



# The Correlation of PLATO® Curricula to West Virginia Content Standards and Objectives

## Science

November 4, 2008

### Introduction

PLATO Learning Inc. combines PLATO computer-assisted instruction into a flexible integrated learning system to enhance instructional effectiveness in education programs. This document identifies PLATO instructional activities that correlate to the West Virginia Content Standards and Objectives, Science. URL: <http://wvde.state.wv.us/csos/>.

It is recommended that instructors review the correlation in order to fine-tune the activity to fit their educational environment. Modules may be added or removed; Web sites and offline activities may also be incorporated to enhance the learning path.

The following PLATO courseware was used in this correlation report:

- Applied Physical Science: Technology Fundamentals**
- Discovery Channel Middle School Science**
- PLATO® Earth and Space Science**
- PLATO® Life Science**
- PLATO® Physical Science**
- PLATO® Projects for the Real World, Level F -- Climbing Mt. McKinley**
- PLATO® Projects for the Real World, Level F -- Designing a Museum**
- PLATO® Projects for the Real World, Level F -- Food Bank**
- PLATO® Projects for the Real World, Level F -- School Proposal**
- PLATO® Projects for the Real World, Level G -- Make TV Work for You**
- PLATO® Projects for the Real World, Level G -- Olympic Games**
- PLATO® Projects for the Real World, Level G -- Volunteering**
- PLATO® Projects for the Real World, Level G -- Yellowstone Connection**
- PLATO® Projects for the Real World, Level H -- All Kinds of Families**
- PLATO® Projects for the Real World, Level H -- Consumer Guide**
- PLATO® Projects for the Real World, Level H -- Maya Mystery**
- PLATO® Projects for the Real World, Level H -- Medical Mixup**
- PLATO® Projects for the Real World, Level I -- Earning Money**
- PLATO® Projects for the Real World, Level I -- Making a Video**
- PLATO® Projects for the Real World, Level I -- Space Center**
- PLATO® Projects for the Real World, Level I -- Trouble in Camelot**

**PLATO Learning, Inc. looks forward to supporting your initiatives in providing successful educational programs using PLATO® computer-based lessons.**

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## Grade 06

### Standard I: Nature of Science

**SC.O.6.1.01 realize that scientists formulate and test their explanations of nature using observation and experiments.**

PLATO Modules are not available for this learning expectation.

**SC.O.6.1.02 recognize scientific knowledge is subject to modification as new scientific information challenges current explanations.**

PLATO Modules are not available for this learning expectation.

**SC.O.6.1.03 examine the careers and contributions of men and women of diverse cultures to the development of science.**

PLATO Modules are not available for this learning expectation.

**SC.O.6.1.04 compare and contrast the historical significance of scientific discoveries.**

PLATO Modules are not available for this learning expectation.

**SC.O.6.1.05 cooperate and collaborate to ask questions, design and conduct investigations to find answers and solve problems.**

PLATO Modules are not available for this learning expectation.

**SC.O.6.1.06 formulate conclusions through close observations, logical reasoning, objectivity, perseverance and integrity in data collection.**

Discovery Channel Middle School Science  
Life Science Series  
Mammals

PLATO® Projects for the Real World, Level I -- Space Center  
Form an Opinion  
1. Read the Mail  
2. Check the Facts

**SC.O.6.1.07 apply skepticism, careful methods, logical reasoning and creativity in investigating the observable universe.**

PLATO Modules are not available for this learning expectation.

**SC.O.6.1.08 use a variety of technologies and scientific instruments to conduct explorations, investigations and experiments of the natural world.**

Discovery Channel Middle School Science  
Life Science Series  
Bacteria



**PLATO® Projects for the Real World, Level F -- Climbing Mt. McKinley**  
**Clothing**  
**2. The Right Question**

**PLATO® Physical Science**  
**Forces and Motion**  
**Motion**

**SC.O.6.1.09 demonstrate safe techniques for handling, manipulating and caring for science materials, equipment, natural specimens and living organisms.**

**PLATO® Physical Science**  
**Chemistry Fundamentals**  
**Mixtures and Solutions**

**SC.O.6.1.10 utilize experimentation to demonstrate scientific processes and thinking skills (e.g., formulating questions, predicting, forming hypotheses, quantifying, or identifying dependent and independent variables).**

**PLATO Modules are not available for this learning expectation.**

**SC.O.6.1.11 construct and use charts, graphs and tables to organize, display, interpret, analyze and explain data.**

**PLATO® Projects for the Real World, Level F -- Food Bank**  
**Food Flow**  
**1. Naming and Grouping**  
**2. Flowcharts**

**Disaster Plan**  
**1. What Could Happen?**

**PLATO® Projects for the Real World, Level F -- Climbing Mt. McKinley**  
**The Weathermaker**  
**2. Wind Speed**

**PLATO® Projects for the Real World, Level G -- Yellowstone Connection**  
**Blue Dot Disease**  
**1. Blue Dot Basics**  
**2. Updating the Park Map**

**PLATO® Projects for the Real World, Level H -- Medical Mixup**  
**Easy Test to Pass**  
**1. Drug Detection Methods**

**PLATO® Projects for the Real World, Level H -- Maya Mystery**  
**Books of Stone**  
**3. Tables and Kings**

**What's in a Bone?**  
**1. Graph and Compare**



**PLATO® Projects for the Real World, Level I -- Space Center**  
**Form an Opinion**  
**2. Check the Facts**

**PLATO® Physical Science**  
**Energy and Its Applications**  
**Properties and Sources of Energy**

**SC.O.6.1.12 use inferential reasoning to make logical conclusions from collected data.**

**Discovery Channel Middle School Science**  
**Life Science Series**  
**Mammals**

**PLATO® Projects for the Real World, Level I -- Space Center**  
**Form an Opinion**  
**1. Read the Mail**  
**2. Check the Facts**

## **Standard 2: Content of Science**

**SC.O.6.2.01 demonstrate the interrelationships among physics, chemistry, biology, earth and environmental science, and astronomy.**

**Discovery Channel Middle School Science**  
**Earth Science Series**  
**Mapping the Earth**

**SC.O.6.2.02 use pictures to show cyclical processes in nature (e.g., nitrogen cycle, carbon cycle, or water cycle).**

**PLATO® Life Science**  
**Organisms and Their Environment**  
**Flow of Energy and Matter in Nature**

**SC.O.6.2.03 classify living organisms according to their structure and functions.**

**PLATO® Life Science**  
**Change Over Time**  
**Evolution and Natural Selection**

**SC.O.6.2.04 compare the similarities of internal features of organisms, which can be used to infer relatedness.**

**Discovery Channel Middle School Science**  
**Life Science Series**  
**Invertebrates**  
**Insects**  
**Evolution**

**PLATO® Life Science**  
**Classification and Diversity of Life**  
**The Animal Kingdom**  
**Exploring Vertebrates**

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**Change Over Time  
Evolution and Natural Selection**

