



MUSEUM of the HISTORY of SCIENCE

The Museum of the History of Science has a unique collection of historic scientific instruments and apparatus covering areas such as astronomy, time-keeping, electricity, optics, medicine, chemistry, radio communication and mathematical instruments. Famous curiosities include Einstein's blackboard, the Wizard Earl's armillary sphere, and John Dee's holy table. The Museum also houses an unusual collection of early Islamic instruments and the largest collection in the world of astrolabes, an early astronomical calculating instrument of extraordinary beauty and ingenuity.

With its world-class collection and magical atmosphere, the Museum provides a fascinating environment in which to explore an understanding of science in a wider cultural context tracing links between past and present.

The Museum is centrally located in the heart of Oxford, and occupies an historic seventeenth-century building which was the original home of the Ashmolean Museum. It is one of the several museums and collections belonging to the University of Oxford and has links with the Faculty of History and science departments within the university.

For more information
www.mhs.ox.ac.uk/education



Museum of the History of Science
Broad Street,
Oxford
OX1 3AZ



SECONDARY SCHOOLS PROGRAMME



RENAISSANCE museums for changing lives

SECONDARY SCHOOLS PROGRAMME

AT THE MUSEUM OF THE HISTORY OF SCIENCE

The Museum's education programme offers a range of taught sessions across the curriculum and at every key stage. These sessions focus on learning through real objects and are delivered by experienced educators. They are adaptable for all abilities and special needs. They can readily be coordinated with sessions offered at the other university museums and collections, and at university departments such as those in the Physical and Mathematical Sciences.

BOOKINGS, SESSION TIMES AND NUMBERS

All sessions are free of charge but must be booked in advance.

Booking times are flexible and sessions can take place outside normal museum opening hours. Individual sessions cater for group sizes of 20-30 and usually last about an hour to an hour and a half. Larger numbers can be accommodated within coordinated cross-museum programmes.

The Museum is normally open to the public from 12 – 5pm Tuesday to Friday, 10am-5pm on Saturday, and 2-5pm on Sunday. Pre-booked parties may visit at other times by arrangement.

To make a booking, please contact the education officer:
Email: christopher.parkin@mhs.ox.ac.uk
Tel: 01865 277297



INFORMATION FOR VISITING GROUPS

LOCATION

The Museum is centrally located in Broad Street next to the Sheldonian Theatre and is within easy walking distance of the other university museums and collections.

TOILETS, COATS AND BAGS

The Museum has toilets which are available to school groups but facilities are limited as is storage for coats and bags. It is advisable to make a toilet stop before visiting the museum, and to keep personal belongings to a minimum.

DISABLED ACCESS

Wheelchair access is limited. Please contact us beforehand to discuss arrangements. Parking for disabled visitors is available in Broad Street.

SUPERVISION AND EXPECTATIONS

We normally require a staffing ratio of 1 to 10. Please contact us to confirm arrangements. The Museum has its own code of conduct for visitors which will be made clear during the introduction.

LUNCH

We have no regular lunch facilities at the Museum. In fine weather, lunch can be eaten in the University Parks which is a short walk away. No eating or drinking is allowed in the Museum. Please see website for advice about alternative venues.

PARKING AND COACHES

The Museum is unable to provide parking facilities for visiting school groups. Coaches are usually able to drop-off and pick-up in Broad Street or in nearby Parks Road. There is a coach park 20 minutes walk from the Museum on Oxpens Road. The car park in Worcester Street also has spaces for minibuses.

DONATIONS

In keeping with all the Oxford University Museums and Collections, schools' sessions are free of charge. However, we welcome any donations (e.g. £50) towards the cost of materials and resources.

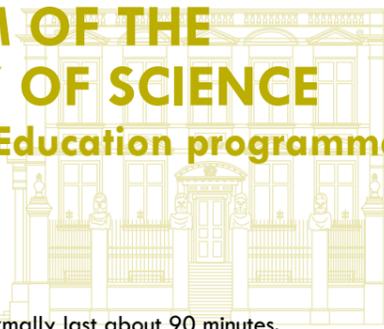
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Broad Street, Oxford OX1 3AZ.



