



**AMGEN®** Biotech Experience  
Scientific Discovery for the Classroom  
United Kingdom

## Welcome

More than 2,600 UK students have used ABE kit already during this school year. Thank you for making it possible for them to enjoy and experience first-hand the biotechnology activities that ABE offers. Student feedback is consistently positive;

*"After we had carried out the electrophoresis practical, we were able to see (using UV light) the DNA molecules that had separated based on length, and I learnt how the DNA ladder is useful in determining which DNA molecules stemmed from which plasmid. It helped to give us a visual picture of what biotechnology can do."*

*"Making recombinant DNA and electrophoresis. It made me realise just how precise you have to be and allowed me to apply things that we are studying in school to real life."*

We look forward to seeing many of you at the summer term CPD programme. Some courses are already full, so please do book as soon as possible to secure a place. Course details and booking links are below.

We are delighted and grateful that the Amgen Foundation will extend funding for the programme for the next two school years at least. In a typical year, ABE reaches more than 90,000 students and 1,500 teachers in over 27 locations world - wide. As part of the next phase of the UK ABE programme we are pleased to alert you well in advance about our ABE celebration conference which will take place on October 10, 2023 at the Wellcome Genome campus, Cambridge. The conference will be free to ABE teachers and technicians, with a contribution to support staff release costs available for each participating school. The programme, jointly planned with Wellcome Genome Campus colleagues will include input by scientists about their research, lab tours and sessions to share ABE practice. More details to follow - but in the meantime, please save the date!

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## Summer term CPD programme

*ABE schools are reminded that participation in the 2023 summer terms professional development programme is essential to borrow kit during 2023-24 school year.*

### Course 1 Introduction to DNA manipulation for the classroom

Run over two full days (09:30 - 15:30): for teachers and technicians new to ABE. Day 1 is for teachers and technicians. Day 2 is for technicians only.

The course introduces the ABE programme; practical techniques including micro-pipetting, restriction digestion, ligation and gel electrophoresis; and ABE labs and teaching techniques.

#### Norwich hub

Day 1: 28 June  
Day 2: 29 June

[Book via Eventbrite](#)

#### Cambridge hub

Day 1: 27 June  
Day 2: 28 June

[Book via Eventbrite](#)

#### Hatfield hub

Day 1: 05 July  
Day 2: 06 July

[Book via Eventbrite](#)

#### Hull hub

Day 1: 19 Sep  
Day 2: 20 Sep

[Book via Eventbrite](#)

*For schools new to ABE, a contribution of £300 for supply cover is available, when both a teacher and technician attend course 1.*

### Course 2 - Extending practical work

One full day (09:30 - 15:30) face to face session with a 1-hour follow-up online, for teachers and technicians who have attended course 1 previously.

The lab based practical session will introduce new ABE labs, activities and practical techniques including: DNA profiling, transformation and analytical PCR; and extension ABE labs, activities and teaching techniques.

#### Norwich hub

Lab based day: 27 June  
Online follow-up:  
29 June, 4-5 pm

[Book via Eventbrite](#)

#### Cambridge hub

Lab based day: 26 June  
Online follow up:  
27 June, 4-5 pm

[Book via Eventbrite](#)

#### Hatfield hub

Lab based day: 04 July  
Online follow up:  
05 July, 4-5 pm

[Book via Eventbrite](#)

#### Hull hub

Lab based day: 21 Sep

[Book via Eventbrite](#)

### Course 3 - Enriching DNA activities

The session is for teachers and technicians who have attended ABE courses 1 and 2. It will include:

**Gene Editing** The genetic technology (precision breeding) act 2023 received Royal assent on 23 March 2023 meaning gene-edited food crops can be developed, grown and sold in England. The session will include an account of research and applications of the technology involved, and

opportunity to discuss ways that this topic can enrich teaching and learning, including resources, discussion points and practical links.

**ABE programme updates** Overview of the 2023-24 programme, opportunities and resources.

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Online: 12 July, 3-5 pm

[Book via Eventbrite](#)

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### **UK ABE website - password protected section**

We apologise for the recent difficulty in accessing resources on the password protected section of the University of Hertfordshire Centre for STEM Education website. The problem has now been resolved and you should now be able to access the resources. If you have any queries please contact Lisa Bagley at [stem@herts.ac.uk](mailto:stem@herts.ac.uk).

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## **Resources and opportunities**

### **ABE precision medicine webpage**

Precision medicine is an approach to healthcare that tailors medical decision-making to an individual patient based on their unique characteristics. It considers factors such as a person's genetic makeup, lifestyle, environmental influences, and specific health conditions when determining which treatment is appropriate. ABE has a wealth of resources related to precision medicine located on the LabXchange platform.



### **[Wellcome Genome campus genomic futures careers outreach programme](#)**



The **Genomic Futures careers outreach programme** offers students an insight into a variety of careers in genomics. It aims to make links with curriculum learning and careers, providing encounters with industry professionals and virtual experiences of the workplace.

More information at [website](#)

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