

Supporting Students
in the
Senior Phase

N5(4) Physics

Course changes: ...new for this session, 2017-18

before this session...

- Course made up of 3 Units
- A **Unit** Test PASS required for each Unit
- An 'Outcome 3' required (i.e. a brief, written Report of an experiment)
- An **Assignment** Report, ...which could have been based only on research and could be written *without* any time limit, using the detailed marking scheme
- Final SQA Exam

from this session, 17-18, onwards..

- Course has same content, but..
- No **Unit** Test PASSes needed
- No 'Outcome 3' required
- An **Assignment** Report, ...which must be based on experimental work as well as research and must be written in a time limit of 1.5 hours, *without* the detailed marking scheme
- Final SQA Exam

N5 Physics Course Overview: *...new for this session, 2017-18*

Course Structure:

The **content** can be taught in any order – there is now no need to follow specific ‘Units’ of content.

(which were: Electricity & Energy, Waves & Radiation, Dynamics & Space)

Course Assessment:

There are two ‘components’

- 1) the Assignment
- 2) the Exam

N5 Physics Course content

Dynamics:

vectors & scalars; velocity-time graphs; acceleration; Newton's Laws; energy; projectile motion.

Space:

Space exploration; cosmology.

Electricity:

Electrical charge carriers (electrons); potential-difference (voltage); Ohm's Law; practical electrical & electronic circuits; electrical power.

Properties of Matter:

Specific-heat-capacity; specific-latent-heat; gas laws & the kinetic-model.

Waves:

Wave parameters & behaviours; electromagnetic spectrum; refraction of light.

Radiation:

Nuclear radiation.

note: more detail can be found on the main SQA 'open' website – see later.

N5 Physics Course Assessment:

...in a bit more detail

Component 1 - Assignment:

- i. **Research Stage:** this is expected to take about 6 to 7 hours of research and practical work, done at home and in school.
- ii. **Reporting Stage:** this needs to be completed in a **time limit of 1.5 hours**, in 'exam conditions' in school.
 - Pupils can bring in all/any information/notes they gather during the Research stage with them for their Reporting stage, (*...but not any pre-prepared, written Report sections!*)
 - Pupils are provided with a 'Guide' to highlight key points to include in their Report – but they are not given the detailed 'Marking Scheme' to use...they must familiarise themselves with that, to be clear about what needs to be included !
 - The Assignment is worth 20 marks (*scaled to 25*), and is **20%** of the overall score.
 - Pupils should refer to the SQA's '**Understanding Standards**' website, and previous school Reports, for 'marked' examples.
 - The Assignment needs to be completed before the Easter holiday.

note: more detail can be found on the main SQA 'open' website – see later.

N5 Physics Course Assessment:

...in a bit more detail

Component 2 – Final Exam:

- the Exam lasts for 2.5 hours and has two ‘sections’:
 - i. **section 1**: 25 multiple-choice questions, worth 25 marks
 - ii. **section 2**: a number of ‘extended answer’ questions, worth 110 marks...however these marks are ‘scaled’ to give a mark out of 75 (*...so that they have a better parity with the multiple-choice questions*)
 - So, overall, those marks are then added to give a total score out of 100...
- Which essentially means that, when combined with the score for the Assignment, the Exam is worth 100/125 marks...which makes it **worth 80 %** of the overall final Grade.
- Pupils should get lots of practise at ‘**Past Paper**’ questions in preparation for their Prelim and their Final Exam.
- Pupils should refer to the SQA’s ‘**Understanding Standards**’ website for ‘marked’ examples of other pupils’ script answers, to better understand the level of detail required to gain marks.

note: more detail can be found on the main SQA ‘open’ website – see later.

N5 Physics – Departmental support:

The teachers & Dep't provide support for pupils in a range of ways:

- Class notes in their jotter
- Hand-out sheets, to supplement class notes
- Summary Notes booklets covering all the Topics of the Course content
- Homework questions / booklet covering all the Course topics
 - homework is normally issued every week, or two, with jotters being marked before being returned.
 - homework is also often posted on ShowMyHomework
- Textbook which covers all the Topics of the Course content
- Study Guide textbook & corresponding on-line resource (*Bright Red*)
- '**Virtual N5 Physics**' software package (...*an excellent 'pupil favourite'* !)
- '**Past Paper**' questions are made available
- Regular and very frequent 'tutorial' sessions and/or additional 'revision' sessions are offered at lunchtimes and at the end of the day, almost daily !

note: more detail can be found from class teachers.

N5 Physics – Departmental Assessment:

- Although the N5 Physics Course now no longer has the *requirement* for pupils to Pass each of the previous Course ‘Units’, we will continue to provide pupils with *Unit*, or Topic, assessments – with plenty notice given before any tests.
- There will be a **Prelim** Exam for pupils to do, shortly after the Christmas holiday.
note: it’s important to realise that there is no such thing as ‘appeals’ anymore, for those pupils who end up feeling that they didn’t perform as well as they’d hoped or expected in their Final Exam. Instead there is what is called the ‘Post Results Service’, but this will only really be applicable to those pupils who scored less than their predicted score/Grade i.e. their Prelim score/Grade. It’s clear then that the pupils performance in their Prelim is very important and they should revise and study well for it – and they should not think that the Prelim ‘isn’t really that important’ !
- All Homework should be completed to the best of their ability and all answers given should be meaningful and presented in a lay-out similar to the worked examples given.
note: there is also an expectation that ‘corrections’ will be done for any wrong answers.

note: more detail can be found from class teachers.

N5 Physics – Useful references:

This is a list of some very useful resources that will benefit N5 Physics pupils with their studying and learning:

- SQA's main 'open' website:

<https://www.sqa.org.uk/sqa/47430.html>

...and under the “**Essential information**” heading go to the “**Course Specification**” section and download the document “**N5 Physics Course Specification 2017-18 session**” for all general details about the Course,

...also, under the heading “**Assessment**” go to the “**Coursework**” section and download the document “**Coursework assessment task for National 5 Physics**” for the detail about the Assignment.

- SQA's 'Understanding Standards' website:

<http://www.understandingstandards.org.uk/Subjects/Physics/national5>

...which gives real examples of previous pupils' work, along with markers comments about why marks were, and were not, allocated...clearly a very valuable insight to be gained from this.

- Virtual N5 Physics:

<http://www.peebleshighschool.org.uk/sites/all/virtual-nat-5-physics/vn5p.html>

... this excellent software package covers all the theory of the Course in a very accessible format...most pupils find this a very worthwhile resource to use and we have purchased a licence for it to be used at home as well as in school.

- 'Mr MacKenzie's fizzics' website:

<http://mrmackenzie.co.uk/category/national-5/>

... is also very good for most topics of the Course.

note: more detail can be found from Mr Reilly and/or class teachers.