Leicestershire Education Business Company

Science, Technology, Engineering and Maths (STEM)

Outreach Workshops

LEBC's STEM workshops take between 2 and 3 hours, they can be modified to meet any specific requirements and are flexible enough to fit in with any school timetable. A range of diverse STEM activities are available for each year group.

KS1

Year 1&2

Maths in the House

The Maths in the House workshop comprises of a series of activities organised around the theme of a house. Pupils move around in small groups, carrying out different activities to investigate maths in the house**.** There is an emphasis on the pupils participating actively in discovering that maths is used in everyday life. Visual, auditory and kinaesthetic learning styles are used.

Me and My Senses

The workshop consists of a series of hands on activities organised around the theme of a medical centre. Pupils move around in small groups, carrying out different activities about their bodies and their senses. There is an emphasis on pupils actively discovering information about what their body can do, again using visual, auditory and kinaesthetic learning styles.

I'm an Investigator

The activities in this workshop inspire the children to start to investigate the properties of different materials whilst encouraging the children to think more about light, sound and magnets; it is very hands on, thought provoking and fun.

KS2

Year 3&4

Mysterious Magical Materials

The aim of this workshop is to get the children to investigate the properties and reactions of different materials. All activities are hands on, some have a slightly spooky twist and the children will make a few objects to take home.

Become an Astronaut

You are about to embark on a journey through space. Before you go you must decide what to take and where you are going to travel to. This workshops involves lots of exciting activities including making your own solar system and building rockets. The investigations are used to get the students thinking about outer space.

Year 5&6

Forensics Workshop

The workshop is organised as a forensic science laboratory in the school hall. After a short introduction setting the scene pupils circulate around the activity stations in small groups, spending about 15 minutes at each one. Each activity centres on an investigation into evidence left at the scene of the crime. Using their scientific investigative skills pupils analyse soil samples, shoeprints, fibres, fingerprints and ink samples and test their own observation skills to crack the case.

Eruptions, Bubbles & Expensive Jewels

Eruptions, Bubbles and Expensive Jewels explores the exciting properties of different materials. Each activity looks at new ways of thinking about different materials, such as unexpected reactions, looking at the world from an ants point of view and becoming the manager of a gold mine. They will test their own observation and investigative skills, whilst also encouraging pupils to discuss their findings before reaching an appropriate conclusion.

Fantastic Forces & Flying Eggs

A workshop designed to excite students about physical science. Stereotypically 'dull' areas of physical science including forces, electricity and magnets are brought to life by exciting experiments and real applications. The workshop ends with a 'protect the egg' competition, where students will see if they were able to design and make some thing that would withstand the test of dropping an egg from 2 metres. Whilst discussing and constantly thinking about the forces which act on everything all the time.

Other STEM activities:

Fun Maths Roadshow

The Fun Maths Roadshow is a range of practical maths puzzles for Key Stage 1 and 2 pupils. This also works well when schools partner year 5&6 with younger pupils. Working in pairs pupils attempt to solve practical puzzles as quickly as they can. The puzzles vary from simple mathematical problems to logical challenges making this resource suitable for pupils of all abilities. This could accommodate 180 children across the day.

K'Nex Challenges

K'Nex is a simple to use construction material which can be used to enhance delivery of Design and Technology, Science and Maths. LEBC has a number of challenges that develop students creativity, problem solving, team working and communication skills and it also promotes self esteem. Activities include Grand Prix Car Design, Bridge Building and Fair Ground Rides. K'Nex challenges are aimed at year 5&6.

The Great Marble Run

Pupils are put into small groups, given a brief introduction and set the challenge of designing and making a ‘Marble Run’. Pupils construct a prototype ‘Marble Run’ with only the materials available. This must allow a marble to run freely, unaided, from the top left hand corner of a board to the bottom right in the slowest possible time. The marble must not stop moving at any time during its descent. Once the marble has started, it must not be touched until it reaches the finish or stops. This activity is excellent at developing team working skills and is aimed at year 5&6.

Heath Robinson Machine

Similar to the game ‘Mouse Trap’ pupils are set the challenge to invent a device which will build up a series of sequences which, when activated, have a cause and effect e.g. popping a balloon. This activity is suitable for year 5/6 and requires pupils to be creative, logical and work well in a team.

How to book

Schools can select two activities to run in a day, Jon Robinson can advise on which activities work well together.

Each workshop can accommodate a class of 30 children.

Prices for workshops are as follows;
2 classes £400
3 classes £550
4 classes £700

For each class of 30 we will require the support of the class teacher and a teaching assistant. LEBC bring along all the resources required to run the workshops. Most activities require a good size class room with 5 manned workstations. Whenever possible STEM workshops are supported by STEM Ambassadors, STEM Ambassadors come from a range of STEM related industries, they are all trained and CRB checked by LEBC. They include civil engineers, NHS employees, post graduate students, IT professionals and scientists. Additional volunteers may also be required.

For more information or to book a workshop contact

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What the teachers and pupils say…

"The Grand Prix Challenge was a very enjoyable day. It was very well organised especially the additional adult help." Mary Halbert, Head Teacher, Somerby Primary School

"The Grand Prix Chalenge gave us a chance to experience being an engineer and it let us see what we are actually capable of." Daniel, Year 5 pupil, Millfield Primary School

"The forensic activities were well matched to the children's abilities. An excellent session thank you!" Lauren Parrell, Year 6 Teacher, Shaftesbury Junior School

"I thought the Eruptions, Bubbles & Expensive Jewels workshop was brilliant and it made me understand about solids, liquids and gasses". Rebecca, Year 6 pupil, Cobden Primary School

"The Me and My Senses workshop supported our KS1 science unit perfectly. It was practical, engaging and fun". Key stage 1 teacher, Evington Valley Primary School.

"The children always respond well to visitors who deliver a product well!" Cath Sudan, Year 5 class teacher from Long Clawson Primary School

Which part of the workshop did you enjoy the most? **"I enjoyed blowing up the rockets because it was so so so fun!"** Year 6 pupil from Wyvern Primary School

"A well delivered, informative session. Excellent! The whole class was engaged throughout the afternoon. They thoroughly enjoyed taking part in all of the activities, extending their knowledge of the senses. A great support for our National Curriculum Science Programme. We can't wait for the next visit!" – Linda Kettle, Year 1 teacher at Asfordby Hill Primary School.

"I enjoyed looking at the Louis Braille book because we had seen it on television. I also liked the smell of oranges and the tasting of different flavoured water" – Amy, pupil at Stonebow Primary School.