

UNIT OUTLINE

Year: 10

Semester 1 2021

Classroom Teacher: Roisin Boadle

Executive Teacher: Vicki Gwilliam

Course Title	Year 10 Science
Term 1	Chemistry
Term 2	Biology

Achievement Standards

On successful completion of this course, a student:

- Analyses how the periodic table organises elements and use it to make predictions about the properties of elements
- Explains how chemical reactions are used to produce particular products and how different factors influence the rate of reactions
- Evaluates the evidence for scientific theories that explain the origin of the universe and the diversity of life on Earth
- Explains the processes that underpin heredity and evolution
- Analyses how the models and theories used have developed over time and discusses the factors that prompted a review
- Develops questions and hypotheses and independently designs and improves appropriate methods of investigation, including field work and laboratory experimentation
- Evaluates the validity and reliability of claims made in secondary sources with reference to currently held scientific views, the quality of the methodology and the evidence cited
- Constructs evidence-based arguments and selects appropriate representations and text types to communicate science ideas for specific purposes

Content Summary

In Semester One, Science students will learn about Chemistry and Biology. During the Chemistry course, students will develop their understanding of atomic structure and apply this to explain patterns in the Periodic Table. They will investigate factors that affect the rate of chemical reactions and extend their understanding of chemical bonding and balanced chemical equations. In the Biology course, students will learn about DNA and genetics and how these impact on inherited traits. They will explore the development of the theory of evolution, including a critical evaluation of the evidence available. In addition to the scientific concepts, students will explore ethical issues surrounding the application of science such as the application of chemistry to sustainability, the advent of genetically modified organisms and the prospect of genetically engineered children. Throughout the semester, students will conduct experimental work with an emphasis upon creating testable questions and hypotheses, collecting and analysing data and communicating results using appropriate scientific language and representations.

Assessment

TASK	DUE DATE
Chemistry Test	Week 7, Term 1
Rates of Reaction Assignment	Week 9, Term 1
Designer Babies Assignment	Week 4, Term 2
Genetics Test	Week 5, Term 2
Evolution In-Class Inquiry	Week 8, Term 2

The assessment schedule may be changed at the teacher's discretion. Any changes will be communicated to the students. Due dates will only be put back, not brought forward. Students with ILPs may have the course content and/or assessment modified as appropriate.

Attendance and Participation

It is expected that students will attend and participate in all scheduled classes/contact time/structured learning activities for the units in which they are enrolled, unless there is due cause and adequate documentary evidence is provided. Students who miss class due to excursions or absence are required to negotiate with the class teacher to catch up all missed work.

Assignments and Homework

- Erindale College regards homework as an essential part of learning. Students are required to complete any unfinished classwork, set homework tasks, research, plan and complete assignments and study for tests.
- All assessment tasks are expected to be submitted by the specified due date, assignment drafts submitted for feedback should be sent to the teacher by the indicated date on each assignment brief.
- It is understood that illness and events beyond the student's control can impact on his/her ability to submit work on time. If a student requires an extension for an assignment, it should be negotiated with the teacher prior to the target date. The teacher also requires a note or phone call from the parent/carer to support the request.

Cheating and Dishonest Practice

The integrity of the College's assessment system relies upon all involved acting in accordance with the highest standards of honesty and fairness. Plagiarism is the copying, paraphrasing or summarising of work, in any form, without acknowledgement of sources, and presenting this as a student's own work. Examples of plagiarism could include, but are not limited to:

- submitting all or part of another person's work with/without that person's knowledge
- submitting all or part of a paper from a source text without proper acknowledgement
- copying part of another person's work from a source text, supplying proper documentation, but leaving out quotation marks
- submitting materials which paraphrase or summarise another person's work or ideas without appropriate documentation
- submitting a digital image, sound, design, photograph or animation, altered or unaltered, without proper acknowledgement of the source.

If plagiarism is detected in a student's work, they will be asked to resubmit the task.

A-E Grade Descriptors

A to E grades demonstrate the level to which the student has displayed the knowledge, skills and understandings indicated in the Australian Curriculum Achievement Standards for the year level.

- A - demonstrating excellent achievement of what is expected
- B - demonstrating high achievement of what is expected
- C - demonstrating satisfactory achievement of what is expected
- D - demonstrating partial achievement of what is expected
- E - demonstrating limited achievement of what is expected