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International

YOUTH SCIENCE

FORTNIGHT

1989

LONDON INTERNATIONAL YOUTH SCIENCE FORTNIGHT

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Founded by the late Philip S. Green, MBE in 1959, the Science Fortnight aims to give a greater insight into science and its applications for the benefit of mankind and to develop a greater understanding between young people of all nations.

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10 DOWNING STREET
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THE PRIME MINISTER

The application of scientific discoveries has revolutionised the lives of many of the peoples of our world. Life expectancy, thanks to the great advances in medical science, has improved greatly in a relatively short period of time. Research in agriculture has enabled the world to support this increased population. Engineering and technological advance has created a level of wellbeing never before achieved.

However, the implications of the greater demands we are making on our planet and the increased rate at which its resources are being used up are only now being fully realised. There are clear indications that world wide action is necessary to prevent long term damage to our environment, without sacrificing the economic progress which is the hope and ambition of the newly industrialising countries. Science has to be the foundation of our common efforts to understand the problems and to deal with them. Tomorrow's scientists will have an important role to play in ensuring not simply that we do what we can to repair the damage of which we are already aware, but that care and consideration is given to the implications of applying new technologies to ensure that the environment is able to sustain life fully in the future.

The Science Fortnight seeks to give an insight into the application of science for the benefit of mankind. The programme will bring an awareness of the international nature of science. Through contact with people from other cultures and parts of the world a greater understanding of the needs of the future, and how best to plan for them can be learned.

It gives me great pleasure to welcome you to the United Kingdom and to wish you, on behalf of Her Majesty's Government, a stimulating and rewarding visit.

Thatcher

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The principal sponsor of participants
from the United Kingdom is
The British Petroleum Company

The Science Fortnight gratefully acknowledges the support of those who select
and support the participation of students from Britain to attend the Science
Fortnight, and in addition to the above, gratefully acknowledges the continued
support given to participants by The Council for International Contact Trust.

(Lists compiled on 31 March, 1989 and therefore incomplete.)

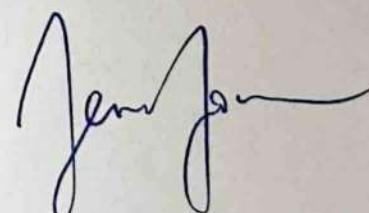
THIRTY-FIRST LONDON INTERNATIONAL YOUTH SCIENCE FORTNIGHT

Nothing is forever! Throughout history succeeding generations have found
that the basis of knowledge has changed. Our present century is no
exception. As science and technology seek to push back the frontiers of
knowledge and to overcome the seemingly insuperable or even
immutable barriers of the past we must prepare ourselves for major
changes in the lifestyle of coming generations.

The need to adapt to change is not new. Resistance to change generally
derives from a fear of the unknown. As our world shrinks and opportunities
— such as the Science Fortnight — enable us to meet our peers from other
cultures and regions of the world, it should become apparent that many of
the fears and even prejudices that make us resist change are groundless.

Our planet does not have infinite resources. If we are to ensure that life will
remain tenable in future centuries it is of the greatest importance that we
accept that need to adapt to change, and in preparation for that, the
more that we can each learn to respect other views; than our own, to see
our own countries and societies in the perspective of a world community;
the more readily and easily change will be made.

The Science Fortnight will provide a unique experience to share views and
experiences with others from many parts of the world. On the basis of that
understanding perhaps you will be more open to new ideas and attitudes
in the future, and at the same time you may persuade others to see your
point of view.



George McGowan
Director
London International Youth Science Fortnight

ACKNOWLEDGEMENTS

The Science Fortnight extends its gratitude to all those who have so generously assisted in the organisation of the 1989 meeting, and in particular to:

The Consultative Council for its advice and the Programme Working Group for its assistance with programme planning.

The Council and Staff of the Institution of Electrical Engineers for providing premises and facilities for lectures and meetings.

The Speakers and Lecturers whose contributions are invaluable:

British Gas plc, Research and Technology Division, Midlands Research Station, Solihull for presentation of the 'British Gas Flames Lecture'.

The commercial and industrial organisations, research establishments, university departments, museums etc which have arranged visits and lectures.

