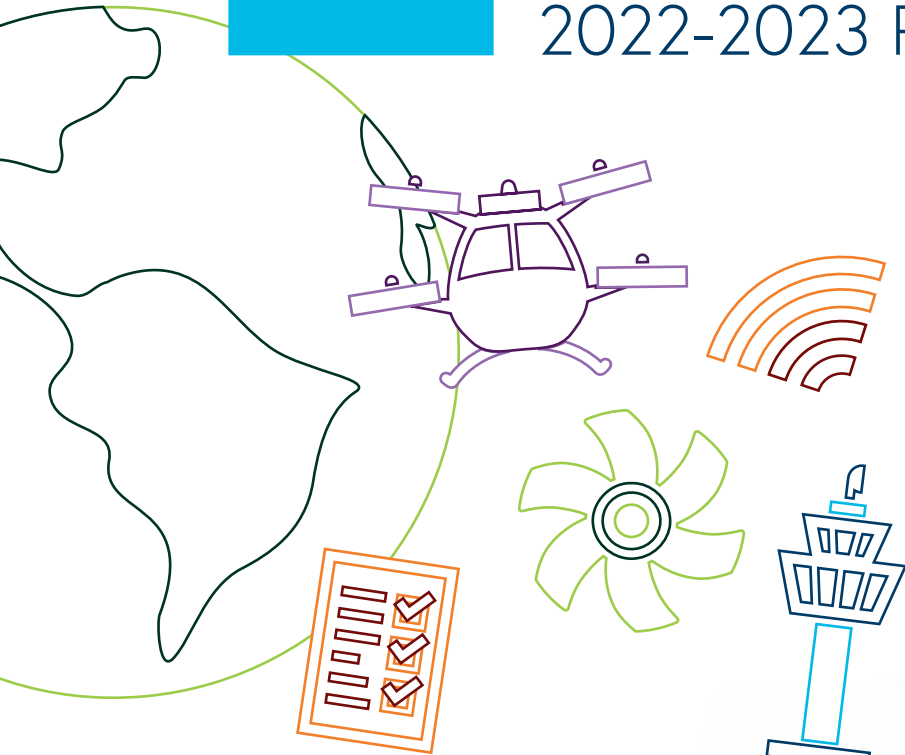


# IET Faraday<sup>®</sup> Challenge Days

2022-2023 Review



Explore the  
IET Faraday<sup>®</sup> Challenge Days  
at [theiet.org/faraday](https://theiet.org/faraday)

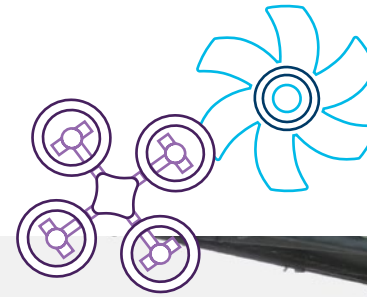
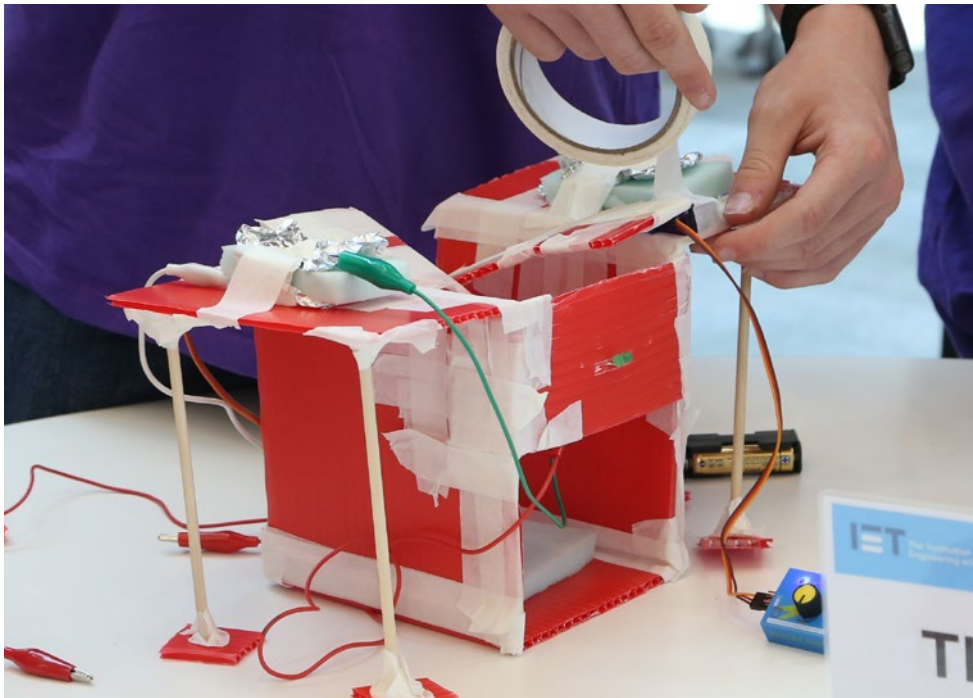


## IET Faraday® Challenge Days 2022-2023 Review

We are extremely proud to have delivered 176 IET Faraday® Challenge Days this season, with 450 schools and 5,786 students involved.

Our supporters and sponsors this year included UKRI's Future Flight Challenge, GKN Automotive, Keith Throter OBE FREng FIET, R C Snelling Charitable Trust, The Reece Foundation and UKRI TAS Hub.

The theme for the 2022-2023 season was in association with UKRI's Future Flight Challenge and tasked teams to design a prototype that could support UKRI's Future Flight Challenge with regards to accessibility and ease of use, safety and impact on the environment.



Students were scored throughout the day on their planning and research; development and functionality of the product; use of budget; product engineering; the final presentation, and their teamwork and attitude throughout.

Members of each winning team won a gift voucher for themselves, a trophy for their school, and had their score added to the national league table. At the end of the season, the top five teams took part in the season's National Final.





## National Final

The National Final was held on 29 June 2023 at the Digital Aviation Research and Technology Centre (DARTeC) at Cranfield University with the top five teams from the season's league table having to design and build a prototype to receive deliveries by drone in a chosen building.

The five national finalists were Sandringham School from Hertfordshire, Fallibroome Academy from Cheshire, Thomas Alleyne Academy from Hertfordshire, The Gilbert School from Essex and The Corbet School from Shropshire.

The final was judged by Michelle Richmond, Director of Membership and Professional Development at the IET, Ama Frimpong, IET Young Women Engineer of the Year 2022, Vicki Murdie, Innovation Lead at UKRI's Future Flight Challenge, Amy Camp, Innovation Lead at UKRI's Future Flight Challenge, and Adrian Cole, Programme Manager at DARTeC. Teams were judged on their product design and presentation.

After a very close competition with impressive presentations this season's winning team was Fallibroome Academy from Cheshire. The winning team designed a prototype receiver box with pressure pad for drone deliveries at hospitals.

On winning, the team said:



"This has been an amazing day, what we have done, the challenge and we got to fly a drone!"



It was an inspiring event for everyone involved and we are confident this season's challenge has given students an insight into the life of a real engineer, the variety a career in engineering can offer and just how exciting and creative engineering really is.



"It was fantastic to welcome these enthusiastic and talented students to Cranfield University. Engineering is a fascinating and exciting career option, and we hope that many of them will be inspired to follow this path. We warmly congratulate them and perhaps we will see some of them studying here at Cranfield in the future!"

