

# SCIENCE WEEK SPECIAL

**National Science Week (March 11th - 20th). So much happened during Science Week that it had to stretch to ten days! So many activities have taken place, that we are devoting this special edition to it.**

## **Year 7's Tower Challenge**

During Science Week all Year 7 students had a tower challenge. We had to make a tower in half an hour, out of a few sheets of newspaper, about 10 paper clips, 10 straws, half a metre of string and a metre of sellotape. The tower needed to have a place to put weights with either a platform or a piece of string to hang the weights on. The winning tower was to be the one that held the most weight.

After our half an hour building time, we all gathered round a bench and tested the towers. The height was measured from the surface of the bench to where the weights would be placed. The heights ranged from 44cm to 29cm.

The winning tower was made by Ryan Baker (7LT), Tim Prestidge (7LT) and Lewis Wintle (7LT). It held a massive 800g and was 30cm high.

Elliot Potter (7LT)

## **Quantum Theatre**

All four primary feeder schools were invited to bring 10 Year 6 students to the first Quantum Theatre Show. This is a travelling drama group who teach Science concepts through sketches and songs.

Below are some letters received from Year 6 students.....

*"Thank you for inviting me to the complete guide to forces. I really enjoyed it as it was very funny. The actors were really good as they had to learn lots and fit the words in with the music. I enjoyed the bit where the actors called up some volunteers."* Mark Stanton

*"Thank you for inviting us to the science theatre. I really enjoyed it and thought the humour was very good. I liked it most when the volunteers helped. I learned a lot about forces and gravity. The beautiful ladies in the second row' was really funny. Once again, it was a great show and thank you for inviting us."* Tom Hillsdon

*"Thank you very much for inviting us to watch the science show. I enjoyed it a lot. They play was funny and it taught me lots too. I thought Morris and Bryon performed well and made us all laugh. I especially liked the part about the second row. Some of the parts I didn't really understand but that was only the bits about the calculating. I liked other bits too."*

*I am looking forward to the science lesson, the taster day and going to Crofton in September. You might know my sister Alice. It looks really exciting going to your school. Thank you for inviting us, it was really good."* Susannah Rushby

*"Thank you ever so much for inviting me to see 'The Complete Guide to Forces'. I really enjoyed it. My favourite part was the bit about the test tube and the Titanic song because I was 'a lady in the second row'. I also liked the 'imaginary car'. Thank you again for inviting me."* Olivia Russell

*"Thank you for inviting us to watch 'The Complete Guide to Forces'. We really enjoyed it. My favourite bit was when the people were seen through the curtain. My best friend's favourite part was when one of the men was singing Titanic to the second row (she was in the second row!). I also liked the bit where Adam went up but he said his name was Tom! It was very kind of you to organise the forces show, THANK YOU! My other best friend's favourite part was when they had the baby and they screwed it up into a little ball and threw it off the stage. I like that bit too! I am looking forward to studying science in Crofton"* Rosalind Thompson

*"Thank you for inviting us to see the Science Theatre. I enjoyed it very much. I especially liked the bit with the Titanic song and when Morris sang to my teacher and my friends in the second row. The bit I really didn't like was when Morris kept doing really bad jokes that I didn't understand. I also liked the bit when you used the baby to explain the forces upthrust and gravity."*

*I found it very funny when Adam said his name was Tom. I am looking forward to going to Crofton and having science lessons. You might know my sister Abi Philo. Thank you for inviting us. I really liked it."* Chloe Philo

## **Quantum Theatre Year 7**

The science play was really enjoyable to watch. The people who did the play really made science seem fun.

Luckily I was fortunate enough to be a volunteer in the play. It was nervous being on stage. They made me wear a clown hat and I had to balance for them. The best bit was the funny dance I had to do. It was really fun.

## **Quantum Theatre Year 8**

During Science Week, on Thursday 24th March, the Quantum Theatre came to Crofton to put on a show about forces and was performed to all Year 7 and 8 students.

The show included well put together songs and drama, getting kids to come up and all the while, teaching us a thing or two about forces.

The funniest part for us was when Grant O'Neill was picked from the audience to go on stage and perform a dance. He also got to put on a pair of stilettos, which made him that bit taller!

Overall, we thought the show was good!

Holly Robertson & Stefani Simpson 80

On Friday 18th March, one class of Year 8 and one class of Year 10 students participated in what has to be one of the strangest and most pernickety quizzes that have ever existed, however the prize for each region was a trip to a top of the range research centre in the midlands. The quiz was timed and for every thirty seconds that the answers were not submitted, points were lost on any correct answers. For example, after thirty seconds any correct answer was worth nearly 200 points but by the end of the twenty minute time limit each correct answer was worth only 50 points. It was therefore necessary that a balance was made between getting a lot of correct answers or answering them as quickly as possible and getting as many bonus points as we could.