The Wardens, Bursars and Staff of the Halls of Residence which provide accommodation and meals.

The New Chef in a Box Ltd for the provision of packed meals.

University College London for the use of its premises.

All those who have provided scholarships to assist the participation of students from overseas, especially the British Council.

The Foreign & Commonwealth Office for its guarantee against loss.

British Airways plc for their generous assistance with travel arrangements for students from a number of overseas countries.

RESIDENTIAL STAFF OF THE LONDON INTERNATIONAL YOUTH SCIENCE FORTNIGHT, 1989

Deputy to the Director: Roger Mulberge
Chief of Staff: James St Ville

College Hall
Malet Street
London WC1E 7HZ
Tel: 01-636 8982

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Deputy Host
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Sam Mallinson (Australia)
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Mark Xuereb (Malta)

The Student Staff of the Science Fortnight is selected from former participants. Applications to serve as staff are not accepted and appointment is by invitation only.

DAILY PROGRAMME

<p>Wednesday 26 July</p> <p>Arrivals Welcome & Orientation in Halls of Residence</p>	<p>Thursday 3 August</p> <p>08.00 Day Visits to Oxford and Cambridge Visits to University and Other Establishments Afternoon Tour of City and Colleges</p>
<p>Thursday 27 July</p> <p>10.00 *Introductions & Programme Briefing 12.00 *OPENING CEREMONY 15.00 *Lecture/Demonstration: Colour in Fun 20.00 Welcome Disco at the Elizabeth Suite</p>	<p>21.00 Topics for Tonight Informal Discussions in Halls of Residence</p>
<p>Friday 28 July</p> <p>20.00 Half Day Visits to Research and Industrial Establishments Student Topics at University College</p>	<p>Friday 4 August</p> <p>10.00 Visits to Scientific Museums at South Kensington (a) Geological Museum (b) Natural History Museum (c) Science Museum 14.15 *Seminars led by former participants of the Science Fortnight 20.00 International Cabaret at Carisbrooke Hall</p>
<p>Saturday 29 July</p> <p>10.00 *Lecture/Demonstration: Immunology and Cancer 14.15 Optional Half Day Sightseeing Tour of London 16.30 Inter Hall Swimming Gala at University of London Union Optional Theatre and Concert Visits</p>	<p>Saturday 5 August</p> <p>10.00 *Lecture/Demonstration: Chemistry of Light 14.15 Inter Hall Rounders in Regent's Park Optional Theatre and Concert Visits</p>
<p>Sunday 30 July</p> <p>09.00 Optional Day Excursions to (a) Portsmouth (b) Stonehenge & Salisbury 20.00 Feature Film at College Hall: <i>Some Like it Hot</i></p>	<p>Sunday 6 August</p> <p>09.00 Optional Day Excursion to (a) Stratford upon Avon (b) Hampton Court & Windsor 20.00 Feature Film at College Hall: <i>Blazing Saddles</i></p>
<p>Monday 31 July</p> <p>10.00 Specialist Lectures at University College, London 14.15 *Lecture/Demonstration: <i>British Gas Flames Lecture</i> 20.00 Student Topics at University College</p>	<p>Monday 7 August</p> <p>10.00 *Participants' Forum I 14.15 *Question Time with Members of Parliament 20.00 Hall of Residence Visits</p>
<p>Tuesday 1 August</p> <p>21.00 Day Visits to Research & Industrial Establishments Topics for Tonight Informal Discussions in Halls of Residence</p>	<p>Tuesday 8 August</p> <p>10.00 *Participants' Forum II 14.15 *CLOSING CEREMONY 20.00 Farewell Disco at the Elizabeth Suite</p>
<p>Wednesday 2 August</p> <p>10.00 Seminars at University College, London and the Institution of Electrical Engineers 20.00 *Lecture/Demonstration: <i>'Radiation: Not in My Back Yard'</i></p>	<p>Wednesday 9 August</p> <p>Departures</p>

*Events marked thus take place at
The Institution of Electrical Engineers, Savoy Place, London WC2R 0BL

