

THE SEVENTH LONDON  
INTERNATIONAL

# Youth Science Fortnight

AUGUST 1965







# THE SEVENTH LONDON INTERNATIONAL Youth Science Fortnight

AUGUST 1965

28 July to 11 August 1965 Theme:  
"International Co-operation in Science."

## Patron

His Royal Highness the  
Duke of Edinburgh, K.G.

## President

Sir John Cockcroft, O.M.

## Vice Presidents

Dame Kathleen Lonsdale,  
D.B.E., F.R.S.  
Eleanor, Lady Nathan, M.A., J.P.  
Dame Irene Ward,  
D.B.E., J.P., M.P.  
Sir Lawrence Bragg, F.R.S.  
The Rt. Hon. Lord Luke of  
Pavenham, T.D., D.L., J.P.  
W. J. Langford, C.B.E., M.Sc., J.P.

*The London International Youth Science Fortnight is organized by Worldfriends International Service for Youth in consultation with the British Association for the Advancement of Science and the Federation of British Industries. The aim of the Fortnight is to give a deeper insight into science and its application for the benefit of mankind and to develop a greater understanding between young people of all nations.*

## Administrative Headquarters

308 Earls Court Road  
London SW5  
Telephone: Fremantle 7071





# BUCKINGHAM PALACE.

When I became Patron of the Science Fortnight seven years ago, it was an interesting new idea which aimed to bring together Londoners and Europeans sharing the same common interest of Science.

Today it attracts participants from every part of the United Kingdom and from all over the world. Every year new contacts are made and every year the circle of friends brought together by these Fortnights grows and widens.

This year I am Patron of the United Kingdom Committee for International Co-operation Year. The Science Fortnight is a practical exercise in international co-operation and a splendid example to everyone interested in the International Co-operation Year. This year's Fortnight with its theme of "International Co-operation in Science" should be particularly interesting and a most appropriate way of celebrating the 20th Anniversary of the United Nations Organisation.

I send a warm welcome to everyone attending this year's Fortnight, particularly all those who have come from abroad. I am sure you will find the experience as interesting and rewarding as all those who have attended previous Fortnights.

*Philip*

July 1965.



## MESSAGE FROM SIR JOHN COCKCROFT, O.M.

Last year I wrote in my message to the Fortnight, "Science has always been international, and long may it remain so". These were Lord Rutherford's words. When we consider the age in which we live we must all realize the great need for co-operation between scientists.

It is never too young to learn, and although you are only embarking on your chosen careers, I am sure that it is of great importance that you should know and appreciate the necessity of applying science correctly.

The civilizations of the world have produced many solutions to the problems of mankind, but they have also produced new problems. The social implications of a highly developed society are all too often forgotten and the resultant human misery is a poor reflection of our achievements. It is the responsibility of scientific

workers to make an effort to bring an end to these situations.

There are many international scientific organizations working in union to develop better conditions for mankind, and you will be hearing about one of them —Pugwash—at your Closing Meeting. Their work is only beginning. In the years that lie ahead I hope you will identify yourself with this movement, based on international co-operation, in an effort to ensure the application of science for the benefit of mankind.

*John Cockcroft*



## International Praesidium of Honour

### *Their Excellencies*

the High Commissioner for Australia  
the Austrian Ambassador  
the Belgian Ambassador  
the High Commissioner for Canada  
the Danish Ambassador  
the French Ambassador  
the German Ambassador  
the High Commissioner for India  
the Irish Ambassador  
the Italian Ambassador  
the Japanese Ambassador  
the Luxembourg Ambassador  
the High Commissioner for Malaysia  
the Netherlands Ambassador  
the High Commissioner for Nigeria

the Norwegian Ambassador  
the High Commissioner for Pakistan  
The Portuguese Ambassador  
the South African Ambassador  
the Swedish Ambassador  
the Swiss Ambassador  
the United Arab Republic Ambassador  
the American Ambassador  
the Yugoslav Ambassador

The Right Honourable Michael Stewart, M.P.  
*Secretary of State for Foreign Affairs*

The Right Honourable Anthony Crosland, M.P.  
*Secretary of State for Education and for Science*

The Right Honourable Frank Cousins, M.P.  
*Secretary of State for Technology*

## Administrative Committee of the London International Youth Science Fortnight

### **Chairman**

\*Major General S. Moore-Coulson, C.B., E.R.D.  
*Education and Research Section, Federation of British Industries*

### **Members**

Mr. B. Campbell  
*Information Officer, Department of Education and Science*  
Mr. R. H. A. Carter, M.B.E.  
*Royal Radar Research Establishment and Worldfriends International Service for Youth*  
Miss F. M. Eastwood, B.A., B.Sc., F.R.I.C.  
*Association of Science Education*  
Mr. R. M. Gordon, M.A.  
*Assistant Education Officer, Greater London Council*  
Mr. D. M. Hall, M.A.  
*Mill Hill School*  
Miss M. P. C. MacKenzie, B.Sc.  
*Putney High School for Girls*  
\*Mr. E. N. Matthews, L.R.A.M.  
*Headmaster de Beauvoir School and Chairman Worldfriends International Service for Youth*  
Mr. H. Matthews  
*Esso Petroleum Company Ltd. and Worldfriends International Service for Youth*  
Mr. R. Moore, C.B.E., M.A.  
*Headmasters' Conference*  
Mr. J. Platt  
*Secretary: Central Bureau for Educational Visits and Exchanges*  
\*Mr. F. R. Reavell  
*Unilever Ltd.*

