



spark!
LONDON'S ORIGINAL
EDUCATION BUSINESS PARTNERSHIP

Primary School Programme Guide

Delivering in partnership with

SATRO  .org.uk
Inspiring young people
Engaging business

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Introducing Spark! and SATRO

Following feedback from local primary schools that they would like Spark! (formerly Hounslow Education Business Partnership) to launch a programme for primary age students we are delighted to set out our first primary school offer for the academic year 2013-14. The workshop programme will be delivered in partnership with Satro, our sister charity based in Surrey. Like us they bring decades of experience of linking education with business, including work supporting primary schools.

Spark! has strong relationships with over 700 West London businesses, so we will mobilise the business volunteers, whilst Satro will facilitate delivery at your school.

Primary School Programme objectives

Spark! facilitates links between local businesses and primary schools in order to:

- Bring the curriculum to life
- Inspire children to aim high
- Support our community of primary professionals

Funding

All our workshops are excellent value for money relative to other service providers – you can see from the fees which are outlined throughout this guide. As a registered charity we are able, from time to time, to secure funding to subsidise delivery costs and make the events available to schools who otherwise would not be able to afford them.

If you would like to talk to us about this opportunity do call or email and we will do our very best to help you. Our aim is to ensure that as many young people as possible have the opportunity to be inspired by the opportunities that lie ahead of them!

Celebrating success

Since 2004, in partnership with Hounslow Chamber of Commerce, Spark! has celebrated primary schools' partnerships with local business at our annual awards.

You can read about past primary school winners of The Malcolm Gibbons Cup at www.sparklondon.org/pastwinners

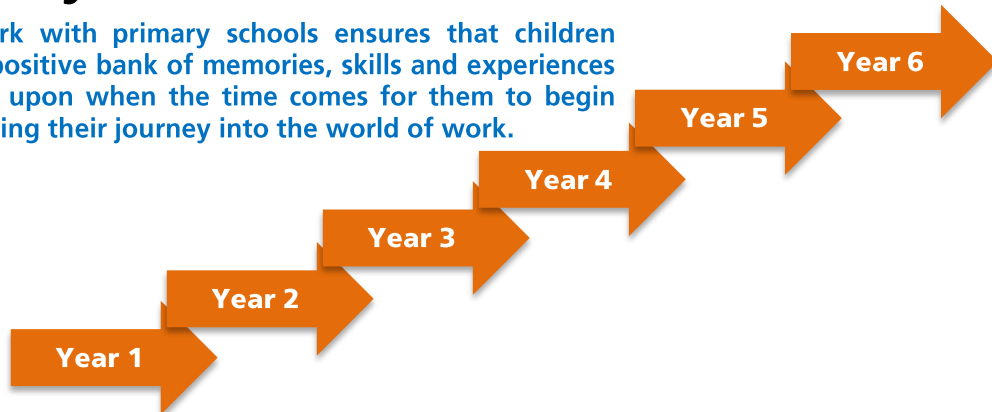
We do hope you will join us to celebrate the achievements of the past year on Thursday 21 November 2013 – register at www.sparklondon.org/partnershipawards2013

“Outstanding Schools... Pupils in primary schools are developing an excellent grasp of the world of work, including basic economics and business ideas and money management.”

Ofsted Guidelines
2012 – Economics,
Enterprise &
Business Education

Starting a journey to the world of work in primary school

Our work with primary schools ensures that children have a positive bank of memories, skills and experiences to build upon when the time comes for them to begin considering their journey into the world of work.



SCIENCE, ENGINEERING AND MATHS

Discovery Science Days (Years 1-6) - The day includes one STEM-related activity per class (up to a maximum of 6 classes) with the support of an experienced Science & Engineering Ambassador in each class.

Mega Structures Challenge (Years 3-6) - A Structures team challenge which teaches students team working and creative problem solving. Teams compete to design and build a large-scale structure, e.g. a bridge, building, stadium. Ideally suited to whole year group.

