



COURSE SYLLABUS

Middle School Science 1

GRADE LEVEL: 6

SCHOOL YEAR: 2024 – 2025

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COURSE DESCRIPTION

Grade 6 Science is an integrated science course that explores the scientific method through the study and experimentation of topics in Physical Science, Life Science and Earth & Space Science. Students will investigate and draw conclusions from learning activities that are designed to foster critical thinking and inquiry.

The teaching session consists of 5 periods (45 minutes) per week, running from August 2019 till May 2020. The nature of the subject relates to explanation, comprehension, comparison, analysis and application of the learned knowledge

The science curriculum at DIS is informed by the **SLOs - The D'Torch:**

Dominicans Are:

Truthful

- We are guided by the Gospel and universal values.
- We center our lives on God's teachings.
- We show respect to all.

Organized

- We set goals and pursue them to fruition
- We maintain a balance between a healthy body, mind and spirit.
- We engage responsibly with the world, through a variety of resources.

Reflective

- We reflect upon our strengths and weaknesses.
- We aim to respond, rather than to react.
- We determine patterns, make connections, and think critically.

Courageous

- We are open and responsive to new and diverse perspectives.
- We are willing to take risks and graciously accept results.
- We communicate effectively.

Helpful

- We evaluate all decisions in the light of the common good.
- We are compassionate and caring.
- We respect and care for the environment.

COURSE OBJECTIVES

Middle School Physical Sciences

Students in middle school continue to develop understanding of four core ideas in the physical science. The middle school performance expectations in the Physical Sciences build on the K-5 ideas and capabilities to allow learners to explain phenomena central to the physical sciences but also to the life sciences and earth and space science. The performance expectations in physical science blend the core ideas with scientific and engineering practices and crosscutting concepts to support students in developing useable knowledge to explain real world phenomena in the physical, biological, and earth and space sciences. In the physical sciences, performance expectations at the middle school level focus on students developing understanding of several scientific practices. These include developing and using models, planning and conducting investigations, analyzing and interpreting data, using mathematical and computational thinking, and constructing explanations; and to use these practices to demonstrate understanding of the core ideas. Students are also expected to demonstrate understanding of several of engineering practices including design and evaluation.

Middle School Life Sciences

Students in middle school develop understanding of key concepts to help them make sense of the life science. These ideas build upon students' science understanding from earlier grades and from the disciplinary core ideas, science and engineering practices, and crosscutting concepts of other experiences with physical and earth sciences.

There are five life science topics in middle school:

- 1) Structure, Function, and Information Processing,
- 2) Growth, Development, and Reproduction of Organisms,
- 3) Matter and Energy in Organisms and Ecosystems,
- 4) Interdependent Relationships in Ecosystems, and
- 5) Natural Selection and Adaptations.

The performance expectations in middle school blend core ideas with scientific and engineering practices and crosscutting concepts to support students in developing useable knowledge across the science disciplines. While the performance expectations in middle school life science couple particular practices with specific disciplinary core ideas, instructional decisions should include use of many science and engineering practices integrated in the performance expectations. The concepts and practices in the performance expectations are based on the grade-band endpoints described in A Framework for K-12 Science Education (NRC, 2012).

Middle School Earth and Space Sciences (ESS)

Students in middle school develop understanding of a wide range of topics in Earth and space science that build upon science concepts from elementary school through more advanced content, practice, and crosscutting themes. There are six ESS standard topics in middle school: Space Systems, History of Earth, Earth's Interior Systems, Earth's Surface Systems, Weather and Climate, and Human Impacts. The content of the performance expectations is based on current community-based geoscience literacy efforts such as the Earth Science Literacy Principles (Wysession et al., 2012), and is presented with a greater emphasis on an Earth Systems Science approach. The performance expectations strongly reflect the many societally relevant aspects of ESS (resources, hazards, environmental impacts) as well as related connections to engineering and technology.

PRIMARY TEXTBOOK & OTHER RESOURCES

- Inspire Science. Biggs, A. L. et. al. 2020 STEM Learning Solutions McGraw Hill Education, Copyright 2020. ISBN 978-0-07-687530-6
- Students also have an online version of the textbook
- Internet for added information/research
- Notepaper, writing utensils (including different coloured pens & colour pencils) and a **binder** with plastic sleeves for storing **ALL** notes, assignments, etc.

ASSESSMENT

Homework and classwork are graded based on the level of completion and submission dates. Students are responsible for checking an assignment's due date, which will be posted on Google Classroom. Students are expected to submit work by the due date, during class time, even if the teacher has not given a verbal reminder. Any late work suffers a **10%** deduction after 1 day, and a maximum score of **60%** thereafter.

Students also have to go to Project I to complete the assignment. Students who are absent are responsible for keeping up with the class by doing the work assigned, and submitting homework due on their return to school.

Tests and Quarterly Exams are announced in advance. Pop Quizzes are unannounced and can be given at any time during the class, so students must come to class prepared. Students who miss a scheduled Test or Quarterly Exam must make up the test/exam ASAP on their return to school. The student must bring a medical certificate or proof of an emergency on the day he/she returns to school. **FAILURE TO DO SO WILL RESULT IN A ZERO BEING GIVEN FOR THE TEST/EXAM**. If the student does not make up the test/exam at the earliest, a maximum score of **60%** will be given. If a student is absent for more than one test/exam, additional penalties will be given.

Grades will be computed following the school wide policy of **30%** Classwork, Homework and Projects, **30%** Tests, **30%** Quarter Exam and **10%** Department. **All** work done by the students will be graded and used for formative or summative assessment. A variety of assessment tools will be used to evaluate performance.