Miss M. A. Richmond, M.A.  
*Joint Committee of the Four Secondary Associations*  
Mr. A. R. Sinclair  
*Foreign Office*  
Mr. W. F. Spinks, M.A.  
*St. Marylebone Grammar School*  
\*Mr. R. A. Stevens  
*Assistant Secretary: British Association for the Advancement of Science*  
Mr. E. W. Tapper, B.Sc.  
*General Secretary: Association of Science Education*  
Mr. C. L. Williams, H.M.I.  
*Department of Education and Science*  
Mr. A. F. Wilshire, B.Sc.  
*National Union of Teachers*

### **Honorary Public Relations Officer**

\*Mr. John Hayward  
*The Rank Organization*

### **Director**

\*Mr. Philip S. Green, M.B.E.  
*Chief Adviser: Worldfriends International Service for Youth*

### **Organizer**

\*Mr. George McGowan  
*Executive Secretary: Worldfriends International Service for Youth*

### **Assistant**

Robin J. Marlow  
*Worldfriends International Service for Youth*

\*Denotes Membership of the Executive Committee

*The London International Youth Science Fortnight is sponsored by*

## Worldfriends International Service for Youth

Worldfriends International Service for Youth is a voluntary members association which aims to increase international understanding and goodwill through meetings of young people of all nations. In conjunction with similar organizations throughout the world it undertakes an annual programme of

Group Home to Home Exchanges  
Holiday Language Courses based on families  
Residential Summer Schools at Oxford and Cambridge  
Regional Youth Conferences  
The London International Youth Science Fortnight and its ancillaries

Special events in International Co-operation Year include a major linking scheme between Welsh and Danish Schools culminating in an exchange visit

programme; visits by eighteen groups of High School Ambassadors travelling through the People to People organization of the United States of America. It is planned to continue these events in future years and additionally to sponsor an International Arts Fortnight in 1966 on similar lines to the Science Fortnight.

1965 has been designated INTERNATIONAL CO-OPERATION YEAR but in W.I.S.Y. every year is INTERNATIONAL CO-OPERATION YEAR.

*in consultation with*

## The British Association for the Advancement of Science

The British Association is a unique independent institution of international reputation which brings almost the whole range of science within the scope of its activities and opens membership, without qualification or nomination, to all who are interested in the progress of science. Today science, whether we like it or not, dominates the life of each one of us. Only science can provide the

answers to some of the major problems which face the world. On the other hand science has provided also the means to bring life on this planet to an end. For this reason the Association regards it as one of its main tasks to promote a better understanding of the significance of scientific research and its impact through its applications on society as a whole.

*and*

## The Federation of British Industries

The Federation of British Industries was founded forty-nine years ago and is a voluntary body representing over 9,000 firms and trade associations in private industry. It formulates opinion through a democratically appointed Grand Council which is advised by standing committees.

Additionally the F.B.I. is represented in nearly every country in the world. The Federation advises on all industrial matters and is in close contact with the Government and the Press. It contributes to public opinion and all fields of social and economic activity by the publication of reports on special studies and by representation on a large number of Government Committees and other bodies.

The Federation of British Industries helps and encourages young people to discover and take part in the development of Science and of Technology.







## INTERNATIONAL CO-OPERATION IN SCIENCE

*The theme of the 1965 Seventh London International Youth Science Fortnight*

"And forward through I canna see, I guess and fear." These words were written by Scotland's best known poet Robert Burns two centuries ago. Whilst they were not used specifically of any future development in the scientific field, Burns would, no doubt, have been staggered if he had been permitted a glance into the future and seen his native Ayrshire, or country, or indeed the world as it is today. The nuclear power station feeding the needs of Scotland from its Ayrshire

coast base; the radio telescopes and tracking stations at Manchester that link Britain through satellite communications with the other side of the world would have seemed incredible and fearful to a student at the beginning of the 20th century let alone one who lived two hundred years ago.

The rapid developments in the field of scientific discovery and the increasing inventiveness of mankind have so increased the pace of life today that the known and cherished ways of life of our parents are no longer possible. Certainly science has brought well-being to the masses. Medicine and modern surgical techniques have succeeded in giving and maintaining life over a longer period of years. Sixty years ago not unintelligent individuals queried the human frame's ability to withstand being "hurtled along at a speed in excess of thirty miles an hour." Today human frames are being "hurtled along" at speeds of two thousand miles an hour in the latest planes and at speeds of incalculable magnitude in spacecraft. And still the human frame survives.

But what of the individual? We live in a world where

many, many people are still fearful of the future. Even today real problems of poverty and hunger exist. The great majority of men on our planet are still unable to do more than look on knowledge as an object of desire. To many more basic fear is a very real thing: fear of disease, of hunger and of brutal death. Can "learned man" believe himself blameless of the failure to eradicate the cause of so much of this fear. While part of the world starves major nations are so politically estranged that farmers are paid to leave their grain fields empty of crops.

Science can produce the means to right so much. Knowledge can be the key to the future solution of most of the world's problems. Its dissemination is therefore of tantamount importance. The greatest enemy of prosperity is ignorance. It must be combated in every field. The responsibility of the scientist must be to ensure that knowledge, discovery, research are used in the service of mankind. This is a grave responsibility which must be recognized and either accepted or rejected. Rejection will mean a bleak future.