Fun Maths Challenge (Years 3-6) - An interactive, hands-on workshop to inspire pupils about maths in a fun, non-confrontational environment. Pupils work in 2s or 3s on a series of varied, differentiated tasks that will engage all levels of ability.

Jaguar Cars 'Maths in Motion' Challenge (Year 6) - Using software students calibrate a virtual racing car and apply their maths knowledge and skills to create optimum performance in their car. This exciting and motivating workshop culminates in a Grand Prix race.

HEALTHY EATING

Healthy Eating Workshops (Years 2 or 5) - Practical workshops to introduce or consolidate the concept of the importance of healthy eating and a balanced lifestyle.

ENTERPRISE

Junior Business Game (Years 5 or 6) - Lasting a full day, teams of 5-6 students set up a manufacturing company to learn about the world of work, finance, teamwork and time-keeping deadlines.

Global Trading Game (Years 5 or 6) - Teams of 5-6 students each represent a country trading in the World Market. Each country has to create as much wealth as possible by manufacturing paper shapes to exact specifications.

Workshops for Key Stage 1 and 2

Discovery Science Days (Years 1-6)

Discovery Science Days are held over a full school day with age-appropriate activities for Years 1-6. A bespoke science programme is planned in association with staff to support and enhance the school's curricular requirements.



SATRO and Spark! have been running successful science workshops in schools for over twenty years. All our school workshops are delivered by expert staff, who will bring with them any specialist kit required, and involve volunteer scientists, engineers and technologists from all areas of the working world, giving young people a chance to talk to 'real scientists' about their day jobs.



Discovery Science Days are suitable for all abilities – whether to provide a challenge for your Gifted & Talented students or to inspire the less able by giving them an opportunity to succeed at something practical and exciting. A Spark! business volunteer from a STEM background works with each class, where possible, to inspire pupils and share their expertise in practical DT tasks.

Discovery Science Days are regularly used by Primary Schools, Secondary schools for Transition events and KS3 revision, and some of our modules are ideal community events to involve parents and carers in their child's learning. Our trained staff can also come to your school and run an INSET session to inspire teachers and other staff.

Workshops are designed for a specific year group to deliver ICT topics (Control Technology or Data Logging) or to develop Team-Building skills (Knex Challenge, Egg Drop Challenge, Water Rockets).

Key skills covered

- Functional Maths
- Problem-Solving Skills
- Scientific enquiry and investigation
- Team-building
- Creative thinking
- Effective participation

How students benefit

- Engages them in problem solving, individually and in teams
- Brings science and technology to life in a practical, hands-on way
- Gives them experience of working with professional scientists, engineers and technologists.

How schools benefit

- Assists with meeting requirements to achieve specialist status in Engineering, Science, Technology and Mathematics.
- Helps enhance the school's reputation and develops links to local companies through the scientists and engineers involved in the workshops.

How teachers benefit

- Helps enhance the National Curriculum and reinforce learning objectives
- Inspires and supports teachers to deliver a range of science and technology topics
- Enables teachers to develop links with scientists, engineers and technologists for the future
- Contributes towards Continuous Professional Development programmes.

How much does it cost?

£626 per full day – up to 120 pupils

£330 per half day – up to 120 pupils

Additional classes of 30 - £83 per class (maximum six classes)

Focus Workshops are also available which are designed for a specific year group to deliver ICT topics (Control Technology or Data Logging) or to develop Team-Building skills (Knex Challenge, Egg Drop Challenge, Water Rockets).

