



**Sacred Heart Catholic High School  
Grade 9 Academic Science  
2020-2021**



**Teacher: Mr. J. Baxter**

**Prerequisite Course:**None

**Description and Overall Expectations:** This course enables students to develop their skills in the processes of scientific investigation. They will acquire an understanding of scientific theories and conduct investigations related to sustainable ecosystems; atomic and molecular structures and the properties of elements and compounds; the study of the universe and its properties and components; and the principles of electricity.

**Scientific Investigation (inquiry & research) and Career Exploration:** demonstrate scientific investigation skills in the four areas of skills (initiating and planning, performing and recording, analysing and interpreting, and communicating); identify and describe careers and Canadian contributions related to this field of science.

**Biology: Sustainable Ecosystems:** assess the impact of human activities on the sustainability of terrestrial and/or aquatic ecosystems, and evaluate the effectiveness of courses of action intended to remedy or mitigate negative impacts; investigate factors related to human activity that affect terrestrial and aquatic ecosystems, and explain how they affect the sustainability of these ecosystems; demonstrate an understanding of the dynamic nature of ecosystems, particularly in terms of ecological balance and the impact of human activity on the sustainability of terrestrial and aquatic ecosystems.

**Chemistry: Atoms, Elements and Compounds:** assess social, environmental, and economic impacts of the use of common elements and compounds, referring to their physical and chemical properties; investigate, through inquiry, the physical and chemical properties of common elements and compounds; demonstrate an understanding of the properties of these, and of the organization of elements in the periodic table.

**Earth and Space Science: The Study of the Universe:** assess some of the costs, hazards, and benefits of space exploration and the contributions of Canadians to space research and technology; investigate the characteristics and properties of a variety of celestial objects visible from Earth in the night sky; demonstrate an understanding of the major scientific theories about the structure, formation, and evolution of the universe and its components and of the evidence that supports these theories.

**Physics: The Characteristics of Electricity:** assess the costs and benefits associated with the production of electrical energy from renewable and non-renewable sources, and analyse how electrical efficiencies and savings can be achieved, through the design of devices and practices in the home; investigate the properties of static and current electricity, and the quantitative relationships between potential difference, current, and resistance in electrical circuits; demonstrate an understanding of the principles of static and current electricity.

**Course Resources:** <https://www.mrbaxtersacredheart.com>

Expectations, due dates and digital copies of notes are posted daily on this site.

**Catholic Graduate Expectations:** Our goal for all students is to experience an education based on our Catholic Graduate Expectations.

We work in community to develop graduates that are:

- Discerning Believers Formed in the Catholic Faith Community
- Effective Communicators
- Reflective and Creative Thinkers
- Self-Directed, Responsible, Life-Long Learners
- Collaborative Contributors
- Caring Family Members
- Responsible Citizens

**Assessment, Evaluation and Reporting:** The primary purpose of assessment and evaluation is to improve student learning. Students will understand what is expected of them, using learning goals, and success criteria,

based on the overall expectations. Feedback (self, peer, teacher) supports learning, and plays a critical role in academic achievement and success.

The development of learning skills and work habits is a key indicator of future success. The following learning skills and work habits will be developed, assessed, and reported during this course:

1. Responsibility fulfills responsibilities and commitments (*e.g. accepts and acts on feedback*)
2. Organization manages time to complete tasks and achieve goals (*e.g. meets goals, on time*)
3. Independent work uses class time appropriately to complete tasks (*e.g. monitors own learning*)
4. Collaboration works with others, promotes critical thinking (*e.g. provides feedback to peers*)
5. Initiative demonstrates curiosity and an interest in learning (*e.g. sets high goals*)
6. Self-Regulation sets goals, monitors progress towards achieving goals (*e.g. sets, reflects goals*)

Group work supports collaboration, an important 21<sup>st</sup> century skill. This will be assessed only as a learning skill. Homework may also be assessed as a learning skill. Evaluation completed in class will be based only on individual student work. Regular attendance is important to support group work, various forms of feedback, and to allow students to demonstrate evidence of their learning. Students are responsible for providing evidence of their own learning (with references where required), in class, within given timelines. Next steps in response to academic integrity issues, such as lack of work completion, plagiarism, or other forms of cheating, range from providing alternate opportunities, to a deduction of marks.

The achievement chart identifies four levels, based on achievement of the overall expectations:

Level 1 achievement falls below the provincial standard (50-59%)

Level 2 achievement approaches the provincial standard (60-69%)

Level 3 achievement is at the provincial standard (70-79%)

Level 4 achievement surpasses the provincial standard (80-100%)

The report card grade will be based on evidence of student performance, including observations, conversations and student products. Consideration will be given to more recent evidence (skill development) and the most consistent level of achievement.

#### **Mark Breakdown:**

Term Work (70%) will include a variety of assessment tasks designed to demonstrate students' development in their knowledge and understanding, thinking and inquiry, communication and application, of all overall expectations.

Summative evaluation (30%) takes place towards the end of the semester, is completed in class, and provides the final opportunity for students to demonstrate what they know, and the skills they have learned, based on the overall expectations. In science 1D, the summative evaluation will consist of a rich summative assessment task (7.5% each) for each of the four units studied throughout the semester (7.5% each).

**Awarding of Course Credit:** Students who demonstrate evidence of achievement of overall expectations, **and** earn a mark of 50% or greater, will earn one credit for the course with the following exception:

Students who do not complete their summative evaluation (exam and/or end of year summative task) will not earn their credit regardless of their mark.

#### **Student and Parent/Guardian Acknowledgement**

We have read the above course outline and are aware of the student responsibilities to attend class on a regular basis, that all course information is found on [www.mrbaxtersacredheart.com](http://www.mrbaxtersacredheart.com) and to provide evidence of learning within the established timelines.

Student's Name (print): \_\_\_\_\_ Student's Signature: \_\_\_\_\_

Parent/Guardian Name (print): \_\_\_\_\_ Parent/Guardian Signature: \_\_\_\_\_