**SC.O.6.2.05 examine how abiotic and biotic factors affect the interdependence among organisms.**

**PLATO® Life Science  
Organisms and Their Environment  
Living With the Environment**

**SC.O.6.2.06 construct models of plant and animal cells and compare the basic parts (e.g., cytoplasm, cell wall, cell membrane, nucleus, or chloroplasts).**

**PLATO® Life Science  
Classification and Diversity of Life  
The Animal Kingdom**

**SC.O.6.2.07 compare growth cycles in different plants (e.g., mosses, ferns, perennials, biennials, woody plants, or herbaceous plants).**

**PLATO® Life Science  
Cells: The Basis of Life  
Differences and Specialization in Cells**

**Classification and Diversity of Life  
Exploring Vertebrates**

**Human Health and Reproduction  
Human Reproduction and Development**

**SC.O.6.2.08 predict changes in populations of organisms due to limiting environmental factors (e.g., food supply, predators, disease, or habitat).**

**PLATO® Life Science  
Organisms and Their Environment  
Living With the Environment**

**SC.O.6.2.09 analyze the ecological consequences of human interactions with the environment (e.g., renewable and non-renewable resources).**

**Discovery Channel Middle School Science  
Earth Science Series  
Natural Resources**

**Physical Science Series  
Nuclear Energy**

**PLATO® Life Science  
Organisms and Their Environment  
Biomes and Biodiversity**

**PLATO® Physical Science  
Energy and Its Applications  
Properties and Sources of Energy**



**SC.O.6.2.10 classify and investigate properties and processes (changes) as either physical or chemical.**

**PLATO® Physical Science  
Chemistry Fundamentals  
Chemical Reactions**

**Properties and Structure of Matter  
Physical and Chemical Properties of Matter**

**SC.O.6.2.11 investigate the formation and separation of simple mixtures of matter concluding that matter is composed of tiny particles and that the particles are the same for the same type of matter.**

**PLATO® Physical Science  
Chemistry Fundamentals  
Mixtures and Solutions**

**Properties and Structure of Matter  
Atoms, Elements, Compounds and Mixtures  
Physical and Chemical Properties of Matter  
States of Matter**

**SC.O.6.2.12 use indicators to classify substances as acidic, basic or neutral.**

**PLATO® Physical Science  
Chemistry Fundamentals  
Bonding and Types of Compounds  
Chemical Reactions**

**SC.O.6.2.13 using the periodic table, identify the symbols of elements as solids, liquids, and gases; metals or nonmetals.**

**Discovery Channel Middle School Science  
Physical Science Series  
Elements  
Chemistry**

**PLATO® Physical Science  
Chemistry Fundamentals  
Bonding and Types of Compounds  
Properties and Structure of Matter  
The Periodic Table**

**SC.O.6.2.14 describe the composition and properties of matter (e.g., particles, malleability, melting point, density, inertia, or specific heat).**

**Discovery Channel Middle School Science  
Physical Science Series  
Elements  
States of Matter**



**PLATO® Physical Science**  
**Chemistry Fundamentals**  
**Chemical Reactions**

**Energy and Its Applications**  
**Heat**  
**Electricity, Circuits, and Power**

**Properties and Structure of Matter**  
**Understanding and Measuring Matter**  
**Physical and Chemical Properties of Matter**  
**States of Matter**

**PLATO® Earth and Space Science**  
**Rocks and Soil**  
**Rocks and The Rock Cycle**

**SC.O.6.2.15 investigate the properties of the electromagnetic spectrum (e.g., wavelengths, frequencies, visible light); relate wavelengths and/or frequencies to position on the electromagnetic spectrum (e.g., colors, x-ray).**

**Discovery Channel Middle School Science**  
**Physical Science Series**  
**Light**

**PLATO® Physical Science**  
**Energy and Its Applications**  
**Properties and Sources of Energy**  
**Properties of Sound and Light**  
**The Behavior of Sound and Light**

**PLATO® Earth and Space Science**  
**Water in Our World**  
**The Cycle & Movements of Water**

**Earth, Space, and the Universe**  
**Space: Stars, Galaxies, and the Universe**

**SC.O.6.2.16 recognize that an object's color is based upon the absorption and reflection of light waves.**

**Discovery Channel Middle School Science**  
**Physical Science Series**  
**Light**  
**States of Matter**

**PLATO® Physical Science**  
**Energy and Its Applications**  
**Properties and Sources of Energy**  
**Properties of Sound and Light**  
**The Behavior of Sound and Light**

**PLATO® Earth and Space Science**  
**Earth, Space, and the Universe**  
**Space: Stars, Galaxies, and the Universe**

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**SC.O.6.2.17 describe light and sound in terms of longitudinal or transverse waves.**

Discovery Channel Middle School Science  
Physical Science Series  
Light  
Sound

PLATO® Physical Science  
Energy and Its Applications  
Properties and Sources of Energy  
Properties of Sound and Light  
The Behavior of Sound and Light

PLATO® Earth and Space Science  
Earth, Space, and the Universe  
Space: Stars, Galaxies, and the Universe

**SC.O.6.2.18 describe the flow of heat between objects (e.g., hot air rises, or absorption and release of heat by metals).**

Discovery Channel Middle School Science  
Physical Science Series  
Heat

PLATO® Physical Science  
Energy and Its Applications  
Properties and Sources of Energy  
Heat

PLATO® Earth and Space Science  
Weather and Atmospheric Processes  
The Atmosphere

**SC.O.6.2.19 diagram simple parallel and series circuits (e.g., bulbs, battery, wires, or switch).**

PLATO® Physical Science  
Energy and Its Applications  
Electricity, Circuits, and Power

**SC.O.6.2.20 correlate the relationship of mass to gravitational force (e.g., larger the mass the larger the gravitational force, or the closer the objects the stronger the force).**

Discovery Channel Middle School Science  
Physical Science Series  
Forces of Gravity

PLATO® Earth and Space Science  
Earth, Space, and the Universe  
The Solar System

**SC.O.6.2.21 examine simple machines and the forces involved.**



**PLATO® Physical Science**  
**Forces and Motion**  
**Work and Simple Machines**

**SC.O.6.2.22 apply the effects of balanced and unbalanced forces on motion of objects.**

**Discovery Channel Middle School Science**  
**Physical Science Series**  
**Forces of Gravity**

**PLATO® Physical Science**  
**Forces and Motion**  
**Newton's Laws: Forces and Motion**

**SC.O.6.2.23 explain motion in terms of frames of reference and analyze graphs depicting motion and predicted future motion.**

