

**St. Nathy's College**

**Subject Department Plan**  
**for:**

**JUNIOR CERT**  
**SCIENCE.**

***Year:***

**2010 / 2011**

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## **1. Subject Aims:**

- To put emphasis on scientific investigation and on the application of Science process skills in student activities.
- To foster an interest in Science and especially the practical work and to continue with at least one science subject to Leaving Cert level.
- To introduce students in first year to basic Science and make it interesting for them – with emphasis on science all around us.

## **2. Subject Objectives:**

- To allow the students to engage in learning activities that will enable them to gain a better understanding of the Science concepts involved and to develop their Science process skills.
- Through a variety of investigations and experiments students attain the specified learning outcomes developing appropriate science process skills and a knowledge of underlying science concepts.
- In performing experiments students have to make their own decision either individually or in groups.

## **Subject Co-ordinator:**

Mr. G. Carmody

## **Subject Teachers:**

Mr. O. Brady

Mr. G. Carmody

Mr. J. Dolan

Mr. J. Guilfoyle

Ms. C. Mooney

Ms. O. Redmond

Mr. T. Ronayne

### **Time Allocation:**

One Double and one single for first years

One Double and two single classes for both second and third years.

### **Options Structure:**

All Junior Cert. students must do Science in St. Nathy's College.

First years have a common exam in science at end of first year (like every other subject) and they are then "streamed" in second year.

### **Timetabling:**

The main timetabling objective is to provide one double class for all Junior Cert. Science students in a Lab.

### **Grouping of Pupils (Mixed ability, Streaming):**

In first year there is no streaming.

At the end of first year they sit a common paper in most if not all subjects and then they are streamed there on.

### **Student Access to Subject / Level:**

All students have must do Science to Junior Cert.

We try to encourage them to do Honours if possible.

We do have one smaller class of weaker students who usually opt for Ordinary level.

Most of the other students take on the Higher paper but a few fo these also take the ordinary level.

### **Class Organisation:**

We move the students around from time to time. We assign a seat to each student and then work from there. In practical work we try to group them

in pairs or three's or in a random manner i.e. different pairings for different experiments.

**Textbooks and Course Materials:**

<b>Year</b>	<b>Textbooks</b>	<b>Course Materials</b>
<p><b>1<sup>st</sup></b></p> <p>Junior Cert Science</p> <p>A Voyage of Discovery</p> <p>H. Dorgan D Kennedy P. Walsh By Folens</p>		
<p><b>2<sup>nd</sup></b></p> <p>SAME AS ABOVE</p>	<p>At the discretion of the individual teacher</p> <p>We use a copy for practical work – the students write up their experiments</p>	
<p><b>3<sup>rd</sup></b></p> <p>No set content</p>	<p>At the discretion of the individual teacher to finish the Course, do the two Practical Exam questions and cover Exam Papers</p>	

## **Planning for Students with Special Needs:**

We actually have no “real” plan in place for students with special needs. Some classes have 28 students in them way beyond the practical limit of 24.

However we do have a small class of about 10 students who do get special attention but not within the bigger classes in science.

Some students do get extra help in English from Ms. Jordan or Ms. Johnston so they can read the questions and try to understand them better.

## **Cross-Curricular Planning:**

We don't have a cross-curricular plan in place with regard to Science.

However, some of the science teachers also teach Junior Cert. Maths and we do “overlap” on both the Maths and Science to a certain degree / level. Science and Home Economics do integrate to a small extent in the Junior Cert Curriculum.

L.CA. Maths might also be mentioned with regard to some practical Maths that they do that relates to Science.

## **Subject Planning for a Culturally Diverse Society:**

We always plan-very carefully- what we carry out in First Year Science.

We cater as best we can for all students in our Science classes – to the best of our abilities.

## **Effective Teaching Methodologies:**

In fairness – all teachers have their own effective Teaching Methodologies and use same in the particular class they are present in.

All classes and subjects are unique and all require a different methodology for the context one is in.

- Chalk and talk
- O.H. Projector

- Practical
- DVD
- Data Projector
- Powerpoint
- Software
- Project work
- Pair Work
- Investigate
- Brainstorm
- Fieldwork

### **Range/Variety of Resources:**

Resources are not bad

Chemicals are plentiful

Glassware is ok

The need for more funding to cater for group work would help.

- Science Equipment
- I.T.
- Digital Projection
- DVD

### **Availability / Use of ICT Facilities:**

Not great

There are 2 projector screens which were bought by the Science Dept

- There should be a Computer in each lab.
- There are no data logging equipment available
- Broadband
- Laptops

### **Provision for Health and Safety Requirements:**

- There are signs notices in place.
- There are fire extinguishers in place.
- The fire exit doors are clearly marked.
- A medical box / kit is available
- Water bottles are available also goggles.

- A fire cupboard is available (gas)
- A sharp bin is in place with other bins for other waste material.
- Fire drills carried out on a yearly basis.

## **Curriculum Content – Long-Term Planning**

### **Content to be covered in each Year of Programme:**

#### **Year 1**

Based on Science – The Textbook we use - A Voyage of Discovery by Folens

Chapters 1– 5 (incl) in Physics

Chapters 15 – 19 (incl) in Chemistry

Chapters 29 – 32 (incl) in Biology

#### **Year 2**

At the discretion of the individual teacher

No set content

#### **Year 3**

No set content

At the discretion of the individual teacher to finish the Course do the two Practical Exam Questions and cover Exam Papers.

### **Homework Procedures:**

Homework is issued at the end of every class period in Science.

It is then corrected at the start of the next Science class.

We also check the Practical copy and use it at the end of year on a % mark of the final year exam.

## **Assessments/Examinations Procedures:**

We carry out tests at Halloween, Christmas, Easter and Summer.

Each individual teacher carried out their own tests e. g. coming up to a Parent Teacher meeting etc.

At the end of First year we give all students a common exam paper in Science based on the chapters we have decided to cover at the start of the academic year.

## **Record Keeping Procedures:**

- Each individual teacher keeps a record of results, behavioural attitudes etc. of each particular class.
- Class attendance.
- Accident report sheets – if need be!

## **Reporting Procedures:**

- If there are reporting procedures it first goes to the class tutor then if needs be to the year head and then to Vice Principal and as a last resort to the Principal.
- Report
- Diary
- Parent Teacher meetings

**Teacher In-Career Development:**

**2004-2005:**

<b>Name</b>	<b>Date</b>	<b>Topic</b>
C. Mooney	Nov. '04	New Science Course to Junior Cert level
J. Guilfoyle	March '05	
P. Curran		
O. Redmond		
G. Carmody		

## **DES Subject Department Inspection:**

**Date: 2005**

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### **Recommendations:**

- Access to labs – need for improvement (especially third year)
- Upgrade Physics Room (2B) - general refitting
- Mark for practical work to be given at exam times