



Course Descriptors  
2018 - 2019  
Semester 2

Biology  
Mathayom 4



## EIP Mathayom Biology Course Description First Year

Subject: Core Biology  
Grade: Mathayom 4  
Periods: 4

Department: Science  
Course Code: SC31141  
Credit: 1.5

### Course Material:

Modern Biology, *Holt, Rinehart and Winston*

### Course Description:

The second semester will continue to lay roots in the foundation of biological themes. Students will explore cellular reproduction, the basics of genetics as well as DNA and genetic expression. A unit on the basic understanding of plant tissues, nutrition and transport, as well as plant reproduction and development will be included. By doing course labs, projects and assignments, the learners will gain a deeper understanding of the topics studied. Students will also be introduced to the topic of Ecology in order to provide a deeper understanding of how all life is interrelated.

### Course Objectives:

1. Understand how cells reproduce in order to maintain healthy organ systems.
2. Explore genetics and investigate what connects each organism as well as makes them unique.
3. Understand the biological structures and processes of plant life.
4. Connect all living things in the world to its non-living components as well.



EIP Mathayom Course Outline  
Second Semester

**Unit 2**

*Chapter 8 – Cell reproduction*

- Chromosomes p 151
- Cell division p 154
- Meiosis p 161

**Unit 3**

*Chapter 9 – Fundamentals of Genetics*

- Mendel's Legacy p 173
- Genetic Crosses p 180
- Genetic Disorders

**Unit 5**

*Chapter 22 – Humans and the Environment*

- An Interconnected Planet p 435
- Environmental Issues p 440
- Environmental Solutions p 446

*Chapter 29 – Plant Structure and Functions*

- Plant Cells and Tissues p 583
- Roots p 587
- Stems p 592
- Leaves p 599

*Chapter 21 – Ecosystems*

- Terrestrial Biomes p 417
- Aquatic Ecosystems p 423

*Chapter 19 – Populations*

- Understanding Populations p 381
- Measuring Populations p 385
- Human Population Growth p 390



EIP Mathayom Evaluation and Grading  
Second Semester

**Breakdown of Grades**

Criteria	3 <sup>rd</sup> quarter	4 <sup>th</sup> quarter	Total
Homework	5%	5%	10%
Participation	5%	5%	10%
Behavior	5%	5%	10%
Labs/Group Work	5%	5%	10%
Tests/Quizzes	20%	20%	40%
Final Examination		20%	20%
Total	40%	60%	100%