Ms.Louidor

Life Science Syllabus 2021-2022

Course Description

The Life Science course invites students to investigate the world of living things—at levels both large and small—by reading, observing, and experimenting with aspects of life on Earth.
Students explore an amazing variety of organisms, the complex workings of the cell and cell biology, the relationship between living things and their environments, and discoveries in the world of modern genetics.

1st Grading Period

- **Unit 1: Nature of science Benchmarks**
  - Scientific Knowledge
  - The scientific method
  - Types of Graphs
  - Benefits and Limitations of Models
  - Understand, Plan, & Execute Scientific Investigations
  - Replication versus Repetition
  - Distinguish types of investigations
  - Identify test variables Representing Data
  - Difference between Theories and Laws
  - SI Units & Measurements
  - Science Fair
- **Unit 2: The cell**
  - The characteristics of cells
  - Chemistry of Life
  - Cell structure & Function
  - Cellular Processes for Homeostasis
  - Plant and Animal Cell Structure and Function of Major Organelles
  - Levels of organizations
  - Classification of Living Things

2nd Grading Period

- **Unit 3: Human Body systems**
    - Introduction to Body Systems (Digestive, Respiratory, circulatory,reproductive, excretory, nervous, musculoskeletal), Functions of Body Systems, Body Systems and Homeostasis.
- **Unit 4: Immunity, Disease, & Disorders**
    - The immune system & Infectious Disease.
- **Unit 5 : Life Over Time**
    - Natural Selection, Evolution

3rd Grading Period

- **Unit 6& 7: Genetics**
    - DNA Structure and Function
    - Heredity, Mendelian Genetics, Punnett Squares
    - Sexual and Asexual Reproduction, Mitosis and Meiosis
    - Impact of Biotechnology
- **Unit 8: Ecology**
    - Introduction to Ecology, Levels of Organization
    - Role and relationships in ecosystem, producers, consumers, decomposers, energy transfer in a food web
    - Organism Relationships in an ecosystem, mutualism, predation, parasitism, competition, commensalism
    - Limiting Factors in an ecosystem, Impact on organism populations

4th Grading Period

- **Unit 9: Cycling of Matter & Energy**
    - Photosynthesis and Cellular Respiration
    - Model carbon cycle, matter and energy transfer between organisms and the environment
    - Conservation of mass and energy in living systems
    - Science Activities (8th grade Preview)
- Assessments
    - There will be 2-3 Exams and 3-4 quizzes per grading period.

    - Grading Scale:
        - 90-100% = A
        - 80-89% = B
        - 70-79% = C
        - 60-69% = D
        - Below 60% = F
    - Grading weights
        - Exams 40%
        - Quizzes/Projects 30%
        - Classwork 20%
        - Homework 10%
- **Homework**: Students should write down homework daily in their agendas, as it is assigned by the teacher. Students also should check Archie (sis.archimedean.org) daily.
- **Absences:** Students are responsible for all material and work missed when absent. It is the student's responsibility to seek this information.
    - 1. Check Archie for any homework posted even on days absent
    - 2. Email the teacher as soon as possible for any missed material or assignments.
    - 3. Ask classmates for class notes from days absent.
    - 4. Speak with the teacher during homeroom or lunch to clarify any missed items.
- Students will only be given work for excused absences only.
- **Late Assignments**
    - One letter grade lower if turned in the class after it was due.
    - Zero if turned in two or more classes late.
    - After three zeros in a grading period, students may be held for lunch detention until all missing work is completed. Continuously missing homework assignments will result in a referral to administration.
- **Required Materials**
    - Composition notebook
    - Science folder (*not shared with other classes)
    - Color pencils, highlighter, markers, glue stick, #2 pencils, pens, and scissors.
    - HMH Book