Key stage 1

Bob the Builder	Machines, materials and safety
Electric Circuits	Learn about a simple circuit. Build a lighthouse with an electric circuit
Floating and Sinking	Investigate properties of different objects. Build foil boats to test displacement of water
Forces - pulleys	Experiment with different pulleys to lift weights, change speed and direction. Make a basket to transport items on an aerial runway.
Gravity	Bunnycopter spinners and simple parachutes
Magnets	Investigate magnetic forces and make a magnetic game
Materials	Investigate waterproof materials
Ourselves	Why we have bones. Make paper skeletons
Push and Pull Forces	Investigate the difference between Push and Pull. Make a model playground to demonstrate forces
Sound	Measure sound with data loggers. Make musical instruments
Waterwheels	Investigate forces and make your own waterwheel

Key stage 2

Cams	Make a moving toy
Circuit Detectives	Investigate circuits and solve circuit faults in small teams
Control Technology (KS2 and 3)	Use a Lego Dacta program to control a traffic light sequence and car park barrier
Data Logging (KS2 and 3)	Investigate light, sound and temperature using data loggers to create exciting graphs
Egyptians	Understand Egyptian technology by building a shaduf and taking part in the Brick Race
Flight	Make your own glider to investigate aerodynamics
Friction and Land Yachts	Test different surfaces using Newton meters. Build a land yacht
Gravity and the Egg Drop Challenge	Investigate spinners and parachutes. Use this knowledge to drop an egg without it breaking!
Light and Shadows	How does light travel? Make a shadow puppet
Materials - packaging Challenge	Which materials work best as protective packaging?
Planets	Investigate the solar system. Make an orrery
Pneumatic monsters	Investigate pneumatics and create your own moving monster
Scene in a Box	Design and make a themed scene incorporating an electric circuit and levers

Mega-Structures Challenge

(Years 3-6)

The one-day Mega-Structures Challenge is tailored accordingly to suit Year 3-6, ideally years 5 or 6. This activity is suitable for a year group, an inter-school challenge or transition event. Students of a wide range of age and ability will explore ways of making structures in an exciting environment, whilst inspiring creativity, developing problem-solving capability and providing opportunities for team-building.



The session is led by experienced staff, who will bring specialised kit – all you need to provide is the paper. The challenge is supported by our volunteers from a business or engineering background, giving participants the opportunity to talk to experts about STEM careers.

What happens on the day?

- The challenge is held over a full school day with up to 60 pupils at KS2 and can be adapted for all levels of ability.
- Students work in small groups of 6 taking on designated roles
- The teams must use their creativity and problem-solving ability to design a structure on a themed topic e.g. bridge-building, iconic London buildings, sports stadium
- All team members will be involved in the practical construction element
- Teams will be required to give a presentation to a panel of judges, explaining the design and key features of the structure
- Expert engineering volunteers will be on hand to give support and answer any questions. The volunteers will also act as judges.
- A hugely exciting session in which everyone gets involved – students and teachers alike.

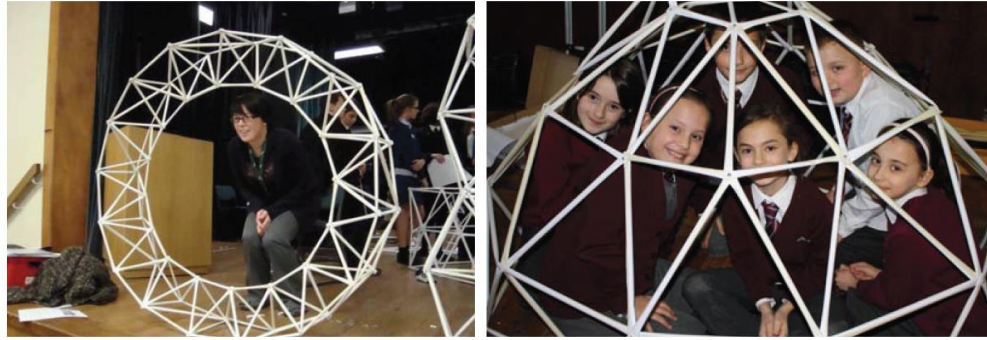
How pupils benefit

- Engages them in problem solving, working to very tight deadlines as a team
- Brings maths and literacy to life in a practical and applied manner
- Raise awareness of the built environment
- Gives them experience of working with external visitors and an opportunity to discuss careers.

How teachers benefit

- Brings functional maths and English to life and kickstarts a Problem Solving approach
- Ideal ice-breaker to mix up new year groups or different sets
- Helps enhance the school's reputation and develops links to local employers through the volunteer engineers involved in the Challenge.