MUSEUM OF THE HISTORY OF SCIENCE

Secondary Education programme



Individual sessions normally last about 90 minutes.

SCIENCE

TIME TELLERS Key Stage 3

Link with session at the Museum of Natural History

This session uses the Museum's extraordinary collection of sundials and other time pieces to explore the principles of time-telling. Students make replica models, use ideas about the earth and sun to explain how they work, and discover the origins of mechanical time-keeping.



SCIENCE

OBSERVING THE UNIVERSE: GALILEO AND THE TELESCOPE Key Stage 4

In this hands-on workshop students discover the story of Galileo's telescope and how he used his observations to challenge orthodox theories of the time. Students will also recreate a 17th-century astronomical experiment and learn about the relationship between theory and observation in early modern science.

Link with session at the Museum of Natural History



SCIENCE

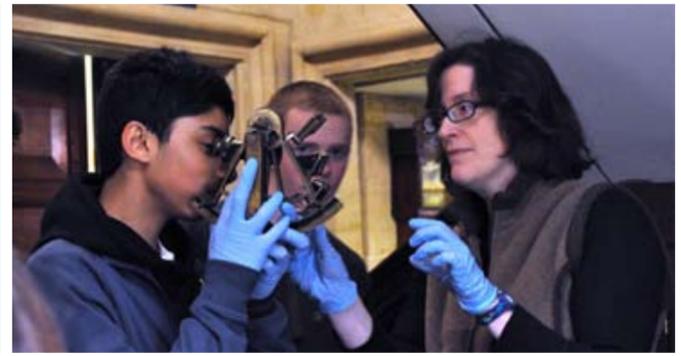
SMALL WORLDS

Yr 9 or Key Stage 4
Links with sessions at the Museum of Natural History and the Botanic Garden

This session looks at the early history of microscopy exploring ideas about how science works. Students see an original edition of Robert Hooke's fabulously illustrated book, *Micrographia* (1665), learn about the early Royal Society and use microscopes to investigate ideas about scientific observation.

DAY PROGRAMMES

These science programmes are offered in conjunction with other collections or departments of the university to make up a day's programme.



COORDINATED SCIENCE PROGRAMME Key Stage 3

This programme includes linked back-to-back sessions at the Museum of the History of Science and the Oxford University Museum of Natural History aimed at Years 7, 8 and 9. Please see separate leaflet for more information.



INVENTIONS Key Stage 3

This is a day in which students discover the science behind landmark inventions in the history of science through a series of interactive sessions based on objects in the Museums' collection. Students relate their discoveries to modern technology.

SCIENCE

SCIENCE

ASTRONOMY DAYS Adaptable for Key Stage 3 or 4

Link with the Physics Department

This is a day of rotating workshop sessions in which students discover the story of Galileo and the early telescope, explore astronomical instruments in the Museum's collection, learn about observing the universe in a visit to the Wetton reflecting telescope at the university's Physics department, or take part in the Citizen Science Project 'Galaxy Zoo'.



SCIENCE

21ST CENTURY SCIENCE Key Stage 4

This programme is designed to support triple science courses. It includes coordinated sessions at the Museum of the History of Science and the Oxford University Museum of Natural History. These allow students to explore objects and relate them to how science works and science in the modern world.

SCIENCE



MUSEUM STUDY DAYS

Key Stage 5

Link with the Physics Department

The Museum organizes occasional study days for sixth-form students in conjunction with science departments. Lectures are given by academic staff of the university, and students have the opportunity to opt for practical workshop sessions. Please see website for details of current events.

SCIENCE

SCIENCE IN ISLAM: DISCOVER THE ASTROLABE

Gifted and talented Yr 9, Key Stage 4 and above
Links with sessions at the Ashmolean Museum

In this session students explore the scientific achievements of early Islamic cultures focusing on the astrolabe, an early astronomical instrument. The session covers ideas about the universe; students make a model astrolabe, and learn how to use it to calculate the time and positions of the stars.



