* **Subject Area:** Elective

* **Category:** Science-Physical

* **Grade Level for which this course has been designed:** ☑ 9 ☑ 10 ☑ 11 ☐ 12

* **Unit Value:** 1.0 (one year, 2 semesters, or 3 trimesters equiv.)

* **Is this course classified as a Career Technical Education:** No

* **Brief Course Description**

Students will demonstrate understanding of important concepts applicable to the Earth around them and the skies above them. Laboratory inquiry, demonstrations and course work are designed to develop a thorough understanding of the solid earth (geology), the
earth's waters (hydrology and oceanography), the earth's atmosphere (meteorology), and the
universe beyond earth (astronomy).

Pre-Requisites

Grade C or better in Algebra 1 - Required

Co-Requisites

Laboratory component is 20% of course - Required

Algebra 1 - Required

Context for Course (optional)

History of Course Development

(optional)

Textbooks

TEXTBOOK 1

* **Title:**	Earth Science: Geology, Environment and the Universe
* **Edition:**	National Geographic Edition
* **Publication Date:**	2002
* **Publisher:**	Glencoe
* **Author(s):**	Hess, et al
URL Resource:	
* **Usage:**	Primary Text Read in entirety or near entirety

Supplemental Instructional Materials

* **Course Purpose**

Students will demonstrate understanding of important concepts applicable to the Earth around them and the skies above them. Laboratory inquiry, demonstrations and course work are designed to develop a thorough understanding of the solid earth (geology), the
earth's waters (hydrology and oceanography), the earth's atmosphere (meteorology), and the

universe beyond earth (astronomy).
Students will study:
The Nature of Science
Mapping Our World
Matter and Atomic Structure
Minerals
Igneous Rocks
Sedimentary and Metamorphic Rocks
Weathering, Erosion, and Soil
Mass Movements, Wind and Glaciers
Surface Water
Groundwater
Atmosphere
Meteorology
The Nature of Storms
Climate
Physical Oceanography
The Marine Environment
Plate Tectonics
Volcanic Activity
Earthquakes
Mountain Building
Fossils and the Rock Record
The Precambrian Earth
The Paleozoic Era
The Mesozoic and Cenozoic Eras
Earth Resources
Energy Resources
Human Impact on Earth Resources
The Sun-Earth-Moon System
Our Solar System
Stars
Galaxies and the Universe

*** Course Outline**

The following topics are covered in depth through the text, lecture, and lab work.
Each topic is reviewed in class, with student assignments including reading,

responding in writing to section, chapter and unit review, demonstrating knowledge through class presentation, and completing lab assignments and lab manuals.

Unit 1: Earth Science
Chapter 1: The Nature of Science
Earth Science, Methods of Scientists and Communicating in Science
Chapter 2: Mapping Our World
Latitude and Longitude, Types of Maps, Remote Sensing
Unit 2: Composition of Earth
Chapter 3: Matter and Atomic Structure
What are elements?, How Atoms Combine, States of Matter
Chapter 4: Minerals
What is a mineral?
Identifying Minerals
Chapter 5: Igneous Rock
What are igneous rocks?, Classifying Igneous Rocks
Chapter 6: Sedimentary and Metamorphic Rocks
Formation and types of Sedimentary Rocks, Metamorphic Rocks
Unit 3: Surface Processes on Earth
Chapter 7: Weathering, Erosion, and Soil
Weathering, Erosion and Deposition, Formation of Soil
Chapter 8: Mass Movements, Wind, and Glaciers
Mass Movement at Earth's Surface, Wind, Glaciers
Chapter 9: Surface Water
Surface Water Movement, Stream Development, Lakes and Freshwater Wetlands
Chapter 10: Groundwater
Movement, Storage, Erosion/Deposition, Systems
Unit 4: The Atmosphere and the Oceans
Chapter 11: Atmosphere
Basics, State of the Atmosphere, Moisture in the Atmosphere
Chapter 12: Meteorology
Causes of Weather, Weather Systems, Gathering Weather Date, Weather Analysis
Chapter 13: The Nature of Storms
Thunderstorms, Severe Weather, Tropical Storms, Recurring Weather
Chapter 14: Climate
What is climate?, Climate Classification, Climatic Changes, The Human Factor

