

Sciences and Technology

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

Mr. Romain Dupont

Course Description

The goal of this class is for students to acquire fundamental cognitive skills and knowledge in Life and Earth Science (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.

The annual programming followed this year will take the form of 5 investigations that allow to describe the present world, to understand it and to anticipate the world to come.

Investigation 1: Investigation about our planet: The Earth and the solar system, The Earth and its movement, its activity, its landscape, the exploitation of its natural resources (PC, LES)

Investigation 2: Investigation about Energy: Energy and Movements (PC), Nutritional needs of living beings (LES), Energy needs (PC, LES, Tech)

Investigation 3: Investigation about the living: Living things, their diversity and their functions (LES)

Investigation 4: Investigation about matter: Matter and mixture (PC), Materials (Tech), Food and organic matter (LES)

Investigation 5: Investigation about human's need: Technical objects, Signals and information (Tech), Human impacts on the environment (PC, LES, Tech)

Skills Mobilized

- Practicing scientific/technological languages (Domaine 1): oral and written expression; reading and analyzing documents presented in different formats; 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; measurement, experiment or production; making connections between a measurement, its unit and the tool used; observations and experiments; using appropriate mathematical tools.
- Citizenship education (Domaine 3): Engaging in ethical, responsible behaviors in terms of health and sustainable development; engaging in the elaboration of safety rules in the lab and on the field.
- 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.

- Making, creating, implementing (Domaine 4): choosing the appropriate tool to measure and observe; implementing a protocol.
- Representations of the world (Domaine 5): situating scientific and technological discoveries over time; understanding scales of space and time.

Timeline

September - October: Investigation about our planet

November - December: Investigation about Energy

January - February: Investigation about the Living

March - April: Investigation about Matter

May - June: Investigation about Human's need