How schools benefit

- Challenges can be tailored to address particular aspects of functional maths or English
- Challenges can be used to consolidate modules within the science, engineering and enterprise curriculum
- Provides an opportunity to develop extension work on structures themes.

How much does it cost?

£626 – up to 60 students

Curriculum links

Science and Engineering – KS2, 3, 4 and 5

Functional maths and English – KS2, 3 and 4

PLTS – Team working, problem solving and creative thinking

Fun Maths Challenge (Years 3-6)

The Fun Maths Challenge is delivered as a half-day event to Years 3 - 6 and offers an opportunity to develop young peoples' functional skills, team-building and effective participating.



What happens on the day?

- The challenge is held over a maximum of 75 minutes and can accommodate between 30 and 70 students at a time. A maximum of three sessions can be delivered in a day.
- Students work in pairs or 3s on a range of mathematical tasks that are graded to cater for all abilities.
- Students work at their own pace, rotating round the individual tasks on a self-selection basis.

How students benefit:

- Engages them in problem-solving.
- Brings maths to life in a practical and applied manner, in a fun format.
- Provides a team-building opportunity to work in pairs or small groups.

How schools benefit

- Brings functional maths to life.
- Ideal ice-breaker to mix up new year groups or different sets.
- Helps enhance school's reputation for creative learning.

How teachers benefit

- We provide a complete package, with materials, supported by a team of business volunteers
- Helps enhance the National Curriculum and reinforce learning objectives.

How much does it cost?

£626 per full day event

£330 per half day

Curriculum links

Key Stage 2: Ma2: 1, 2 and 3

Ma3: 1, 2 and 3

Key Stage 3: Sections of Ma2 and Ma3



Jaguar Cars 'Maths in Motion' Challenge (Year 6)

The Jaguar Cars 'Maths in Motion' Challenge has become a well-established event in the calendar of many schools nationwide. Its aim is to engage students from Year 6 in an exciting and motivating mathematics based project.

SATRO and Spark! working in partnership with the Cambridgeshire Software House are now able to offer bespoke workshops to schools in London Borough of Hounslow. Students will have the opportunity to use software to calibrate a virtual racing car and compete against their rival teams in a Grand Prix style race.



The three hour session is led by our accredited Associate and supported by one or two of our expert business volunteers. We bring the specialised software – the school needs to provide minimum of 10 computers.

What happens on the day?

- The three hour challenge session can be delivered in a morning session to complete one race or extended in the afternoon to accommodate 2 races in a day. Up to 60 students can participate in a session, subject to number of computers available.
- Students work in small groups of two, three or four.
- Teams use a range of mathematical skills, e.g. percentages, multiplication, division, ratios, measuring angles, calculating speed.
- Opportunity to use a computer simulation, create graphs and adjust data for optimum performance.
- A hugely exciting session offering a novel format to consolidate, improve and apply maths knowledge.

How pupils benefit

- Engages them in a range of mathematical tasks
- Brings maths to life in a practical and applied manner
- Team-working opportunity
- Helps raise self-esteem for all abilities through achievement
- Raises awareness of a working environment and related job opportunities
- Gives them experience of working with external visitors and to consider career options.

How teachers benefit

- Brings functional maths and computing to life in an engaging way
- Opportunity to observe students and assess their level of knowledge
- Incorporates IT skills
- Ideal for Gifted & Talented events or for mixed ability groups
- Workshop can form basis of cross curriculum projects
- Links to work-related learning
- NCETM approved maths training.

How schools benefit

- Offers an exciting and unique workshop to support students' learning
- Provides an extension of the maths and computing curriculum
- Level of challenge can be adapted to different abilities
- Helps raise standards in mathematics and computing
- Helps enhance the school's reputation for offering innovative learning
- Approved by NCETM and CREST.

How much does it cost?

£600 for a full day and £350 for a half day - up to 60 students in each half day session.