**PLATO® Physical Science**  
**Forces and Motion**  
**Motion**  
**Newton's Laws: Forces and Motion**

**SC.O.6.2.24 monitor major atmospheric events using a variety of resources including technology.**

**Discovery Channel Middle School Science**  
**Earth Science Series**  
**Weather and Climate**

**Physical Science Series**  
**Heat**

**PLATO® Projects for the Real World, Level F -- Climbing Mt. McKinley**  
**The Weathermaker**  
**1. Catching the Wind**  
**2. Wind Speed**

**PLATO® Projects for the Real World, Level I -- Space Center**  
**Weather Forecast**  
**2. Storm Map**

**PLATO® Earth and Space Science**  
**Looking at Earth's Features**  
**Mapping**

**The Energetic Earth**  
**Plate Tectonics and Earth Movements**

**Water in Our World**  
**The Cycle & Movements of Water**

**Weather and Atmospheric Processes**  
**The Atmosphere**  
**Climate**



**SC.O.6.2.25 compare and contrast continental drift hypothesis to the plate tectonic theory.**

**Discovery Channel Middle School Science**  
**Earth Science Series**  
**History of Earth**  
**Earthquakes**  
**Volcanoes**

**PLATO® Projects for the Real World, Level G -- Yellowstone Connection**  
**Hot Spots in Time**  
**1. Moving Continents**  
**2. Hot Spots Through Time**

**PLATO® Earth and Space Science**  
**Looking at Earth's Features**  
**Earth's Composition**  
**Supporting Life: Earth's Surface and Changing Landforms**

**The Energetic Earth**  
**Plate Tectonics and Earth Movements**  
**Volcanoes**

**Water in Our World**  
**The Oceans**

**SC.O.6.2.26 associate plant and animal life forms with specific geologic time periods.**

**Discovery Channel Middle School Science**  
**Earth Science Series**  
**History of Earth**

**PLATO® Life Science**  
**Change Over Time**  
**Fossils and the Geologic Time Scale**

**SC.O.6.2.27 recognize the phases of the moon.**

**PLATO® Earth and Space Science**  
**Earth, Space, and the Universe**  
**The Solar System**  
**The Sun, Earth, and Moon**

**SC.O.6.2.28 investigate models of earth-moon-sun relationships (e.g., gravity, time, or tides).**

**Discovery Channel Middle School Science**  
**Earth Science Series**  
**Space Exploration**

**Physical Science Series**  
**Forces of Gravity**

**PLATO® Projects for the Real World, Level I -- Space Center**  
**Weightlessness**



1. Lunch in Space
2. Unfurnished Space

**PLATO® Earth and Space Science**

Looking at Earth's Features  
Mapping

Water in Our World  
The Cycle & Movements of Water

Weather and Atmospheric Processes  
Climate

Earth, Space, and the Universe  
The Solar System  
The Sun, Earth, and Moon  
Space: Stars, Galaxies, and the Universe

**SC.O.6.2.29 compare the earth's tilt and revolution to the seasonal changes.**

Discovery Channel Middle School Science  
Earth Science Series  
The Universe

**PLATO® Earth and Space Science**  
Weather and Atmospheric Processes  
Weather  
Climate

Earth, Space, and the Universe  
The Solar System  
The Sun, Earth, and Moon

**Standard 3: Application of Science**

**SC.O.6.3.01 explore the relationship between the parts of a system to the whole system.**

PLATO Modules are not available for this learning expectation.

**SC.O.6.3.02 construct a variety of useful models of an object, event, or process.**

PLATO Modules are not available for this learning expectation.

**SC.O.6.3.03 compare and contrast changes that occur in an object or a system to its original state.**

PLATO Modules are not available for this learning expectation.

**SC.O.6.3.04 compare and contrast the influence that a variation in scale will have on the way an object or system works. (e.g., cooling rates of different-sized containers of water, strength of different-sized constructions from the same material, or flight characteristics of different-sized model airplanes).**

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PLATO Modules are not available for this learning expectation.

**SC.O.6.3.05 research everyday applications and interactions of science and technology.**

Discovery Channel Middle School Science

Earth Science Series

Natural Resources

Mapping the Earth

Life Science Series

Forensics

Physical Science Series

Structures

PLATO® Projects for the Real World, Level I -- Space Center

Spinoffs

I. Spinoff Technologies

PLATO® Physical Science

Chemistry Fundamentals

Chemical Reactions

Energy and Its Applications

Electricity, Circuits, and Power

Magnetism and Electromagnetism

The Behavior of Sound and Light

Forces and Motion

Work and Simple Machines

**SC.O.6.3.06 evaluate and critically analyze mass media reports of scientific developments and events.**

PLATO Modules are not available for this learning expectation.

**Grade 07**

**Standard I: Nature of Science**

**SC.O.7.1.01 realize that scientists formulate and test their explanations of nature using observation and experiments.**

PLATO Modules are not available for this learning expectation.

**SC.O.7.1.02 recognize scientific knowledge is subject to modification as new scientific information challenges current explanations.**

PLATO Modules are not available for this learning expectation.

**SC.O.7.1.03 examine the careers and contributions of men and women of diverse cultures to the development of science.**

PLATO Modules are not available for this learning expectation.

**SC.O.7.1.04 compare and contrast the historical significance of scientific discoveries.**

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**PLATO Modules are not available for this learning expectation.**

**SC.O.7.1.05 cooperate and collaborate to ask questions, design and conduct investigations to find answers and solve problems.**

**PLATO® Physical Science  
Chemistry Fundamentals  
Mixtures and Solutions**

**SC.O.7.1.06 formulate conclusions through close observations, logical reasoning, objectivity, perseverance and integrity in data collection.**

**PLATO Modules are not available for this learning expectation.**

**SC.O.7.1.07 apply skepticism, careful methods, logical reasoning and creativity in investigating the observable universe.**

**Applied Physical Science: Technology Fundamentals  
Module: Electrical Systems**

**Discovery Channel Middle School Science  
Earth Science Series  
Space Exploration**

**SC.O.7.1.08 use a variety of technologies and scientific instruments to conduct explorations, investigations and experiments of the natural world.**

**Discovery Channel Middle School Science  
Life Science Series  
Bacteria**

**PLATO® Projects for the Real World, Level G -- Yellowstone Connection  
Blue Dot Disease  
1. Blue Dot Basics  
2. Updating the Park Map**

**PLATO® Projects for the Real World, Level H -- Medical Mixup  
Easy Test to Pass  
1. Drug Detection Methods**

**PLATO® Projects for the Real World, Level H -- Maya Mystery  
Books of Stone  
3. Tables and Kings**

**What's in a Bone?  
1. Graph and Compare**

**PLATO® Projects for the Real World, Level I -- Space Center  
Form an Opinion  
2. Check the Facts**

**PLATO® Physical Science  
Forces and Motion  
Motion**



**SC.O.7.1.09 demonstrate safe techniques for handling, manipulating and caring for science materials, equipment, natural specimens and living organisms.**

