



# Clinical Biochemistry - Point of care testing

Event title	Clinical Biochemistry – Point of care testing.
Venue	The Royal College of Pathologists, London.
Target audience	A-level Students studying biology and chemistry. Students were recruited from both year 12 and year 13, so background knowledge varied.
Objectives	<ul style="list-style-type: none"><li>• Enjoy working in groups carrying out hands-on experiments and activities using real scientific equipment with real pathologists.</li><li>• Be inspired by medical science, in particular pathology, and realise how fun it can be.</li><li>• Have a new and empowering experience.</li><li>• Develop a deeper understanding about medical science e.g. how modern hospital laboratories operate.</li><li>• Their stereotypical views of the medical profession will be challenged, i.e. realise that there are many career opportunities in medicine other than being a surgeon or a nurse.</li><li>• Pathology is not CSI or Silent Witness.</li><li>• Pathology is about the living not the dead, i.e. 70% diagnoses are made by pathologists.</li><li>• Pathology is diverse.</li><li>• Pathologists are part of a team and are a fundamental 24 hour element of the NHS.</li><li>• Learn how to use common laboratory equipment, such as microscopes, test tubes, pipettes etc.</li><li>• Learn some core pathology skills e.g. visual pattern recognition and problem solving.</li><li>• Be encouraged to consider a career in medicine, in particular pathology.</li></ul>
Age range	17 - 19
How was the event advertised?	It was advertised through Outreach Project Manager's network of teachers, other Colleges and Aim Higher.
Number attending	60
Booking required?	Yes.
Length of event	45 minutes.
Refreshments provided?	Yes – juice and biscuits on break.
Equipment needed	<ul style="list-style-type: none"><li>• Pregnancy tests.</li><li>• Urine dipsticks.</li><li>• Faecal occult blood tests.</li><li>• Glucose meters.</li><li>• Gloves.</li><li>• Made up solutions.</li><li>• Paper towels.</li><li>• Chocolate cake (poo).</li></ul>
People needed	There were 4 trainee clinical biochemists.

Printed material used	Hand-outs about biochemistry, a resource to help them used with their challenge, a worksheet and career leaflets were also distributed.
Room set up	Classroom style.
Event programme	<p>Students learned about some of the different types of tests that clinical biochemistry laboratories run every day and carried out pregnancy, urine dipstick, faecal occult blood and glucose testing.</p> <p>Introduction: 5 mins.</p> <p>Group is then split up into four groups and then they spend 8-10 minutes on each station before rotating around each of the 4 tests: glucose, pregnancy, FOB and urine dipsticks. A bell is used to signal when to move in. At each station they perform each test and fill out their worksheet.</p> <p>We wanted to show that the reasons why these tests must be monitored is to make sure the results are accurate and the patient is treated properly.</p>
Possible variations	This would also be suitable with KS4 students.
What did the audience particularly like?	They really liked performing tests.
What surprised the audience?	The number of tests that clinical biochemists perform every day.
What else would the audience have liked?	More time with each clinical biochemist.
How much preparation was involved?	Not too much – we were supplied with tests from the different companies and the solutions weren't too hard to make up.
Any other comments?	If we were doing this again, we would have at least an hour.
Images	
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