Chapter 15: Physical Oceanography
The Oceans, Seawater, Ocean Movements
Chapter 16 The Marine Environment
Shoreline Features, The Seafloor
Unit 5: The Dynamic Earth
Chapter 17: Plate Tectonics
Drifting Continents, Seafloor Spreading, Theory of Plate Tectonics, Causes of Plate Motions
Chapter 18: Volcanic Activity
Magma, Intrusive Activity, Volcanoes
Chapter 19: Earthquakes
Forces Within Earth, Seismic Waves and Earth's Interior, Measuring and Locating Earthquakes, Earthquakes and Society
Chapter 20: Mountain Building
Crust-Mantle Relationships, Convergent-Boundary Mountains, Other Types of Mountains
Unit 6: Geologic Time
Chapter 21: Fossils and the Rock Record
The Geologic Time Scale, Relative-Age Dating/Absolute-Age Dating of Rocks, Remains of Organisms in the Rock Record
Chapter 22: The Precambrian Earth
The Early Earth, Formation of the Crust and Continents, Formation of the Atmosphere and Oceans, Early Life on Earth
Chapter 23: The Paleozoic Era
The Early, Middle and Late Paleozoic
Chapter 24: The Mesozoic and Cenozoic Eras
Mesozoic Paleogeography and Life, Cenozoic Paleogeography and Life
Unit 7: Resources and the Environment
Chapter 25: Earth Resources
What are resources?, Land/Air/Water Resources
Chapter 26: Energy Resources
Conventional, Alternative, Conservation of Energy Resources
Chapter 27: Human Impact on Earth Resources
Populations and the Use of Natural Resources, Human Impact on Land/Air/Water Resources
Unit 8: Beyond Earth
Chapter 28: The Sun-Earth-Moon System
Tools of Astronomy, The Moon, The Sun-Earth-Moon System

Chapter 29: Our Solar System
Overview of Our Solar System, The Terrestrial Planets, The Gas Gian Planets, Formation of Our Solar System
Chapter 30: Stars
The Sun, Measuring the Stars, Stellar Evolution
Chapter 31: Galaxies and the Universe
The Milky Way Galaxy, Other Galaxies in the Universe, Cosmology

*** Laboratory Activities**

The course will concentrate on use of scientific method in relation to observing, forming hypotheses, testing hypotheses through experimentation and/or further observation, and forming objective conclusions.
The following hands-on scientific lab topics and activities are directly related to and support class work, involving inquiry, observation, analysis, and write-up. These hands-on activities account for at least 20% of class time.
The activities are of two types: Investigation and Mapping.
In an Investigation activity, students will be presented with a problem. Then, through use of scientific methods, answers will be sought. Conclusions will be based on observations alone or on those made by the entire class, recorded experimental data, and interpretation of what the data and observations mean. In a Mapping activity, students will use existing maps or create
their own to help solve or understand various problems in Earth science.

Chapter 1 The Nature of Science
1.1 INVESTIGATION
Observing and Analyzing Stream Flow
PROBLEM
What conclusions can you draw about some of the processes represented in a stream table?
OBJECTIVES
• Observe a model of natural phenomena.
• Communicate observations clearly and accurately.
• Choose criteria to classify observed phenomena.
Chapter 2 Mapping Our World
2.1 MAPPING
PROBLEM

How can you develop a model of a topographic map and use a topographic map to interpret the shape of a landform?

OBJECTIVES

• Construct a model of a mountain with a minimum of two different elevations.
• Use contour lines on the model to represent changes in elevation.
• Model a topographic map by transferring the contour lines to a flat surface.
• Interpret a map constructed by another student to identify the appropriate model mountain.

Modeling Topographic Maps

2.2 INVESTIGATION

Interpreting Political and Landform Maps

PROBLEM

How can different types of maps be prepared and interpreted for various uses?

OBJECTIVES

• Draw a political map and a landform map of a single location in or near your school or home.
• Describe the strengths and limitations of each map.
• Compare the information provided by political, topographic, and physical maps.

Chapter 3 Matter and Atomic Structure

3.1 INVESTIGATION

Rates of Chemical Reactions

PROBLEM

How can the melting and boiling points of water (a liquid at room temperature) be demonstrated and compared with those of carnauba wax (a solid at room temperature)? Which states of matter will be observed in this demonstration?

OBJECTIVES

• Describe methods of measuring the boiling and freezing points of liquids.
• Plan and carry out a demonstration of changes in state of liquids and solids.
• Generalize your results to the scale of the hydrologic, lithospheric, and atmospheric systems of Earth.
• Predict the variables involved in further investigation of changes in state.