**PLATO® Physical Science  
Chemistry Fundamentals  
Mixtures and Solutions**

**SC.O.7.1.10 utilize experimentation to demonstrate scientific processes and thinking skills (e.g., formulating questions, predicting, forming hypotheses, quantifying, or identifying dependent and independent variables).**

**Applied Physical Science: Technology Fundamentals  
Module: Electrical Systems**

**SC.O.7.1.11 construct and use charts, graphs and tables to organize, display, interpret, analyze and explain data.**

**PLATO® Projects for the Real World, Level G -- Yellowstone Connection  
Blue Dot Disease  
1. Blue Dot Basics  
2. Updating the Park Map**

**Earth Energy  
1. Making Graphs**

**PLATO® Projects for the Real World, Level H -- Medical Mixup  
Easy Test to Pass  
1. Drug Detection Methods**

**PLATO® Projects for the Real World, Level H -- Maya Mystery  
Books of Stone  
3. Tables and Kings**

**What's in a Bone?  
1. Graph and Compare**

**PLATO® Projects for the Real World, Level I -- Space Center  
Exploring Planets  
1. Satellite Images**

**Form an Opinion  
2. Check the Facts**

**PLATO® Physical Science  
Forces and Motion  
Motion**

**SC.O.7.1.12 use inferential reasoning to make logical conclusions from collected data.**

**Discovery Channel Middle School Science  
Life Science Series  
Mammals**

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**PLATO® Projects for the Real World, Level I -- Space Center**  
**Form an Opinion**  
**1. Read the Mail**  
**2. Check the Facts**

**Standard 2: Content of Science**

**SC.O.7.2.01 demonstrate an understanding of the interrelationships among physics, chemistry, biology, earth/environmental science, and astronomy.**

**Discovery Channel Middle School Science**  
**Earth Science Series**  
**Mapping the Earth**

**SC.O.7.2.02 identify and describe disease causing organisms (such as bacteria, viruses, protozoa, fungi) and the diseases they cause.**

**Discovery Channel Middle School Science**  
**Life Science Series**  
**Viruses**  
**Bacteria**  
**Cells**

**PLATO® Projects for the Real World, Level H -- Medical Mixup**  
**The AIDS Question**  
**1. AIDS Answer**

**Editor's Desk**  
**1. Edit an AIDS Pamphlet**

**PLATO® Life Science**  
**Cells: The Basis of Life**  
**What Is Life?**  
**Similarities in Cells Structure and Function**  
**Differences and Specialization in Cells**

**Classification and Diversity of Life**  
**Bacteria, Protists, Fungi**

**Human Health and Reproduction**  
**Immunity and Preventing Disease**

**SC.O.7.2.03 explain how skeletal, muscular, and integumentary systems work together in the human body.**

**Discovery Channel Middle School Science**  
**Life Science Series**  
**Human Biology**

**PLATO® Life Science**  
**Structure and Function in Living Organisms**  
**Organ Systems**

**SC.O.7.2.04 compare the level of organization of cells, tissues and organs in living things.**

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**Discovery Channel Middle School Science  
Life Science Series  
Birds  
Human Biology**

**PLATO® Life Science  
Cells: The Basis of Life  
Differences and Specialization in Cells  
  
Structure and Function in Living Organisms  
Levels of Organization  
Structure and Function of Tissues and Organs**

**SC.O.7.2.05 construct simple keys to differentiate among living things with similar characteristics.**

**Discovery Channel Middle School Science  
Life Science Series  
Invertebrates  
Insects**

**SC.O.7.2.06 use pictures to show cyclical processes in nature (e.g., water cycle, nitrogen cycle, or carbon cycle).**

**PLATO® Life Science  
Organisms and Their Environment  
Flow of Energy and Matter in Nature**

**SC.O.7.2.07 evaluate how the different adaptations and life cycles of plants and animals help them to survive in different niches and environments (e.g., inherited and acquired adaptations).**

**Discovery Channel Middle School Science  
Life Science Series  
Invertebrates  
Insects  
Fish and Amphibians  
Reptiles  
Birds  
Mammals  
Plants  
Evolution  
Ecology**

**Physical Science Series  
Magnetism  
Heat**

**PLATO® Life Science  
Classification and Diversity of Life  
The Plant Kingdom  
Exploring Vertebrates**

**Organisms and Their Environment  
Maintaining Conditions for Life**

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**Living With the Environment**  
**Biomes and Biodiversity**

**Change Over Time**  
**Fossils and the Geologic Time Scale**  
**Evolution and Natural Selection**

**PLATO® Earth and Space Science**  
**Weather and Atmospheric Processes**  
**Climate**

**SC.O.7.2.08 analyze how changes in the environment have led to reproductive adaptations through natural selection.**

**Discovery Channel Middle School Science**  
**Life Science Series**  
**Evolution**

**PLATO® Life Science**  
**Change Over Time**  
**Evolution and Natural Selection**

**SC.O.7.2.09 explain how an organism's behavior response is a combination of heredity and the environment.**

**Discovery Channel Middle School Science**  
**Life Science Series**  
**Genetics**

**PLATO® Life Science**  
**Classification and Diversity of Life**  
**Exploring Vertebrates**

**Genetics and Heredity**  
**Genes and Traits**  
**Heredity**  
**Genetic Variation and Biotechnology**

**Organisms and Their Environment**  
**Maintaining Conditions for Life**

**Change Over Time**  
**Evolution and Natural Selection**

**SC.O.7.2.10 analyze the differences in the growth, development and reproduction in flowering and non-flowering plants.**

**PLATO® Life Science**  
**Cells: The Basis of Life**  
**Differences and Specialization in Cells**

**Classification and Diversity of Life**  
**The Plant Kingdom**

**SC.O.7.2.11 predict the trends of interdependent populations if one of the limiting factors is changed.**

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Discovery Channel Middle School Science  
Life Science Series  
Ecology

PLATO® Life Science  
Organisms and Their Environment  
Living With the Environment

**SC.O.7.2.12 evaluate the consequences of the introduction of chemicals into the ecosystem (e.g., environmental consequences, human health risks, or mutations).**

PLATO Modules are not available for this learning expectation.

