

# Sciences and Technology

6<sup>eme</sup> (6<sup>th</sup> Grade) [4 periods per week, year-round]

Mr. Jonathan Pironet

## Course Description

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This course is taught in French.

The goal of this class is for students to acquire fundamental cognitive skills and knowledge in Biology, Geology, Chemistry, Physics and Technology.

Knowledge content in each part will be constructed by the students themselves 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 mobilised during the Sciences and Technology class are embedded in 5 domains of skills, knowledge and culture as follows:

- Practicing scientific/technological languages (Domaine 1): oral and written expression; reading and analysing documents presented in different formats to communicate; choosing appropriate formats to represent data. Extract the relevant information from a document and put them in relation to answering a question.
- Using tools and methods (Domaine 2): using digital tools to communicate results, processing data, simulating phenomena, representing technical objects, identifying sources of reliable information; selecting or using appropriate equipment to conduct an observation, measurement, experiment or production; making connections between a measurement, its unit and the tool used; keeping a written or digital record of research, observations and experiments; organizing a workspace alone or in group to conduct an experiment; performing simple and targeted bibliographic researches; using appropriate mathematical tools.
- Citizenship education (Domaine 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; implementing responsible and civic action, individually or collectively, in and out of school.
- Practicing a scientific/technological approach (Domaine 4): formulating a scientific question or a technological problem; formulating hypotheses; designing an experimental protocol; collecting, analyzing and interpreting data; drawing conclusions from data; describing the operation of technical objects, their functions and their components; designing all or parts of a technical object as a team to meet a specific need.
- Making, creating, implementing (Domaine 4): choosing the appropriate tool to measure and observe; implementing a protocol; creating all or parts of a technical object as a team to meet a specific need.
- Representations of the world (Domaine 5): situating scientific and technological discoveries over time; understanding scales of space and time; distinguishing beliefs or opinions from scientific and technological knowledge.

## Timeline

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Part 1 : I investigated about matter / 30 hours (2 months)

Part 2 : I investigated about life / 30 hours (2 months)

Part 3 : I investigated about energy / 30 hours (2 months)

Part 4 : I investigated about Earth / 30 hours (2 months)

Part 5 : I investigated about human / 30 hours (2 months)