Baylab workshop "Forensics - DNA Fingerprinting" agenda

On arrival, please bring your students to our front entrance for a supervised welcome and handover to the Baylab team. This can be found opposite Pepsico and their car park, address 400 South Oak Way, Green Park, RG2 6AD. A member of the Baylab team will be in reception to greet you.

If you plan to ask students to meet at Bayer rather than travelling with staff, please let the Baylab team know in advance via baylabinfo@bayer.com so we can ensure we have the right cover in place.

If you have any issues on the day (including delays), please contact Emma Schierbaum, Baylab Manager, on +44 118 206 3284 or 07393 759447.

To help the day run smoothly, we work to a fairly tight schedule. We'd be grateful if you could aim to arrive at the times below so we can make a prompt start.

9:45-10:00am Arrival

10:00-10:15am Introductions

10:15am Lab

12:30pm Lunch

13:30pm Lab

15:45pm Depart

Please note: these times are intended as a guide. Exact timings on the day may vary depending on the needs of the group. The Baylab team will always do our best to keep to schedule and support a prompt departure. For further information, please refer to our terms and conditions.

Parking

Coaches

Coach parking on Green Park is limited. If your coach needs to stay, we suggest parking on Longwater Avenue or at the Madejski Stadium. Please note that parking at the Madejski requires prior permission from the stadium. If this may be an issue, we recommend checking with your coach company in advance.

Minibuses

There are limited minibus spaces in our visitor car park, to the right of the main entrance. If these are full, you may use a disabled bay if one is available. If you do, please let Reception know when you arrive.

Lunch and refreshments

Please note that Bayer does not provide lunch for students. Students will need to bring a packed lunch or can buy food in the restaurant.

Workshop Summary

Summary

Designed for sixth form students aged 16–18

Duration: 5 hours

Maximum group size: 24

Links to the national curriculum:

- DNA, chromosomes and genes
- Short Tandem Repeats (STRs)
- Polymerase Chain Reaction (PCR)
- Gel electrophoresis

Baylab advantage: students use equipment typically found in degree-level settings

Method

- Students explore the DNA code and consider how non-coding regions are used in DNA profiling.
- Focusing on one Short Tandem Repeat (STR), they use polymerase chain reaction (PCR) to amplify this region.
- Using gel electrophoresis, students analyse each profile to determine genotype.
- Students also consider reliability by comparing analysis of a single locus versus multiple loci, including the power of discrimination and allele frequency within a population.

Outcome

By examining STR regions in the non-coding parts of DNA, students match an unknown DNA sample to one of five suspects. Through creating DNA profiles using PCR and gel electrophoresis, they apply learning from their studies and develop confidence in analysing banding patterns to determine genotype for a particular STR.