



Grade 7/8 Science

Course Code: 0120

Credit Value: none

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Prerequisites: none, although successful completion of K-6 science courses are strongly encouraged.

Required Materials and Recommended Resources:

Required: binder, pencils, eraser, lined paper

Textbook: *Discovering Science 8* (Botneck et. Al.; McGraw-Hill Ryerson Ltd., 2009)

Other resources to be used as supplementary material

Course Description and Purpose

The purpose of this course is to encourage students to discover and learn more about science, technology, society, and the environment and provide an avenue to build skills, knowledge and a positive attitude toward scientific concepts. More specific goals are listed below. With all science courses, there are main topics that are broadly stated, and then focus on specific units. This year, students will be building their skills by looking at the units of Cells & Systems, Optics, Fluids, and Water Systems.

Goals of Course

The main goals of science education are to

- encourage students at all grades to develop a critical sense of wonder and curiosity about scientific and technological endeavors
- enable students to use science and technology to acquire new knowledge and solve problems, so that they may improve the quality of their own lives and the lives of others
- prepare students to critically address science-related societal, economic, ethical, and environmental issues
- provide students with a proficiency in science that creates opportunities for them to pursue progressively higher levels of study, prepares them for science-related occupations, and engages them in science-related hobbies appropriate to their interests and abilities
- develop in students of varying aptitudes and interests a knowledge of the wide variety of careers related to science, technology, and the environment

Summary of Main Topics

Development of scientific literacy is supported by instructional environments that engage students in the following processes:

- **scientific inquiry:** students address questions about natural phenomena, involving broad explorations as well as focused investigations
- **technological problem solving (design process):** students seek answers to practical problems requiring the application of their science knowledge in various ways
- **decision making:** students identify issues and pursue science knowledge that will inform the issues



Schedule *Note that Social Studies Units will alternate with Science Units	Topics covered
September	
Social Studies Unit 1: Understanding Societies Past and Present	<ul style="list-style-type: none">• What is a World View?• Origins of Human Societies• Societies and Civilizations• Knowing the Past
Science Unit 1: Cells and Systems	<ul style="list-style-type: none">• Cell Theory, Characteristics of Living Things
October	
Science Unit 1: Cells and Systems	<ul style="list-style-type: none">• Cell structure and activity• Specialization and structure in the human body• Heart structure and function of blood• Body systems overview• Primary and secondary defenses• Disorders and diseases relating to unit material• Microscope use
Social Studies Unit 2: Early Societies of Mesopotamia, Egypt, or the Indus Valley (focus on Egypt)	<ul style="list-style-type: none">• Overview of Early Civilizations• Interaction with the Natural Environment
November	
Social Studies Unit 2: Early Societies of Mesopotamia, Egypt, or the Indus Valley (focus on Egypt)	<ul style="list-style-type: none">• Interaction with the Natural Environment• Living in an Early Society• Communication and Art in Early Society
Science Unit 2: Optics	<ul style="list-style-type: none">• Sources of light; light as energy
December	
Science Unit 2: Optics	<ul style="list-style-type: none">• Colour theory and colour detection• Electromagnetic radiation• Reflection and refraction• Light, mirrors, and lenses• The human eye
January	
Social Studies Unit 3: Ancient Societies of Greece and Rome	<ul style="list-style-type: none">• Overview of Antiquity• Culture of Ancient Greece• Democracy in Ancient Greece• Roman Empire• Legacy of Ancient Greece and Rome
February	
Science Unit 3: Fluids	<ul style="list-style-type: none">• Fluids vs. non-fluids• Viscosity and flow rate• Density, effects of density• Pressure, volume, temperature and fluids• Hydraulic and pneumatic systems
March	
Social Studies Unit 4: Transition to the Modern World	<ul style="list-style-type: none">• Overview of the Middle Ages• Life in Medieval Europe• The Rise of Islam and the Ottoman Empire• China and the Mongol Empire



	<ul style="list-style-type: none"> • Legacy of the Middle Ages
April	
Science Unit 4: Water Systems	<ul style="list-style-type: none"> • Properties of water, including heat capacity • Ocean currents • Global water cycle • North American drainage system • Erosion and deposition • Tides • Flooding • Safe drinking water, water treatment, waste water disposal • Water pollution and water management
May	
Social Studies Unit 5: Shaping the Modern World	<ul style="list-style-type: none"> • World Overview (1400 – 1850) • Global Exploration • Renaissance and Reformation • Industrial Revolution
June	
Social Studies Unit 5: Shaping the Modern World	<ul style="list-style-type: none"> • World Overview (1400 – 1850) • Global Exploration • Renaissance and Reformation • Industrial Revolution
End of Course Activities	

Assessment

Student Evaluation

Formative Assessments:

- Entrance/exit slips
- Participation in class

Summative Assessments:

- Written Assignments
- Tests/Quizzes
- Projects/Posters
- Experiments/labs (Subject to health guidelines)

Breakdown of Marks

Coursework (tests & assignments): 100%

Marks will be given based on rubrics or a set marking scheme and demonstrated knowledge. Marking will vary from assignment to assignment, but will be communicated to students before they begin their work. Rubrics and set marking schemes that require key words or specific information will be the two commonly used marking schemes.

Guidelines

Homework Policy

Homework may be assigned if/when:

- Students are not able to complete their assignments during class.
- Students are absent.

Plagiarism

- If a student plagiarizes work, they will receive a mark of zero until the assignment can be redone under supervision
- Any plagiarism will result in a serious conversation with the student, the classroom teachers, the parents/guardians, and possibly administration. For more than one offense, administration will be involved.

**Incomplete Work**

- Following the deadline of any assignment, the student's mark will be recorded as a zero. Upon completion of the assignment, it will be graded and recorded. At reporting periods, a final deadline will be given for the evaluations to take effect on the report card for that reporting period.

Extra Help

- If students need extra help, your teachers are available at lunch hour. Appointments can also be made for the morning or afterschool.

Classroom Expectations

- Attendance and Absence
 - Students are expected to attend class regularly.
 - Students who arrive in class 5 minutes after the start of class or later will be marked as LATE
 - Students who arrive with 15 minutes or less left in class will be marked as absent
 - Students who are absent for class are responsible for gathering missed work and asking questions. Notes for missed work will be available on Microsoft Teams or in paper format (paper format will only be available to borrow, supervised at lunch time).
- All members of the classroom community are expected to be polite and respectful to all staff, students, and property in the classroom.
- **Use of Personal Devices**
 - Devices and accessories must be turned off and put out of sight during teacher instruction.
 - Students may listen to music during independent work time on Fridays, with teacher permission. If there is any other reason that a student must use their device, permission must always be given prior to its use. Parents/guardians are welcome to contact the office as needed.
 - If students cannot comply with the technology expectations, their device will be placed in a safe location until the end of class.
 - If necessary, the student will be asked to leave their device in their locker.

NOTE: All notes and assignments will be posted on Microsoft Teams, an app which students can access with their email and school computer login.