International co-operation and the pooling of ideas

and resources are vital if waste is to be eliminated and advance to be rapid. The London International Youth Science Fortnight is particularly proud of its offspring (the first of many?) the London Science Club which provides a platform for discussion and the development of ideas on these themes. The current joint project with the Club Jeunes-Science of Bordeaux to fire a rocket is a symbolic action. It symbolizes the early appreciation of the feasibility of co-operation and joint effort.

The Science Fortnight is sponsored in an effort to ensure that young scientists are aware of the choice that must be made. It unashamedly exists for the purpose of ensuring that future generations of scientists know that they bear the responsibility of using their knowledge in the service of their fellow men. It aims to give a deeper insight into science and how best it can be applied to serve man. The programme of the Fortnight will pose many questions and scatter many seeds of knowledge. The answers to these questions and the fruits of the seeds must come from the participants.

**GEORGE McGOWAN**



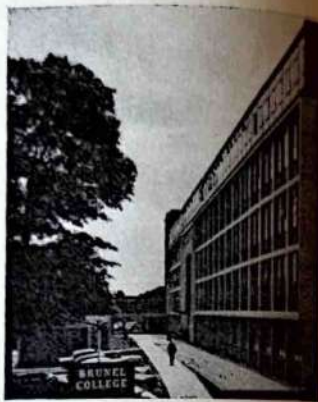


## Programme of Events

**Wednesday, 28 July**  
Arrivals Day



**Thursday, 29 July**  
*Morning*  
Orientation Session  
*Afternoon*  
Opening Ceremony  
The Rt. Hon. Lord Snow will give the main address  
*Evening*  
Welcome Dance at the Empire Rooms  
Cabaret: Frankie Vaughan with the V Group



**Friday, 30 July**  
*Morning and Afternoon*  
Seminars at Colleges of London University



**Thursday, 5 August**  
*Morning*  
Lecture  
"International Co-operation in Fundamental Particle Physics"  
*Afternoon*  
Exhibitions  
Two mobile exhibitions concerning World Hunger and International Co-operation  
*Evening*  
"Topics for Tonight"—hostel discussions



**Friday, 6 August**  
Day Out  
Visits to places of scenic and historic interest combined with Scientific Visits



**Saturday, 7 August**  
*Morning*  
Film Show  
Arranged by Shell International Petroleum Company  
*Evening*  
Guest Evening  
All foreign students will be invited to spend an evening with a London student and his family.



**Saturday, 31 July**  
*Morning and Afternoon*  
Coach Tour of London

**Sunday, 1 August**  
Optional Excursions



**Sunday, 8 August**  
Optional Excursions

**Monday, 9 August**  
*Morning and Afternoon*  
Scientific Visits



**Monday, 2 August**  
*Morning*  
Brains Trust in Reverse  
Sir Peter Runge will preside  
*Afternoon*  
Demonstration  
"The Advance of Aviation Medicine into Space"  
*Evening*  
"Topics for Tonight"—hostel discussions  
**Tuesday, 3 August**  
*Morning and Afternoon*  
Scientific Visits



**Tuesday, 10 August**  
*Morning*  
Reports—"Topics for Tonight"  
*Afternoon*  
Open Forum: "Pugwash"  
Sir John Cockcroft will preside  
Closing Ceremony  
Address by K. Helveg Petersen, Director of Education for Denmark  
*Evening*  
Farewell Dance at the Carisbrooke Hall by invitation of the London Science Club

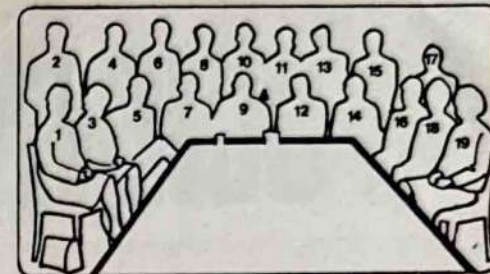


**Wednesday, 4 August**  
*Morning*  
Free  
Opportunity to witness "Changing the Guard"  
*Afternoon*  
Demonstration  
"Dynamic considerations in the repair of the human skeletal system"  
*Evening*  
International Evening at Carisbrooke Hall  
Cabaret: Robert Brown



**Wednesday, 11 August**  
Departures Day





1. Rosemary Cathels\*
2. V. Clive Lockwood
3. Barbara Udall
4. Morris Chudleigh
5. Robin J. Marlow (*Assistant Secretary*)
6. Richard Gledhill
7. Peter A. C. Ward\* (*Personal Assistant to George McGowan*)
8. David Baldwin
9. George McGowan (*Executive Secretary*)
10. Christopher Power
11. Roger Mulberge\*
12. Philip S. Green, M.B.E. (*Director*)
13. Colin A. West\*
14. M. M. Deloz (*Belgium*)
15. Austin Kinsella
16. Andrew J. Hayes (*Head Courier*)
17. Viji Thambyrajah
18. Anna Jennings
19. Philippa Smith

\* Denotes senior courier.