**SC.O.7.2.13 compare differences among elements, compounds, homogeneous and heterogeneous mixtures.**

Discovery Channel Middle School Science  
Physical Science Series  
Elements

PLATO® Physical Science  
Chemistry Fundamentals  
Mixtures and Solutions

Properties and Structure of Matter  
Atoms, Elements, Compounds and Mixtures  
The Periodic Table

**SC.O.7.2.14 examine the differences in types of solutions (e.g., solutes and solvents, relative concentrations, conductivity, pH).**

PLATO® Physical Science  
Chemistry Fundamentals  
Bonding and Types of Compounds  
Mixtures and Solutions  
Chemical Reactions

Properties and Structure of Matter  
The Periodic Table

**SC.O.7.2.15 examine chemical reactions involving acids and bases by monitoring color changes of indicator(s) and identifying the salt formed in the neutralization reaction.**

PLATO® Physical Science  
Chemistry Fundamentals  
Bonding and Types of Compounds  
Mixtures and Solutions  
Chemical Reactions

**SC.O.7.2.16 write word equations to describe chemical reactions.**

Discovery Channel Middle School Science  
Physical Science Series  
Chemistry

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**PLATO® Physical Science  
Chemistry Fundamentals  
Chemical Reactions**

**SC.O.7.2.17 describe the movement of individual particles and verify the conservation of matter during the phase changes (e.g., melting, boiling, or freezing).**

**Discovery Channel Middle School Science  
Physical Science Series  
States of Matter**

**PLATO® Physical Science  
Energy and Its Applications  
Heat**

**Properties and Structure of Matter  
Physical and Chemical Properties of Matter  
States of Matter**

**SC.O.7.2.18 identify the characteristics of sound waves and describe how sound is perceived by the ear.**

**Discovery Channel Middle School Science  
Physical Science Series  
Sound**

**PLATO® Physical Science  
Energy and Its Applications  
Properties and Sources of Energy  
Properties of Sound and Light  
The Behavior of Sound and Light**

**SC.O.7.2.19 define the absorption and reflection of light as translucent, opaque and transparent.**

**Discovery Channel Middle School Science  
Physical Science Series  
States of Matter**

**PLATO® Physical Science  
Energy and Its Applications  
Properties and Sources of Energy**

**SC.O.7.2.20 interpret and illustrate changes in waves as they encounter various mediums (e.g., mirrors, or lenses).**

**Discovery Channel Middle School Science  
Physical Science Series  
States of Matter**

**PLATO® Physical Science  
Energy and Its Applications  
Properties and Sources of Energy  
The Behavior of Sound and Light**

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**SC.O.7.2.21 Investigate absorption and reflection of light by an object.**

Discovery Channel Middle School Science  
Physical Science Series  
States of Matter

PLATO® Physical Science  
Energy and Its Applications  
Properties and Sources of Energy

**SC.O.7.2.22 characterize series and parallel circuits; AC and DC currents.**

Applied Physical Science: Technology Fundamentals  
Module: Electrical Systems

PLATO® Physical Science  
Energy and Its Applications  
Electricity, Circuits, and Power

**SC.O.7.2.23 explain conservation of matter and energy and investigate the different forms of energy (e.g., mechanical, potential, kinetic, or gravitational).**

PLATO® Physical Science  
Energy and Its Applications  
Properties and Sources of Energy

Forces and Motion  
Work and Simple Machines

**SC.O.7.2.24 perform experiments with simple machines to demonstrate the relationship between forces and distance; use vectors to represent motion.**

Discovery Channel Middle School Science  
Physical Science Series  
Forces of Gravity

PLATO® Physical Science  
Forces and Motion  
Motion  
Newton's Laws: Forces and Motion  
Work and Simple Machines

**SC.O.7.2.25 explain the effect of gravity on falling objects (e.g.,  $g=9.8\text{m/s}^2$ , object dropped on earth and on moon).**

Applied Physical Science: Technology Fundamentals  
Module: Mechanical Systems

Discovery Channel Middle School Science  
Earth Science Series  
Space Exploration

Physical Science Series  
Forces of Gravity



**PLATO® Physical Science**  
**Energy and Its Applications**  
**Properties and Sources of Energy**

**SC.O.7.2.26 describe and compare the causes of tides, surfs and currents.**

**Discovery Channel Middle School Science**  
**Earth Science Series**  
**Oceans**

**PLATO® Earth and Space Science**  
**Water in Our World**  
**The Cycle & Movements of Water**  
**The Oceans**

**Weather and Atmospheric Processes**  
**Climate**

**SC.O.7.2.27 examine the effects of the sun's energy on oceans and weather (e.g., air masses, or convection currents).**

**Discovery Channel Middle School Science**  
**Physical Science Series**  
**Heat**

**PLATO® Earth and Space Science**  
**Looking at Earth's Features**  
**Supporting Life: Earth's Surface and Changing Landforms**

**Water in Our World**  
**The Cycle & Movements of Water**

**Weather and Atmospheric Processes**  
**The Atmosphere**  
**Weather**  
**Climate**

**Earth, Space, and the Universe**  
**The Sun, Earth, and Moon**

**SC.O.7.2.28 interpret GIS maps and create and interpret topographical maps.**

**Discovery Channel Middle School Science**  
**Earth Science Series**  
**Mapping the Earth**

**Life Science Series**  
**Viruses**  
**Genetics**

**PLATO® Projects for the Real World, Level G -- Yellowstone Connection**  
**Blue Dot Disease**  
**2. Updating the Park Map**



**PLATO® Projects for the Real World, Level H -- Maya Mystery  
Made in Copan  
3. Latitude and Longitude**

**Books of Stone  
1. A Stone Forest**

**PLATO® Projects for the Real World, Level I -- Space Center  
Weather Forecast  
1. Reading the Map**

**PLATO® Earth and Space Science  
Looking at Earth's Features  
Mapping**

**SC.O.7.2.29 describe rock formations (e.g., rock cycle).**

**Discovery Channel Middle School Science  
Earth Science Series  
Rocks and Minerals  
Volcanoes**

**PLATO® Earth and Space Science  
Rocks and Soil  
Rocks and The Rock Cycle**

**SC.O.7.2.30 classify rocks (e.g., crystal/particle size, or mineral composition and uses).**

**Discovery Channel Middle School Science  
Earth Science Series  
Rocks and Minerals**

**PLATO® Earth and Space Science  
Rocks and Soil  
Rocks and The Rock Cycle**

**SC.O.7.2.31 determine the relevant age of rock layers using index fossils and the law of superposition.**

**Discovery Channel Middle School Science  
Earth Science Series  
History of Earth  
Fossils**

**PLATO® Earth and Space Science  
Looking at Earth's Features  
Supporting Life: Earth's Surface and Changing Landforms**

**The Energetic Earth  
Plate Tectonics and Earth Movements**

**Weather and Atmospheric Processes  
Climate**

**SC.O.7.2.32 explain how changing latitude affects climate.**

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**Discovery Channel Middle School Science  
Earth Science Series  
Weather and Climate**