**Professor Graham Braithwaite,**  
Director of Transport Systems at Cranfield University



## Quotes from professionals

### David Lakin

IET Head of Education, Safeguarding and Education Policy

"Once again I have been hugely impressed by the high quality of work we've seen this season from all students across the whole of the UK involved in IET Faraday® Challenge Days. The IET were delighted to partner with UKRI and their Future Flight Challenge to set the challenge for this season that not only provided inspiration for the young people involved, but also challenged them to use a wide range of skills from problem solving, teamwork, budgeting, and communications to impress our judges.

Each season, the solutions to the challenges set that young people come up with continue to amaze me, and their ability to see a problem in a different light is a skill that will set them in good stead for the future whilst building confidence in presenting and talking others through their ideas.

It's been great to have UKRI involved this season, and I would like to express on behalf of the IET, our thanks to the Future Flight Challenge team for supporting the programme and helping to create such an inspiring challenge for students this season that really pushed their creativity and thinking."



### Vicki Murdie

Innovation Lead, Future Flight Challenge, UK Research and Innovation

"It has been a fantastic opportunity for the UKRI Future Flight Challenge to partner with the IET this year for the IET Faraday® Challenge Days. The energy and engagement at the events has been inspirational.

We have seen how much the students enjoyed the chance to complete hands on engineering design and build work, and really thinking about how to develop solutions that support uses of future flight technologies. We are sure that through these events, the schools and students will have seen the world of possibilities that a career in engineering offers and the benefits that future forms of flight will bring to society."



### Keira Hart

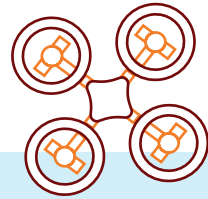
IET Faraday® Challenge Leader



"When we first met with the partners for the 2022-2023 season of IET Faraday® Challenge Days I have to admit I wasn't at all sure how to start planning the challenge. Our partners, Future Flight Challenge, talked about things I thought were more suited to a sci-fi movie script than for the briefing video for an IET Faraday® Challenge Day! Slowly we began to put together a video script and brief which gave students some background into what will be their future and I began to get a real sense of how our air space might be used more efficiently and creatively. This was going to be a real challenge for the students, probably more so than any theme we have had for previous IET Faraday® Challenge Days.

Back in July 2022, with some trepidation, Phil, Mick and I ran the first of our two pilot days. We needn't have been concerned. Yet again Year 8 students demonstrated that they are far more creative and forward thinking than we adults. They found no issue in coming up with ideas to allow us to use new technologies and approaches which come with the use of drones and vertical take-off driven and non-driven aircraft. The students on the second pilot day approached the challenge with the same ease, coming up with ideas around delivery, collection, passenger experience, disaster management and aid and even land management of redundant airport runways.

We have had another superb year; loads of ideas from the students which show that our future is in good hands. Interestingly the challenge seemed to defeat most of our teachers, with only a handful of teachers' teams attempting it. One team only got as far as writing Team 7 on their paperwork before giving up! Just shows really, we just need to leave the students to it and they will outshine us every time!"



## Student quotes

"I think that this was a great experience and it was fun to see how engineers tackle problems."

13-year-old boy

"A great experience and I think more schools should have the opportunity."

12-year-old girl

"Best day ever 200/10"

13-year-old girl

"It was different to usual design and technology lessons and more fun, it helped develop my confidence in presenting and making things."

12-year-old girl

"I really want to do this in the future because of this."

12-year-old girl

"I enjoyed engineering and learned many new things from the mistakes we made."

12-year-old girl

"I think engineers need more credit because they do so much work most people don't know about."

12-year-old girl

"Today was stressful but it taught me so much more than school ever could."

13-year-old girl

"It was very eye-opening and innovative."

13-year-old boy







## Headline statistics from the full season

No. of events: **176**

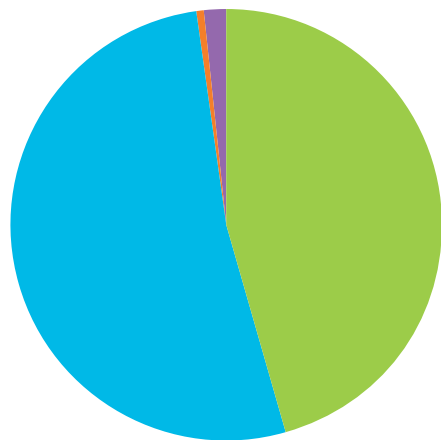
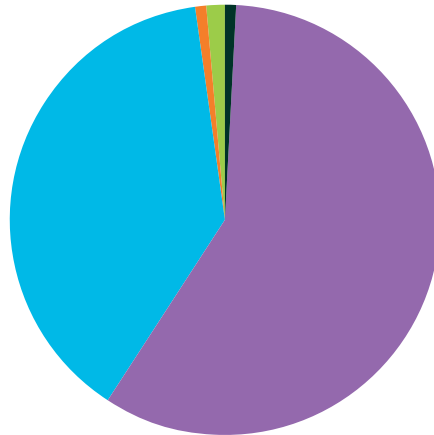
No. of students: **5,786**

No. of schools: **450 schools and 1 home educated team**

Engaged with **125** schools defined as hard to reach (high percentage of free school meals, rural schools and social mobility indicators).

### Age

- 11 years: **0.97%** (56 students)
- 12 years: **58.47%** (3,383 students)
- 13 years: **38.37%** (2,220 students)
- 14 years: **0.84%** (49 students)
- Not specified: **1.35%** (78 students)



### Gender

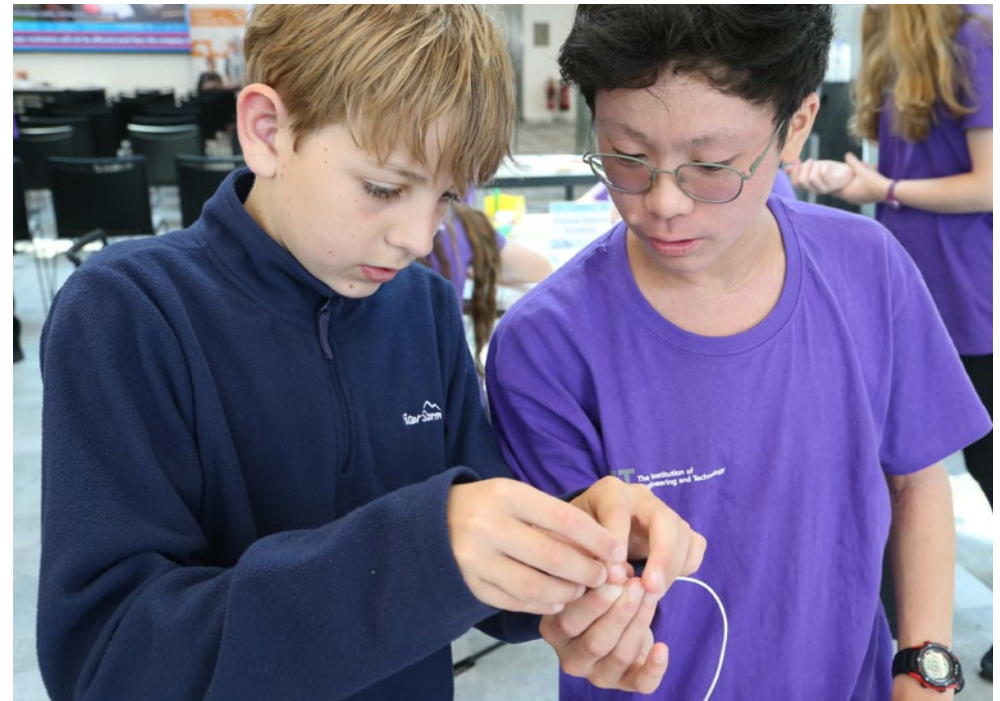
- Male: **45.68%** (2,643 students)
- Female: **52.25%** (3,023 students)
- Other: **0.48%** (28 students)
- Not specified: **1.59%** (92 students)