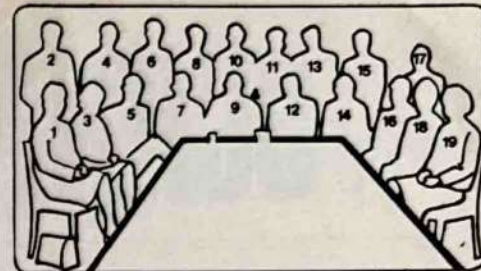
*Master of Ceremonies at the Institution of Electrical Engineers* Donald M. Hall

## HOSTS AND HOSTESSES

Commonwealth Hall  
 V. Clive Lockwood  
 Connaught Hall  
 Christopher Power  
 Barbara Udall  
 College Hall  
 H. J. Carlo  
 Agnes McCormack  
 Passfield Hall  
 Bryan H. Massam

# THESE ARE YOUR COURIERS AND HOSTS





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# SCIENTIFIC VISITS

## **Beecham Research Laboratories, Betchworth**

Research in pharmaceuticals—particularly penicillin and fermentation chemistry. Allergy research and research in new drugs of a purely chemical nature.

## **British Aircraft Corporation (Operating) Ltd.**

Manufacturers of civil airliners, including the Viscount, the Vanguard and the V.C.10.

## **British Coal Utilization Research Association**

One of Britain's largest research associations with a staff of over three hundred.

## **British Insulated Callenders Cables Ltd.**

Shepherds Bush Central Research Establishment for this Group of Companies with interests in the manufacture and transmission of all electric power at all voltages, railway electrification, copper refining, etc.

## **British Iron and Steel Research Organization**

Research at Battersea for iron and steel industry under the joint sponsorship of the Government and the industry itself.

## **British Petroleum**

### **(a) B.P. Refinery (Kent) Limited**

With the capacity to process about 10 million tons of crude oil a year Kent refinery is the largest wholly owned refinery in the B.P. group and processes a full range of petroleum products.

### **(b) B.P. Research Centre, Sunbury**

The international centre of the B.P. group's research into all aspects of the petroleum industry from the search for oil to processing and the uses of refined products.

## **Cambridge University**

A visit will be made to the School of Veterinary Medicine.

## **Central Electricity Generating Board**

Owns and operates the power stations and main transmission lines in England and Wales. Visits will be made to the Board's nuclear power station at Bradwell.

## **Chester Beatty Research Institute**

Together with the Royal Cancer Hospital's physics and radio therapy department forms part of the Institute of Cancer Research.

## **Esso Petroleum Company Limited**

### **(a) Esso Research Limited, Abingdon**

Petroleum products and chemicals research for Esso companies in Great Britain, Europe and North Africa.

### **(b) Esso Refinery, Fawley**

The Refinery is located on the south-western shore of Southampton Water. The refinery has a capacity of nearly 12m. tons per year and is the largest in the United Kingdom. It represents an investment of over £90m. and employs about 2,700 people.

## **General Post Office**

Visits will be made to the Postal Mechanization Office as well as to Continental, International and Local Telephone Exchanges.

## **Telephone Exchanges**

International and Continental Exchanges, Faraday Building where the visitors will see the operational and technical side of overseas telephone calls.

Kelvin House will also be visited where the full range of Post Office information services such as "TIM", "weather" and "What's on in London" will be demonstrated.

## **Sorting Offices**

The visitors will be shown by Post Office Engineers advanced mechanical equipment for sorting letters and parcels.

## **Hawker Siddeley Aviation Limited**

Constructors of Civil and Military Aircraft.

## **Hydraulics Research Station**

The Station is concerned with water from the time it falls on land as rain or snow until it reaches the sea. It studies such subjects as hydraulic structures for hydro-electric projects, flood relief schemes, silting in estuaries, the design of harbours and breakwaters, and coastal erosion.

DURING THE FORTNIGHT  
VISITS WILL BE MADE  
TO THE FOLLOWING  
ESTABLISHMENTS



## **IBM United Kingdom Ltd.**

Visit to the London Data Centre. There will be an opportunity to programme the IBM 7094—one of the world's largest computers.

## **Imperial Chemical Industries, Paints Division**

Visit to Factory and Research Unit at Slough.

## **International Computers and Tabulators Limited**

Visit to Headquarters at Putney for demonstrations of computers and data processing equipment. Also visit to research laboratory in Stevenage followed by tour of Stevenage New Town.

## **Kodak Limited**

The factory at Harrow is the principal plant of Kodak in Britain producing many different kinds of films, plates and sensitized paper. The Photographic Museum contains many unique exhibits.

## **London Transport Executive**

Serves an area of 2,000 square miles by train, bus and coach. Nine and a half million people are handled each working day. The visit will cover the Aldenham Bus Repair Workshops and the Chiswick Underground Works.

## **National Institute of Medical Research**

The Mill Hill establishment is the principal centre of the Medical Research Council.

## **National Physical Laboratory**

The Laboratory conducts research in aerodynamics, advanced electronic systems, electricity, optics, X-ray, ultra-violet and infra-red radiations, ionizing radiations, mathematics and the development of computational methods, metallurgy, sound and noise, ship hydrodynamics, molecular physics and phenomena at ultra high pressure.

## **Oxford University**

Visits will be made to the Dyson Perrins (organic chemistry) and Zoology laboratories and visitors will see something of the University Colleges.

## **Planetarium**

London's Theatre of the skies.

## **Rank Organization**

### **(a) Rank-Bush Murphy Colourvision Laboratories**

These laboratories have been involved in most aspects of the development of colour television. Their colour monitors were used in the transatlantic colour transmission via Telstar from Goonhilly in Cornwall.

