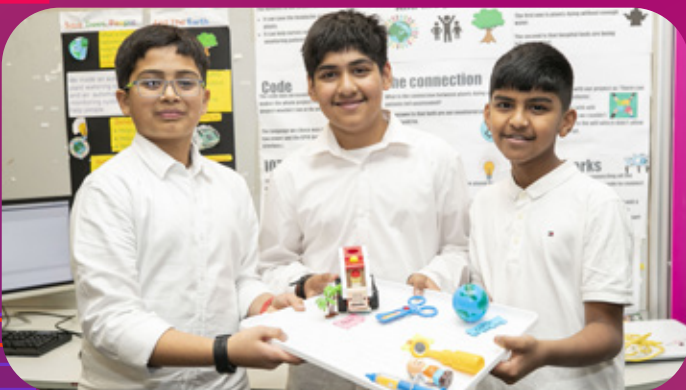


ENVIRONMENTAL AWARENESS  
AND CARE



ENERGY AND FORCES





## FOR FURTHER INFORMATION

please visit  
email  
or telephone

[btyoungscientist.com/the-primary-science-fair-at-btyste](https://btyoungscientist.com/the-primary-science-fair-at-btyste)  
[primarysciencefair@bt.com](mailto:primarysciencefair@bt.com)  
1800 924 362

# BT YS Business Bootcamp

## Programme for students

A number of the exhibiting intermediate and senior students from the 2022 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.

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.

### 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

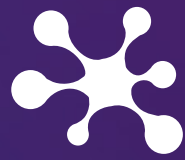
We at BT believe that the BT Young Scientist Business Bootcamp helps to bridge the gap between the worlds of education and business and mentor the next generation of young innovators and entrepreneurs.



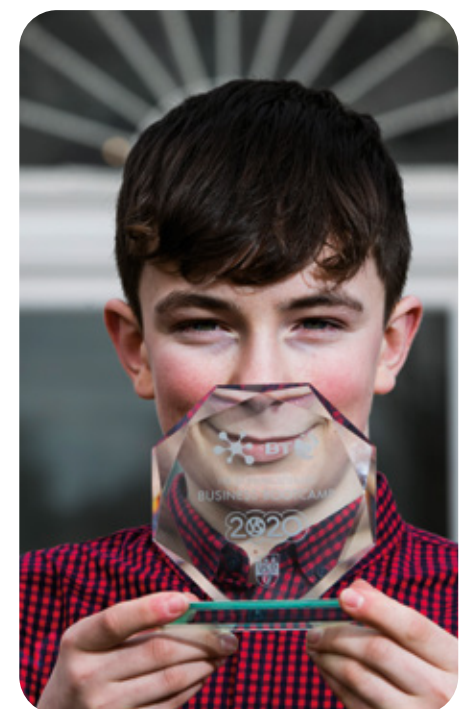
in association  
with UCD Innovate

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.





THE BT YOUNG SCIENTIST  
BUSINESS BOOTCAMP



# Events schedule

## Wednesday 12th January



8am – Taoiseach Welcome Video

8.30am

Good luck messages

8.45am

RTÉ Tops tips on what to visit/watch today

9am

World Cup Physics

9.30am

Interview series  
- Greg Tarr

9.45am

Mark the Science Guy  
followed by A Day in the Life

10am

Psychologi-Science Magic  
with David Meade

10.30am

Cleaning up our oceans

11am

Sustainable Outerspace

11.30am

Interview series  
- Mari Cahalane

12noon

Cancer: a formidable adversary  
- but science is fighting back

12.45pm

Strong Women Science  
Workshop

1pm

BTYSTE 2022  
Opening ceremony

1.30pm

Psychologi-Science Magic  
with David Meade

2pm

'Space 2021:  
update and highlights'

2.30pm

Strong Women Science  
Workshop

3pm

Physics of Roller-coasters  
- Tayto Park Adventure

3.30pm

Self Help Africa - Food For  
Thought and Food Production

4pm

Science of Rap - The Kabin in  
the Neighbourhood

4.30pm

Cleaning up our oceans

5pm

CWIT  
Bright Futures in Technology

5.30pm

Day one highlights

6pm - 12 midnight **Free access to the daily shows**



# Events schedule

Thursday 13th January



8.30am

Good luck messages

8.45am

RTÉ Tops tips on what to  
visit/watch today

9am

Day One highlights followed  
by Science of Bees

9.15am

Psychologi-Science Magic  
with David Meade

9.45am

Mark the Science Guy  
followed by A Day in the Life

10am

Sustainable Outerspace

10.30am

Climate Self Help Africa  
Coping with Climate Change

11am

Physics of Roller-coasters  
- Tayto Park Adventure

11.30am

Interview series - Cormac Harris  
& Alan O'Sullivan

11.45am

Science of Bees

12noon

Strong Women Science  
Workshop

12.30pm

Interview series - Dan Hobbs  
& Ciaran O'Mara

1pm

Science of Rap - The Kabin in  
the Neighbourhood

1.30pm

Cleaning up our oceans

2pm

Psychologi-Science Magic  
with David Meade / Nextipedia

2.30pm

World Cup Physics

3pm

Tackle your feelings

3.30pm

'Space 2021:  
update and highlights'

4pm

Vaccines

5pm

Metaverse and  
Augmented reality

5.30pm

Day two highlights

6pm - 12 midnight **Free access to the daily shows**

# Events schedule

Friday 14th January



8.30am

Good luck messages

8.45am

RTÉ Tops tips on what to visit/watch today

9am

Day Two highlights / Mark the Science Guy & a day in the Life

9.15am

Psychologi-Science Magic with David Meade

9.45am

Mark the Science Guy followed by A Day in the Life

10am

Physics of Roller-coaster - Tayto Park Adventure

10.30am

Interview Series - YSK

11am

Strong Women Science Workshop

11.30am

Sustainable Outerspace

12noon

Science of Rap - The Kabin in the Neighbourhood

12.30pm

The Science of Bees

12.45pm

Mark the Science Guy / Doireann, Donnacha, Karl

1pm

BT Young Scientist & Technology Exhibition 2022  
Awards ceremony

2.30pm

Psychologi-Science Magic with David Meade

3pm

Strong Women Science Workshop

3.30pm

'Space 2021: update and highlights'

4pm

Play back of awards ceremony

5.30pm

Day three highlights

5.45pm

Bubble Science

6pm - 12 midnight **Free access to the daily shows**



Quality, Affordable Self-Care Products™



Perrigo Company plc is dedicated to making lives better by bringing high quality and affordable selfcare products that consumers trust everywhere they are sold. The Company is a leading provider of over-the-counter health and wellness solutions that enhance individual well-being by empowering consumers to proactively prevent or treat conditions that can be self-managed.

Visit us at [www.perrigo.com](http://www.perrigo.com)



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:

**[btireland.com](https://btireland.com) and [btyoungscientist.com](https://btyoungscientist.com)**