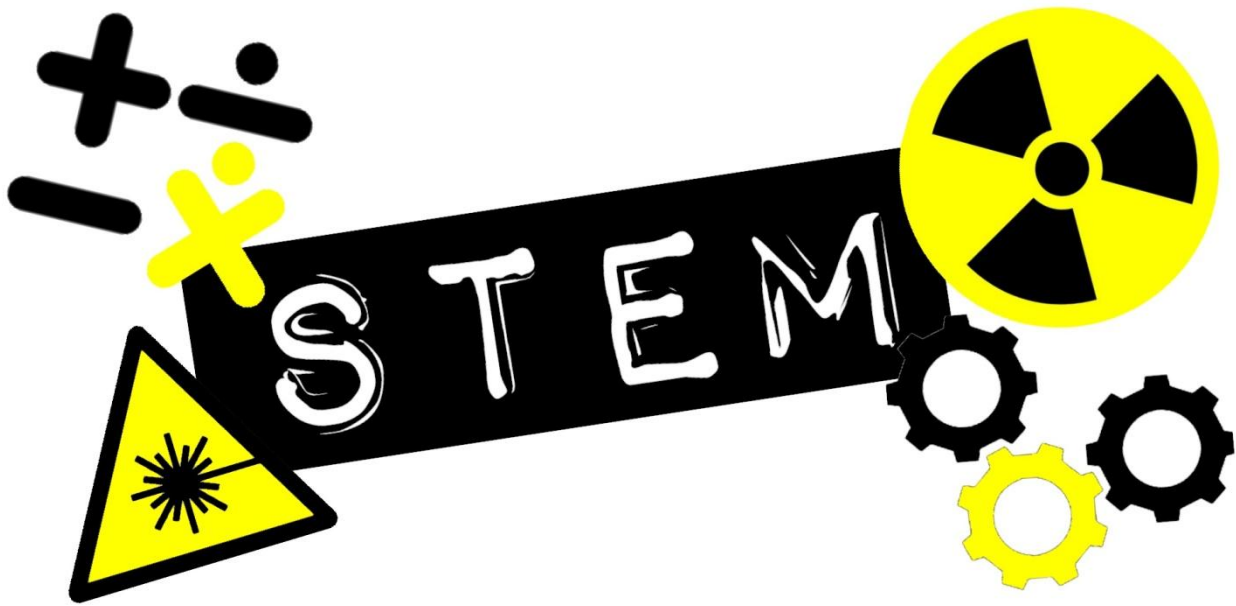


# George Salter



## History of Events

*N.K. Sharma*

Mr N K Sharma

Assistant Principal

*R.Masih*

Miss Rebecca Masih

Science Teacher  
STEM

*S.Taylor*

Mr Steneth Taylor

Technology Teacher  
STEM

*A.Sanghera*

Mr A Sanghera

Maths Teacher  
STEM

## History of Events

### STEM Events Jan 2011- July 2011

Date	Event/Award/Training/Visit	Group Target	Year(s)	Key Outcomes
01/01/2011	Ice Breakers	KS 3	7 & 8	The first session consisted of structured Icebreakers such as building a bridge or skyscraper out of paper. They were designed to introduce the students to each other and staff and to engage them in a fun and learning way.
01/02/2011	Smoke Bombs	KS 3	7 & 8	Follow up session allowed pupils to create smoke bombs by melting together 2 parts caster sugar to 3 parts potassium nitrate. It turned into a big sticky brown lump similar to toffee. They dropped it on to tin foil, making a flat cookie sized lump and allowed it to cool. The intention was to take the smoke bombs outside and light them however one went off in side the class room which gave a lot of colourful smoke. The pupils found this activity fun and engaging however it resulted in the fire bell going off
01/03/2011	Egg delivery package	KS 3	7 & 8	This fun design and build challenge asks the teams of pupils to build a model parachute along a theme of Space Tourism. The model must be safely launched, carry its passenger - the egg – for the greatest flight distance possible and then land. This challenge tested every part of their engineering capabilities, with two trails to show improvement of each design and an eggsemplary landing!
01/04/2011	Plastic Rubber bouncing balls	KS 3	7 & 8	Pupils made bouncy custard balls using PVA glue and borax. A selection of food colourings and custard powder was available for kids to make their ball unique.
01/05/2011	Aerodynamic Kites	KS 3	7 & 8	Pupils did research, design, construction of kites. Kites are an excellent way to teach history ( Ben Franklin and Alexander Graham Bell?), literacy and even music related to kites. Math and art merge during kite design, as do the ratio and proportion lessons during kite building. The culminating activity of flying student-designed kites then becomes a great way to introduce basic physics and aerodynamics.
01/06/2011	Wooden Wheel/ Cam Toy	KS 3	7 & 8	This was a mechanism project. This was an accelerated version of a year 9 activity. The idea was to briefly explain the elements of a mechanism then to go straight on to the making of the mechanism to keep the fun club feel while the STEM Club members learnt practical skills while witnessing the science of mechanisms in action. This project was enjoyed by the STEM Club members and they had an opportunity to use their creativity in decorating their wooden mechanism which was based on any theme of their choice.
29/06/2011	RAF Cosford	KS 3	7 & 8	The Stem team participated in the West Midlands' regional Big Bang Fair, hosted at the Royal Air Force Museum Cosford on Wednesday 29th June 2011. The Fair aims were to excite, educate, stimulate and enthuse young people about opportunities in Science, Technology, Engineering and Mathematics (STEM), inspiring them to consider future careers in these fields. The regional fair was a series of live, interactive science, technology, engineering and mathematics events that offered local students the opportunity to experience hands-on learning outside the classroom in a fun, interactive and innovative way including workshops run by re-enactors. The day also offered the students an opportunity to celebrate their achievements through competitions and award schemes, link classroom learning with real career choices and engage local business and industry with the next generation of employees.