Curriculum links

Maths, ICT, Science and Engineering - KS2 and 3

PLTS – Team-working, problem solving, reflective learning, effective participating



Healthy Eating Workshops (Years 2 or 5)



Originally developed in association with Unilever, Healthy Eating workshops have proved to be a popular activity in Surrey primary schools.

Two workshops are available and are suitable for KS1 (Year 2) pupils and KS2 (Year 5). The objectives of the workshop are to identify what 'healthy eating' is and why it is important to a balanced lifestyle. Food safety is an element of the session, so hygiene rules are covered. Pupils undertake a series of practical activities to endorse the learning objectives.

Each workshop is a half-day session, starting with a presentation on the importance of healthy eating and the different food groups. Pupils work in their own classroom doing a carousel of three activities. Year 2 activities include planning and making a healthy snack plus a cooking skills game. Year 5 pupils will also look at planning a meal on a budget and packaging plus a cooking activity.



How pupils benefit

- Gives pupils the opportunity to practice Key Skills – working with others, improving their own learning and performance
- Gives pupils the opportunity to work with people from the world of science and business and share their expertise in practical tasks

How teachers benefit

- Supports and enhances the National Curriculum and reinforce learning objectives
- Contributes towards continuous professional development



How schools benefit

Helps enhance the school's reputation and may develop links to business through the science and business volunteers who participate in the workshops.

How much does it cost?

£660 per full day workshop (2 workshops)

£385 per half day workshop (1 workshop)

60 pupils per workshop. Additional charge of £50 to cover resources if 90 pupils.

Curriculum links

- KS1 and 2 in particular PSHE
- Art and Design
- Food Technology
- Science and Numeracy

Workshops originally developed with Unilever



Junior Business Game (Years 5 or 6)



The Junior Business Game is an enterprise game, lasting a full day, in which teams of 5-6 students set up a manufacturing company to learn about the world of work, finance, teamwork and time-keeping deadlines. It is delivered by expert staff who will bring with them all the equipment required, and involve volunteer business people from all areas of the working world, giving young people a chance to talk to volunteer 'business ambassadors' about their day jobs.

Our business games are suitable for all abilities – whether to provide a challenge for your Gifted & Talented students or to inspire the less able by enabling them to succeed at something practical and exciting. The business games are regularly used by Junior Schools, Secondary Schools at all levels and for Transition events, and Colleges. Our events are an ideal way to mix up teams across year groups, or from different schools.

What happens on the day?

- Teams of students run a manufacturing business for the day, taking on the roles of CEO, Head of Marketing, Accountant, etc.
- All companies manufacture products, buying supplies and selling their products at a profit
- Companies must produce marketing campaigns and win orders from buyers
- Companies must manage their finances and operate their bank accounts
- Companies must also deal with occasional emergencies such as stock market crashes and strikes
- Volunteer business people are assigned to each company to act as a mentor and advisor – giving young people the chance to talk to the volunteers about their 'day jobs'.

The day is fast and furious, sometimes stressful (just like the real working world!) and hugely exciting – for students and teachers!

How students benefit:

- Engages them in problem solving and working to tight deadlines, individually and in teams
- Brings numeracy and literacy to life in a practical hands-on way
- Give them experience of working with volunteers from business and an opportunity to discuss careers
- Makes enterprise hugely exciting!

How schools benefit

- Assist with development of Functional Skills
- Helps enhance the schools' reputation and develops links to local companies through the business volunteers involved in the games.

How teachers benefit

- Helps enhance the National Curriculum and reinforce learning objectives
- Enables teachers to develop links with businesses for the future
- Contributes towards continuous professional development programmes.

How much does it cost?

£626 for a full day - Up to 90 students

Curriculum links

Enterprise – KS2

Numeracy – KS2

PLTS – Team working, creative thinking, problem solving and enterprise – KS2

Global Trading Game (Years 5 or 6)

The Global Trading Game is delivered by expert staff who will bring with them all the equipment required, and involve volunteer business people from all areas of the working world, giving young people a chance to talk to volunteer 'business ambassadors' about their day jobs.



