



## Science Newsletter – Term 1 Academic Year 2008-2009.

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### **Our Visitor from Outer Space**

On Wednesday 10<sup>th</sup> September 2008, Lumen Christi College were delighted to welcome Michael Fossum, who was an astronaut on the last space shuttle mission. He is of Irish descent and was in Ireland to promote science subjects for the Education Board.

Pupils of eight Derry schools were invited to attend and listen to Space Commander, Michael Fossum describe his experiences of flying the Space Shuttle, looking down on Earth, and working on the Space Station. Mr Fossum was enthusiastic and full of good humour. He explained that his dream was always to become a NASA employee and he achieved this even though: "I was never top of the class at school, I didn't even finish top at University."

It was only when working as a test pilot on developmental aircraft for the US Air force that Space Commander Fossum excelled.

In 2006, his dream became a reality, when, after seven applications to astronaut training over 13 years, Michael was accepted and took his place on the crew of STS 121.

“You are strapped to a space shuttle which weighs 4.5million pounds, 4million of which are explosives. When it lifts off, it really gets up and goes. I went from Florida to space in 8.5 minutes. There is always that ‘I want to get off’ moment.”

Mr. Fossum enthralled his audience and was extremely gracious in posing for photographs and talking with students and teachers .He later travelled to Seagate Technology in Springtown Industrial Estate.

### **Royal College of Surgeons**

Lumen Christi pupils interested in studying medicine at university met with senior doctors from the Royal College of Surgeons (RCS), on 23<sup>rd</sup> September 2008, at an interactive meeting organised by the Western Trust.

At the event, students were able to interact and ask questions of senior doctors and consultants from the Western Trust, who work in areas such as: Anaesthetics, Cardiology, Gastroenterology, Obstetrics, Paediatrics, Laparoscopic Surgery, Orthopaedics, Respiratory and General Practice.

Short talks also took place on choosing a Medical School, given by Mr Martyn Coomer, Head of the Royal College of Surgeon’s Research Department; and on preparing an application and CV and Interview preparation, given by Ms Nuala Sheerin, Director of Human Resources, Western Trust.

### **Biodiversity Project**

Class 9C took part in the Biodiversity, Birds, Bats and Barn Owls project at Creggan Country Park on Monday 20<sup>th</sup> October. This activity was developed further by carrying out an analysis of trees and plants in the school grounds and by the use of bat detectors to detect the bat population.

### **Sentinus**

A variety of STEM activities have taken place throughout this term. These activities were provided by the SENTINUS organisation.

#### **Primary STEM Road shows**

Robotics.	1 <sup>st</sup> Oct 2008.
Construction activities.	27 <sup>th</sup> Nov 2008.

#### **Secondary Sentinus Road shows 2008/2009.**

Fun Maths(Yr 8)	24 <sup>th</sup> Sept 2008.
Lost in Space Road show(Yr9)	11 <sup>th</sup> Dec 2008.

Our Year 11 students acted as mentors throughout these activities.

### **Y Touring Company.**

Y Touring is Central YMCA’s award winning Touring Theatre Company established in 1989 and is based in King’s Cross, London

The company uses theatre as a means of increasing the informed debate about the impact of science on society, particularly in the field of biomedical science. The theatre group visited the school on Wed 19<sup>th</sup> November 2008.

Their presentation '*Nobody Lives Forever*' by Judith Johnson ,a play about stem cell research, was thoroughly enjoyed by our Year 13 &14 students and by visiting students from St Cecilia's College and GaelColaiste Chineal Eoghain.

### **First LEGO League in Northern Ireland**

Lumen Christi pupils, accompanied by Mr Molloy took part in the world's biggest interactive robotics challenge for young people on November 18, 2008, in Belfast. The students gathered at W5 in the Odyssey to design, build, and program a winning robot that had to perform a series of set tasks linked to a research presentation on the challenges of global climate change.