01/07/2011	Stem Careers Fair	KS 3	7 -11, VI form	STEM Ambassadors from a range of STEM (science, technology, engineering and maths) careers visited George Salter Academy, to take part in a Science, Maths, Engineering & Business Careers Fair. The event introduced students to the breadth of STEM careers available in the region. e.g Forensics CSI, Finance Banker, Mechanical engineer, Nurse

**STEM Events Sep 2011- July 2012**

STEM Events Sep 2011- July 2012				
Date	Event/Award/Training/Visit	Group Target	Year(s)	Key Outcomes
01/09/2011	Silverstone Visit	STEM Club	7 & 8	Students visited Silverstone to launch the Formula One Project. Touring the stadium and looking at the designs of the motor cars. Involved in science and maths activities e.g. Designing balloon powered cars, investigating down force of a moving object, applying Newton's 3 Laws.
15/09/2011	British Science Festival (Bradford)	KS4/5 G&T	11 & 12	Students attended the National event where they were inspired and enthused further on scientific concepts and projects. Increasing awareness of Science in the real-world and making link to topics they are studying.
30/09/2011	stemNRICH 1st Teacher Inspiration Day at University of Cambridge	STEM Training CPD	N/A	CPD event where meeting and discussions with teachers increased ideas, activities and confidence in running a successful STEM club. Discussion of cross-curricular links with STEM departments.
08/12/2011	STEM Club presentation to SLT	STEM Club	7 & 8	Students using their skills to present their club to SLT. Raising awareness of STEM in school through discussion of projects they have been involved in so far and forthcoming projects such as CERN visit.
09/12/2011	RSA Academy Visit	STEM Club	7 & 8	Having starting the Formula One Project, students visited the RSA Academy (local school) and met with STEM club students there that are also involved the F1 project. Shared ideas with each other, improved teamwork skills and confidence in the project and communication. Teachers making links and use of high-tech equipment available. Students won a 'Best Team Work Award'.
15/12/2011	Air Kix - Wind Tunnel Visit	STEM Club	7 & 8	Kicking off the 'Build-a-plane Boeing Project' and current work on aerodynamics and making gliders project, students experience forces in action in reality by experience flying in a wind tunnel. Increasing interest in aerodynamics and appropriate structures, whilst increasing knowledge of Maths, Science and Technology.
01/01/2012	Chess Club Launch	STEM Club	7,8,9,10, 11	Set up in December 2011, the Chess Clubs primary objective was to create a fun learning environment investigating logical strategies to problems. This was well received by the pupils.
06/02/2012	Build-a-plane Boeing Project meeting with partner schools at NEW Academy.	STEM Training CPD	N/A	Teacher meeting with all 7 partner schools. Discussions of expectations of projects, visiting location where plane will be assembled.
07/02/2012	Build a Shuttle	STEM Club	8,9	Students assemble a basic scale model of the space shuttle as a hands-on activity. The activity features math-related concepts such as finding the scale of the paper model and the glide ratio of its flight.
21/02/2012	Big Bang in a Box (Sutton Coldfield)	Top set year 10 KS4	10n2/3	Year 10 students currently doing GCSE Triple Science, engaged in STEM challenges such as Forensic Science etc. Increasing knowledge and awareness of STEM related subjects and seeing the links across subjects.
29/02/2012	Visit to Formula One Finals (Loughborough University)	STEM Club	7 & 8	Students presenting and competing against other schools involved in the projects. Presenting their project and designed vehicle to judges and racing it on track. Came 9th place so didn't enter the semi finals but raised awareness and evaluated improvements and expectations for next year.