The game is suitable for all abilities – whether to provide a challenge for your Gifted & Talented students or to inspire the less able by enabling them to succeed at something practical and exciting.

Our Business Games are regularly used by Junior Schools, Secondary Schools at all levels and for Transition events, and Colleges. The events are an ideal way to mix up teams across year groups, or from different schools.

The aims of the day are?

- Teams of students represent a country trading in the World Market
- Each country has to create as much wealth for their country as possible by manufacturing paper shapes to exact specifications
- Some countries have lots of technology (scissors, compasses etc.) but few resources (paper). Other countries have lots of resources but little or no technology
- Throughout the game fluctuations in the world market take place to represent shortages and gluts and the high value of some resources in short supply is revealed to the well developed countries only.

The game is fast and furious, sometimes stressful and hugely exciting – for students and teachers!

How students benefit

- Engages them in problem solving and working to tight deadlines, individually and in teams
- Illustrates how the process of trade can benefit or hinder the economic development of different communities or countries
- Generates interest and discussion about the world trading systems in an enjoyable and non-academic way
- Helps them understand the extent to which more developed countries exploit less developed countries
- Encourages students to think creatively and understand the importance of working as a member of a team.

How teachers benefit

- Helps enhance the National Curriculum and reinforce learning objectives
- Enables teachers to develop links with businesses for the future
- Contributes towards continuous professional development programmes

How much does it cost?

£626 for a full day – Four 90 minute sessions – up to 60 students per session
£330 for a half day – Two 90 minute sessions – up to 60 students per session

Curriculum links

Enterprise – KS2 and 3

Numeracy – KS2

Functional maths – KS3

Geography – KS2 and 3

PLTS – Team working, creative thinking, problem solving

Registering your school

The earlier your school books a workshop the higher quality of delivery. Spark! needs as much lead time as possible – and usually a minimum of three months – to recruit the business volunteers to support the smooth running of workshops in your school.

Booking Form

School	
Key contact	
Phone number	
Email address	
Postal address	
Workshop name	
Workshop school contact	
Preferred date(s) and time(s) – if applicable	
Number of students	
Year group	
Any additional information	

Signature

Position

Date

Please return completed forms by e-mail or post to:

Ruby Mir, Head of Schools Services,

Spark!, c/o GSK House, Rm D2-48, 980 Great West Road, Brentford, Middx TW8 9GS

E-mail ruby.mir@sparklondon.org

Tel: 020 8047 3350

Terms of service

Lead time - Ideally book your workshop with three months lead time to ensure the highest quality of delivery. We will not accept bookings less than a month before the proposed delivery date.

Invoicing - After receipt of a signed booking form, Spark! will invoice and contract with school for settlement within 30 days.

Cancellation - Once confirmed, events are subject to the following cancellation charges:

- less than four weeks' notice – 50% of the full cost.
- less than two weeks' notice – 100% of the full cost.

Other opportunities

Spark! works with a range of local companies including Sky, Chiswick Park Enjoy-Work and BA who offer opportunities for students of primary school age.

For example, Chiswick Park hosts half day 'eco-visits' that comprise:

- Arrival at Enjoy-Work reception, ground floor building 3
- Introduction to Chiswick Park & recycling presentation
- Drink and fruit (provided by Chiswick Park)
- Natures recyclers - trip to wormery, mulching bays & hedgehog house
- Poly tunnel – hands on with mini beasts
- Return to Building 3 – summary and review
- Quiz & questions

We are here to support teachers with any area of the curriculum or school life. If you want to put a new spin on a favourite topic or are you struggling to create a cross-curricular we can work together to organise a bespoke activity to enhance and enrich the curriculum for your pupils.

If you would like Spark's assistance in making these connections, then please email ruby.mir@sparklondon.org





**Formerly Hounslow Education Business Partnership, Spark!
was founded in 1980 and has been working with young
people, schools and businesses creating new opportunities
and igniting careers for over thirty years.**

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Company Number: 7409565 | Charity number: 1138697
UK Register of Learning Providers: 10033962