PENICILLIN THE WONDER DRUG Key Stage 4 and above

This session explores the story of penicillin from its discovery by Alexander Fleming to its war-time development in Oxford. Students have the opportunity to analyse the complex social factors which influence scientific research and development.

SCIENCE

CREATIVE SPARKS: ELECTRICITY For Key Stage 3

Link with session at the Museum of Natural History

In this session students explore early ideas about electricity with a focus on thinking scientifically. An object discovery trail introduces the use of models to express scientific ideas. This is followed by demonstrations of early electrical experiments which bring to life a story of 18th-century discovery, and the invention of the lightning conductor.

SCIENCE

NUMBER AND SYMMETRY IN ISLAMIC DESIGN Key Stage 3

Link with session at the Museum of Natural History

Students explore the Museum's historic collection of Islamic instruments through an object trail. They discover how number and symmetry combine in Islamic design and follow a step by step guide to piece together a colourful tessellating tile design.

MATHEMATICS

INGENIOUS GEOMETERS Key Stage 3

Link with session at the Museum of Natural History

Students explore how geometry is used in astronomy, navigation and surveying. They handle historical navigational instruments, discover the methods of early explorers and are guided through a practical problem-solving task.

MATHEMATICS

MATHEMATICS



IMAGINED JOURNEYS

In this session students explore the extensive collection of astrolabes and navigational instruments in the Museum's collection, and start to create their own imaginary travel journal using design patterns and instruments as a starting point.

Link with the Ashmolean

SECRET KNOWLEDGE: THE ART AND SCIENCE OF PERSPECTIVE Adaptable for Key Stages 3 or 4 and above.

In this session students discover the story of the invention of linear perspective during the Renaissance through optical demonstrations, and experiment with model camera obscuras to make perspective drawings around the Sheldonian Theatre.

Link with the Ashmolean

ART & SCIENCE



SYMMETRY IN ISLAMIC DESIGN Key Stage 3 or 4

In this session students study the varieties of pattern and their uses in Islamic culture, and use collage techniques to construct a design based on symmetry and geometric design.

Link with the Ashmolean

SURGERY AND ANATOMY IN THE EARLY MODERN PERIOD

Key Stage 4
Suitable for Schools' History Project GCSE Medicine through Time

This session explores the history of anatomy and surgery with hands-on surgical instruments and a presentation of early books from the Museum's library. Students gain a unique insight into the development of surgery and anatomy in the 17th-century.

RENAISSANCE BOOKS Key Stage 5

This is a discussion-led session with access to a range of early books and printed material from the Museum's library. It explores the impact of printing in the 16th- and 17th-centuries drawing on examples from natural philosophy, mathematics, astronomy, medicine, anatomy and early encyclopaedia.

HISTORY



PENICILLIN THE WONDER DRUG

Key Stage 4 or 5
Suitable for Schools' History Project GCSE Medicine through Time

This session explores the story of penicillin from its discovery by Alexander Fleming to its war-time development in Oxford. Students have the opportunity to analyse the complex societal factors which influence scientific research and development.

HISTORY



See separate leaflet for more information.

CROSS-CURRICULAR PROGRAMMES ACROSS THE UNIVERSITY COLLECTIONS

These sessions offer students from a whole year group the opportunity to explore the University collections, learning from objects.

A balanced programme of practical activities, object handling sessions and self-guided trails is provided. Students visit 3 of the University Collections during the day.

The Collections participating in this programme are the Ashmolean Museum, the Museum of History of Science, The Botanic Garden, The Pitt Rivers Museum, and the Museum of Natural History. All the museums and collections are within easy walking distance of each other.

LEARNING FROM REAL THINGS Key Stage 3

Science, Maths, History and RE

TRADE AND EXPLORATION Key Stage 3

Geography, History, Science, Maths and Business



HISTORY