

Group 4

PHYSICS

The IB course of physics is to attempt to understand the nature of fundamental laws of universe.

During physics lessons mathematical models are developed to understand observations, and these themselves can become theories that attempt to explain the observations. A good knowledge of mathematical tools is also required for analysis of physical experiences.

Moreover, great emphasis is placed on understanding physical phenomena. The IB physics students have opportunities to design investigations, collect data, develop manipulative skills, analyse results, collaborate with peers and evaluate and communicate their findings. Students develop the skills to work independently on their own design, but also collegiately, including collaboration with schools in different regions, to mirror the way in which scientific research is conducted in the wider community.

The structure of the IB physics is intended to promote concept-based learning and teaching that can be connected through three fundamental topics: Energy, particles and forces. There are five organizing themes in the physics course:

1. Space, time and motion
2. The particulate nature of matter
3. Wave behaviour
4. Fields
5. Nuclear and quantum physics

These themes have been chosen to indicate the main areas of physics relevant for this level of study and do not suggest a teaching order. The aim of the physics course is to integrate concepts, topic content and the nature of science through inquiry.

The SL course provides students with a fundamental understanding of physics and experience of the associated skills. The HL course requires students to increase their knowledge and understanding of subject. The SL course has a recommended 150 teaching hours, while HL course has 240 teaching hours. This difference is mainly associated with additional content studied by HL students. It should be stressed that some of the HL themes are more conceptually demanding and these themes are explored in greater depth. The main difference in SL and HL is one of the breadth and depth. The SL and HL students must develop

collaborative science project. This project is interdisciplinary project addressing real problems that may be investigated through relevant experiments and scientific discussions.

It should be emphasized that our IB class graduates won the biggest laurels at the Physical Olympiad, both nationally and international - gold and silver medal of the Physics Olympiad.

However, talented students can participate in physical circle.