Chapter 4 Minerals

4.1 INVESTIGATION

Growing Crystals

PROBLEM

How do crystals form from solutions?

OBJECTIVES

• Form crystals by evaporating solutions.

• Identify several of the major crystal systems.

Chapter 5 Igneous Rocks

5.1 INVESTIGATION

Comparing Lunar Rocks to Earth Rocks

PROBLEM

How do lunar rocks compare with Earth rocks?

OBJECTIVES

• Estimate mineral percentages in igneous rock samples.

• Identify types of igneous rocks.

• Compare lunar rocks to Earth rocks.

5.2 MAPPING

Locating Igneous Rocks on Earth

PROBLEM

How can you identify where rocks originate?

OBJECTIVES

• Classify igneous rocks based on texture and color.

• Recognize that the characteristics of rocks are linked to their formation conditions and origins.

• Plot the location of igneous rocks on a map.

Chapter 6 Sedimentary and Metamorphic Rocks

6.1 INVESTIGATION

Comparing Chemical Sedimentary Rocks and Modeling Their Formation

PROBLEM

How can you distinguish among different types of chemical sedimentary rocks?
How do chemical sedimentary rocks form?

OBJECTIVES

• Differentiate among several types of chemical sedimentary rocks.

• Simulate the formation of chemical sedimentary rocks.

6.2 MAPPING

Grand Canyon Formations

PROBLEM

How can you interpret Earth's history from the igneous, metamorphic, and sedimentary rocks exposed in the Grand Canyon?

OBJECTIVES

• Interpret a cross section of the Grand Canyon.

• Describe relationships among different rock bodies and layers.

• Hypothesize about some of the ancient environments represented by the rocks in the Grand Canyon.

Chapter 7 Weathering, Erosion, and Soil
7.1 INVESTIGATION
Chemical Weathering and Temperature
PROBLEM
What effect does temperature have on the chemical weathering of limestone?
OBJECTIVES
• Determine the effect of an acid on limestone.
• Model the effect of temperature on the chemical weathering of limestone.
• Calculate the relationship between temperature increase and chemical breakdown.
7.2 MAPPING
Global Soils and Climate
PROBLEM
Are soil types influenced by precipitation and temperature?
OBJECTIVES
• Use maps to compare climate and soils in different regions.
• Relate regional soil types to temperature and rainfall.
Chapter 8 Mass Movements, Wind, and Glaciers
8.1 INVESTIGATION
How Does Wind Erosion Take Place?
PROBLEM
How does wind-blown sand behave around small rocks and other obstructions?
OBJECTIVES
• Observe and compare the effects of moving air on different particle sizes.
• Observe some features of wind deposits.
Chapter 9 Surface Water
9.1 INVESTIGATION
Analyzing Watersheds
PROBLEM
Determine the health of a watershed by analyzing indicators and establish goals to improve the health of the watershed.
OBJECTIVES
• Examine maps showing condition and vulnerability indicators.
• Analyze maps and establish a watershed health report.
• Develop a list of goals aimed at reversing damage and improving the health of the watershed.
9.2 MAPPING
Interpreting a River's Habits

PROBLEM
What can a topographic map tell about a river and its surroundings?
OBJECTIVES
Use a topographic map to answer questions about a river and its valley.
Chapter 10 Groundwater
10.1 INVESTIGATION
Measuring Permeability Rate
PROBLEM
How does the water permeability of different soil components vary?
OBJECTIVES
• Measure the water permeability of various types of soil.
• Compare and contrast the permeability of pure and mixed materials.
Chapter 11 Atmosphere
11.1 INVESTIGATION
Temperature Inversion
PROBLEM
How can you detect a temperature inversion, and how does it trap pollution?
OBJECTIVES
• Graph temperature data for the atmosphere.
• Describe how a temperature inversion affects ground-level pollution.
Chapter 12 Meteorology
12.1 INVESTIGATION
Modeling the Coriolis Effect
PROBLEM
How does the Coriolis effect deflect the movement of air and water in each hemisphere?
OBJECTIVES
• Model the Coriolis effect in the northern and southern hemispheres.
• Sketch various movements caused by the Coriolis effect.
• Infer how the Coriolis effect influences global wind patterns and ocean currents.
Chapter 13 The Nature of Storms
13.1 INVESTIGATION
Building Hurricane-Proof Homes
PROBLEM
How do floods affect rates of erosion and human-built structures?
OBJECTIVES
• Model different types of floods.
• Observe and record rates of erosion.