The whole experience was.....different, not least because we were asked afterwards to pose for the camera wearing paper masks in the likeness of Einstein himself. In all, 350 teams entered nationally, split into separate regions. We came 15th nationally with a score of 1028 and 6th in our region out of 76, despite a lot of the teams being from private or grammar schools.

It was a good fun event, and I'm sure everyone involved enjoyed it.

Peter Whiteley

## BREWERY TRIP Year 11 Triple Scientists

In February the Year 11 triple scientists toured the Gales Brewery in Horndean.

"It was fascinating to know that if you fell in the fermenting vats, you would most certainly die."

Aaron Webster

"Tasting the hops and froth were very bitter"

Ben Richardson

"I was disappointed that there was no beer tasting allowed!"

Tom Mould

"The best thing was tasting some froth"

Jon Taylor

"The hops tasted like Maltesers"

Laura Drew

## **SETT** **Year 11**

On Tuesday 1st March, the following Science students from Year 11 attended SETT:

Lee Baker

Ben Chilcott

Alex Craine

Evan Fury

Oliver Hopkins

Mark Palmer

James Sadler

Megan Travers

Alex Tufnail

Michael Vardy

Mike Wheeler

Oliver Wollaston

This was a science engineering and technology challenge at St. Vincent's College. In the morning, we attended workshops of our choice, which proved entertaining and informative. We got a good taste of what life is like at the college.

The workshops were:

Analysing Personality

Better Milk for Cats

Human Genetic Diseases

The Big Bang

Discovering Drugs

Making Slime

Rock School

Lost your Memory?

Volcanoes

Collisions

In the afternoon, we were set a challenge. We had to build a tall, and strong tower. We had limited materials, including newspaper, tin foil and a balloon. Although our group did not win, (there were some minor technical difficulties regarding a balloon) our towers did hold a lot of weight - and at least they looked pretty! The Crofton Tower managed to hold 3kg and had to include a water turbine to power a small lift.

Thanks to Mrs. Madden for taking us.

Alexandra Tufnail 11H

## **Blue Fusion** **Year 11**

Blue Fusion is a Science competition held every year and on Thursday 17th March, Sacha Wason, Jon Taylor, Sam Powell, Aaron Webster, Kerry Burrows and myself accompanied Mrs. Terry to represent Crofton at IBM Hursley, where Blue Fusion was being held.

We arrived at IBM at 9.30am and our guide for the day was Nigel Linfield. After a brief introduction, we were put into action, our first activity of the day called 'Turbulence Testing' (as with all the activities) relied on teamwork. We were challenged to create a coffee cup holder that could withstand some extreme shaking!

In all, we completed (in varying states of success!) eight challenges. My personal favourite and our team's most successful was 'Safe Breaking'. In this activity, the team had to work together whilst being separated in two rooms. We had to break into a safe, communicating only by Morse code and a game of chess. Jon devised our own (very complex) code using the chess pieces to represent digits. I'm still unsure of how it worked but we managed to receive a brilliant 99% for this task!

During the day we had two guest speakers:

- Trevor Bayliss, who invented the clockwork radio (used in Africa to help communicate advice on AIDs etc.)
- Jonathan Zerihan, an aerodynamics engineer from BAR Honda (for anyone like me who knows nothing about Formula 1 Racing, the organisation Jenson Button races for).

Both talks were fascinating. Trevor Bayliss left us all inspired to make that invention a reality.

Sixteen teams participated and although, much to our disappointment, we didn't win on the day, we did all have a fantastic time. Many thanks to Mrs. Terry for taking us and good luck to those who enter next year - you'll have a great day.

Laura Drew 11H

### **Biology Field Trip New Forest - June '04**

It's nearly time for the Year 10 Triple Scientists to get their wellies on!

On the 4th July they will be investigating the water quality of a small tributary of the River Lymington in the lovely New Forest, as part of the coursework for the Biology GCSE.

This is some advice from the current Year 11s.....

'wading in muddy streams, getting water in our wellies, chasing creepy crawlies.....you don't get a better day than this (and free ice creams!) Thank You!'

Lauren Bryant

'wading through water looking for bugs!! So much fun!'

Kerry Burrows

Laura Drew advises the Year 10s ..... 'to wear long wellies!'

Natalie Townend realised 'just how many different insects there are in one spot!'

'Great fun walking down rivers collecting odd species of aquatic insects....'