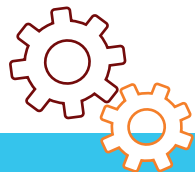
## Student feedback

The following statistics represent the % of students who were in agreement with these statements (information gathered from 5,786 students):

- I enjoyed the IET Faraday® Challenge Day **98%**
- I learnt new things **97%**
- I now understand more about what engineering is **96%**
- I have a better idea about what engineers do and the skills they need **95%**
- Before today I was considering studying or working in engineering **32%**
- Following this event I am now considering studying or working in engineering **56%**
- I'd like to do something like this again **95%**

**There was a 75% increase in students who after taking part in an IET Faraday® Challenge Day would now consider studying or working in engineering.**



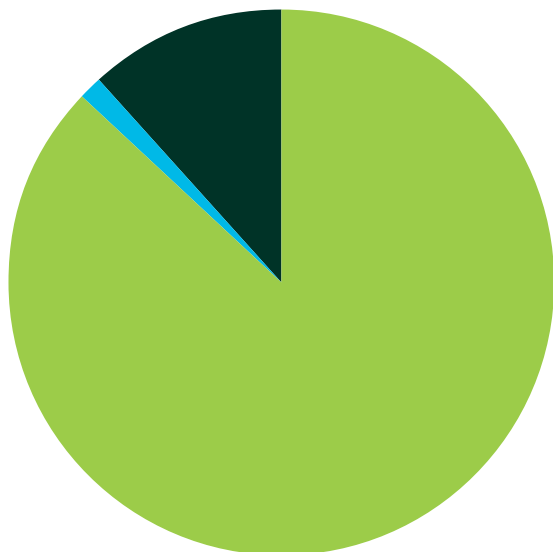


## Teacher quotes

"Thank you for the amazing opportunity. Great CPD for teachers too!"

"Amazing! Cannot recommend this enough. Challenging and engaging! Fabulous."

"A thoroughly enjoyable and inspiring experience for all involved. The students extended their knowledge, practical skills and awareness whilst learning to work with others. The day was presented with energy, enthusiasm, fairness and great awareness of how to inspire. The student's knowledge and skills - tailored to individuals and their groups. A wonderful experience overall."



## Student feedback

- Positive: 87% (3,105 students)
- Negative: 1% (44 students)
- Both: 12% (415 students)



## Student quotes

"I loved how we got to use our imagination and we had free reign on our design. The Challenge Leader helped so much and was so supportive and helpful when we were completely stuck. I thought I was terrible at STEM but today proved that I thought wrong. I am proud of myself and so pleased to have been given this opportunity."

13-year-old girl

"I really loved my time at the IET Faraday® Challenge Day, I thought it was loads of fun and unlike any other experience."

13-year-old girl

"I thought it was really eye opening to the possibilities of doing engineering as a job."

13-year-old girl

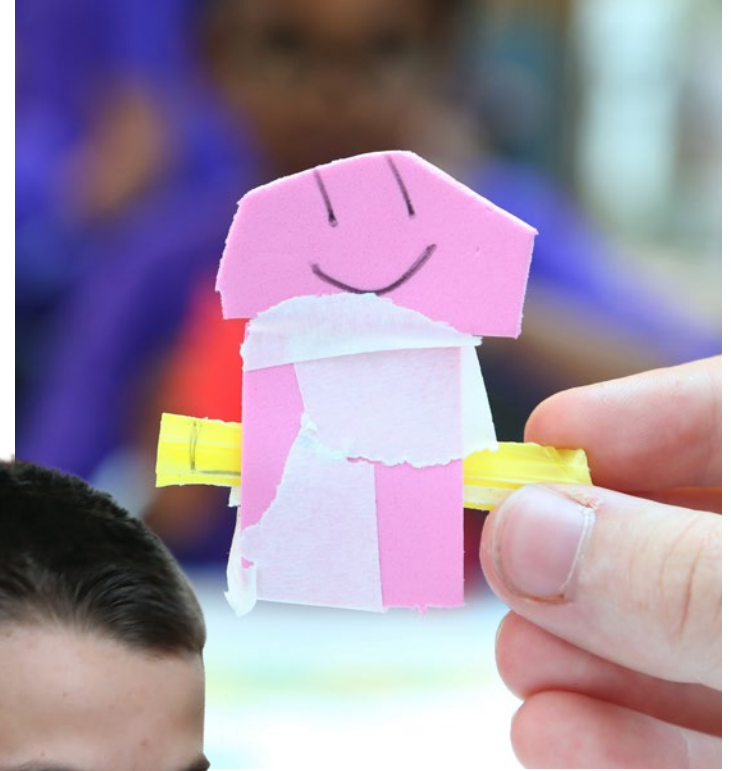


## Teacher quotes

"Excellent interdisciplinary learning themes embedded into all sections of the session. Pupils were engaged throughout and were challenged. I believe the session was a very modern and thorough approach to interdisciplinary learning in a STEM context. It was evident that pupils were given an opportunity to show their individual strengths and areas of expertise in group work! Additionally, these strengths were developed further and new skills were developed through peer led learning and the position they were given in their group. It was clear that the pupils had an appropriate time to plan, design, implement, improve and evaluate their project which was conveyed in their excellent closing presentations. Pupils were expected to evaluate their skills by the session leader and I felt this was a very effective and relevant ending to the session and introduction to a skills for work framework."

"The event has been superbly delivered, extremely organised and the Challenge Leader has known exactly when to be supportive but also when to challenge them with their design thinking. The students have all enjoyed participating, have gained a real knowledge of what engineering is and also the importance of project development and teamwork. A super day. Thank you so much."

"Excellent way to promote STEM and engineering. Kept the students engaged throughout, challenging them to think towards the next level. Bringing out the best in them."







## Teacher feedback

The following statistics represent the % of teachers who were in agreement with these statements (information gathered from 572 teachers):

- The level of complexity was suitable for a National STEM challenge aimed at students aged 12 to 13 years **98%**
- The interest of the students was retained throughout the day **98%**
- The students learnt new concepts and expanded their knowledge base **98%**
- The registration process was straightforward with enough time to plan for the event **98%**
- I would be interested in taking part next year **98%**
- I would recommend the IET Faraday® Challenge Programme to other teachers **98%**

## Special thanks

**IET Faraday® Challenge Days really do inspire students and raise the profile of STEM overall.**

The IET Faraday® Challenge Days this year reached more young people thanks to the generosity of companies and charities who have funded individual events or contributed towards the core IET events and online teaching resources.

**A huge thank you to you all.**

The next generation of engineers will have better skills thanks to their IET Faraday® Challenge experiences and thanks to you.