**Physical Science Series  
Heat**

**PLATO® Earth and Space Science  
Weather and Atmospheric Processes  
Climate**

**SC.O.7.2.33 trace the life cycle of a star.**

**Discovery Channel Middle School Science  
Earth Science Series  
The Universe**

**PLATO® Earth and Space Science  
Earth, Space, and the Universe  
The Sun, Earth, and Moon  
Space: Stars, Galaxies, and the Universe**

### **Standard3: Application of Science**

**SC.O.7.3.01 explore the relationship between the parts of a system to the whole system.**

**Applied Physical Science: Technology Fundamentals  
Module: Introducing Energy and Systems**

**Module: Mechanical Systems**

**Module: Fluid Systems**

**Module: Heat Systems**

**Module: Electrical Systems**

**SC.O.7.3.02 construct a variety of useful models of an object, event, or process.**

**PLATO Modules are not available for this learning expectation.**

**SC.O.7.3.03 compare and contrast changes that occur in an object or a system to its original state.**

**Applied Physical Science: Technology Fundamentals  
Module: Introducing Energy and Systems**

**Module: Mechanical Systems**

**Module: Fluid Systems**

**Module: Heat Systems**

**Module: Electrical Systems**

**SC.O.7.3.04 compare and contrast the influence that a variation in scale will have on the way an object or system works. (e.g., cooling rates of**

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**different-sized containers of water, strength of different-sized constructions from the same material, or flight characteristics of different-sized model airplanes).**

**Applied Physical Science: Technology Fundamentals**

**Module: Introducing Energy and Systems**

**Module: Mechanical Systems**

**Module: Fluid Systems**

**Module: Heat Systems**

**Module: Electrical Systems**

**SC.O.7.3.05 research everyday applications and interactions of science and technology.**

**Applied Physical Science: Technology Fundamentals**

**Module: Mechanical Systems**

**Module: Fluid Systems**

**Module: Heat Systems**

**Module: Electrical Systems**

**Discovery Channel Middle School Science**

**Earth Science Series**

**Natural Resources**

**Mapping the Earth**

**Life Science Series**

**Forensics**

**Physical Science Series**

**Structures**

**PLATO® Projects for the Real World, Level I -- Space Center**

**Spinoffs**

**I. Spinoff Technologies**

**SC.O.7.3.06 evaluate and critically analyze mass media reports of scientific developments and events.**

**PLATO® Physical Science**

**Energy and Its Applications**

**Properties and Sources of Energy**

**SC.O.7.3.07 explore the connections between science, technology, society and career opportunities.**

**Applied Physical Science: Technology Fundamentals**

**Module: Mechanical Systems**

**Module: Fluid Systems**

**Module: Heat Systems**

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**Module: Electrical Systems**

**Discovery Channel Middle School Science**

**Earth Science Series**

**Natural Resources**

**Fossils**

**Mapping the Earth**

**Life Science Series**

**Forensics**

**Physical Science Series**

**Structures**

**PLATO® Projects for the Real World, Level I -- Space Center**

**Spinoffs**

**I. Spinoff Technologies**

**Editor's Desk**

**I. Edit Notes**

**Grade 08**

**Standard I: Nature of Science**

**SC.O.8.1.01 formulate scientific explanations based on historical observations and experimental evidence, accounting for variability in experimental results.**

PLATO Modules are not available for this learning expectation.

**SC.O.8.1.02 demonstrate how a testable methodology is employed to seek solutions for personal and societal issues. (e.g., “scientific method”).**

PLATO Modules are not available for this learning expectation.

**SC.O.8.1.03 relate societal, cultural and economic issues to key scientific innovations.**

PLATO Modules are not available for this learning expectation.

**SC.O.8.1.04 conduct and/or design investigations that incorporate the skills and attitudes and/or values of scientific inquiry (e.g., established research protocol, accurate record keeping, replication of results and peer review, objectivity, openness, skepticism, fairness, or creativity and logic).**

**Applied Physical Science: Technology Fundamentals  
Module: Electrical Systems**

**SC.O.8.1.05 implement safe procedures and practices when manipulating equipment, materials, organisms, and models.**

**PLATO® Physical Science  
Chemistry Fundamentals  
Mixtures and Solutions**



**SC.O.8.1.06 use appropriate technology solutions within a problem solving setting to measure and collect data; interpret data; analyze and/or report data; interact with simulations; conduct research; and present and communicate conclusions.**

**Discovery Channel Middle School Science  
Earth Science Series  
Mapping the Earth**

**Life Science Series  
Viruses  
Genetics**

**PLATO® Physical Science  
Energy and Its Applications  
Properties and Sources of Energy**

**SC.O.8.1.07 design, conduct, evaluate and revise experiments (e.g., compose a question to be investigated, design a controlled investigation that produces numeric data, evaluate the data in the context of scientific laws and principles, construct a conclusion based on findings, propose revisions to investigations based on manipulation of variables and/or analysis of error, or communicate and defend the results and conclusions).**

**PLATO Modules are not available for this learning expectation.**

**SC.O.8.1.08 draw conclusions from a variety of data sources to analyze and interpret systems and models (e.g., use graphs and equations to measure and apply variables such as rate and scale, evaluate changes in trends and cycles, predict the influence of external variances such as potential sources of error, or interpret maps).**

**PLATO® Projects for the Real World, Level H -- Medical Mixup  
Easy Test to Pass  
1. Drug Detection Methods**

**PLATO® Projects for the Real World, Level H -- Maya Mystery  
Books of Stone  
3. Tables and Kings**

**What's in a Bone?  
1. Graph and Compare**

**PLATO® Projects for the Real World, Level I -- Space Center  
Form an Opinion  
2. Check the Facts**

## **Standard 2: Content of Science**

**SC.O.8.2.01 demonstrate an understanding of the interrelationships among physics, chemistry, biology, earth/environmental science, and astronomy.**

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**Discovery Channel Middle School Science  
Earth Science Series  
Mapping the Earth**

**SC.O.8.2.02 examine and describe the structures and functions of cell organelles.**

**Discovery Channel Middle School Science  
Life Science Series  
Cells**

**PLATO® Life Science  
Cells: The Basis of Life  
Similarities in Cells Structure and Function  
Differences and Specialization in Cells  
Cellular Processes**

**Classification and Diversity of Life  
Bacteria, Protists, Fungi  
The Animal Kingdom  
Exploring Vertebrates**

**Human Health and Reproduction  
Immunity and Preventing Disease**

**SC.O.8.2.03 explain how the circulatory, respiratory and reproductive systems work together in the human body.**

**Discovery Channel Middle School Science  
Life Science Series  
Human Biology**

**PLATO® Life Science  
Structure and Function in Living Organisms  
Organ Systems**

**SC.O.8.2.04 compare the variations in cells, tissues and organs of the circulatory, respiratory and reproductive systems of different organisms.**