The FIRST LEGO League event was brought to Belfast for the first time by a partnership of Queen's University, Invest NI, the Institution of Engineering and Technology, SAP Research and W5.

Guided by Mr Molloy and assisted by Ben Green from SAP the team researched and produced a solution to the theme, presented their findings and build an autonomous robot using engineering concepts.

Well done to the school team who won the award for Robot Design and a big thank you to Mr Ben Green for his help throughout this term.

### **.Real World Science Conference 21<sup>st</sup> Nov 2008**

Three hundred young people in the North West attended The Seagate Real World Science Conference.

The inspiring one-day, hands-on, interactive conference is organised annually by Seagate and was held on Friday 21 November 2008 at Lumen Christi College, Derry. The aim was to encourage pupils to step out of the classroom and think out of the box when it comes to careers. Students got to see adults, from a range of professions, in action as life-changing Superheroes and spent a creative, interactive day experiencing everything from the science of slime to how to build a robo-servant!

The Seagate Real World Science Conference has been designed to support the curriculum of Year 10 students by encouraging the uptake of Science, Technology, Engineering and Mathematics (STEM), and enhancing pupils' employability.

The event also provided a forum for companies and organizations that, like Seagate, want to bring their support and STEM inspiration to schools in their community. Twenty one workshops were provided for the conference.

John Spangler, vice president at Seagate's Springtown facility provided the key note speech.

Our Principal, Mr Patrick O'Doherty, said, "Seagate and Lumen Christi share the same goals in educating the next generation in STEM. We both want to encourage not only the uptake of sciences but also to increase awareness by students of the vast range of interesting careers at the cutting-edge of many industries that utilise them so they can make informed career choices. That's why we're delighted to continue to build on the relationship established with Seagate through this science conference."

Year 10 pupils from Buncrana, Claudy, Strabane, Dungiven and Limavady and the wider NorthWest catchment area attended, along with students from schools based in the city.

A big thank you to all of those involved, pupils, teachers and particularly J Coates and Paula Mc Elhinney of Seagate and our Year 13 students who acted as mentors on the day.

### **Primary Schools**

The Primary schools program started the week beginning Monday 20<sup>th</sup> Oct 2008. Link schools are The Nazareth House, The Long Tower and The Fountain and Model primary schools. All pupils will receive two periods of science tuition per week.

Primary School tutors are M.Gillan, A King, G mc Crory and M Smyth.

Primary School students attend all Primary Sentinus workshops and other relevant events as they may occur.

### **Secondary School Links**

Secondary Schools involved are; Foyle & Londonderry College, St Cecilia's College, St Patrick's & St Brigid's, Claudy, Colaiste Chineal Eoghain and St Mary's College Derry.

Pupils from these schools are invited to take part in any relevant workshops or science events taking place here in school and are invited to participate in GCSE Science Revision Days. Teachers are also invited to take part in any relevant inset training days and have been given access to materials on the Specialist Science website.

The Irish Department in Lumen Christi have developed strong links with Colaiste Chineal Eoghain

Numerous links have been developed with St Mary's College Derry by M Gill & J Dunne including Video Conferencing and teacher training events. Plans are at the embryonic stage to host a joint Science Fair in The Millennium Forum, May 2009.

### **GCSE Astronomy**

J.Dunne has continued this program of study with students (Yr 11 & Yr 13) from Lumen Christi College and Foyle & Londonderry College. Classes take place on Thursday evenings after school.

### **First Certificate in Engineering**

Classes have started at The Northwest Regional College on Tuesday and Wednesday evenings after school for this one-year program. This is also a joint project for eight of our Year 11 pupils and eight Year 11 pupils from Foyle & Londonderry College. The results for the last two-year were a resounding success with all students achieving double grade 'A'.