15/03/2012	National Big Bang Fair (NEC)	Top set year 9 (KS4)	9n1	Top set Year 9 students that will start GCSE Triple Science to see and get involved in a range of STEM projects/activities to increase awareness of STEM subjects in a exciting and relating to real life concepts that have been done by students across the UK.
16/03/2012	National Big Bang Fair (NEC)	11n2 (KS4) & STEM Club (KS3)	11n2 and STEM Club	Top set Year 11 students and STEM club students to see and get involved in a range of STEM projects/activities to increase awareness of STEM subjects in a exciting and relating to real life concepts that have been done by students across the UK. A taster for STEM students in preparation of presenting there next year.
19/03/2012	stemNRICH 2nd Teacher Inspiration Day at University of Cambridge	STEM Training CPD	N/A	CPD event where meeting and discussions with teachers increased ideas, activities and confidence in running a successful STEM club. Discussion of cross-curricular links with STEM departments and progress so far. Involved in activities to use in clubs and in lessons and sharing ideas.
28/03/2012	RSA Academy STEM Fair Presenting	STEM Club	7, 8 & 9	Through liaising with this school and linking projects. The STEM club were invited to present their project at the RSA Academy Fair. GSA students presented their F1 project and displayed and communicated their projects to others at the school.
2nd-5th April 2012	Engineering Residential (Wolverhampton Uni Telford Campus)	5 students chosen from 9n1	9	5 students chosen from year 9 Cohort. These students expressed an interest in STEM and in particular Engineering. A bursary for five year 9 students to engage in STEM activities such as building a caisson, shelters etc. Students worked with other year 9 students from schools across the country, increasing a range of skills e.g. problem solving, creativity as well as increasing subject knowledge and further interest in STEM. Working towards Bronze CREST Awards,.
30/05/2012	National Space Centre - Mission to Mars Visit	STEM and Year 8	8	Students visited National Space Centre in Leicester where they were involved in a Mission to Mars Challenge. Toured the Space Centre and achieved certificates of achievement in the Space challenges.
22/06/2012	stemNRICH 3rd Teacher Inspiration Day at University of Cambridge	STEM Training CPD	N/A	CPD event where meeting and discussions with teachers increased ideas, activities and confidence in running a successful STEM club. Discussion of cross-curricular links with STEM departments and progress so far. Involved in activities to use in clubs and in lessons and sharing ideas.
26/06/2012	Regional Big Bang Fair (B'ham Think tank)	STEM Club	7, 8	Students to compete against other schools in the West Midlands by displaying and presenting their projects to professional judges. Also accrediting their Silver/Bronze CREST Awards.
12/07/2012	Science Of Flight Day (W'ton College)	10 students chosen from KS4	9 & 10	Launch of the 'Build-a-plane Boeing Project'. Students that are chosen to be involved from each school meet each other and work on several aerodynamics and flight activities/challenges. Building foundation subject knowledge and enthusiasm towards the 2-year project.
July	Alton Towers Visit	STEM Club	8, 9, 10	A reward trip to end the year and a launch to Rollercoaster project due to start next year.