**Discovery Channel Middle School Science  
Life Science Series  
Insects  
Fish and Amphibians  
Birds**

**PLATO® Life Science  
Structure and Function in Living Organisms  
Organ Systems**

**Classification and Diversity of Life  
The Animal Kingdom**

**SC.O.8.2.05 discuss how living cells obtain the essentials of life through chemical reactions of fermentation, respiration and photosynthesis.**



**Discovery Channel Middle School Science  
Life Science Series  
Plants**

**Physical Science Series  
Light**

**PLATO® Life Science  
Cells: The Basis of Life  
Differences and Specialization in Cells  
Cellular Processes**

**SC.O.8.2.06 analyze how behaviors of organisms lead to species continuity (e.g., reproductive/mating behaviors, or seed dispersal).**

**PLATO® Life Science  
Classification and Diversity of Life  
Exploring Vertebrates**

**SC.O.8.2.07 demonstrate the basic principles of genetics; introduce Mendel's law, monohybrid crosses, production of body and sex cells (mitosis/meiosis), genes, chromosomes, and inherited traits.**

**Discovery Channel Middle School Science  
Life Science Series  
Genetics  
Cells**

**PLATO® Life Science  
Cells: The Basis of Life  
Cellular Processes**

**Classification and Diversity of Life  
Exploring Vertebrates**

**Genetics and Heredity  
Genes and Traits  
Heredity  
Genetic Variation and Biotechnology**

**Human Health and Reproduction  
Human Reproduction and Development**

**Change Over Time  
Evolution and Natural Selection**

**SC.O.8.2.08 compare patterns of human development to other vertebrates.**

**Discovery Channel Middle School Science  
Life Science Series  
Cells**

**PLATO® Life Science  
Cells: The Basis of Life  
Cellular Processes**

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**Classification and Diversity of Life  
Exploring Vertebrates**

**Human Health and Reproduction  
Human Reproduction and Development**

**SC.O.8.2.09 organize groups of unknown organisms based on observable characteristics (e.g., create dichotomous keys).**

**Discovery Channel Middle School Science  
Life Science Series  
Invertebrates  
Insects**

**PLATO® Life Science  
Classification and Diversity of Life  
Classifying Life**

**SC.O.8.2.10 trace matter and energy flow in a food web as it flows from sunlight to producers and consumers, design an environment in which the chemical and energy needs for the growth, reproduction and development of plants are met (e.g., food pyramids, decomposition).**

**Discovery Channel Middle School Science  
Life Science Series  
Insects  
Plants  
Ecology**

**PLATO® Life Science  
Organisms and Their Environment  
Flow of Energy and Matter in Nature**

**SC.O.8.2.11 use the periodic table to locate and classify elements as metallic, non-metallic or metalloid.**

**PLATO® Physical Science  
Properties and Structure of Matter  
The Periodic Table**

**SC.O.8.2.12 reconstruct development models of the atom (e.g., Crookes, Thompson, Becquerel, Rutherford, or Bohr).**

**PLATO® Physical Science  
Properties and Structure of Matter  
Atoms, Elements, Compounds and Mixtures**

**SC.O.8.2.13 calculate the number of protons, neutrons, and electrons and use the information to construct a Bohr model of the atom.**

**PLATO® Physical Science  
Chemistry Fundamentals  
Bonding and Types of Compounds**



**Properties and Structure of Matter  
Atoms, Elements, Compounds and Mixtures  
The Periodic Table**

**SC.O.8.2.14 classify elements into their families based upon their valence electrons.**

**PLATO® Physical Science  
Chemistry Fundamentals  
Bonding and Types of Compounds**

**SC.O.8.2.15 evaluate the variations in diffusion rates and examine the effect of changing temperatures.**

**PLATO Modules are not available for this learning expectation.**

**SC.O.8.2.16 conduct and classify chemical reactions by reaction type (e.g., synthesis, decomposition, single replacement or double replacement); energy type (e.g., endothermic and exothermic); and write word equations for the chemical reactions.**

**Discovery Channel Middle School Science  
Physical Science Series  
Chemistry**

**PLATO® Physical Science  
Chemistry Fundamentals  
Chemical Reactions**

**Energy and Its Applications  
Properties and Sources of Energy**

**SC.O.8.2.17 identify and describe factors that affect chemical reaction rates, including catalysts, temperature changes, light energies and particle size.**

**Discovery Channel Middle School Science  
Physical Science Series  
Heat**

**PLATO® Physical Science  
Chemistry Fundamentals  
Mixtures and Solutions  
Chemical Reactions**

**SC.O.8.2.18 examine the various sources of energy (e.g., fossil fuels, wind, solar, geothermal, nuclear, biomass).**

**Discovery Channel Middle School Science  
Physical Science Series  
Electricity  
Heat  
Nuclear Energy**



**PLATO® Life Science**  
**Organisms and Their Environment**  
**Biomes and Biodiversity**

**PLATO® Physical Science**  
**Energy and Its Applications**  
**Properties and Sources of Energy**  
**Electricity, Circuits, and Power**

**PLATO® Earth and Space Science**  
**Weather and Atmospheric Processes**  
**Climate**

**SC.O.8.2.19 explain the Doppler effect (e.g., sound).**

**Discovery Channel Middle School Science**  
**Physical Science Series**  
**Sound**

**PLATO® Projects for the Real World, Level I -- Space Center**  
**Exploring Planets**  
**I. Satellite Images**

**PLATO® Physical Science**  
**Energy and Its Applications**  
**Properties of Sound and Light**  
**The Behavior of Sound and Light**

**SC.O.8.2.20 quantitatively represent wavelength, frequency and velocity (e.g.,  $v=\lambda f$ ).**

**PLATO® Physical Science**  
**Energy and Its Applications**  
**Properties and Sources of Energy**  
**Properties of Sound and Light**  
**The Behavior of Sound and Light**

**PLATO® Earth and Space Science**  
**Water in Our World**  
**The Cycle & Movements of Water**

**SC.O.8.2.21 relate the conservation of energy theory to energy transformations (e.g., electrical/heat, or mechanical/heat).**

**Applied Physical Science: Technology Fundamentals**  
**Module: Introducing Energy and Systems**

**Module: Mechanical Systems**

**Module: Fluid Systems**

**Module: Heat Systems**

**Discovery Channel Middle School Science**  
**Physical Science Series**  
**Heat**



**PLATO® Physical Science**  
Energy and Its Applications  
Properties and Sources of Energy  
Electricity, Circuits, and Power  
Magnetism and Electromagnetism

Forces and Motion  
Work and Simple Machines

**SC.O.8.2.22 quantitatively represent work, power, pressure (e.g.,  $Work=Force \times distance$ ,  $Power=Work/time$ , or  $pressure=force/area$ ) from collected data.**

