



About the Tutor

Guy Sutton's primary research interests are the genetics of brain development and function, together with the mechanisms that underlie neurodegenerative diseases and brain damage.

Dr Sutton is Director of MBI and runs seminars in neuropathology and forensics with a variety of legal professionals, including serious crime police officers and barristers. Guy is an Honorary Special Lecturer in Neuroscience at University of Nottingham Medical School and has held previous academic appointments at Manchester, Manchester Metropolitan and Cambridge Universities. He has lectured in neuroscience and genetics to a range of undergraduate and postgraduate students, including medics, biologists and psychologists. Guy has been a visiting researcher to universities in the United States and has conducted research projects and data analysis for various organisations, including the Department of Health and the Medical Research Council. In addition to presenting research at various international conferences and writing for academic publications, he has talked about the theoretical and clinical aspects of his research on television and radio.

Guy has tutored on 'A' level reading parties for students and teachers for several years. He is an associate tutor with Villiers Park Educational Trust, Cambridge and runs courses for Young, Gifted and Talented, previously, the National Academy For Gifted & Talented Youth.

About MBI

MBI (Medical Biology Interactive) delivers one-day and half-day courses, seminars and tutorials in epidemiology, occupational health and the human sciences to the health service, industry and education. All MBI seminars are written and run by academics and health specialists, each of whom has considerable experience in research and its practical applications. Seminars are delivered at the hospital, workplace or school, based on cutting-edge research and current practice benchmarks, and tailored to the needs and concerns of the client.

For further information and full programmes, please contact Dr. Guy Sutton; tel. 07941 039670, e-mail: gmsutton@mbi-consultancy.co.uk.

Neuropathology For Police Officers Seminar

"The seminar was very well received. Officers enjoyed it on both a professional and a personal level. The explanation of terminology was extremely useful and officers made note of how well the content was delivered and how passionately it was presented."

Mr Richard Alexander
Leicestershire Constabulary



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Seminars & Tutorials For The
Health Service, Industry & Education

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M B I
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PRESENTS

FORENSIC SCIENCE



*A Half-Day Tutorial
For AS/A2 Level Students
On Forensic Issues,
Techniques & Methods -
Delivered At Your School*

TUTOR:

Dr Guy Sutton

Director, MBI &
Honorary Special Lecturer,
University of Nottingham Medical School

WHY A FORENSICS MORNING?

Forensic science (also referred to as *forensics*) involves the application of a wide spectrum of sciences in order to answer questions posed by the legal system. In criminal cases forensic scientists are often involved in the search for and examination of physical samples, which might be useful for establishing or excluding an association between someone suspected of committing a crime and the scene of the crime or victim. In recent years, the contribution of forensic science to the criminal justice system has been increasingly important.

This exciting tutorial is intended to provide students with a broad introduction to issues and techniques in forensics. Students will consider procedures such as post-mortem and blood pattern analysis, factors affecting rates of decomposition and determining the time of death, through to important technologies such as mitochondrial DNA (mtDNA) profiling, a method which has a discriminating power of one in 50 million. This technique was integral to establishing the British DNA Database, the largest of its kind in the world, which presently contains 4.5 million samples taken during criminal enquiries. In this fascinating tutorial, students will also address some of the many subdivisions of forensic science, including digital forensics, forensic DNA analysis, forensic entomology, forensic pathology, forensic psychology, forensic archaeology and forensic toxicology.

WHICH STUDENTS WILL BENEFIT?

This tutorial is designed primarily for able A-level biology and chemistry students, but will also be useful to:

- any AS/A2 students with an interest in forensics
- any students considering a university degree and/or career in the following subjects:

Forensic Science
Biology
Law

Medicine
Psychology
Neuroscience

The material presented during this tutorial is intended to complement and develop upon topics and issues encountered at AS and A2 level.

AIMS OF THE TUTORIAL

There are two main aims to this tutorial:

- to provide the student with an introduction to issues, debates and principles in forensic science.
- to consider some of the methods and techniques used by forensic scientists, from fingerprinting to post-mortem examination to advanced DNA profiling, focusing on the work of the Forensic Science Service.

EXEMPLAR PROGRAMME

A variety of topics and issues relating to forensic science will be covered. Topics can be tailored to the requirements of the syllabus studied and the teacher:

- **9.00-9.10: Introduction & Aims**
- **9.10-10.00: Forensics: Science & Psychology**
The nature, scope and practice of forensic science. Scientific evaluation of forensic evidence. Offender profiling. Case Study.
- **10.00-10.40: ForensicWeb**
Computer-based practical session.
- **10.55-11.40: Examination of Human Remains**
Changes in the human body shortly after death; estimating the post-mortem interval. Circumstances and location of death. Rates of post-mortem decomposition and ambient conditions. Forensic entomology. Factors aiding identification of human remains.
- **11.40-12.05: Human Tissues & Wounds As Forensic Indicators**
Body fluids and waste products. Outer body – skin, fingerprints. Bone characteristics and determination of gender and age. Wounds – bruises, abrasions, stab wounds, gunshot wounds, post-mortem injuries.
- **12.05-12.30: Methods & Techniques In Forensic Molecular Biology**
Computer-based practical session.
- **12.30-12.45: Forensic Toxicology**
Major poisons. Commonly abused drugs: chemical structure, physical form, effects and elimination. Drug sampling.
- **12.45-12.50: Conclusions**

FORMAT

The tutorial is delivered in your school and runs throughout the school day. Tutorial date can be arranged by contacting MBI.

Format is varied, with interactive, multimedia lectures, case studies, group discussions and computer-based practical sessions.

Each school receives an interactive CD-ROM featuring tutorial material, activities and web links. Students each receive a comprehensive tutorial pack relating to and complementing material presented during the tutorial.

PRAISE FOR BRAIN DAY

"A brilliant day, tailored to our specifications and requirements."

Mrs. K. Walton,
Wirral Grammar School For Girls, Bebington.

"Spot on! The day took the students' knowledge to another level... it has also greatly improved my knowledge and understanding of the brain."

Mr. A. Harper,
Oldershaw School, Wirral.

"Fantastic - brings it alive. Great tutorial pack, fantastic resources."

Mr. Peters,
Horsforth School, Leeds.

"A very high standard of presentation. Even the most reluctant students were engaged and fascinated."

Mrs. V. Sweeting,
Enfield County High School, London.

"Pupils highly enjoyed the optical illusions and interactive quizzes. A brilliant day."

Ms. P. Glaze,
Oldbury Wells School, Bridgnorth.

"Very well organised and pitched at the right level - both those with some previous knowledge and those without benefited enormously... Students were buzzing at the end of the day."

Mrs. P. Nissebaum,
The Long Eaton School, Nottingham.

"A fantastic presentation."

Ms. J. Marriott,
Dronfield Henry Fanshawe School, Derbyshire.

"An excellent tutorial, delivered with real enthusiasm and verve. The students went away inspired and are still talking about it!"

Mr. P. Lucas,
Queen Elizabeth School, Kirkby Lonsdale.

"A thoroughly stimulating day for both students and staff, exceeding all our expectations."

Mr. K. Smith,
St Albans Girls' School, Hertfordshire.

"Great variety of content... Students enjoyed the tutorial enormously and loved the sheep brain dissection. The day had been presented as an "Enrichment" opportunity and it certainly was."

Mrs. J. Hardy,
St Aidan's & St John Fisher Associated Sixth Form,
Harrogate.