

Flex Science Curriculum & Assessment

Balance Year

Year Long Organizer & Final Summative Project:

Creating a Habitat on Mars for Humans applying everything learned from the year

ASTRONOMY

- The formation of the universe can be explained by the big bang theory.
 - Components of the universe over time
 - Astronomical data & collection methods (expedition to space simulation)

CHEMISTRY

- The electron arrangement of atoms impacts their chemical nature
 - Creation of Elements & Atomic Structure
 - Elements & Compounds (periodic table)
 - Ionic & Covalent Naming
- Energy change is required as atoms rearrange in chemical processes.
 - Chemical Reactions... Chemistry of LIFE & GARDEN
 - Photosynthesis/Respiration

BIOLOGY

- The biosphere, geosphere, hydrosphere, and atmosphere are interconnected, as matter cycles and energy flows through them
 - Nutrient Cycles
 - Earth's Spheres
 - Trophic Levels & Food Chains/Webs

PHYSICS

- Energy is conserved, and its transformation can affect living things and the environment.
 - Energy types, Potential/Kinetic & Transformations
 - Sources of Energy (non-renewable/renewable; solar, wind, nuclear, geothermal...)
 - Radiation

Assessment is based on evidence of learning from:

- completion of assignments in conjunction with lessons (quality of learning developed over time)
[formative feedback 1-2-3 with comments or Check]
- Snapshot Quizzes on Learning & development over time (check for present level of understanding and what needs more work)
[formative feedback as percent]
- Communication of understanding the BIG IDEAS for each unit (written, verbally/interviews...)
[summative feedback as percent and interview communication]
- Final Summative Project applying what was learned throughout the year
[summative feedback as percent and interview communication]

Connecting between the years... Evolution of a Planet to Evolution of Living Species

Braiding Western Scientific Method with Indigenous Place-Based Learning

-Personal Science Project/Experiment Demo

Change Year

Year Long Organizer & Final Summative Project:

Human Discovery through time—Timeline & Discovery Magazine applying everything learned from the year.

BIOLOGY

- Evolution Planet/Living things
 - Discovery
 - Mechanism
 - Evidence
- Cells are derived from cells
 - Cell structure & Function Review
 - Cell Division (Mitosis/Meiosis)
- DNA is the basis for the diversity of living things (Genetics)
 - Reproduction (Asexual/Sexual)
 - Genome & Gene Expression
 - DNA & Inheritance
 - Variation
 - Evolution

CHEMISTRY

- The electron arrangement of atoms impacts their chemical nature
 - Atomic Theory Discovery (models of the atom)
 - Elements & Compounds (periodic table)
 - Ionic & Covalent Naming
- Energy change is required as atoms rearrange in chemical processes.
 - Chemical Reactions... Chemistry of FOOD
 - Acids & Bases

PHYSICS

- Electric current is the flow of electric charge
 - Discovery/history
 - Current Electricity (Current, Voltage, Resistance)
 - Ohm's Law
 - Circuits (Series, Parallel, Combined)
 - Application with ROBOTICS (future discovery)

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[formative feedback 1-2-3 with comments or Check]
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[formative feedback as percent]
- Communication of understanding the BIG IDEAS for each unit (written, verbally/interviews...)
[summative feedback as percent and interview communication]
- Final Summative Project applying what was learned throughout the year
[summative feedback as percent and interview communication]