Sacha Wason

### **The Friday of Science Week was rather mad - we had an all day Einstein Party attended by everyone in Year 7, 8, 9 and 10.**

#### Einstein Party

##### Year 8

I enjoyed the Einstein party because it was something different and I saw some very interesting experiments.

The thing I enjoyed the most was setting Mr. Collinson's hands on fire because it looked really good. The thing I enjoyed the least was the Bernoulli's balls because my hair dryer wasn't strong enough so I couldn't do anything.

Sean Attrell 8T

#### Einstein Party

##### Year 9

2005 is Einstein year. It commemorates 100 years since Einstein released his first papers. The Science department had an Einstein day to mark this event. There were different tasks around the science block, one of which we were asked to try and bring in a hairdryer!

Instead of our normal science lesson we went into groups and had ten minutes in each room. Some of the tasks we had to do included making a balloon 'kebab' which involved skewering a balloon without popping it. The hairdryer was needed for balancing ping pong balls and there was another experiment involving waterproof cloth. The most interesting experiment we were able to watch was where bubbles were forming from a blue liquid. The beaker the liquid was in was attached by tubing to the gas. When lit, the bubbles went up in flames for a second. The teachers held the bubbles in their hands and we were able to set the teachers alight!

A lot of hard work went in to the preparation of all the tasks and experiments, so a big thank you is needed to the Science Department for such an interesting day.

Esther Main 9M

### **BRIGHT SPARKS Year 8**

#### IBM Trip

On Friday 11th March, myself and four other students attended a Bright Sparks day at IBM in Winchester. The students were: Jonathan Girling, Lauren Terry, Rebecca Scutt and Danielle Barrett (all from Year 8).

When we arrived at the research centre we were presented with name badges and set into our new teams. We were then given an opening talk by one of the staff. After this, we went off in our new teams named after famous scientists e.g. Faraday, Hawkins and Einstein etc. We had to compete in several interactive challenges at the centre. All in all, there were seven activities. They were Bin testing, which was a logic game; a game involving kangaroos which was based on chain management, delivering goods to various stores; Mars Lander, a Mars landing simulator in which we had to guide a landing craft on to the red planet. Also there was a game named Kids Run e-Business, involving running a business at several different levels, a nutrition game teaching us about healthy food, a turbulence tester, where we built an object out of a polystyrene cup, some elastic bands and various other bits and bobs. This cup was meant to hold a cup of water still, whilst it was violently shaken and stop it from spilling its load. Finally there was a game named Pirate Guess, in which we solved various cryptic clues which led us to treasure.

At the end of the day, a talk was given by a computer animator named Stefan Marojam who has done many animations including a cartoon on Nickelodeon, and the BBC3 advert with the blob characters. After this, there was a prize giving ceremony in which some very generous prizes were given out, including MP3 players.

Everybody involved in the trip had a great time and enjoyed every minute of the day. We would all like to thank Mrs. Madden for chaperoning us, Mr. Collinson for transport and of course Mrs. Terry for organizing such an enjoyable event.

Angus Ewen 8J

## **IBM Trip**

On Friday 11th March, six students from Year 8 were selected to take part in an IBM activity day.

On the activity day, we did many activities like having to run a small business firm. We also had challenges such as trying to land a NASSA space craft on Mars, building a cup holder that could withstand turbulence and many other fun activities. They also had the latest range of gaming consoles and gaming technology out for us to test!

We also had a short talk on computer animation and how animated films are made.

It was a great day and we would like to thank the Science teachers that put this on for us.

Jonathan Girling 8M

## **IBM Trip**

The Crofton Team were focused, on task and brilliant fun. The team was split up into famous scientist groups and all the participating schools were split up, so each group contained only one student from each school.

Each group had to communicate, team build and think on their feet (no mean feat!). Each group scored on their teamwork, communication and team building skills. Crofton worked with their teams with enthusiasm and pathos.

I'm sure that if Crofton had worked in their school group as a single team, they would have swept the board!

Crofton should be proud of their contribution to the IBM Bright Sparks.

Mrs. Madden

## **NHS CONFERENCE Year 10**

We had to be at the minibus for 8.30am. Mrs. Terry drove us to QA Hospital. First of all we went the wrong way and ended up in the eye clinic which Jenna found quite amusing and then became obsessed with eyes for the rest of the day. We went to a place called the QUAD which was actually just a rectangular building with a square on its side.