Academic Dishonesty means employing a method or technique or engaging in conduct in an academic endeavor that contravenes the standards of ethical integrity expected at DIS. Academic dishonesty includes but is not limited to, the following:

1. Purposely incorporating the ideas, words of sentences, paragraphs, or parts thereof without appropriate acknowledgment and representing the product as one's own work; and
2. Representing another's intellectual work such as photographs, paintings, drawings, sculpture, or research or the like as one's own, including failure to attribute content to an AI.
3. Employing a tutor, making use of Artificial Intelligence without acknowledgement, getting a parent to write a paper or do an assignment, paying for an essay to be written by someone else and presented as the student's own work.
4. Committing any act that a reasonable person would conclude, when informed of the evidence, to be a dishonest means of obtaining or attempting to obtain credit for academic work.

Any act of academic dishonesty will result in an automatic zero on the entire assignment

ADDITIONAL INFORMATION

Please see **Google Classroom** for more information. Class codes: Gr. 6 St. Hyacinth – **6icq5dw**

Gr. 6 Bl. Ceslao – **63ch5lq**

GR. 6 SCIENCE 1 2024-2025
1st QUARTER – TENTATIVE COURSE CONTENT

(NB: Depending on time and interest, the teacher may delete and/or add other selections.)

Week / Date	Topic / Projects / Assessments
Week 1 Aug 12th to 16th 4 Days of Class 12 ~ First Day/Orientation Day 15 ~ Opening Mass & Assumption of Our Lady 8:00 15 ~ Induction of Officers	Thursday – Orientation Introduction to course and textbook Unit 1 – Life Structure & Function Module 1 – Cells & Life
Week 2 Aug 19th to 23rd	Unit 1 – Life Structure & Function Module 1 – Cells & Life <u>Lesson 1</u> : Exploring Life
Week 3 Aug 26th to 30th 26 ~ Fire drill? 26 ~ MS & HS Catholic Bridge Program (after assembly) 28 ~ St. Dominic Feast Day	Unit 1 – Life Structure & Function Module 1 – Cells & Life <u>Lesson 1</u> : Exploring Life <u>Lesson 2</u> : Cell Structure & Function
Week 4 Sept 2nd to 6th 2 ~ House Ceremony	Unit 1 – Life Structure & Function Module 1 – Cells & Life Module Project
Week 5 Sept 9th to 13th 9 ~ Mass & Mother Mary Birthday & VIP Induction	Unit 1 – Life Structure & Function Module 2 – Body Systems <u>Lesson 1</u> : Levels of Organization
Week 6 Sept 16th to 20th 1 Day of Class 17 ~ Moon Festival 18-20 ~ Teachers' Conference	Unit 1 – Life Structure & Function Module 2 – Body Systems <u>Lesson 2</u> : Structure & Support
Week 7 Sept 23rd to 27th 24-26 ~ Pre-Exam Days	Unit 1 – Life Structure & Function Module 2 – Body Systems <u>Lesson 3</u> : Obtaining Energy & Removing Waste
Week 8 Sep 30th to Oct 4th	Unit 1 – Life Structure & Function Module 2 – Body Systems <u>Lesson 4</u> : Moving Materials
Week 9 Oct 7th to 11th 1 Day of Class 7 ~ Launch of Rosary Month & Bullying Prevention Day 8-9 ~ Q1 Exams 10 ~ Double Ten Day 11 ~ Record Day	Q1 Exam Review Q1 EXAMS

2nd QUARTER – TENTATIVE COURSE CONTENT

(NB: Depending on time and interest, the teacher may delete and/or add other selections.)

Week / Date	Topic / Projects / Assessments
Week 1 (10) Oct 14th to 18th 14 ~ Second Quarter Begins	Unit 1 – Life Structure & Function Module 2 – Body Systems Lesson 5: Control & Information Processing
Week 2 (11) Oct 21st to 25th 25 ~ Book Fair 25 ~ Masquerade Night	Unit 1 – Life Structure & Function Module 2 – Body Systems Module Project
Week 3 (12) Oct 28th to Nov 1st 1 ~ All Saint's Day Mass	Unit 2 – Reproduction of Organisms Module – Reproduction of Organisms Lesson 1: Inheritance
Week 4 (13) Nov 4th to Nov 8th	Unit 2 – Reproduction of Organisms Module – Reproduction of Organisms Lesson 2: Types of Reproduction
Week 5 (14) Nov 11th to 15th	Unit 2 – Reproduction of Organisms Module – Reproduction of Organisms Lesson 3: Reproduction & Growth of Animals
Week 6 (15) Nov 18th to 22nd 22 ~ Gr.12 Q2 Exam 22 ~ YSC Contest	Unit 2 – Reproduction of Organisms Module – Reproduction of Organisms Lesson 3: Reproduction & Growth of Animals
Week 7 (16) Nov 25th to 29th 25 ~ Gr.12 Q2 Exam 26-28 ~ Pre-Exam Days	Unit 2 – Reproduction of Organisms Module – Reproduction of Organisms Lesson 4: Reproduction & Growth of Plants
Week 8 (17) Dec 2nd to Dec 6th 6 ~ Foundation Day Celebration (Half Day)	Unit 2 – Reproduction of Organisms Module – Reproduction of Organisms Module Project
Week 9 (18) Dec 9th to 13th 3 Days of Class 12-13 ~ Q2 Exams	Q2 Exam Review Q2 EXAMS
Dec 16th to Jan 3rd	Christmas Break