



2024-25 Course Outline

COURSE: Sciences 9
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Introduction

The overall purpose of the science program at Island Pacific School is that a student will be able to **appreciate** that science is the tool that makes the beauty and complexity of the natural world explicit. With this appreciation they will be curious and inclined to discover and explore the dynamics of the world around them. Students will develop the **ability** to apply the disciplined process of the scientific method to answer the questions that they generate. When **applying** the science they have learned, students should be able to consider issues from a multifaceted view. Students will see the importance and value of contributions from other disciplines and will appreciate that science is always located within a social and ethical framework. They will be empowered to use their knowledge to take action on scientific issues.

The grade 9 Science course is located within a program framework with four content areas: Life Science, Physical Science, Earth and Space Science and Processes and Skills of Science. The processes and skills needed to undertake scientific inquiry are addressed throughout the year. The curriculum will be delivered through a variety of experiences including lab experiments, demonstrations, projects, games and activities. I am looking forward to an exciting and inventive year!

The **aims of MYP science** are to encourage and enable students to:

- ☐ understand and appreciate science and its implications
- ☐ consider science as a human endeavour with benefits and limitations
- ☐ cultivate analytical, inquiring and flexible minds that pose questions, solve problems, construct explanations and judge arguments
- ☐ develop skills to design and perform investigations, evaluate evidence and reach conclusions
- ☐ build an awareness of the need to effectively collaborate and communicate
- ☐ apply language skills and knowledge in a variety of real-life contexts
- ☐ develop sensitivity towards the living and non-living environments
- ☐ reflect on learning experiences and make informed choices



Content

The following units will be covered over the course of the year.

Term 1: **Life Sciences** – Reproduction

Mitosis, meiosis

Asexual and sexual reproduction

Genetics

Physical Science - Electricity

Circuits, voltage, current, and resistance

Atoms, Elements, Compounds & Characteristics of Electricity

Term 2: **Physical science** - Chemistry

Element properties as organized in the periodic table

The arrangement of electrons determines the compounds formed by elements

Earth Sciences - Effects of solar radiation on the cycling of matter and energy

Matter cycles within biotic and abiotic components of ecosystems

Sustainability of systems

First Peoples knowledge of interconnectedness and sustainability

Required Materials

- Planner (provided by the school)
- Binder with dividers and lined paper
- Pens, pencils, eraser

Resources & Materials

In this course we will use the text, BC Science as a base. This will be augmented by reference works, web resources, newspaper articles, and laboratory equipment. .

Class notes and assignments will be posted on google classroom each week. Students are encouraged to check Google Classroom frequently to ensure they are up to date with the assignments.

Assessment

Island Pacific School uses the International Baccalaureate rubrics to evaluate students in reference to four distinct criteria. Throughout the year students will be given written and verbal assignments, projects, lab reports and tests which will be evaluated based on the following IB criteria:

Criterion A: Knowing and understanding

Criterion B: Inquiring and designing

Criterion C: Processing and evaluating

Criterion D: Reflecting on the impacts of science

Throughout the year there are various report cards and parent, student, teacher interviews that will give us an opportunity to discuss your child's progress, but please feel free to contact me throughout the year if you have any questions or concerns.