UK Research  
and Innovation

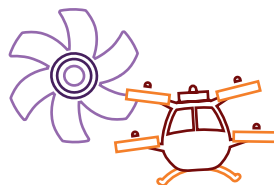


**Keith Thrower**  
OBE FREng FIET



**REECE**  
**FOUNDATION**





## The IET

No. of events: **140**, No. students: **4,626**, No. of schools: **347**

Date	Host School	Location
6 September 2022	Armadale Academy	West Lothian
7 September 2022	Lanark Grammar School	South Lanarkshire
8 September 2022	Cargilfield Academy	Midlothian
12 September 2022	Harrow Way Community School	Hampshire
14 September 2022	The Trafalgar School Downton	Wiltshire
15 September 2022	Saffron Walden County High School	Essex
16 September 2022	Samuel Ward Academy	Suffolk
20 September 2022	The Grange School	Dorset
21 September 2022	Leweston School	Dorset
22 September 2022	The Darwin Centre	Pembrokeshire
22 September 2022	Ringwood School	Hampshire
23 September 2022	Westbourne School	Vale of Glamorgan
26 September 2022	Notley High School	Essex
27 September 2022	Philip Morant School	Essex
28 September 2022	The Bromfords School and Sixth Form College	Essex
28 September 2022	Kinross High School	Perth and Kinross
29 September 2022	Crieff High School	Perth and Kinross
29 September 2022	Wildern School	Hampshire
30 September 2022	Mearns Academy	Aberdeenshire
3 October 2022	Ernesford Grange Community Academy	Leicestershire
4 October 2022	Harris C of E Academy	Leicestershire

## Student feedback

Age: **11: 56** (1.21%), **12: 2,810** (60.74%), **13: 1,688** (36.49%), **14: 2** (0.04%),  
Not specified: **70** (1.52%)

Gender: Male: **2,093** (45.24%), Female: **2,439** (52.72%), Other: **23** (0.5%),  
Not specified: **71** (1.54%)

The following statistics represent the % of students who were in agreement with these statements:

- I enjoyed the IET Faraday® Challenge Day **99%**
- I learnt new things **98%**
- I now understand more about what engineering is **97%**
- I have a better idea about what engineers do and the skills they need **96%**
- Before today I was considering studying or working in engineering **37%**
- Following this event I am now considering studying or working in engineering **60%**
- I'd like to do something like this again **97%**

Date	Host School	Location
5 October 2022	Kenilworth School	Warwickshire
5 October 2022	Tarporley High School	Cheshire
6 October 2022	St Thomas More Catholic High	Cheshire
7 October 2022	Middlewich High School	Cheshire
7 October 2022	The Redhill Academy	Nottinghamshire
11 October 2022	Hove Park School	West Sussex
11 October 2022	St Helen and St Katharine	Oxfordshire
12 October 2022	Worthing High School	West Sussex
17 October 2022	St Louis Grammar School	County Antrim
18 October 2022	Ashfield Boys' High School	Belfast
19 October 2022	The Wallace High School	County Antrim
20 October 2022	Banbridge High School	County Antrim
21 October 2022	Fort Hill Integrated College	County Antrim





Date	Host School	Location
31 October 2022	Colfe's School	London
1 November 2022	Harris Girls' Academy Bromley	Kent
2 November 2022	Ellesmere College	Shropshire
2 November 2022	The Ravensbourne School	Kent
3 November 2022	Adcote School	Shropshire
4 November 2022	Mary Webb School and Science College	Shropshire
8 November 2022	Folkestone School for Girls	Kent
8 November 2022	Hodgson Academy	Lancashire
9 November 2022	Longridge High School	Lancashire
10 November 2022	The Schools at Somerhill	Kent
10 November 2022	Walton-le-Dale High School	Lancashire
11 November 2022	Darwen Aldridge Community Academy	Lancashire
16 November 2022	Thomas Alleyne Academy	Hertfordshire
17 November 2022	Royal Grammar School Worcester	Worcestershire
18 November 2022	Malvern St James Girls' School	Worcestershire
21 November 2022	Yavneh College	Hertfordshire
22 November 2022	Westfield Academy	Hertfordshire
23 November 2022	Park High School	Middlesex
29 November 2022	Cobham Hall School	Kent
29 November 2022	Whalley Range High School	Greater Manchester
30 November 2022	Salford City Academy	Salford
1 December 2022	Stone Lodge School	Kent
1 December 2022	Trinity C of E High School	Manchester
5 December 2022	Wreake Valley Academy	Leicestershire
6 December 2022	Lutterworth High School	Leicestershire
6 December 2022	Rydal Penrhos School	Conwy



## Student quotes

"It was really fun and helped build teamwork and leadership skills. I personally believe I learned lots of new focus and discovered new career paths. I would love to this again."

13-year-old girl

"I really enjoyed this because I've never done something like this before, it was amazing!"

12-year-old boy

"I found it really fun and it has inspired me to be an engineer when I'm older."

12-year-old boy

"This event was highly helpful in my understanding of engineering and it definitely made me consider learning about engineering more seriously in the future."

13-year-old girl

Date	Host School	Location
7 December 2022	Bangor University	Gwynedd
7 December 2022	Hinckley Academy & John Cleveland Sixth Form	Leicestershire
8 December 2022	Walton High School	Buckinghamshire
9 December 2022	Berkhamsted Boys School	Hertfordshire
12 December 2022	Hornsea School	East Riding of Yorkshire
13 December 2022	Winifred Holtby Academy	East Riding of Yorkshire
14 December 2022	Havelock Academy	Northeast Lincolnshire
14 December 2022	St Johns Marlborough School	Wiltshire
15 December 2022	Farringdon Community College	Oxfordshire



## Teacher feedback

Feedback gathered from **438** teachers.

The following statistics represent the % of teachers who were in agreement with these statements:

- The level of complexity was suitable for a National STEM challenge aimed at students aged 12 to 13 years **99%**
- The interest of the students was retained throughout the day **99%**
- The students learnt new concepts and expanded their knowledge base **99%**
- The registration process was straightforward with enough time to plan for the event **99%**
- I would be interested in taking part next year **99%**
- I would recommend the IET Faraday® Challenge Programme to other teachers **99%**



### Teacher quotes

"Another brilliant year, very challenging task that makes the students work hard. Great support for groups who didn't manage to work as well through the task to enable each child to feel like they have made a great achievement today. Thank you."

"Wonderful opportunity for our children to be inspired by STEM and engineering. The Challenge Leader was a fantastic and professional host. The children were engaged throughout."

"Fantastic to see the children see their ideas develop from conception to production, figuring out for themselves how to improve them and confidently present their work."

"Great day for the students to apply STEM to real world applications."