### **(b) Rank Data Systems (Xeronic)**

The Xeronic Computer Output Printer—the fastest output printer in the world—prints the information it receives from the computer at a speed of up to 4,800 characters per second.

## **Royal Botanic Gardens, Kew**

Three hundred acres of gardens with herbarium, museums and research laboratory.

## **Shell International Petroleum Company Limited**

### **(a) Woodstock Agricultural Research Centre**

Headquarters of the European agricultural research carried out by the Royal Dutch Shell group of companies.

### **(b) Research Laboratories, Edham**

The visit to the Laboratories will enable striking advances in the development of chemicals from petroleum to be studied.

## **Shell Haven Refinery**

One of Shell's two largest and most modern refineries in the United Kingdom. It covers over 500 acres and has a processing capacity of 9.35 million tons of crude oil each year.

## **Unilever**

Research on food and animal feeding stuffs and the biological response of Unilever Products. The Laboratory extends over 1,000 acres and employs nearly 1,000 staff.

## **The Wellcome Foundation Ltd.**

Museum of Medical Science: a teaching museum of tropical diseases used extensively by medical students.

*The organizers of the Science Fortnight thank all concerned for making the above visits possible.*



# Speakers Seminars Topics for Tonight

## SPEAKERS

At the Opening Ceremony the President of the Science Fortnight, Sir John Cockcroft, O.M., will preside and the Principal Address will be given by the Right Honourable Lord Snow, who is perhaps better known as C. P. Snow, the distinguished scientist and novelist.

On the Closing Day, 10 August, Sir John Cockcroft will again preside. On this occasion there will be a Forum on "Pugwash" during which British scientists will describe how their membership of "Pugwash" affects their work. The audience will have an opportunity of joining in the discussion.

## TOPICS FOR TONIGHT

Informal discussions on topics under the broad headings of the Seminars will take place in all hostels on the evenings of 2 and 5 August, 1965. The same personnel will take part, and additionally the Education Department of OXFAM will provide a Leader. Full details of the Topics and the venue of each discussion will be circulated at the beginning of the Fortnight.

## SEMINARS

On 30 August the following gentlemen will take charge of Seminars on the topics indicated. Students will be allocated to Seminars in accordance with their expressed Scientific Interest. Chairmen of these sessions will be selected from the Scientific Staff of London Schools.



PHYSICS	A	Dr. H. R. Allan	Department of Physics Imperial College of Science and Technology, London
	B	Dr. D. K. Butt	Department of Physics, Birkbeck College, London
CHEMISTRY	C	Dr. M. D. Johnson	Department of Chemistry, King's College, London
	D	Dr. A. J. B. Robertson	Department of Chemistry, King's College, London
BIO-CHEMISTRY	E	Dr. B. R. Rabin	Department of Biochemistry, University Col- lege, London
BIOLOGY	F	Dr. J. D. Carthy	Department of Zoology, Queen Mary College, London
MATHEMATICS	G	Professor J. Crank	Department of Mathematics, Brunel College, Acton
ENGINEERING	H	Dr. P. A. Lindsay	Department of Electrical Engineering, King's College, London
GENERAL SCIENCE	I	Mr. R. M. Longstaff	United Kingdom Atomic Energy Research Laboratory

## The co-operation of the

# Twenty Eighth London International Youth Science Fortnight 23 July - 6 August 1986

*'For What Use is Science if Mankind does not survive?'*

Office of the High Commissioner for Australia  
Worldfriends, Austria  
Bayerischer Jugendring, Germany  
Ministry of Education, Belgium  
Science Fairs Council, Canada  
Worldfriendship Federation, Denmark  
The Royal Dublin Society, Ireland  
Office National des Universites, France  
Office of the High Commissioner for India  
Worldfriends Italiana  
Deutsch Englische Gesellschaft, Berlin  
Worldfriendship Federation, Japan  
Mouvement Jeunes Science, France  
College of Advanced Technology, Tripoli, Libya  
Office of the High Commissioner for Pakistan  
The Calouste Gulbenkian Foundation, Portugal  
Association for the Advancement of Knowledge and  
Culture, South Africa  
Central Committee for International Exchange, Sweden  
National Science Teachers Association, United States  
of America  
Office of the High Commissioner for Nigeria  
Office of the High Commissioner for New Zealand  
Worldfriends International Service for Youth, London

PO Box 159  
London SW10 9QX  
England

Tel: 01-373 4568  
Telex: 269706

Industries,  
S. Moore  
ence and advice  
emonstrations.  
the Institution of  
so generously  
to be the centre  
their never  
distance.  
for making  
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Executive for their  
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tnight, and in  
Dennis for his  
co-operation,  
porters in industry  
he Fortnight their

bring the Capital Fund of the Science  
Fortnight nearer to its target of £5,000.  
Her Majesty's Government for its courtesy  
and consideration, in particular to the  
Foreign Office for its help overseas and  
its guarantee.  
The Shell International Petroleum  
Company Limited for its continued assis-  
tance not only with programme arrange-  
ments but in accommodating meetings at  
Shell Centre.  
Fountain Press Ltd., Publishers of 'Science  
& Technology' for their generous  
provision and production of this Souvenir  
Programme.  
The many other people who help, not  
only in this country, but also abroad; the  
staff of Worldfriends International Service  
for Youth and any others inadvertently  
omitted for their loyal support and hard  
work without which the Fortnight would  
not be possible.

