

PHYSICS SL (2013-2014)

HORTON HIGH SCHOOL

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Welcome to Physics SL!! Physics SL will be a demanding & challenging course and should appeal to hard-working & self-motivated students. This is a two year in-depth Physics course with an emphasis on laboratory investigations. All students taking Physics SL will participate in a Group 4 (experimental sciences) project. Evaluation of the course will be based on practical lab work and external examinations written in May of 2014. Students should have a strong background in mathematics & ability in science.

The core topics of study include: physics & physical measurement, mechanics, thermal physics, oscillations & waves, electric currents, fields & forces, atomic & nuclear physics, and energy power & climate change. In addition to the core topics, sight & wave phenomena and quantum physics & nuclear physics will be covered as options.

Required Materials:

- 3-ring binder (dedicated to Physics)
- dividers
- looseleaf
- graph paper
- pens, pencils, coloured pencils, ruler
- scientific calculator (see list of approved calculators in Reference Booklet)
- 80 pg Hillroy® exercise book (to be used as a log for your practical work)

Text & Other Resources

• **Standard Level Physics** by Hamper & Ord, Pearson Baccalaureate (2007)

• Other Resources:

- **Physics Course Companion** by Kirk & Hodgson, Oxford University Press (2010)
- **Physics SL: Approach your exams the IB way** by Homer, International Baccalaureate Organization (2011)
- **Physics: For use with the IB Diploma Programme** by Dickinson (2012)

IB Evaluation

- External Assessment (76% of final mark)
 - Paper 1 (20% /45 minutes) ~ 30 multiple choice questions on the core (**no calculator**)
 - Paper 2 (32% /75 minutes)
 - Section A ~ one data-based question and several short-answer questions on the core (all compulsory)
 - Section B ~ one extended-response question from the core (from a choice of three)
 - Paper 3 (24% /60 minutes) ~ several short-answer questions and one extended-response question in each of the two options (all compulsory)
- Internal Assessments (24% of final mark)
 - Physics SL students are required to spend 40 hours on practical activities (excluding time spent writing up work). This time includes 10 hours for the Group 4 project. Student work is assessed internally based on five assessment criteria and broken down into three aspects (refer to your Reference Booklet for more details). Randomly selected pieces of work will be requested to be submitted to the IBO for external moderation. Your IA mark will be based on 48 pts scaled to give you a total out of 24%.

Course Work

All course work will be evaluated using the IB scale of 1 to 7. It is important for you to realize that your mark is **NOT** "out of 7". All completed work will be kept in a file and is not to leave the classroom.

- Quizzes ~ quizzes will be given regularly and will be multiple choice
- Tests ~ tests will be given for each topic and will be a mixture of multiple choice & extended-response questions
- Exam ~ an exam will be given in January 2014
- Practical work ~ several labs will be evaluated using the IA criteria, but there may be others that are not. Lab write-ups must be done individually and will be due approximately one week after completion.

Extra Help ~ available every other day (please sign up)

Academic Honesty ~ a mark of zero will be assigned if cheating or submitting copied work (refer to Reference Booklet)

Missed Time ~ it is your responsibility to get caught up!!

Expectations ~ it is important to always have high expectations for yourself, but it is also important to be realistic!