**4.2 Learning Support resources**

The following have been implemented to support our pupils:

* Adaptation of term exams
* Taping of exams
* Use of lap-tops in class and examinations
* These have all been well received by the pupils and the department is extremely pleased with the percentage of pupils continuing with one or more of the sciences in the senior cycle.
* There is a special Learning Support folder for the Science Department which is kept confidential and stored in the Science Teachers’ Resource room (which is kept locked).
* **Provision of extra notes / handouts**

We have been using these for years at leaving cert level and their success can be judged by reading the feedback page on the homepage of [www.thephysicsteacher.ie](http://www.thephysicsteacher.ie)

Recently we have compiled a similar set of notes for Junior Cert students. It may be too early to judge its success but it’s interesting that for many years our Junior Cert results were on a par with the national average whereas in 2010 (the first year for which students had access to these notes) the number of ‘A’s was well above the national average, and of the 13 A-grades achieved 10 of them were from students of teachers who were using these notes (two teachers out of 6).

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | 2007 |  | 2008 |  | 2009 |  | 2010 |  |
| All | Science |   | Science |   | Science |   | Science |   |
|  | H | O | H | O | H | O | H | O |
| A | 6 | 0 | 4 | 0 | 5 | 0 | 13 | 0 |
| B | 40 | 4 | 25 | 2 | 15 | 4 | 30 | 5 |
| C | 31 | 13 | 42 | 7 | 26 | 2 | 38 | 4 |
| D | 8 | 1 | 35 | 2 | 47 | 1 | 7 | 2 |
| E | 1 | 0 | 2 | 0 | 2 | 0 | 0 | 1 |
| F | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| No of papers | 86 | 18 | 108 | 11 | 95 | 7 | 88 | 12 |
| No of honours | 77 |   | 71 |   | 46 |   | 81 |   |
| Percentage of honours | 90% |  | 66% |  | 48% |  | 92% |  |

* **Extra Credit**

After the syllabus extract in the leaving cert physics notes we have included an ‘Extra Credit’ section. This is for students who would like to know a little more about the concepts – either from an explanatory perspective or in many instances from a general interest perspective.

* **Syllabus extracts**

At the end of the theory section on each chapter of the students’ leaving cert notes there is an extract from the relevant section of the syllabus.

This is to help students identify what they need to know/understand on completion of the chapter. The hope is that this will assist those students for whom the textbook is intimidating in terms of the amount of information it contains – quite often some students find dissemination of the relevant information to be an onerous task in itself.

* **Website**

There are also a wide variety of resources to cater for many different learning styles available on [www.thephysicsteacher.ie](http://www.thephysicsteacher.ie)

* **Crosswords**

We have put together a series of crosswords at junior cert level and are working on a separate series for leaving cert level. These can be done online but are also included in the students’ notes for those who do not have access to the internet.

* **Mind-maps**

We are also experimenting with having the information from each chapter summarised using programs like mind-maps, wordle and tugxedo.

* **Counter-intuitive concepts**

We try where possible to recognise the difficult nature of many of the concepts and respond to this appropriately (see the document on *Misconceptions*).

* **Language in Science**

We try where possible to recognise the difficulty associated with the learning of so many new and difficult words (see the document on *Language in Science*).

A valuable resource here is the following which uses the hangman game to help learn new terms:

<http://www.freezeray.com/scienceLiteracy.htm>

* **YouTube**

In order to assist with students’ revision a number of different resources have been compiled.

For example we have uploaded over 100 physics videos to YouTube which have amassed over half a million views to date.

These have proved useful to both students in aiding their revision and developing a deeper understanding of the topic , but also to teachers who may not be familiar with certain demonstrations or have the resources to hand to carry them out for their own students.

* **Podcasts**

The Physics Department have compiled a number of podcasts for both Junior and Leaving Cert level – these can all be accessed from the homepage of [www.thephysicsteacher.ie](http://www.thephysicsteacher.ie)

* **Bank of questions**

We hope to build up a comprehensive bank of higher order questions for each topic over time.

As a start we have included an initial list of questions at the end of this section.

Two areas where we have a special interest are the following:

1. Differentiated Learning
2. Assessment for Learning (AfL)

We deal with each of these separately in the following sections.