We ate lots of sandwiches and in between visited several interesting workshops:-

Cardio-physiology - we saw a heart monitor and talked about jobs

Nursing - we talked about personality traits and jobs (both part-time and full time)

Biomedical Science - we saw blood under a microscope and used a glucose level tester for people with diabetes

TEAMS - we saw a £500,000 manakin that trainee doctors use for training on Corillion - the future of QA and jobs in construction

Connexions - role play of a meeting and a talk about careers

All in all, I enjoyed the day and had a lot of fun. Many thanks to Mrs. Hill from Connexions, without whom the Crofton students would not have been able to attend the conference.

Sam Collins 10L

Students who attended were:

Emma Bailey  
Giuliette Catterson-West  
Jenna Lloyd  
Emma Gedge  
Rebecca Walls  
Sam Collins  
Michael Hurangee  
Charlote Ford  
Sophie Wheatcroft  
Alice Coulton

## **Marwell Zoo Trip Year 11**

Mr. Anderson and Mr. Collinson took 11X4 and 11Y4 to Marwell Zoo on 14th January.

The students enjoyed a lecture on Conservation in the Education Centre and completed the 'Endangered and Threatened Special Trail' around the Zoo.

They are studying hard for their exams at the moment and we wish them well.

Intech Lectures  
Xmas Lecture & Lovely Liquid Nitrogen  
Year 7 & 8

The lectures at INTECH (the interactive science museum at Winchester) have been excellent.

In December fifty of the Year 7s enjoyed the 'Science of Christmas' lecture and in February, fifty of the Year 8s and some staff enjoyed a demonstration of 'Lovely Liquid Nitrogen!'

These lectures have proved so popular that we'll have to start thinking about obtaining more tickets!

**Science Week**  
**Year 6 Crofton Hammond**

The final event of Crofton's Science Week was the Year 6 students from Crofton Hammond spending a lesson in the Labs on 14th April.

They had a great time burning magnesium and making it react with acid. They performed flame tests on some metals and also looked for some colourful chemical reactions. We look forward to seeing them again on their taster day soon.

**Salter's Chemistry**  
**Year 10**

Congratulations to Peter Whiteley. He is such a lucky person - he will be attending the University of Surrey for four days in June to complete a 'Salter's Chemistry' course for more able chemists. Competition for places is limited and Peter's application was clearly very good.

We hope he enjoys himself (oh.....and learns some fab chemistry too!).

Science Dept.

**Science & Maths Challenge Day**  
**Year 6 and 7**

Last June, the Year 6s from Crofton Hammond and Anne Dale joined the then Year 7s off timetable for a Science and Maths challenge day.

It's amazing to look at the photographs and see how much the current Year 7s have grown and what new skills they have developed in only one year!

The Year 6 students are now in Year 7 and here are some of the things they said about the Science & Maths Challenge day.....

'It made me feel comfortable about coming to Crofton. The best thing was building with K'nex.'  
(Jason Thorpe)

'I enjoyed doing all the puzzles in Maths and making aeroplanes.'  
(Jack Pilgrim)

'I thought that it was a lovely school to come to and my favourite bit was making custard balls in science.'  
(Jodie Randell)

'It made me feel a bit more confident about coming here.'  
(Ben Drakeford)

**This year we are planning a Science and Maths challenge team quiz for year 6 and Year 7 students on the evening of the 9th June with cash prizes!!**

Year 8 Chemistry Visit  
Southampton University

On Wednesday 23rd March, four lucky Year 8 pupils visited Southampton University with Mrs. Blackburn and Mrs. Dibble to attend a Chemistry Fun Day and Competition. There were:

Gemma Field  
Tim West  
Rosie Sadler  
Steven Dalglish

During the day we were set tasks and questions and did experiments to answer them. We were given two different types of problems to sort out, one in the morning and one in the afternoon. Unfortunately Mrs. Blackburn and Mrs. Dibble were whisked off during these sessions to chat in the staffroom. I think we could have done with their help.

The first experiment was a series of tests to determine the name of certain chemicals. After this, we were taken to the student union for lunch. Mrs. Dibble bought us some chips to share and we chatted about the morning's task whilst playing pool. We then went back to the university laboratory to start the second task.

The second experiment was to identify chemicals using the colour, acidity, alkalinity and reactions with different liquids. To make it easier, they gave us a sheet with details of different reactions that happen when chemicals are mixed.

Then we were given a demonstration of liquid nitrogen and dry ice. We were then taken to the student lecture theatre and given a lecture about smell. It was very interactive and we were asked to identify smells - some were really difficult!

Then came the prize giving. We were amazed at the amount of money they were willing to give: First prize £100, second prize £50 and third prize £25. Unfortunately we didn't win any prizes but we really enjoyed the day and I am sure we must have come fourth!

I would like to say thank you to Mrs. Blackburn and Mrs. Dibble for taking us to such a fun event; we really enjoyed the day!

Gemma Field 8R