PRINCIPAL LECTURES AND DEMONSTRATIONS

Thursday 27 July	11.00	Opening Ceremony Principal address by The Rt Hon Kenneth Baker, MP Secretary of State for Education and Science <i>Colour is Fun</i> Dr Arthur Tarrant, PhD CPhys CEngA Home Economics & Domestic Engineering Research Unit University of Surrey (assisted by Mr K J George, FInst)
Saturday 29 July	10.00	<i>Immunology and Cancer</i> Dr Richard O'Kennedy BSc PhD MIBiol MIBiol DipFS National Institute for Higher Education, Dublin
Monday 31 July	14.15	<i>British Gas Flames Lecture</i> Dr R J Harris BSc PhD CEng MIGasE MInstEnergy British Gas Midlands Research Station, Solihull
Wednesday 2 August	20.00	'Radiation: Not in My Back Yard?' Professor J R A Lakey BSc PhD CPhys FInstP CEng FINuce FInstP Royal Naval College, Greenwich
Saturday 5 August	10.00	<i>Chemistry of Light</i> Dr Peter Douglas, BSc PhD and Dr Andrew Mills, BSc PhD GRSC Department of Chemistry, University of Swansea
Monday 7 August	10.00	Participants' Forum I Theme: <i>For What Use is Science if Mankind does Not Survive?</i>
	14.15	Question Time with Members of Parliament Andrew Bowden, MBE MP (Conservative) W E Garrett, MP (Labour) Lord Ross of Newport, (Social Liberal Democrat)
Tuesday 8 August	10.00	Participants' Forum II
	15.00	<i>Closing Ceremony</i> Closing address by George McGowan, Director, London International Youth Science Fortnight

SPECIALIST LECTURES AND SEMINARS

Monday 31 July	10.00	University College London Faculty of Engineering <i>High Energy Physics</i> Dr Richard E Ansorge, MA PhD Cavendish Laboratory, University of Cambridge
	A	<i>Molecular Symmetry and Its Significance for Reactivity and Spectroscopy</i> Dr Alison Rodger BSc PhD(Sydney) MA(Oxon)
	B	<i>Fossils, Evolution and The Origin of Species</i> Dr Peter Sheldon, BSc PhD Department of Geology, University College Cardiff
Wednesday 2 August	10.00	Seminars 1-4: Institution of Electrical Engineers Seminars 5-7: University College London Faculty of Engineering
	1	<i>The Role of Nuclear Power in World Energy Requirements</i> Harry A Cole, CEng MIEIRE UK Atomic Energy Authority
	2	<i>Is Anything Really Safe to Eat?</i> Suzanne E Emmett, BSc Cert Ed Home Economics & Domestic Engineering Research Unit University of Surrey
	3	<i>New Approaches to Traditional Medicine</i> Dr P J Hylands, BPharm PhD CChem MRSC Xenova Ltd, Slough, Berkshire
	4	<i>Should We Try to Send People to Mars?</i> Dr Alan D Johnstone, BSc MSc PhD Mullard Space Science Laboratory, University College London
	5	<i>Two Brains in One Head — a Problem in Communication</i> Dr George E Savage, BSc PhD School of Biological Sciences, Queen Mary College, London
	6	<i>How Safe Is Our Food?</i> Dr David P Richardson, BSc MSc PhD FRSR FInst The Nestle Company, Croydon
	7	<i>Breast Cancer Screening — The Evidence For & Against</i> Dr Clive A Wells, MA MB BChir MRCPPath Consultant Pathologist, St Bartholomew's Hospital, London

SEMINARS LED BY FORMER PARTICIPANTS

Friday
4 August

14.15 **Institution of Electrical Engineers**
The speaker's first year of participation in the Science Fortnight is indicated in parenthesis after his/her name

I **Acquired Immunodeficiency Syndrome (AIDS)**
Dr Miguel A M G S Forte (1976)
LicMed(Lisbon) DTM&H(London)
Hospital Santa Maria (Lisbon, Portugal)
Currently undertaking research at East Birmingham Hospital on a grant from the Calouste Gulbenkian Foundation

II **Learning to Play the System**
Stephen Jackson (1985) BA (Mod) (Maths & Science)
GJW Government Relations Ltd, London

III **More Than Anatomy**
Dr Deborah Kirklin (1980) MD
Barnet General Hospital, London

IV **What Hat Does a Scientist Wear?**
Nigel Lee (1984) MEng (Hons) acgi
Andersen Consulting, London