seminars and discussions.

financial support and who continue to



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**The co-operation of the following in making arrangements for participation in the Fortnight is greatly appreciated:**

Office of the High Commissioner for Australia  
Worldfriends, Austria  
Bayerischer Jugending, Germany  
Ministry of Education, Belgium  
Science Fairs Council, Canada  
Worldfriendship Federation, Denmark  
The Royal Dublin Society, Ireland  
Office National des Universites, France  
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Great Britain	Morocco	Yugoslavia
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## Our grateful thanks are due to

Industry, Research Establishments and Universities for their generous invitations to participants to visit them during the Fortnight. The Speakers, Lecturers, Seminar and Discussion Group Leaders for sparing their valuable time and for their interest and help; and also in many cases for allowing their premises to be used for Seminars. The British Association for the Advancement of Science and in particular Mr. R. A. Stevens and Miss R. Birley for their assistance in arranging the lectures, seminars and discussions.

The Federation of British Industries, through Major-General S. Moore Coulson, for their guidance and advice in the arrangement of demonstrations. The Council and Staff of the Institution of Electrical Engineers for so generously allowing their premises to be the centre of the Fortnight and for their never failing courtesy and assistance. The Rank Organization for making Mr. John Hayward again available to act as Honorary Public Relations Officer for the third year. The London Transport Executive for their courtesy and willingness to undertake the many complex arrangements necessary in planning the Fortnight, and in particular to Mr. H. N. Dennis for his unfailing sympathy and co-operation. The many generous supporters in industry who continue to give the Fortnight their financial support and who continue to

bring the Capital Fund of the Science Fortnight nearer to its target of £5,000. Her Majesty's Government for its courtesy and consideration, in particular to the Foreign Office for its help overseas and its guarantee. The Shell International Petroleum Company Limited for its continued assistance not only with programme arrangements but in accommodating meetings at Shell Centre. Fountain Press Ltd., Publishers of 'Science & Technology' for their generous provision and production of this Souvenir Programme. The many other people who help, not only in this country, but also abroad; the staff of Worldfriends International Service for Youth and any others inadvertently omitted for their loyal support and hard work without which the Fortnight would not be possible.



## PROGRAMME NOTES

### TOPICS FOR TONIGHT

Informal evening discussions will take place on the following topics under the leadership of the Seminar leaders:

#### 2 August

- |      |  |                   |
|------|--|-------------------|
| 2000 | Nuclear Energy—do the gains outweigh the risks?          | College Hall      |
| 2000 | Thinking of molecules in three dimensions                | Passfield Hall    |
| 2000 | Computers in action in Science, Engineering and the Arts | Commonwealth Hall |
| 2000 | The basis of life—Biochemistry?                          | Connaught Hall    |

#### 5 August

- |      |  |                   |
|------|--|-------------------|
| 2000 | Are Radioisotopes worth while?                             | College Hall      |
| 2000 | Should there be a revolution in the teaching of chemistry? | Passfield Hall    |
| 2000 | Lasers—a solution in search of a problem?                  | Commonwealth Hall |
| 2000 | The implications of the study of behaviour                 | Connaught Hall    |

A report will be produced by one member of each group and these reports will be given on the morning of 10 August.

### DAY OUT

On Friday 6 August visits to places of scenic or historic interest will be arranged for each participant. The following visits will be made in conjunction with visits to the industrial and research establishments indicated:

- |                      |  |
|----------------------|--|
| Berkeley Castle      | and the Central Electricity Generating Board's Nuclear Research Laboratory |
| Blenheim Palace      | and the British Motor Corporation's Cowley Factory                         |
| Canterbury Cathedral | and the Fruit Research Station at East Malling                             |
| Coventry Cathedral   | and selected engineering and communications factories in the Coventry area |
| Guildford Cathedral  | and the Central Electricity Generating Board's Laboratories at Leatherhead |
| Windsor Castle       | and the Radio and Space Research Station at Slough                         |

One purpose of these visits is to enable all visiting students to see something of the United Kingdom other than the London Area.