**PLATO® Physical Science**  
Energy and Its Applications  
Electricity, Circuits, and Power  
  
Properties and Structure of Matter  
Understanding and Measuring Matter  
  
Forces and Motion  
Work and Simple Machines  
  
**PLATO® Earth and Space Science**  
Looking at Earth's Features  
Earth's Composition

**SC.O.8.2.23 graph and interpret the relationships of distance versus time, speed versus time, and acceleration versus time.**

**PLATO® Physical Science**  
Forces and Motion  
Motion  
Newton's Laws: Forces and Motion

**SC.O.8.2.24 describe Newton's Laws of Motion; identify examples, illustrate qualitatively and quantitatively drawing vector examples.**

**Applied Physical Science: Technology Fundamentals**  
Module: Mechanical Systems

**Discovery Channel Middle School Science**  
Physical Science Series  
Motion

**PLATO® Physical Science**  
Forces and Motion  
Newton's Laws: Forces and Motion

**SC.O.8.2.25 illustrate and calculate the mechanical advantage of simple machines.**

**Applied Physical Science: Technology Fundamentals**  
Module: Mechanical Systems



**PLATO® Physical Science**  
**Forces and Motion**  
**Work and Simple Machines**

**SC.O.8.2.26 research and draw conclusions related to the quality and quantity of surface and ground water.**

**Discovery Channel Middle School Science**  
**Earth Science Series**  
**Natural Resources**

**PLATO® Life Science**  
**Organisms and Their Environment**  
**Biomes and Biodiversity**

**PLATO® Earth and Space Science**  
**Looking at Earth's Features**  
**Supporting Life: Earth's Surface and Changing Landforms**

**Water in Our World**  
**The Cycle & Movements of Water**  
**Fresh Water**

**SC.O.8.2.27 identify and explain the principle forces of plate tectonics and related geological events (e.g., earthquakes, volcanoes, or landforms).**

**Discovery Channel Middle School Science**  
**Earth Science Series**  
**Earthquakes**  
**Volcanoes**

**PLATO® Earth and Space Science**  
**Looking at Earth's Features**  
**Earth's Composition**  
**Supporting Life: Earth's Surface and Changing Landforms**

**The Energetic Earth**  
**Plate Tectonics and Earth Movements**  
**Earthquakes**  
**Volcanoes**

**SC.O.8.2.28 determine the impact of oceans on weather and climate; relate global patterns of atmospheric movement on local weather.**

**PLATO® Earth and Space Science**  
**Water in Our World**  
**The Cycle & Movements of Water**  
**The Oceans**

**Weather and Atmospheric Processes**  
**The Atmosphere**  
**Climate**

**SC.O.8.2.29 analyze the forces of tectonics, weathering and erosion that have shaped the earth's surface.**



**Discovery Channel Middle School Science**  
**Earth Science Series**  
**Land and Water**  
**Rocks and Minerals**

**PLATO® Earth and Space Science**  
**Looking at Earth's Features**  
**Earth's Composition**  
**Supporting Life: Earth's Surface and Changing Landforms**

**The Energetic Earth**  
**Plate Tectonics and Earth Movements**  
**Volcanoes**

**Rocks and Soil**  
**Rocks and The Rock Cycle**  
**Weathering, Soil, and Erosion**

**Water in Our World**  
**The Oceans**

**SC.O.8.2.30 model processes of soil formation and suggest methods of soil preservation and conservation.**

**Discovery Channel Middle School Science**  
**Earth Science Series**  
**Land and Water**

**PLATO® Life Science**  
**Organisms and Their Environment**  
**Biomes and Biodiversity**

**PLATO® Earth and Space Science**  
**Looking at Earth's Features**  
**Earth's Composition**

**Rocks and Soil**  
**Weathering, Soil, and Erosion**

**SC.O.8.2.31 research and recognize the societal concerns of exploration and colonization of space.**

**PLATO® Earth and Space Science**  
**Earth, Space, and the Universe**  
**Space: Stars, Galaxies, and the Universe**

**SC.O.8.2.32 explain phenomena associated with motions in sun-earth-moon system (e.g., eclipses, tides, or seasons).**

**Discovery Channel Middle School Science**  
**Earth Science Series**  
**The Universe**

**PLATO® Earth and Space Science**  
**Looking at Earth's Features**  
**Mapping**



**Water in Our World**  
**The Cycle & Movements of Water**

**Weather and Atmospheric Processes**  
**Weather**  
**Climate**

**Earth, Space, and the Universe**  
**The Solar System**  
**The Sun, Earth, and Moon**

**SC.O.8.2.33 describe the origin and orbits of comets, asteroids, and meteoroids.**

**Discovery Channel Middle School Science**  
**Earth Science Series**  
**Solar System**  
**The Universe**

**PLATO® Earth and Space Science**  
**Earth, Space, and the Universe**  
**The Solar System**

### **Standard 3: Application of Science**

**SC.O.8.3.01 synthesize concepts across various science disciplines to better understand the natural world (e.g., form and function, systems, or change over time).**

**Applied Physical Science: Technology Fundamentals**  
**Module: Introducing Energy and Systems**

**Module: Mechanical Systems**

**Module: Fluid Systems**

**Module: Heat Systems**

**Module: Electrical Systems**

**SC.O.8.3.02 investigate, compare and design scientific and technological solutions to personal and societal problems.**

**Discovery Channel Middle School Science**  
**Earth Science Series**  
**Earthquakes**

**Physical Science Series**  
**Motion**

**PLATO® Projects for the Real World, Level I -- Space Center**  
**Spinoffs**  
**2. Inventions**

**SC.O.8.3.03 communicate experimental designs, results and conclusions using advanced technology tools.**

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**Discovery Channel Middle School Science  
Life Science Series  
Birds**

**SC.O.8.3.04 collaborate to present research on current environmental and technological issues to predict possible solutions.**

**Discovery Channel Middle School Science  
Earth Science Series  
Natural Resources**

**PLATO® Life Science  
Organisms and Their Environment  
Biomes and Biodiversity**

**PLATO® Earth and Space Science  
Water in Our World  
The Oceans  
Fresh Water**

**SC.O.8.3.05 explore occupational opportunities in science, engineering and technology and evaluate the required academic preparation.**

**Discovery Channel Middle School Science  
Earth Science Series  
Fossils**

**PLATO® Projects for the Real World, Level I -- Space Center  
Editor's Desk  
I. Edit Notes**

**SC.O.8.3.06 given a current science-technology-societal issue, construct and defend potential solutions.**

**Discovery Channel Middle School Science  
Earth Science Series  
Earthquakes**

**Physical Science Series  
Motion**

**PLATO® Projects for the Real World, Level I -- Space Center  
Spinoffs  
2. Inventions**