V **Science and the Law**
Charles Muller (1982), LLM
Arthur Andersen & Co, Luxembourg

VI **Composite Materials – A Revolution In Our Lives?**
Benoit Templier (1982),
Ingenieur des Arts et Manufactures
Renault Motor Company, France

TOPICS FOR TONIGHT

Informal discussions led by members of the student staff of the Science Fortnight

Tuesday
1 August

21.00 **College Hall**
Genetic Engineering – Should We Play God?
introduced by Roger Pepin

Ifor Evans Hall
Attitudes to Animals
introduced by Judith Purdy

International Hall
Is the United Nations the Key to World Peace?
introduced by Ian Shepherd

Informal discussions led by participants of the Science Fortnight on subjects of their own choice (details to be published during the Science Fortnight).

Thursday
4 August

21.00 All Halls of Residence

HALF DAY VISITS TO INDUSTRIAL & RESEARCH ESTABLISHMENTS & TO UNIVERSITY DEPARTMENTS

Friday, 28 July

British Broadcasting Corporation
BBC Television Centre
British Gas plc
South Eastern Gas, Croydon
Brunel University, Computer Centre
City University
Department of Aeronautics
GEC Research Ltd
Hirst Research Centre
Imperial College
Dept of Chemical Engineering
Institute of Cancer Research
Chester Beatty Research Institute
King's College London
Chelsea Department of Pharmacy

King's College London
Department of Biophysics
Royal Naval College, Greenwich
Dept of Nuclear Engineering
St Bartholomew's Hospital
Dept of Respiratory Medicine
University College London
Department of Electronic & Electrical Engineering
Wellcome Institute of the History of Medicine
Zoological Society of London
Dept of Veterinary Science

DAY VISITS TO INDUSTRIAL & RESEARCH ESTABLISHMENTS

Tuesday, 1 August

Atomic Energy Research Establishment
Harwell
British Petroleum Company plc
BP Research Centre
Sunbury on Thames
Central Electricity Generating Board
Dungeness Power Stations
Esso Petroleum Co Ltd
Exxon Chemical Ltd
Fawley Refinery
Freemans plc
Peterborough Distribution Centre
Joint European Torus, Abingdon

National Inst for Medical Research
Mill Hill
Royal Botanic Gardens, Kew
Royal Navy
Institute of Naval Medicine
Alverstoke, Hampshire
Royal Marsden Hospital, Sutton
Shell Research Ltd
Sittingbourne Research Centre
SIRA Ltd, Chislehurst
University College London
Mullard Space Science Laboratory

VISITS TO OXFORD & CAMBRIDGE

Thursday, 3 August

Cambridge
University of Cambridge
Department of Chemistry
Department of Engineering
Department of Physics
Anglian Water
British Antarctic Survey
NAPP Laboratories Ltd
St John's Innovation Centre

Oxford
University of Oxford
Department of Engineering Sciences
Oxford Scientific Films Ltd

STUDENT TOPICS

Participants who wish to give a paper based on a project or investigation they have undertaken will be allocated a period during one of the sessions listed below. Papers will be grouped by category and a schedule published at the beginning of the Science Fortnight.

