



Researchers  
in Schools



GEORGE  
ABBOT SCITT

## Therfield School Case Study

Therfield school is a medium-sized mixed comprehensive 11–18 secondary school based in Leatherhead in Surrey. In 2016 62% of Year 11 pupils achieved a C grade or above in English and Maths GCSE with a school progress 8 score of +0.06.

At A Level the pupil progress score in 2016 was +0.19<sup>1</sup> which is above the national average. Many of Therfield's pupils access higher education, however there is a gap between the local average proportion of young people entering higher education and those entering higher education who are eligible for free school meals.

In recent years, a major priority for the headteacher has been to recruit strong Maths and Science teachers, at a time when this has proved challenging through routine advertisements and has often required significant expense through using recruitment agencies. The school sees participation in the RIS programme as an important route to ensuring that it is recruiting excellent teachers in these shortage subjects.

### Researchers in Schools Partnership

Researchers in Schools began working with Therfield School in September 2015 through the George Abbot SCITT and placed 1 physics participant.

The programme involves participants being placed for an initial three years, during which they train to teach and then work as qualified teachers. Whilst on the programme, participants have one day off-timetable per week to work towards the aims of the programme: championing university access, disseminating subject expertise and promoting research.

This includes running the Uni Pathways programme: participants work with a small group of Year 10 pupils over Year 1 and Year 2 of the programme, delivering university-style learning, supporting their attainment and university readiness. These university-style tutorials are based on previous research completed by participants at postgraduate level.

### Participants



Dr Fabio Di Salvo (RIS 2015 Physics participant)

Dr Di Salvo completed his PhD at Imperial College London, researching mechanistic models for simulating slug flow in horizontal and vertical pipes.

Uni Pathways Title – *From bikes to buildings: testing modern designs using computational fluid dynamics.*

<sup>1</sup> Compare School & College Performances. UK Government (2016). *Secondary (Key Stage 4) Performance in 2016*. Retrieved from <https://www.compare-school-performance.service.gov.uk/school/125252>

## School Perspective

### James Malley- Head Teacher

*'The RIS programme has had a significant impact on students at Therfield. We have a fantastic Physics teacher, with excellent subject knowledge, teaching great lessons at a time when recruiting any science teacher is very challenging.*

*I was talking to one of our Year 12 students and his mum at parents evening. Following the sixth form trip to CERN in Geneva (which was led by Dr Di Salvo) this student is committed to a career in science or engineering. For this student, Dr Di Salvo's teaching and leadership has changed their life.'*

### Dr Fabio Di Salvo- 2015 Physics Participant

*'I chose RIS because it was the only teacher training route that recognised the impact that a PhD graduate can have in schools. Since joining my school, I have delivered my University style course on Computational Fluid Dynamics to a group of students, some of them have said they will now be looking to take the CFD module during their University courses.'*

## Widening Participation

Dr Di Salvo has used his contacts at CERN to organise a trip for Key Stage 5 students interested in physics and engineering. Pupils explored the city and exhibitions within CERN, as well as being able to descend 100m to see one of the detectors. Pupils talked to a retired CERN physicist and asked questions about the Hadron Collider.

Along with this, Dr Di Salvo also successfully runs a Science club in the school to promote STEM subjects and is currently setting up the CREST award. During his day off- timetable, Dr Di Salvo has been working with the Institute of Physics developing a website that aims to support teachers in identifying and addressing misconceptions in Key Stage 3 and 4.