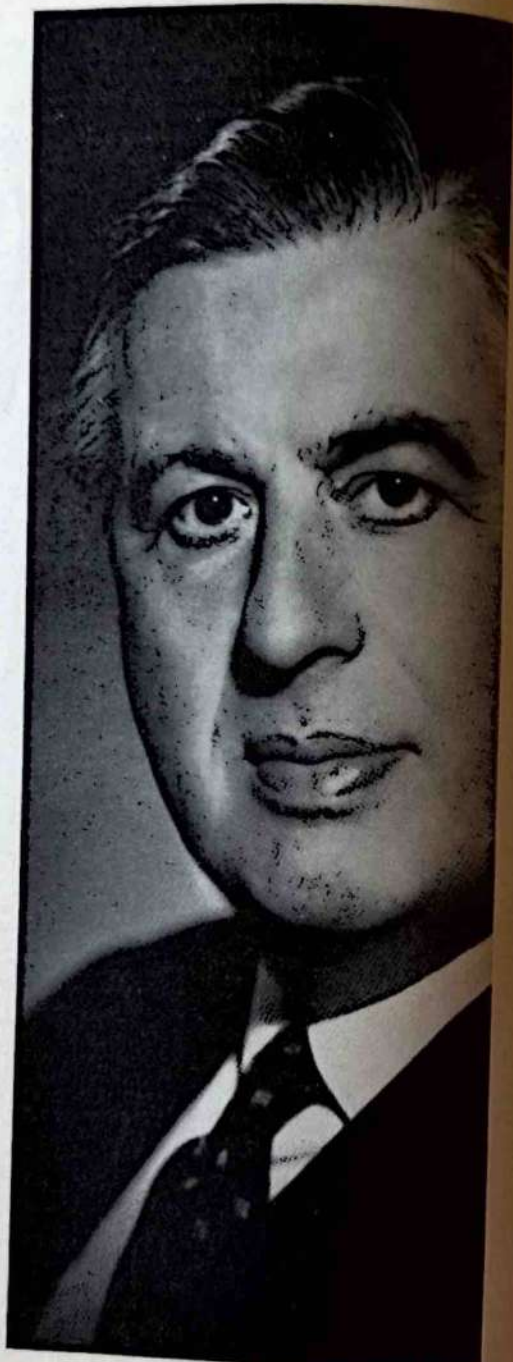
### DEMONSTRATIONS

#### 2 August 1965

"Dynamic considerations in the repair of the human skeletal system." A lecture on man-machine relationship together with a demonstration and film by Professor J. Zarek, Dipl. Eng., B.Sc., Ph.D., A.M.I.Mech.E.

#### 4 August 1965

"The Advance of Aviation Medicine into Space." A team demonstration by members of the staff of the Institute of Medicine of the Royal Air Force. This demonstration is presented by kind permission of the Director-General of the Royal Air Force's Institute of Medicine.



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### BRAINS TRUST PANEL

#### Sir Peter Runge (left):

Sir Peter Runge was educated at Charterhouse and Trinity College, Oxford, where he graduated with honours in chemistry. He is President of the Federation of British Industries and is a director of Tate & Lyle, Ltd., and other companies. He is a member of the National Economic Development Council of the United Kingdom.

#### Sir Gerald Nabarro

Sir Gerald Nabarro represented the Kidderminster constituency in Parliament from 1950-1964. He was educated at a L.C.C. elementary school and served in the Army

before entering industry as a labourer in 1937. He is now a Company Director of many engineering and sawmill firms.

#### Dr. Peter Sykes, M.Sc., Ph.D., F.R.I.C.

Dr. Sykes is a Fellow of Christ's College, and is Lecturer in Organic Chemistry at Cambridge University. His publications include—*A Guidebook to Mechanism in Organic Chemistry*.

#### Dr. Peter N. Rogers, B.Sc., Ph.D., M.I.Biol.

Dr. Rogers was educated at High Wycombe and Leicester University. After some years in education, Dr. Rogers entered industry and is currently employed on product development.



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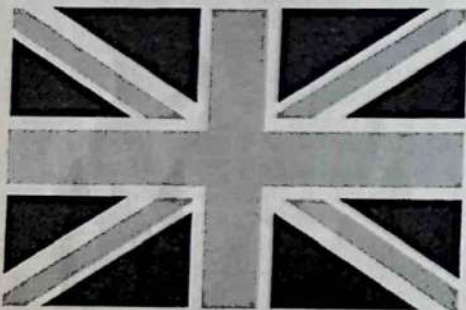
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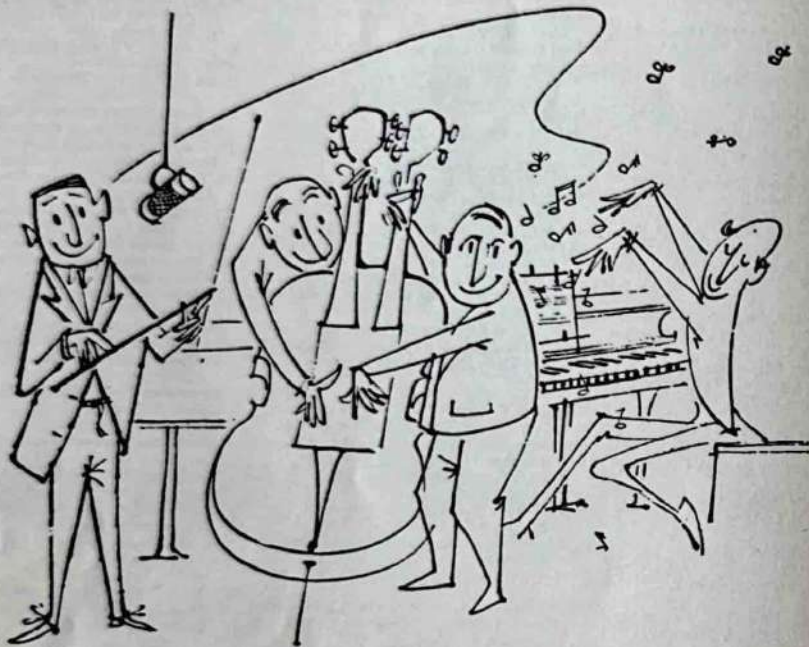
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# Twenty Eighth London International Youth Science Fortnight 23 July – 6 August 1986

*'For What Use is Science if Mankind does not survive?'*

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# Twenty Eighth London International Youth Science Fortnight

## ORIGIN

The London International Youth Science Fortnight was held for the first time in 1959 with HRH Prince Philip, Duke of Edinburgh as Founder Patron. The present Patron of the Science Fortnight is HRH the Duke of Kent. The Twenty Eighth Science Fortnight will take place from 23 July to 6 August, 1986.

