

Sciences and Technology

6^{eme} (6th Grade) [4 periods per week]

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Course Description

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 mobilized in Sciences and Technology class are embedded in 5 domains of skills, knowledge and culture as follows:

- Practicing scientific languages (Domaine 1): oral and written expression; reading and analyzing 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): Use digital tools to communicate results, process data, simulate phenomena, represent technical objects, identify sources of reliable information. Select or use appropriate equipment to conduct an observation, measure, experiment or production. Make the link between the measurement made, the units and the tool used. Keep a written or digital record of research, observations and experiments. Organize alone or in a group a workspace of experimental realization. Perform simple and targeted bibliographic searches. Use the 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. Implement responsible and civic action, individually or collectively, in and out of school, and testify to it.
- Practicing a scientific approach (Domaine 4): formulating a scientific question; formulating hypotheses; designing an experimental protocol; collecting, analyzing and interpreting data; drawing conclusions from data. Describe the operation of technical objects, their functions and their components. Perform as a team all or part of a technical object meeting a need.
- Making, creating, implementing (Domaine 4): choosing the appropriate tool to measure and observe; implementing a protocol.
- Representations of the world (Domaine 5): situate scientific and technological discoveries over time; understand the scales of space and time; distinguish beliefs or opinions from scientific and technological knowledge.

Timeline

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)