

# Sciences de la Vie et de la Terre - Earth and Life Sciences

2<sup>nde</sup> (10<sup>th</sup> Grade FB) [1.5 periods per week]

Mme. Laurence Laneque

## Course Description

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The goal of this class is for students to acquire fundamental cognitive skills and knowledge in two experimental sciences: Biology and Geology (Earth Science). The 3 themes allow students to understand life on earth and its functioning (theme 1), current issues such as sustainable development and human resources management (theme 2), as well as human health (theme 3).

Scientific knowledge will be built by students as often as possible, through guided document and data analysis and/or practical activities, allowing them to acquire reasoning and technical skills and develop a sense of self-efficacy, initiative and autonomy.

Skills mobilized during the SVT class are embedded in 5 domains of skills, knowledge and culture as follows:

- Practicing scientific languages (Domain 1): oral and written expression; reading and analyzing documents presented in different formats (texts, tables, graphs...); choosing appropriate formats to represent data.
- Using tools and methods (Domain 2): searching and obtaining relevant and reliable information from the internet; using relevant data from a database or a program to solve a scientific problem, cooperating and collaborating for a project, using software, computer simulations and other numeric tools.
- Citizenship education (Domain 3): Engaging in ethical, responsible and rational behaviors in terms of health and sustainable development; engaging in the elaboration of safety rules in the lab and on the field.
- Making, creating, implementing (Domain 4): choosing the appropriate tool to measure and observe; implementing a protocol.
- Practicing a scientific approach (Domain 4): formulating a scientific question; formulating hypotheses; designing an experimental protocol; collecting, analyzing and interpreting data; drawing conclusions from data. Using mathematical tools to explain a natural phenomenon.
- Representations of the world (Domain 5): Knowing how to differentiate scientific knowledge from opinions and beliefs.

## Timeline

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Part 1: Life on Earth and its Evolution - Organization of life (13 weeks).

Part 2: Contemporary Issues - Geology and Human activity (9 weeks).

Part 3: Human body and health - Procreation and sexuality- Micro-organisms and health (11 weeks).