



Tohoku International School

Secondary Course Syllabus

Course Title: General Science [Year A]	Teacher: Ms. Constance Bahn Email: cbahn@tisweb.net										
Grade Level(s): Grade 7-8	Time Frame: 37 weeks										
<p>Brief Course Description:</p> <p>This course enables students to develop their understanding of basic concepts in biology, chemistry, earth and space science, and physics, and to relate science to technology, society, and the environment. Throughout the course, students will develop their skills in the processes of scientific investigation. Students will acquire an understanding of scientific theories and conduct investigations related to plants and ecology, the cellular nature of life and reproduction, health and nutrition, systems of the human body, and the principles of electricity.</p>											
<p>Course Philosophy:</p> <p>The two years of General Science studied by TIS students in grade 7 & 8 are designed to spark interest, excitement, enjoyment and curiosity in the natural world around us. Gaining an understanding of the scientific method and how science is practiced are essential in order to make sound and informed decisions throughout life. Learning is best achieved when the content is applicable, practical and hands-on. We will experience many inquiry-based activities, co-operative learning, and infuse current technologies into many aspects of the course where appropriate and relevant.</p>											
<p>Course Objectives:</p> <p><i>The aims of the General Science program are to:</i></p> <ul style="list-style-type: none"> ● Study the processes of scientific inquiry and technology development and the history and context within which these have been carried out. ● Develop numeracy through practical mathematical problems. ● Develop a basic understanding of the structure and properties of materials, experience and learn the processes by which materials are changed and how the uses of materials are related to their properties. ● Study, discuss, and learn the factors that govern the flow of energy throughout the universe, the transformation of natural resources into useful energy forms, and the conservation of energy during interaction with materials. ● Study and learn to identify components of the various Earth systems and understand the changes and patterns that result from interactions within and between these systems. ● Learn how living organisms use matter and energy to build their structures and conduct their life processes. ● Learn the mechanisms and behaviors used by living organisms to regulate their internal environments and to respond to changes in their surroundings. Students will also study how knowledge about life processes can be applied to improving human health and well-being. 											
<p>Units of Study:</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 5%; text-align: center;">1</td> <td style="text-align: center;"><i>Plants & Ecology</i></td> </tr> <tr> <td style="text-align: center;">2</td> <td style="text-align: center;"><i>Cells, Genes & Reproduction</i></td> </tr> <tr> <td style="text-align: center;">3</td> <td style="text-align: center;"><i>Health & The Human Body</i></td> </tr> <tr> <td style="text-align: center;">4</td> <td style="text-align: center;"><i>Electricity</i></td> </tr> <tr> <td style="text-align: center;">ONGOING</td> <td style="text-align: center;"><i>Science Investigation Project</i></td> </tr> </table>		1	<i>Plants & Ecology</i>	2	<i>Cells, Genes & Reproduction</i>	3	<i>Health & The Human Body</i>	4	<i>Electricity</i>	ONGOING	<i>Science Investigation Project</i>
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General Science (cont'd)

NOTE:

* A student will always have opportunity to demonstrate new understanding of previous learning objectives in order to improve grades.

Assessment:

Assignments & Lab Reports [30%]

Tests & Quizzes [30%]

Semester Projects [30%]

Learning Skills [10%]

BREAKDOWN OF COURSE ASSESSMENT

Assignments & Lab Reports – 30%

The General Science course is designed with a focus on inquiry, investigation and problem-based learning. Thus, this component of the grade will be comprehensive in terms of evaluating the understanding of all learning objectives with equal value.

Quizzes & Tests – 30%

Assessments will take numerous forms both formal and informal and will be used to indicate the level of understanding a student obtains for each objective. Students will be given **at least** one week's notice prior to a test.

Semester Projects – 30%

These major evaluation tools for this course are meant for the students to apply what they have learned throughout the year. Students will choose an individual investigation question, which they will attempt to answer using the scientific method. They will conduct research, plan and carry out experiments and tests, collect data and present their findings. This project will occur throughout the year, typically with one class period per week dedicated to this purpose.

Learning Skills – 10%

Attendance, organization, completion of course work and the ability to take initiative and work productively in various settings all play a role in student success and are important for achieving the course expectations. Students will be observed throughout the year in order to determine an accurate assessment of these skills, according to the Learning Skills rubric.

Course Specific Materials Required:

- A4 binder, dividers and paper
- Ruler

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