• Determine how floods affect local communities.
• Discuss ways to reduce flood damage.
Chapter 14 Climate
14.1 INVESTIGATION
Heat Absorption over Land and Water
PROBLEM
How do soil and water compare in their abilities to absorb and release heat?
OBJECTIVES
• Model rates of heat absorption and heat release by land and water.
• Measure and record different rates of heat absorption and heat release in the air over land and water.
• Analyze the effects of heat absorption and heat release on climate.
14.2 MAPPING
Classifying Climates
PROBLEM
How do climates differ from one another?
OBJECTIVES
• Interpret climatic data on a world map.
• Compare and contrast different climates.
• Analyze the factors that make climates different.
Chapter 15 Physical Oceanography
15.1 MAPPING
Ocean Surface Temperatures
PROBLEM
How do ocean surface temperatures vary from place to place?
OBJECTIVES
• Interpret a world map of ocean surface temperatures.
• Compare the surface temperatures of different oceans.
• Analyze why ocean surface temperatures vary.
15.2 INVESTIGATION
Making Waves
PROBLEM
What factors affect the heights of waves?
OBJECTIVES
• Model the movement of waves.
• Measure and record differences in wave heights.
• Infer what factors affect the heights of waves.
Chapter 16 The Marine Environment

16.1 MAPPING
Changes in Sea Level
PROBLEM
How have coastlines and sea level changed during geologic time?
OBJECTIVES
• Observe and measure changes in coastlines.
• Describe changes in sea level over geologic time.
• Predict the impact of rising sea level on coastal regions.
16.2 INVESTIGATION
Observing Brine Shrimp
PROBLEM
Under what conditions do brine shrimp hatch and thrive?
OBJECTIVES
• Culture brine shrimp.
• Observe and record data about the structure and behavior of a crustacean.
• Analyze the effects of different salt concentrations on an aquatic organism.
Chapter 17 Plate Tectonics
17.2 INVESTIGATION
Earthquakes and Subduction Zones
OBJECTIVES
• State a hypothesis about the relative ages of the crust at two convergent boundaries.
• Use earthquake data to construct profiles of two convergent boundaries.
• Compare the behavior of two subducting plates.
Chapter 18 Volcanic Activity
18.2 INVESTIGATION
Analyzing Volcanic-Disaster Risk
PROBLEM
What is the probability that a volcano will erupt in any given year? What does that imply for the cost of insuring people against volcanic disasters?
OBJECTIVES
• Assess the probability of a volcanic disaster.
• Investigate the feasibility of an insurance policy against volcanic disaster.
Chapter 19 Earthquakes
19.1 INVESTIGATION
Earthquake News Report
PROBLEM
Where are earthquakes most likely to occur next ?

OBJECTIVES
• Analyze the locations, magnitudes, and depths of recent earthquakes.
• Predict where earthquakes are most likely to occur in the next few weeks.
Chapter 20 Mountain Building
20.1 INVESTIGATION
Plate Tectonics of North America
PROBLEM
How can the theory of plate tectonics be used to analyze some of the tectonic features of North America?
OBJECTIVES
• Identify the major plates associated with North America and their movements.
• Describe the locations and orientations of major mountain chains of North America.
• Explain how geologic evidence supports the theory of plate tectonics.
• Predict how future tectonic processes might affect the North American continent.
20.2 MAPPING
Analysis of Geologic Maps
PROBLEM
How can geologic maps be used to interpret the processes that have resulted in the major landforms of North America?
OBJECTIVES
• Identify structural elements of the North American continent by rock age and type.
• Describe the tectonic forces that have shaped the mountain ranges of North America.
• Describe some of the geologic characteristics of the Appalachian and Rocky Mountain systems.
• Compare the tectonic history of some of the major mountain chains of North America.
Chapter 21 Fossils and the Rock Record
21.1 INVESTIGATION
Fossilization and Earth's History
PROBLEM
How is evidence of life-forms preserved, and what information is in the fossil record?
OBJECTIVES
• Construct models of fossils formed by molding, casting, and original

