

# PHYSICS SL (2017-2019)

## 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 the internal assessment and external examinations written in May of 2019. Students should have a strong background in mathematics & ability in science.

The core topics of study include: measurements & uncertainties, mechanics, thermal physics, waves, electricity & magnetism, circular motion & gravitation, atomic, nuclear, & particle physics, and energy production. In addition to the core topics, relativity, engineering physics, imaging or astrophysics may be covered as an option.

### 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)
-  Hardcover lab book (to be used as a log for your practical work)

### Text & Other Resources

-  **Standard Level Physics** by Hamper, Pearson Baccalaureate (2014) ~ ebook
-  **Other Resources:**
  - o **Standard Level Physics** by Hamper & Ord, Pearson Baccalaureate (2007)
  - o **Physics: For use with the IB Diploma Programme** by Dickinson (2012)
  - o **Physics Standard Level** by Pat Roby, OSC (2015)
  - o **Physics SL: Approach your exams the IB way** by Homer, International Baccalaureate Organization (2011)

## IB Evaluation

- 📘 External Assessment (*80% of final mark*)
  - Paper 1 (20% /45 minutes) ~ 30 multiple choice questions on the core (**no calculator**)
  - Paper 2 (40% /75 minutes) ~ short-answer and extended response questions on the core material
  - Paper 3 (20% /60 minutes) ~ questions on the core and option material
    - Section A ~ one data-based question and several short-answer questions on experimental work
    - Section B ~ short-answer and extended response questions from one option
  
- 📘 Internal Assessment (Individual Investigation) (*20% of final mark*)
  - Physics SL students are required to spend 10 hours completing an Individual Investigation. The Investigation will be graded internally and then submitted to the IB for moderation.

## 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 ~ a mock exam will be given in February or March of 2018
- 📘 Practical scheme of work ~ students will complete 20 hours of practical activities, 10 hours completing an Individual Investigation, and 10 hours completing the Group 4 Project.

**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!