

Grade 7 - Science

Unit 1 - Atomic Theories, Atoms and Elements

Start: August

Duration: 8 weeks

LEARNING EXPERIENCES:

Exploring the development of the atomic model theories and the periodic table of elements, students will appreciate Science as 'work in progress', each cornerstone the result of many scientists building on each other's work. Reflecting on the impacts of using a chosen element, students will cultivate their research and information literacy skills.

KEY CONCEPT:

Systems

RELATED CONCEPTS:

Models, Patterns

STATEMENT OF INQUIRY

Scientific innovation has allowed the development of **models** and **systems** to understand the **patterns** and properties of matter.

INQUIRY QUESTIONS:

Factual:

What is the structure of the atom?
What are the patterns of properties in the periodic table?

Conceptual:

How have theories of the atom changed over time?

Debatable:

Elements occur naturally all around us. To what extent are elements safe to use?

OBJECTIVES AND ASSESSMENT CRITERIA:

Criterion A: Knowing and understanding

Students will:

- i. describe scientific knowledge.
- ii. apply scientific knowledge and understanding to solve problems set in familiar and unfamiliar situations.
- iii. analyse information to make scientifically supported judgments.

Criterion D: Reflecting on the impacts of science

Students will:

- i. explain the ways in which science is applied and used to address a specific problem or issue.
- ii. discuss and evaluate the various implications of the use of science and its application in solving a specific problem or issue.
- iii. apply scientific language effectively.
- iv. document the work of others and sources of information used.

ATLs

Communication, Research, Thinking

RESOURCES:

MS Teams/ Laptops / Notebooks / Worksheets / Simulations / Videos

SUMMATIVE ASSESSMENTS:

Assignment #1

"Uses of an Element" - a Research Essay (criterion D)

Assignment #2

End of Unit Test (criterion A)