## AIM

The Science Fortnight aims to give a deeper insight into science and its applications for the benefit of mankind, and to develop a greater understanding between young people of all nations.

## ORGANISATION

The Science Fortnight is arranged by LIYSF Ltd. and its programme is devised by a Working Group drawn from past participants together with representatives of scientific institutions.

## PARTICIPATION

The academic level of the Science Fortnight is that of University entrance and it is open to science students in the 16-22 age range from all countries of the world. The language used throughout is English, of which all participants should have a good working knowledge. Over three hundred students attend from around forty nations, all living together in University Halls of Residence.

There are many opportunities of meeting people of different nationalities and cultures through the informal contacts which can be made during the Fortnight.

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Programme Working Group  
The Reverend Edwin A. Morris, BSc

**Originator**  
Philip S. Green, MBE

**Director**  
George McGowan



# Twenty Eighth London International Youth Science Fortnight

## ORIGIN

The London International Youth Science Fortnight was held for the first time in 1959 with HRH Prince Philip, Duke of Edinburgh as Founder Patron. The present Patron of the Science Fortnight is HRH the Duke of Kent. The Twenty Eighth Science Fortnight will take place from 23 July to 6 August, 1986.

## AIM

The Science Fortnight aims to give a deeper insight into science and its applications for the benefit of mankind, and to develop a greater understanding between young people of all nations.

## ORGANISATION

The Science Fortnight is arranged by LIYSF Ltd. and its programme is devised by a Working Group drawn from past participants together with representatives of scientific institutions.

## PARTICIPATION

The academic level of the Science Fortnight is that of University entrance and it is open to science students in the 16-22 age range from all countries of the world. The language used throughout is English, of which all participants should have a good working knowledge. Over three hundred students attend from around forty nations, all living together in University Halls of Residence.

There are many opportunities of meeting people of different nationalities and cultures through the informal contacts which can be made during the Fortnight.

## SCIENTIFIC PROGRAMME

The programme is planned to include lectures by eminent scientists; visits to industrial and research establishments; to university laboratories in London, Cambridge and Oxford; to scientific museums, etc. Specialist lectures and seminars are arranged and time is provided for the presentation of participants' own research projects. There are many opportunities for participants to join in discussion and debate. Students are asked to indicate special interests on their application forms and these are taken into account when personal programmes are prepared. Apart from the scientific programme there is a full social programme. Participants are expected to attend all events taking place during the morning and afternoon, but events scheduled to take place after 1800 hours are optional, so that there is adequate opportunity for personal arrangements.

## SOCIAL PROGRAMME

Social events include a Welcome and a Farewell Disco. Midway through the Fortnight there is an International Evening at which participants entertain each other with a cabaret which includes national songs and dances, (participants intending to perform on this evening should come prepared and if they wish bring national costume). Arrangements are also made for participants to become temporary members of the University of London Union, where facilities are available for swimming, squash, badminton and table tennis. Those wishing to take part should bring their own sports equipment. Tickets are available for theatres and concerts at week-ends and on Sundays coach excursions are arranged to places of interest in and out of London.

For further information and  
application forms please contact:-

LIYSF Ltd.  
PO Box 159  
London SW10 9QX  
United Kingdom

Tel: 01-373 4568

Telex: 297606

## COST

The participation fee of around £380 covers accommodation and all meals together with the full programme of the Fortnight (both scientific and social). A travel pass giving unlimited travel on public transport in Central London is also provided. Additional funds will be required if the participant wishes to purchase theatre or concert tickets (about £6) and for Sunday Excursion (about £12.50 each). However, the programme is arranged to ensure that on almost every evening there is some activity available at no extra cost.

## APPLICATIONS & GRANTS

Participants from the United Kingdom are mainly sponsored by Local Education Authorities or by Industry, but they may apply direct. It is, however, advisable to contact school or Local Education Authority sources initially as they may be prepared to help with a grant towards the fee or advise on ways in which financial assistance can be obtained.

Participants from overseas may apply direct. However, in many cases there are arrangements for sponsorship and selection and it would be desirable to look into these possibilities. Advice can be obtained from the Science Fortnight Office. It is sometimes possible to obtain small grants towards the participation fee, especially for students from developing countries. Further information about this is also available from the Science Fortnight Office.

There are no funds available for travel grants.



Founder Patron  
HRH Prince Philip  
Duke of Edinburgh, KG, KT  
1959-1969

Patron  
HRH The Duke of Kent

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## Countries represented in 1985

Australia  
Belgium  
Brazil  
Bulgaria  
Canada  
Cyprus  
Egypt  
France  
Germany  
Guyana  
Hong Kong  
Hungary  
India  
Indonesia  
Iran  
Ireland  
Israel  
Italy  
Jamaica  
Jordan

Kuwait  
Lebanon  
Luxembourg  
Malta  
Netherlands  
Portugal  
Qatar  
Singapore  
South Africa  
Spain  
Sweden  
Switzerland  
Taiwan (ROC)  
Thailand  
Trinidad & Tobago  
Tunisia  
United Kingdom  
United States of  
America  
Zambia

# Twenty Eighth London International Youth Science Fortnight 23 July – 6 August 1986

*'For What Use is Science if Mankind does not survive?'*

*'The aim of the Science Fortnight is to give a  
deeper insight into Science and its  
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