Science push for girls

Can studying the stars be a way of getting girls more interested in science? **Rebekah Oruye** looks at the growing popularity of a new course in astronomy at one Birmingham school

Karina Birdi, Emma Bird, Natalie Dobson, Danning Li and Emerald Herrick-Doyle

Traditionally boys significantly outperform girls in science at schools across Britain.

The Government has already acknowledged that more must be done to encourage girls to take up science.

Recent figures by the Organisation for Economic Co-operation and Development (OECD) concluded that boys scored on average ten points higher in science tests than girls. So how does an all-girls school encourage its pupils into picking the subject beyond the compulsory studying age, with physics in particular struggling to get high interest from young female students?

King Edwards VI High School in Edgbaston (KEHS) is trying to buck the trend by introducing a new GCSE – in astronomy. And gazing up at the stars and learning about the earth's place in the solar system seems to have drawn the curiosity of students.

Bringing the subject to the school was the brainchild of head of physics Dr Bernie Tedd.

Dr Tedd, himself an amateur astronomer, found out about teaching astronomy while at a meeting of the European Association for Astronomy held in the Canary Islands a few years ago.

He said interest in physics was relatively low at KEHS compared with biology and chemistry and decided to offer extra-curricular sessions in astronomy at lunchtimes and after school for pupils keen to find out about the earth and its place in the wider universe.

He said: "Interestingly, astronomy seems to capture their imagination amazingly. They associate the awe of the night sky with themselves whereas physics is a male-oriented subject."

"The nice thing about it, is that the new things you see in the newspapers like the discovery of dark matter, is accessible for them. You can go deeper in a great detail. In many academic fields the new breakthroughs are very difficult to understand."

The two-year astronomy course attracted eight pupils in the first year it became available and all the graduates of the first session passed with top A* marks. Now three years later, there are 30 girls regularly attending classes.

During lessons, Dr Tedd said pupils are given worksheets, web activities and expected to conduct practical study in their own time.

"There's all sorts of wonderful things you can do with astronomy nowadays. "For example, on the web, you can control the Faulkes telescope in Australia. You can choose where you want to look, choose the filters for the telescope and get professional looking photographs."

The pupils also take part in 'star' parties, where refreshments are shared and guest speakers provide talks. Dr Tedd said KEHS's close proximity to neighbouring Birmingham University means they have close link with its Astronomical Society.

The school has recently become involved in Comenius project, linking its astronomy workshops with five other European schools in, Greece, Italy, Netherlands, France and Romania.

Funding from the British Council allows the school to take pupils to workshops in different countries.

Principal Sarah Evans added: "It's something unusual and quite different for the girls. It brings alive a part of physics for the girls and it's important they can engage with the subject, that can be very hands-on and involve a lot of independent research."

Astronomical rise in interest

Four pupils at KEHS, who are in their second year of astronomy, told what the course means to them.

Emma Bird, aged 14, said: "It's really interesting. With normal science you're just in the classroom, but with astronomy you get to go out and see what you are learning about. There is quite a lot of work to do.

"I still think it's a good idea to try it, as you can do it as a lesson without taking the GCSE."

Emerald Herrick-Doyle said the astronomy classes had helped with her understanding of other subjects.

She added: "It helps you with physics and maths too because it involves lots of measurements."

The 15-year-old said she was thoroughly enjoying the subject and would be more wiling to consider studying physics in the future.

"Some friends think it's geeky, like physics, but I think it's more interesting than biology."

The practical aspect of astronomy was favoured by Danning Li, aged 15, who will be taking part in the Comenius trip to Romania.

She said: "We went to the museum in Greenwich and could see where telescopes originated from and could stand on the Meridian line, that was fun."

"When we go to Romania, we will be trying to find out about longitude and latitude and making an animation. It's exciting and you don't get to do that in any other subjects."

Karina Birdi, aged 15, also enjoyed the practical side of astronomy and said a career in astronomy was not something she would rule out.