preservation.
• Compare the characteristics of different types of fossils.
• Construct possible scenarios for fossil formation.
• Evaluate the quality of information that comes from the fossil record.
Chapter 22 The Precambrian Earth
22.1 INVESTIGATION
Sequencing Time
PROBLEM
How do milestones in the existence of Earth correspond to a human lifespan?
OBJECTIVES
• Compare the proportionate length of a human life to that of Earth.
• Calculate the scale at which Earth's history can be graphically compared to a human lifetime.
• Analyze the timing and scope of the evolution and diversification of life on Earth.
22.2 MAPPING
What came first?
PROBLEM
How can we illustrate the relationship of Precambrian life-forms to those that exist today?
OBJECTIVES
• Represent life-forms that appeared during different periods of Earth's history, beginning with the Precambrian.
• Relate time to the number and complexity of organisms on Earth.
• Describe how information about the Precambrian can be used to analyze planetary materials in the search for life elsewhere in the universe.
Chapter 23 The Paleozoic Era
23.1 MAPPING
Water to Land
PROBLEM
How can we use representative fossils to infer the type of environment in which organisms once lived?
OBJECTIVES
• Map the fossils in a progression of different environments.
• Categorize fossils based on adaptations for survival in sea, beach, or land environments.
• Draw the boundaries of environments on a fossil map.
• Defend interpretations of fossil evidence.
23.2 INVESTIGATION

Searching for Oil with Microfossils

PROBLEM

How do benthic foraminifera indicate potentially good reservoir rock and source rock in an ocean basin?

OBJECTIVES

• Identify eight species of fossil benthic foraminifera and their preferred ocean habitats.

• Analyze diagrams of foraminifera samples for water-depth range.

• Infer water depths in the basin.

• Use water depth to predict where to find potential source rock and reservoir rock.

Chapter 24 The Mesozoic and Cenozoic Eras

24.1 MAPPING

Cenozoic Ice Sheets and Plant Distribution

PROBLEM

How can the relationship between changes in the extent of the Laurentide ice sheet in North America and changes in the distribution of vegetation inform us about climate change during the Cenozoic?

OBJECTIVES

• Describe the distribution of different plant groups in North America at different times during the last ice age.

• Explain the relationship between changes in plant distribution and the extent of the Laurentian ice sheet.

• Make inferences about the relationship between plant distribution and climate change.

24.2 INVESTIGATION

Index Fossils and Dinosaur Bones

PROBLEM

How can dinosaur fossils be traced from one place to another by using index fossils?

OBJECTIVES

• Develop a hypothesis about a correlation between rock layers in Montana and western Canada.

• Identify rock layers that contain index fossils.

• Predict which rock layers in western Canada will contain the same kind of fossils as those in Montana.

Chapter 25 Earth Resources

25.2 INVESTIGATION

Water Usage
PROBLEM
How has water usage changed in the United States since 1950?
OBJECTIVES
• Analyze changing trends in water usage over a 40-year period.
• Determine which categories use the most water per day.
• Discuss conservation methods that might decrease water use.
Chapter 26 Energy Resources
26.2 INVESTIGATION
Assessing Wind Energy
PROBLEM
Is wind energy a viable energy resource for your area?
OBJECTIVES
• Construct a tool to measure wind speed.
• Observe and record wind speeds at different locations.
• Determine if local wind speeds are high enough to generate electricity.
• Consider the advantages and disadvantages of wind energy.
Chapter 27 Human Impact on Earth Resources
27.2 INVESTIGATION
Algal Blooms
PROBLEM
Under what conditions do algae grow best?
OBJECTIVES
• Observe the growth of algae in two controlled experiments.
• Discover what makes algae thrive.
• Recognize that excessive growth of algae may be linked to human activities.
Chapter 28 The Sun-Earth-Moon System
28.1 INVESTIGATION
Make Your Own Telescope
PROBLEM
Which combination of lenses will make the best refracting telescope?
OBJECTIVES
• Measure the diameter and focal length of lenses.
• Find the ideal telescope length, given a pair of lenses whose focal lengths are known.
• Examine the magnification properties of various pairs of lenses.
• Construct a telescope.
Chapter 29 Our Solar System