Date	Host School	Location
5 January 2023	Cophall School	London
6 January 2023	Enfield County School for Girls	Middlesex
10 January 2023	Aston Academy	South Yorkshire
11 January 2023	Kirk Balk Academy	South Yorkshire
12 January 2023	Queen Ethelburga's Collegiate	North Yorkshire
13 January 2023	Fulford School	North Yorkshire
16 January 2023	The Deepings School	Cambridgeshire
17 January 2023	Ormiston Bushfield Academy	Cambridgeshire
18 January 2023	Woodfield Academy	Worcestershire
18 January 2023	Wooton Park School	Northamptonshire
19 January 2023	Parkside Middle School	Worcestershire
20 January 2023	King Edward VI Camp Hill School for Girls	West Midlands
24 January 2023	The Compton School	London
24 January 2023	Wellington School	Greater Manchester
25 January 2023	Cheadle Hulme School	Cheshire
25 January 2023	Notting Hill & Ealing High School	London
26 January 2023	The East Manchester Academy	Greater Manchester
27 January 2023	Priestlands School	Hampshire
1 February 2023	St Edward's College	Merseyside
2 February 2023	The Academy of St Nicholas	Merseyside
2 February 2023	Glebelands School	Surrey
3 February 2023	Broughton Hall Catholic High School	Merseyside
6 February 2023	The Royal Liberty School	Essex
7 February 2023	Woodford County High School	Essex
8 February 2023	Plashet School	London





Date	Host School	Location
8 February 2023	Trinity Catholic High School	London
9 February 2023	The Petchey Academy	London
10 February 2023	Sarah Bonnell School	London
14 February 2023	Glossopdale School	Derbyshire
15 February 2023	Fallibroome Academy	Cheshire
16 February 2023	The Bolsover School	Derbyshire
20 February 2023	Richard Challoner School	Surrey
21 February 2023	Riddlesdown College	Surrey
22 February 2023	Coombe Wood School	Surrey
23 February 2023	Orleans Park School	Middlesex
24 February 2023	The Tiffin Girls' School	Surrey
28 February 2023	Walton High School	Staffordshire
1 March 2023	Newcastle Academy	Staffordshire
7 March 2023	Ysgol Maes Garmon	Flintshire
8 March 2023	Upton Hall School FCJ	Merseyside
9 March 2023	The Mosslands School	Merseyside
21 March 2023	Lichfield Cathedral School	Staffordshire
22 March 2023	Aldridge School	West Midlands
27 March 2023	Oaklands Catholic School	Portsmouth
28 March 2023	The Gilbert School	Essex
29 March 2023	Brentwood School	Essex
30 March 2023	Brentwood Ursuline Convent High School for Girls	Essex
18 April 2023	Onslow St Audrey's School	Hertfordshire
19 April 2023	Sandringham School	Hertfordshire
20 April 2023	St George's School	Hertfordshire
24 April 2023	Mounts Bay Academy	Cornwall

Date	Host School	Location
25 April 2023	Helston Community College	Cornwall
26 April 2023	Penryn College	Cornwall
26 April 2023	The Taunton Academy	Somerset
26 April 2023	University of Leeds	West Yorkshire
3 May 2023	King Ethelbert School	Kent
4 May 2023	Robertsbridge Community College	East Sussex
5 May 2023	Rainham Mark Grammar School	Kent
9 May 2023	Bideford College	North Devon
10 May 2023	University of Plymouth	Devon
11 May 2023	Honiton Community College	Devon
15 May 2023	Arnewood School	Hampshire
16 May 2023	The Burgess Hill Academy	West Sussex
16 May 2023	The Westgate School	Hampshire
17 May 2023	Davison C E High School for Girls	West Sussex
19 May 2023	Christ The King College	Isle of Wight
23 May 2023	Bristol Grammar School	Bristol
24 May 2023	Cleeve School	Gloucestershire
25 May 2023	Chosen Hill School	Gloucestershire
6 June 2023	Richard Rose Morton Academy	Cumbria
8 June 2023	Queen Elizabeth School	Cumbria





## GKN Automotive

No. of events: **1**, No. students: **36**, No. of schools: **5**



Date	Host School	Location
10 October 2022	Abingdon School	Oxfordshire

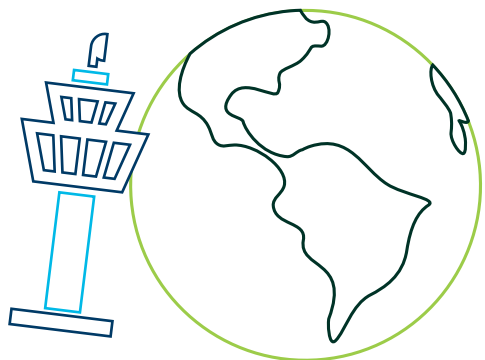
## Student feedback

Age: **12: 34** (94.44%), **13: 1** (2.78%), **Not specified: 1** (2.78%)

Gender: **Male: 20** (55.55%), **Female: 15** (41.67%), **Not specified: 1** (2.78%)

The following statistics represent the % of students who were in agreement with these statements:

- I enjoyed the IET Faraday® Challenge Day **100%**
- I learnt new things **94%**
- I now understand more about what engineering is **97%**
- I have a better idea about what engineers do and the skills they need **94%**
- Before today I was considering studying or working in engineering **31%**
- Following this event I am now considering studying or working in engineering **58%**
- I'd like to do something like this again **97%**



## Student quotes

"It was a really fun and exciting experience! I loved it!"

12-year-old girl

"It was very fun and I enjoyed learning new things, I liked how challenging it was."

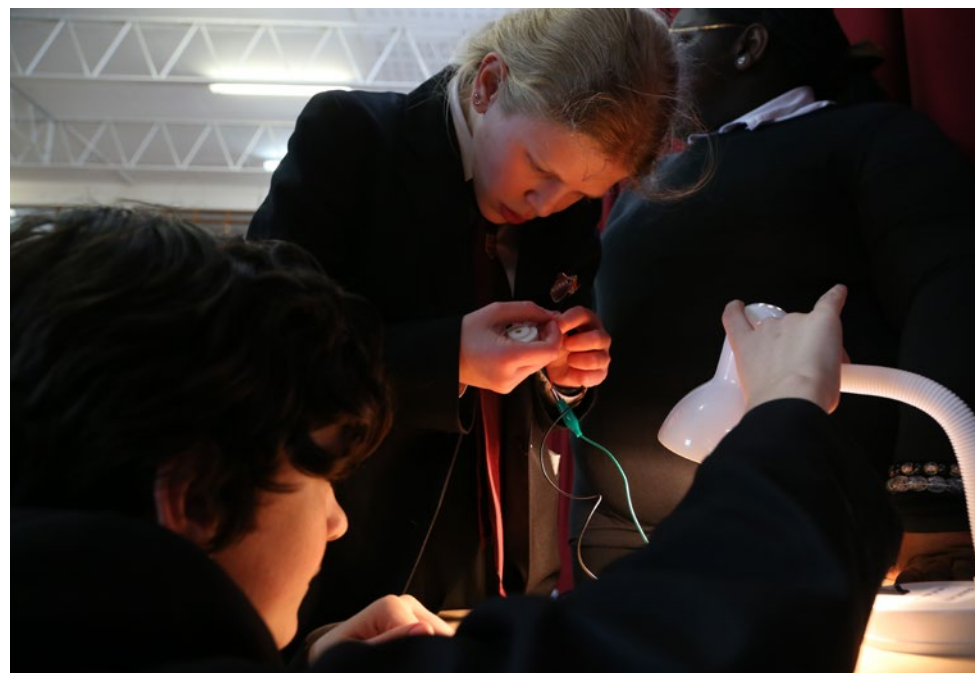
12-year-old girl

"I really enjoyed it, I now understand more about engineering, great experience and fun."

12-year-old girl

"It was really fun and a great experience to use creativity and teamwork."

12-year-old girl





## Teacher feedback

Feedback gathered from 6 teachers.