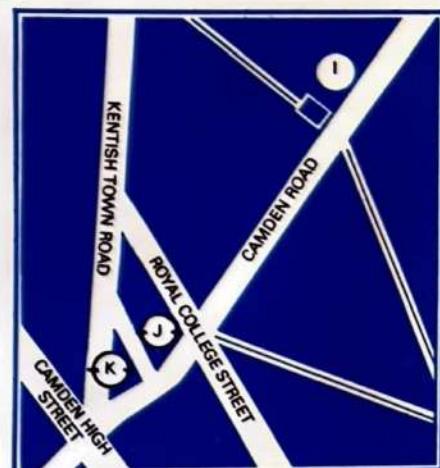
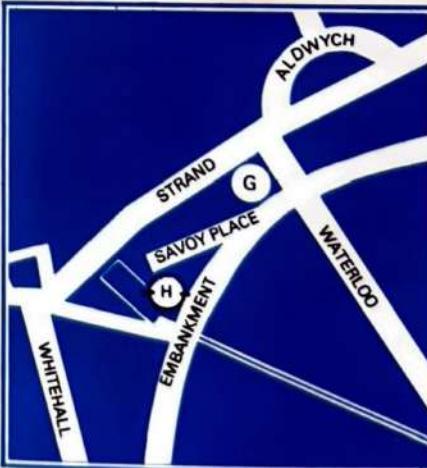
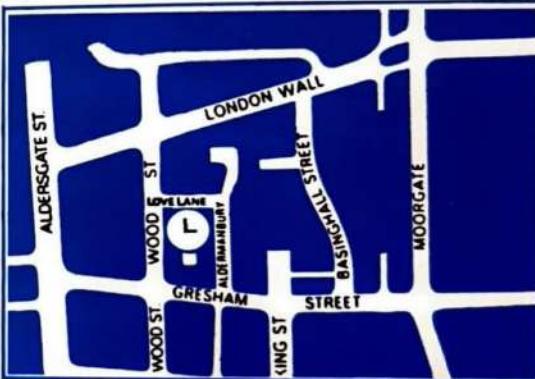
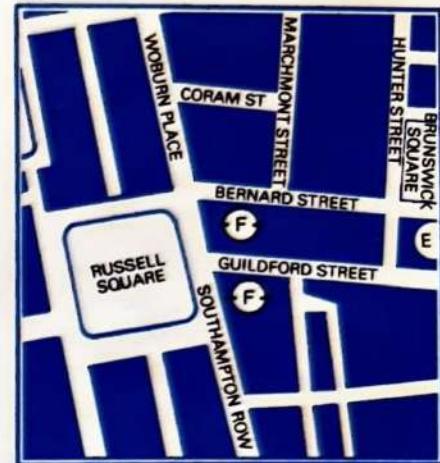
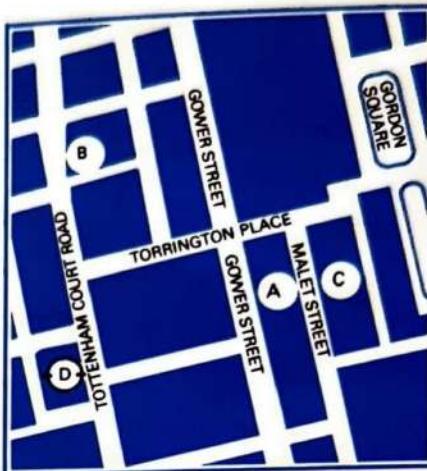
Friday 28 July	20.00	University College London, Faculty of Engineering Lecture Theatres : G6, 421, 422, 508
Monday 31 July	20.00	University College London, Faculty of Engineering Lecture Theatres : G6, 421, 422, 508

MUSEUM VISITS

Friday 4 August	10.00	Geological Museum Exhibition Road, South Kensington, London SW7
		Natural History Museum Cromwell Road, South Kensington, London SW7
		Science Museum Exhibition Road, South Kensington, London SW7

SOCIAL PROGRAMME

Thursday 27 July	20.00	Welcome Disco Elizabeth Suite, Gresham Street, London EC2
Saturday 29 July	16.30	Inter Hall Swimming Gala University of London Union, Malet Street, London WC1
Sunday 30 July	20.00	Feature Film: <i>Some Like it Hot</i> College Hall, Malet Street, London WC1
Friday 4 August	20.00	International Cabaret Carisbrooke Hall, Seymour Street, London W2
Saturday 4 August	14.15	Inter Hall Rounders Competition Regent's Park, London NW1
Sunday 5 August	20.00	Feature Film: <i>Blazing Saddles</i> College Hall, Malet Street, London WC1
Tuesday 8 August	20.00	Farewell Disco The Elizabeth Suite, Gresham Street, London EC2



KEY TO MAPS

- A College Hall
- B Empire Rooms
- C University of London Union
- D Gooche Street Station
- E International Hall
- F Russell Square Station
- G Institution of Electrical Engineers
- H Embankment Station
- I Ifor Evans Hall, 109 Camden Road
- J Camden Town Underground
- K Camden Road Station
- L Elizabeth Suite

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INTERNATIONAL
YOUTH SCIENCE FORTNIGHT
25 July to 8 August 1990