### **Science Specialist Website**

This can be accessed by using the following link-or simply getting Lumen Christi website and clicking on Specialist Science;

<http://specialistscience.lumenchristi.derry.ni.sch.uk>

The website provides resources and revision materials for all Key Stages. The emphasis this year will again be on producing PowerPoint presentations, worksheets or other resources for KS3. This will be carried out as part of our ongoing review of KS3 Curriculum. The minimum requirement is 3 power points plus worksheets from each Department.

### **Science Clubs**

Both junior and senior science clubs have started. M Joyce runs the senior club on Friday at 3pm and M.Gill & M Reynolds run junior club after school on Mondays.

In Junior Science Club there are many projects underway. Ash mc Fadden of Greencastle Maritime Museum runs a subdivision of the club and takes students for activities to do with rocketry. Karen Healy, Environmental Officer @ Creggan Country Park is a regular visitor. Visits from the Loughs Agency and others have been planned in the near future.

Science clubs will continue throughout the school year.

A big thank you to Ash for his dedication and in giving of his time each week.

### **Revision classes**

Revision classes for Double Award Modular are in progress for all three disciplines;

Biology; K O'Brien, Lab3 Mon.

Chemistry; L.Parke.Lab 1 Mon

Physics; M.Smyth/M Gill. Lab 6 & 8. Wed.

### **Engineering Education Scheme Project**

M.Gill runs this on Thursday evening after school. Our Link Company is Derry City Council and Link Engineer is Mr Leo Strawbridge. This requires three days attendance at QUB and a two night residential during the last week of the first academic term. Students are given a design brief to solve an engineering problem that the company may have within their company. They are required to come up with at least three possible solutions, decide on one-produce a report and PowerPoint. A panel of working engineers assesses their project.

### **Creggan Country Park;**

This organisation provides workshops suitable for KS3/KS4 pupils and some projects are also suitable for use with our Primary/Secondary School link pupils. Strong links have been developed with Karen Healy over this past year, with our pupils taking part in variety of activities last year. The Primary Schools 'Big Bug Event' takes place here. Further events are planned for this year.

### **Science in Society Program;**

The School of Biomedical Sciences @ University of Ulster Coleraine campus presents the '**Science in Society**' series of seminars 2008 – 2009. A King and biology students attend these after school lectures.

### **Forward Thinking Northern Ireland**

This is a science and citizenship education project that aims to encourage young people to engage with thinking about the wider social and ethical implications of science and technological discoveries. Discussions are underway with Lynda Dunlop of University of Ulster regarding the implementation of this project. It is due to kick off in February 2009 with class 8A and will run simultaneously with a year 8 class in St Patrick's & St Brigid's Claudy. Time allocation will be 8 double periods-lessons will take place during science/citizenship classes.

### **Extended Schools Program**

Junior Science Club will be involved in a joint activity with the Geography Eco Schools Group in refurbishing the outside quadrangle opposite the staff room. On going discussions are taking place with a representative from The Conservation Volunteers as regards planting and the cleaning of the pond. Twenty free trees have been ordered from The Woodland Trust and are due to arrive by the end of November-these will be planted in the school grounds.

### **CREST Awards**

The Science Dept has joined this scheme and Bronze/Silver/Gold Awards are available for various activities.

### **Stranmillis College**

Lumen Christi College worked with Stranmillis University College, Belfast, to develop a teacher training module for students of the combined B.Ed in Science and Mathematics.

Participants in this project included students, Professor Irene Bell, Dr John Mc Cullagh, Stranmillis College

Mr Patrick O' Doherty, Dr Marie Ferris , Mr Michael Kerlin, Dr Michael Gormley, Ms Catherine Hughes, Dr Michael Joyce, Mrs Mildred Gill, Mr Chris Ryan, Mrs Catherine Rawdon and Ms Geraldine Mc Grory Lumen Christi College.

On Wednesday 19<sup>th</sup> November 2008, eight Year BEd Post Primary Maths and Science students visited Lumen Christi College.

Students observed a number of lessons delivered by various Lumen Christi College teachers.  
Student consultation and teaching day occurred on Wednesday 10<sup>th</sup> December 2008.