The following statistics represent the % of teachers who were in agreement with these statements:

- The level of complexity was suitable for a National STEM challenge aimed at students aged 12 to 13 years 100%
- The interest of the students was retained throughout the day 100%
- The students learnt new concepts and expanded their knowledge base 100%
- The registration process was straightforward with enough time to plan for the event 100%
- I would be interested in taking part next year 100%
- I would recommend the IET Faraday® Challenge Programme to other teachers 100%



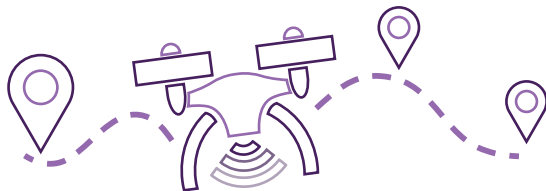
### Teacher quotes

"Well led programme, great freedom and equipment."

"Really great day allowing the students to create without interference from staff."

"The students really were fully engaged all day and learnt so many non-academic skills for a change."

"Great day. It was wonderful to see the students go from nothing to a prototype in a matter of hours."

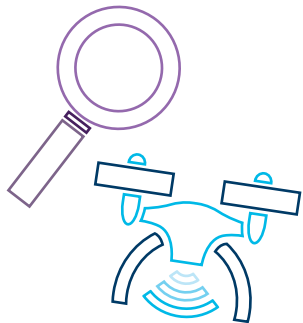




## Keith Thrower OBE FREng FIET

No. of events: **4**, No. students: **141**, No. of schools: **9**

Date	Host School	Location
10 January 2023	Queen Anne's School	Berkshire
11 January 2023	Little Heath School	Berkshire
12 January 2023	St Gabriel's School	Berkshire
31 January 2023	Sandhurst School	Berkshire



### Student feedback

**Age: 12: 82** (58.16%), **13: 58** (41.13%), **Not specified: 1** (0.71%)

**Gender: Male: 39** (27.66%), **Female: 100** (70.92%), **Other: 1** (0.71%), **Not specified: 1** (0.71%)

The following statistics represent the % of students who were in agreement with these statements:

- I enjoyed the IET Faraday® Challenge Day **98%**
- I learnt new things **99%**
- I now understand more about what engineering is **94%**
- I have a better idea about what engineers do and the skills they need **95%**
- Before today I was considering studying or working in engineering **20%**
- Following this event I am now considering studying or working in engineering **33%**
- I'd like to do something like this again **91%**



## “ Student quotes

"I loved that, it was fun and interesting. I learned more about engineering and might even look deeper into it."

12-year-old girl

"It was fun when we properly got started. I liked the freedom we were given to do what we wanted."

13-year-old girl

"I really enjoyed working with my team to create a new invention."

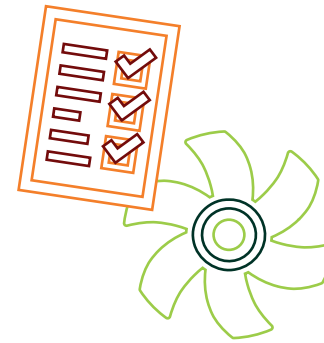
12-year-old girl

"I enjoyed brainstorming ideas with my team to aid the future."

12-year-old girl

"It was such a nice experience, I learnt so much about trial and error and creating things I'd love to do it again."

12-year-old girl



## Teacher feedback

Feedback gathered from 10 teachers.

The following statistics represent the % of teachers who were in agreement with these statements:

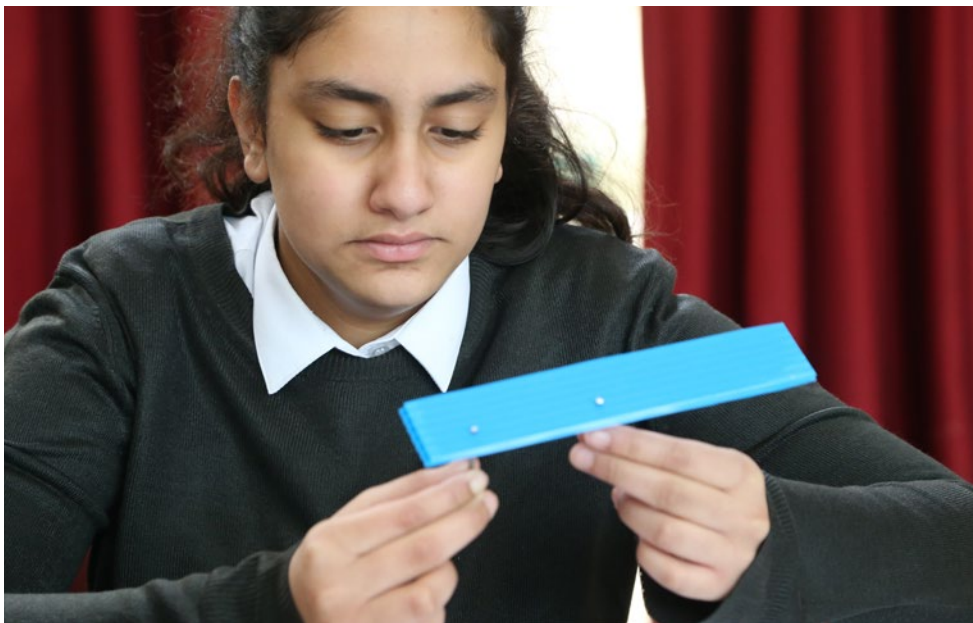
- The level of complexity was suitable for a National STEM challenge aimed at students aged 12 to 13 years 100%
- The interest of the students was retained throughout the day 100%
- The students learnt new concepts and expanded their knowledge base 100%
- The registration process was straightforward with enough time to plan for the event 100%
- I would be interested in taking part next year 100%
- I would recommend the IET Faraday® Challenge Programme to other teachers 100%

## “ Teacher quotes

"My students really surprised me, with how they worked together and what they physically built. They got a lot out of it."

"A good day that all students enjoyed and was excellent as a team building exercise too. The Challenge Leader was well organised and had great engagement with all students."

"The pupils really enjoyed it - thank you! What a wonderful opportunity for them."





## R C Snelling Charitable Trust

No. of events: **2**, No. students: **67**,  
No. of schools: **5** and **1 home educated team**



Date	Host School	Location
22 March 2023	Sir John Leman High School	Suffolk
23 March 2023	Neatherd High School	Norfolk

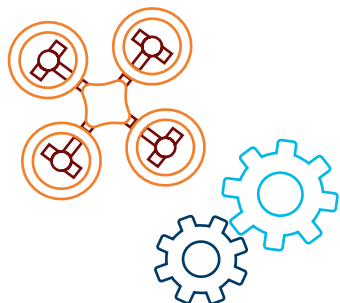
### Student feedback

Age: **12: 31** (46.27%), **13: 36** (53.73%)

Gender: **Male: 39** (58.21%), **Female: 28** (41.79%)

The following statistics represent the % of students who were in agreement with these statements:

- I enjoyed the IET Faraday® Challenge Day **99%**
- I learnt new things **100%**
- I now understand more about what engineering is **98%**
- I have a better idea about what engineers do and the skills they need **96%**
- Before today I was considering studying or working in engineering **34%**
- Following this event I am now considering studying or working in engineering **52%**
- I'd like to do something like this again **99%**



### “ Student quotes

"I found this day very fun and useful as I want to be an engineer."  
**13-year-old boy**

"The IET Faraday® Challenge Day was a very fun treat and I learnt a lot about engineering."  
**13-year-old boy**

"Very fun day, I thought in new ways and problem solved. Learnt new things. Worked well with new people."  
**13-year-old girl**

"Very fun would definitely do it again. 10/10"  
**13-year-old boy**



## Teacher feedback



Feedback gathered from **8** teachers.

