

Science Etonbury 2024

In association with AMGEN biotech experience,
Thistle Scientific, Synoptic and The University of Hertfordshire

This year we have been able, once again, to offer DNA Gel electrophoresis biotechnology sessions to some of our students. This gives our students hands-on practical experience and a chance to use cutting-edge equipment that is now commonplace in research and industry. Last week was the turn of our A-level Biology students and this week the BTEC Forensic class will get experience it too.

The students started by having theory lessons leading up to the practical application where they discussed the electrophoresis process and how it works before they were able to spend some time getting used to using micropipettes. They created pictures with tiny amounts of food colouring pipetted into wells. This was an exercise in dexterity which the students found extremely useful during the actual DNA experience itself.

Their next task was to use an enzyme to cut the DNA, which was then separated by fragment size to produce a basic DNA profile. The profile gel was then viewed with a UV imaging system and photographed for analysis.

The students carried out all of the procedures with great success and the results they got were very impressive. The general consensus amongst them was that it was “cool” and it definitely inspired them to think about the sorts of careers that are open to them once they finish their studies with us.

We would like to offer our thanks to the AMGEN Biotechnology experience program at the University of Hertfordshire for the enzymes, loaned equipment, staff training and accessories.

We would also like to offer our sincere thanks to Adie Cleaver at Thistle Scientific for the amazing donation of electrophoresis equipment that was delivered to Etonbury during the Easter holidays. Thistle has provided us with enough tanks and power supplies to run this experience, in-house, throughout the year for up to two full classes of students at GCSE and A-level at a time.

The EnduroGDS Gel documentation unit was kindly donated by Clare Grimsey at Synoptics in Cambridge.

We are extraordinarily grateful for all the support we have received from them in order to offer this opportunity to our school community and this equipment will also be used to hold taster sessions for teachers and technicians from across our BEST academy trust during the next academic year.