29.1 INVESTIGATION
Your Age and Weight on Other Planets
PROBLEM
What would your age and weight be if you lived on another planet?
OBJECTIVES
• Calculate your age on the other eight planets of the solar system.
• Calculate your weight on each planet.
Chapter 30 Stars
30.1 INVESTIGATION
Diameter and Rotation of the Sun
PROBLEM
What are the diameter and rotation rate of the Sun?
OBJECTIVES
• Measure the diameter of the Sun.
• Measure the rotational rate of the Sun.
• Estimate the size of sunspots.
30.2 MAPPING
Constellations and the Seasons
PROBLEM
How do stars appear to move in the sky?
OBJECTIVES
• Identify several stars and constellations in the night sky.
• Understand how stars move during a night.
• Understand why different constellations are visible during a year.
• Measure the latitude of your city or town.
Chapter 31 Galaxies and the Universe
31.1 INVESTIGATION
Modeling Spiral Galaxies
PROBLEM
How do the arms of spiral galaxies form?
OBJECTIVES
• Model spiral galaxies.
• Compare and contrast scientific theories about the formation of spiral arms.
• Describe the characteristics of spiral galaxies.
31.2 MAPPING
Three-Dimensional Map of the Local Group
PROBLEM
What does the Local Group of galaxies look like?

OBJECTIVES
• Map the Local Group from three viewpoints.
• Construct a scale model showing the locations of the galaxies of the Local Group.

Key Assignments

The course is designed to cover the following topics through careful text reading, analysis and synthesis of progressive learning. Text assignments will include response to section, chapter, and unit review questions, as well as quizzes, informal checks for understanding, and embedded assessments. Research and demonstration of understanding will include web-based research and presentation, research of current earth science studies through published reports, and current events examination and reporting.
Topics for text assignments, web research and current studies will include but not be limited to:
Applications and Solutions to Problems in the California Setting
The Principle of Conservation as it Applies to the Physical and Environmental World

Earth Science Research Assignment
Theme: Natural Disasters

For this assignment you will research a natural disaster that has occurred in the last century. This excludes such disasters as Chernobyl and others cause by humans. Some examples are earthquakes, hurricanes, volcano eruptions, etc.

Your paper should include the following details: where is occurred, when, why (were there events that led up to the disaster?), who was involved (death, injury, loss of property, species affected), and what the final outcome was. Included should also be the pros and cons of the event- there are ALWAYS pros and cons to any natural disaster.

You will need to cite all sources used using APA formatting and style.
The Challenges That are Inherent to Maintaining Our Planet's Order

Instructional Methods and/or Strategies

College Model of Education: Personalized Learning Model emphasizes independent study while attending Resource Center classes twice weekly (weekly for science labs) Students may choose to meet weekly with their Personalized Learning Teacher and/or Highly Qualified
Teacher instead. The same instructional methods are used in either case.
Classroom Instruction
Direct Instruction
Research Assignments (either individual or group)
Independent Study
Interactive online instruction
Lab assignments/experiements
Work individual with Personalized Learning Teacher/Highly Qualified Teacher
If not enrolled in a class - meet with Highly Qualified Teacher weekly for one hour/week.

Student will use the text as a primary resource. Lecture, laboratory experiments, group projects, individual and group research, oral and written presentation will be used to reinforce learning. Students will summarize each unit and answer questions about each unit, and respond to critical thinking challenges. Students will write well-developed essays that indicate mastery of topics/concepts and to demonstrate college preparatory writing ability. Student will meet weekly with Personalized Learning Teacher/Highly Qualified Teacher to discuss material covered in the course, review work and to take tests, which include comprehensive midterm/final.

*** Assessment Methods and/or Tools**

• Attendance at Resource Center Class twice weekly OR weekly review of work by Personalized Learning Teacher/Highly Qualified Teacher
• Written assignments evaluated by provided writing rubrics
• Oral presentations
• Discussions: classroom participation and small group work. If not enrolled in Resource Center class then weekly discussions with Personalized Learning Teacher/Highly Qualified Teacher.
• Weekly homework assignments
• Chapter/Unit tests
• Comprehensive midterm/final
Assessment tools may also include the following:

- Participation in weekly lab activity with graded lab manual (science courses)
- Student demonstrations
- Student work samples
- Research Projects
- Projects: Power Point Presentation, brochures, community service, etc.

* Lab Notebook

Exams, homework assignments, discussions, oral presentations, and writing assignments are used to assess student progress. Exams for each unit consist of short essay format or extensive essay. Essays emphasize critical thinking skills and demonstrate analysis and synthesis of ideas. All work is corrected by the course instructor and/or Personalized Learning Teacher/Highly Qualified Teacher. Feedback is provided on all written work with student revision and rewrite completed when appropriate.

Print Close

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