The following statistics represent the % of teachers who were in agreement with these statements:

- The level of complexity was suitable for a National STEM challenge aimed at students aged 12 to 13 years **100%**
- The interest of the students was retained throughout the day **100%**
- The students learnt new concepts and expanded their knowledge base **100%**
- The registration process was straightforward with enough time to plan for the event **100%**
- I would be interested in taking part next year **100%**
- I would recommend the IET Faraday® Challenge Programme to other teachers **100%**

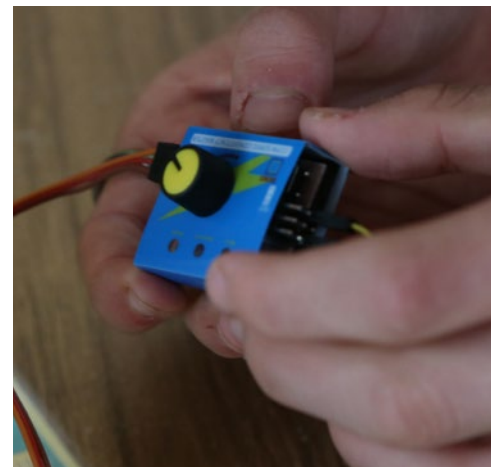


## “ “ Teacher quotes

"Thank you, great day, really enjoyable, fantastic learning experience for our students."

"A really positive and challenging experience in all the right ways."

"A great day, thank you! Loved your enthusiasm and the students seemed to really enjoyed themselves."

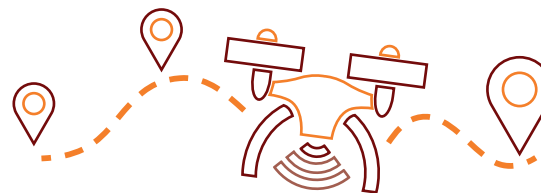






## The Reece Foundation

No. of events: 12, No. students: 344, No. of schools: 26



Date	Host School	Location
14 September 2022	King James I Academy	County Durham
15 September 2022	Bedale High School	North Yorkshire
21 November 2022	Dukes Secondary School	Northumberland
22 November 2022	Grace College	Tyne and Wear
23 November 2022	Heworth Grange School	Tyne and Wear
1 March 2023	Farringdon Community Academy	Tyne and Wear
2 March 2023	Parkside Academy	County Durham
21 March 2023	Gosforth Central Middle School	Tyne and Wear
22 March 2023	Kingsmeadow Community School	Gateshead
23 March 2023	Emmanuel College	Tyne and Wear
25 May 2023	Outwood Academy Riverside	Cleveland
26 May 2023	University of Sunderland	Tyne and Wear

## Student feedback

Age: 12: 191 (45.48%), 13: 148 (53.23%), Not specified: 5 (1.03%)

Gender: Male: 164 (42.89%), Female: 167 (54.01%), Other: 2 (0.52%), Not specified: 11 (2.58%)

The following statistics represent the % of students who were in agreement with these statements:

- I enjoyed the IET Faraday® Challenge Day **98%**
- I learnt new things **97%**
- I now understand more about what engineering is **98%**
- I have a better idea about what engineers do and the skills they need **99%**
- Before today I was considering studying or working in engineering **31%**
- Following this event I am now considering studying or working in engineering **53%**
- I'd like to do something like this again **94%**



## Student quotes

"I loved this opportunity and would definitely consider a future in engineering."

13-year-old girl

"I had a really good time and loved getting to create something I would never be capable of normally."

12-year-old girl

"I think it was very fun and it helped a lot of people understand the fun side of engineering."

13-year-old girl

"I thought today was very exciting and fun I feel that today was very good for my education."

12-year-old girl

"It was very fun and using that material we had to create a prototype was really interesting, overall it put our patience, knowledge and teamwork to the test."

12-year-old boy

"It was challenging but I had a good time, I learnt more about engineering and found out that everything is engineered, I would definitely do something like this again."

13-year-old boy

"It was fun and gave an insight on the process involved in making new inventions for the future."

13-year-old boy



## Teacher feedback

Feedback gathered from **33** teachers.

The following statistics represent the % of teachers who were in agreement with these statements:

- The level of complexity was suitable for a National STEM challenge aimed at students aged 12 to 13 years **100%**
- The interest of the students was retained throughout the day **100%**
- The students learnt new concepts and expanded their knowledge base **100%**
- The registration process was straightforward with enough time to plan for the event **96%**
- I would be interested in taking part next year **100%**
- I would recommend the IET Faraday® Challenge Programme to other teachers **100%**



## Teacher quotes

"Excellent opportunity for students to get creative with science."

"Superb presentation and activity range. All students engaged throughout the day. Presenter was very engaging, encouraging and explained things beautifully."

"Brilliant day, I loved how the facilitator ensured all groups were supported throughout."

"Really well planned day with a challenging task that caught the imagination of the pupils. IET host was excellent."

"Wow! What an impactful day. It brought out the best in our pupils. Thank you the IET."

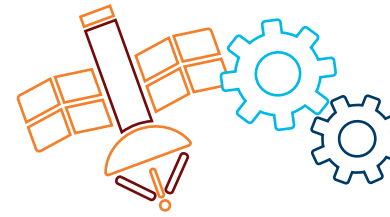




## UKRI Future Flight Challenge

No. of events: **10**, No. students: **346**, No. of schools: **35**

Date	Host School	Location
13 September 2022	The Deanery CE Academy	Wiltshire
6 October 2022	Wilsthorpe School	Nottinghamshire
28 November 2022	Saint Edmunds Catholic School	Hampshire
6 March 2023	The Ecclesbourne School	Derbyshire
8 March 2023	The Ripley Academy	Derbyshire
23 March 2023	New Model Institute for Technology & Engineering	Herefordshire
11 May 2023	Bishopbriggs Academy	Renfrewshire
12 May 2023	Glasgow Airport	Renfrewshire
7 June 2023	Irvine Royal Academy	North Ayrshire
8 June 2023	Queen Margaret Academy	South Ayrshire



### “ “ Student quotes

"I really enjoyed today and I had an amazing day! From this I learned new things that I can use to evolve in engineering."  
**12-year-old girl**

"It was really fun as I learnt new things and got to experience what it is like being an engineer."  
**12-year-old boy**

"I really liked today because lots of people had fun and (1) we had time off lessons and (2) we created technology."  
**12-year-old boy**

"Very amazing event I was very lucky to be invited, recommended it to anyone who likes engineering."  
**13-year-old boy**

"This was a good experience for aspiring engineers to learn more about their career options."  
**12-year-old girl**

"Was a great experience and has made me think about many other career options."  
**12-year-old girl**

"It was great to experience the day to day life of an engineer and working with a team that includes people you didn't know before."  
**12-year-old boy**





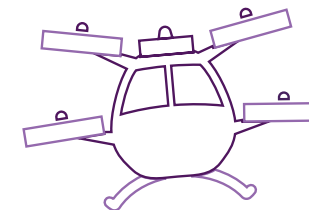
## Student feedback

Age: 12: 162 (46.82%), 13: 144 (41.62%), 14: 39 (11.27%), Not specified: 1 (0.29%)

Gender: Male: 165 (47.69%), Female: 176 (50.87%), Other: 2 (0.58%), Not specified: 3 (0.86%)

The following statistics represent the % of students who were in agreement with these statements:

- I enjoyed the IET Faraday® Challenge Day 97%
- I learnt new things 98%
- I now understand more about what engineering is 95%
- I have a better idea about what engineers do and the skills they need 96%
- Before today I was considering studying or working in engineering 36%
- Following this event I am now considering studying or working in engineering 54%
- I'd like to do something like this again 96%



## Teacher feedback

Feedback gathered from 45 teachers.

