Chemistry - Atoms & the Periodic Table

Time Frame: 15 days	Unit Title: Atoms & the Periodic Table	Course Name: Chemistry

Stage 1: Desired Results

Established Goal(s)

NGSS Standards Addressed:

HS-PS1-1 Use the periodic table as a model to predict the relative properties of elements based on the patterns of electrons in the outermost energy level of atoms.

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Transferable Skills

Students will be able to independently use their learning to...

Determine trends based on data.

Meaning

Understandings

Students will understand that...

- ★ The relationships between neutrons, electrons, and protons.
- ★ Average atomic mass can be predicted from isotopic data.
- ★ Electrons are organized around the nucleus.
- ★ Emission data can identify elements.
- ★ Periodic Table can be used to determine the structure of an element.
- ★ Periodicity of the Periodic Table allows you to predict properties

Essential Questions

- ★ How do scientists know the elements that make up stars and planets?
- ★ How do scientists know properties of elements that are yet to be discovered?

Acquisition

Students will know...

- ★ The structure of an atom
- ★ How to read the Periodic Table
- ★ Patterns in the Periodic Table
- ★ Arrangement of electrons in an atom

Students will be able to...

- ★ Analyzing the emission spectrum of an atom
- ★ Predict properties of an atom
- ★ Determine the electron configurations for an atom