PARKLAND SECONDARY SCHOOL

"An Innovative, Inspiring, Inclusive Learning Community"

Course: International Baccalaureate Physics Standard Level (IB Physics SL)

Group 4 Physics aims

The aims of the course are to enable students to:

1. Gain an appreciation for the discipline of physics and its contributions to our world
2. Develop key skills to break apart and solve complex problems
3. Foster a sense of curiosity for the pursuit of understanding how the universe works
4. Examine how the paradigm of science can influences the way society views the world
5. Connect students to modern experiments that are going on in the world of physics today
6. Encourage collaborations between disciplines and other subjects
7. Develop student passions and interests for fields relating to Physics

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Group 4 Physics Assessment objectives

Students will be expected to demonstrate the following.

1. Identify and define equations and terms to apply to situations
2. Describe a method of solving particular problems
3. Calculate mathematical solutions
4. Compare and contrast similar scenarios
5. Analyze and break apart complex problems
6. Challenge theories presented and construct personal inquiry projects
7. Discuss and Evaluate peer works with the intent of elevating understanding

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Resources:

Textbooks and resources are provided to the students by the school. Students need to come to the class with standard school supplies (Ruler, Pencil, Eraser, calculator, and notebook)

10640 McDonald Park Road, Sidney, BC V8L 3S7
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School District No. 63 (Saanich)

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Group 4 (Physics SL) Topics

Syllabus component	**Teaching hours**
Topic 1 : Mechanics	50
Topic 2 :Circular Motion and Gravitation	12
Topic 3 : Energy Production	6
Topic 4 : Thermal Physics	12
Topic 5 : Waves	18
Topic 6 : Electromagnetism	18
Topic 7 : Atomic, Nuclear, and Particle	12
Topic 8 : Relativity	12
Course exploration Internal assessment in physics SL is an individual investigation using practical scientific methods. Students will produce a 6-12 page long write up that answers a purposeful scientific research question.	10
Total teaching hours	**150**

Evaluation

Assessment Component	Weighting
External Assessment (3 hours) (at end of 2nd year, in early May) **Paper 1** Multiple-choice questions on core topics. The use of calculators is not permitted. Students will be provided with a periodic table. **Paper 2** Short-answer and extended-response questions on the core topics. The use of calculators is permitted. A chemistry data booklet is to be provided by the school. **Paper 3** This paper will have questions on core, and option topics. 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. The use of calculators is permitted. A chemistry data booklet is to be provided by the school	**20%** **36%** **24%**
Internal Assessment This component is internally assessed by the teacher and externally moderated by IB at the end of the course. This component will consist of a mixture of short- and long-term investigations (such as practical lab work and subject-specific projects), an interdisciplinary project called the Group 4 Project and the Individual Investigation.	**20%**

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