The following statistics represent the % of teachers who were in agreement with these statements:

- The level of complexity was suitable for a National STEM challenge aimed at students aged 12 to 13 years 96%
- The interest of the students was retained throughout the day 96%
- The students learnt new concepts and expanded their knowledge base 96%
- The registration process was straightforward with enough time to plan for the event 95%
- I would be interested in taking part next year 96%
- I would recommend the IET Faraday® Challenge Programme to other teachers 96%



## Teacher quotes

"A fantastic day! Thoroughly enjoyed by our students 10/10"

"An excellent day. Well balanced invention and informative."

"Excellent day, all six school groups participated fully in the challenge. Presentations were effective, well done to all groups."

"Well organised and presented our pupils loved the experience. Thank you."

"All pupils commented on how well they enjoyed the day and it was great watching them in their teams, what a great opportunity for them."



## UKRI TAS Hub

No. of events: **7**, No. students: **226**, No. of schools: **23**

Date	Host School	Location
22 February 2023	Chelsea Academy	Kensington and Chelsea
7 March 2023	Derby Grammar School	Derby
25 April 2023	Norton Hill School	Somerset
28 April 2023	University of York	North Yorkshire
5 May 2023	University of Portsmouth	Hampshire
10 May 2023	Larbert High School	Falkirk
7 June 2023	Lancaster University	Lancashire

## Student feedback

Age: **12: 73** (32.3%), **13: 145** (64.16%), **14: 8** (3.54%)

Gender: **Male: 123** (54.43%), **Female: 98** (43.36%), **Not specified: 5** (2.21%)

The following statistics represent the % of students who were in agreement with these statements:

- I enjoyed the IET Faraday® Challenge Day **98%**
- I learnt new things **94%**
- I now understand more about what engineering is **94%**
- I have a better idea about what engineers do and the skills they need **94%**
- Before today I was considering studying or working in engineering **44%**
- Following this event I am now considering studying or working in engineering **62%**
- I'd like to do something like this again **93%**



## Student quotes

"I really enjoyed this event and now understand more about engineering."

**12-year-old boy**

"I have enjoyed today as it has tested my thinking. It was fun and educational."

**13-year-old boy**

"I had fun working with my team and this experience felt like a real working environment."

**12-year-old boy**

"This was so much fun and I am thinking of doing something similar with stuff I have at home for something I am passionate about."

**12-year-old girl**

"It was a really fun day and I have developed skills that I can use at school and at work when I get a job."

**12-year-old girl**

"It was very enjoyable and fun and I think more students should get to experience it."

**13-year-old boy**

"This was awesome, I loved doing this, 10/10 would do this again!"

**13-year-old boy**

"It was a great experience which taught me to work under pressure with a group of peers when I wasn't confident."

**13-year-old girl**

## Teacher feedback

Feedback gathered from 32 teachers.

The following statistics represent the % of teachers who were in agreement with these statements:

- The level of complexity was suitable for a National STEM challenge aimed at students aged 12 to 13 years 97%
- The interest of the students was retained throughout the day 97%
- The students learnt new concepts and expanded their knowledge base 97%
- The registration process was straightforward with enough time to plan for the event 97%
- I would be interested in taking part next year 97%
- I would recommend the IET Faraday® Challenge Programme to other teachers 97%



### Teacher quotes

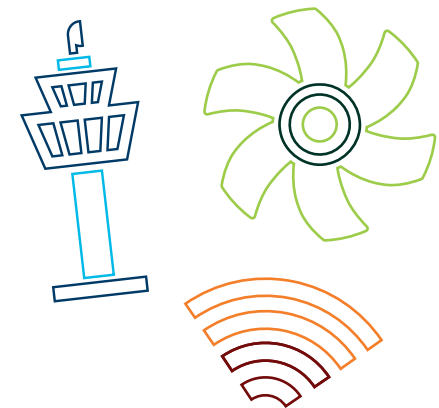
"Well taught throughout day. Students were engaged. It helped build their confidence. Brilliant day."

"Excellent and challenging event that made the students think."

"Really great day allowing students to practice many transferable skills."

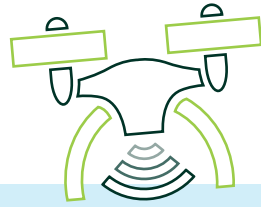
"Well led by Challenge Leader. Good balance of guidance and chance for students to develop own ideas."

"Challenge Leader delivered the event really well. Pupils were engaged and displayed skills not usually developed in the classroom."





## National Final



### “ Student quotes

"Today was really fun and I enjoyed the competition a lot!"  
13-year-old girl

"Loved the experience!"  
13-year-old girl

"Thank you, I really enjoyed it!"  
13-year-old boy

"I really enjoyed working in groups with my peers and the simulation of a real-life, tense and time-constrictive scenario."  
12-year-old girl

"I really enjoyed the IET Faraday® Challenge Day and thought it was a great opportunity to develop skills and learn more about the engineering world."  
13-year-old girl



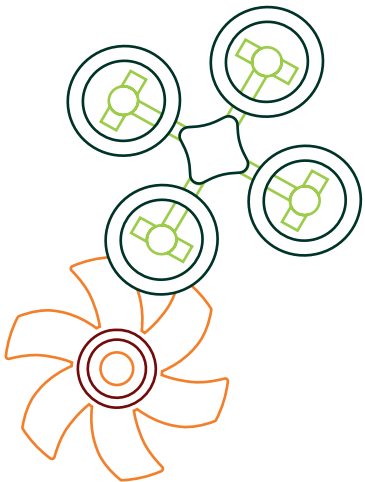
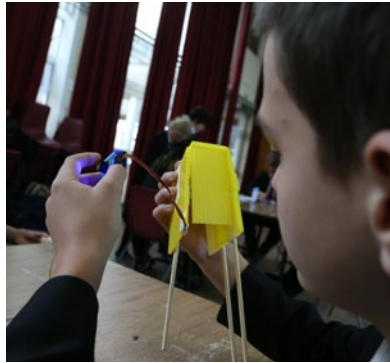
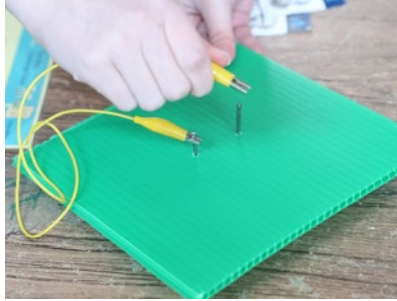
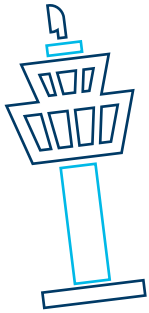
### “ Teacher quotes

"It has been a fantastic couple of days. Pupils have been totally engaged in the activities."

"Fantastic two days especially enjoyed university venue. Whole experience very slick, many thanks!"

"This was an absolutely amazing experience for our students. The set up was seamless, so easy for us teachers to participate and so valuable for our students. Thank you so much!"







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