

MODESTO CITY SCHOOLS COURSE OUTLINE

Course Title	Earth Space Science OLL S1	Earth Space Science OLL S2
Course Number	OLL54401	OLL54402
Recommended Grade	<input type="checkbox"/> 7 <input type="checkbox"/> 8 <input checked="" type="checkbox"/> 9 <input checked="" type="checkbox"/> 10 <input checked="" type="checkbox"/> 11 <input checked="" type="checkbox"/> 12	
Duration	<input type="checkbox"/> Quarter <input checked="" type="checkbox"/> Semester	
Credit	<input type="checkbox"/> 2.5 <input checked="" type="checkbox"/> 5 <input type="checkbox"/> 10	
Repeatable for Credit	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Required for Graduation	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Meets Graduation Requirement	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
CALPADS Course Number	9321	
CALPADS Course Name	Earth and Space Sciences	
Meets UC/CSU Requirements	<input type="checkbox"/> Yes <input type="checkbox"/> No If yes, which area? <input type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> C <input type="checkbox"/> D <input type="checkbox"/> E <input type="checkbox"/> F <input type="checkbox"/> G	
CTE Course	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
CTE Course Level	<input type="checkbox"/> Introduction <input type="checkbox"/> Concentrator <input type="checkbox"/> Capstone N/A	
Part of a Course Pathway	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, which pathway?	
Credential Requirements		
Replaces	N/A	
Recommended Prerequisites	N/A	
Aligned to Standards Date		
Content Delivery Method	<input type="checkbox"/> Instructor Led <input checked="" type="checkbox"/> Online Provider Modesto Virtual Academy	
Other Information		
Board Approval Date		
Implementation Date	Fall 2020	

Course Description:

Required Text(s): (Title, Publisher, Year):

Supplementary Materials(s):



Course Name: Earth Space Science v19

Course Credit: 1

Course Estimated Completion Time: 2 segments/32-36 weeks

Course Description: Be captivated by the wonders and beauty of the third planet from our Sun, Earth. Be amazed by what awaits your discovery within our solar system and beyond. Explore the universe. Earth/Space Science is a laboratory course focusing on the study of space, geologic structures and forces, the waters on our planet, and atmospheric conditions. Through experimentation and investigation, students explore the earth systems including the geosphere, hydrosphere, cryosphere, atmosphere, and the carbon cycle. This course offers interactive experiences, higher-order thinking, collaborative projects, and real-world application along with a variety of assessments. Upon completion of the course, students have a clear understanding of the dynamic forces at work in the world around them, becoming better caretakers of our planet, Earth.

Prerequisites: None

Honors Lessons: Yes

Course Profile (Includes Honors, if applicable)

Type of Assessment	Quantity	Location(s)
Teacher-graded	26	01.05 Atomic Structure and Forces 01.06 Matter and Energy 02.04 Meteorology 02.05 Severe Weather (Honors) 03.01: Surface Water 03.02: Groundwater 03.05: Fresh Water Discussion-Based Assessment 04.02: Exploring the Universe 04.04: Origin and Expansion of the Universe 04.05: Our Universe Discussion-Based Assessment 05.03: Rocks and Minerals as Resources (Honors) 06.01: Geologic Time Scale 06.03: Origin and Evolution of Life 07.02: Ocean Circulation 07.04: Tides and Water Power (Honors) 08.02: Forces in Our Solar System 08.06: The Earth-Sun-Moon System 09.03: Mechanisms of Movement
Auto-graded	60	01.01: Welcome to Earth Space Science 01.02: Scientific Investigation 01.03: Theories and Laws 01.04: Measurement 01.04: Measurement (Honors) 01.08: Beginning with Science Module Exam 01.08: Beginning with Science Module Exam (Honors) 02.00: Climate and Meteorology Pretest 02.01: Water Cycle 02.02: The Atmosphere 02.03: Weather vs. Climate 02.05: Severe Weather 02.06: Global Climate Change 02.08: Climate and Meteorology Module Exam 02.08: Climate and Meteorology Module Exam (Honors) 03.00: Fresh Water

		Pretest 03.03: Water Quality 03.04: Water Conservation 03.06: Fresh Water Module Exam 03.06: Fresh Water Module Exam (Honors) 04.00: Our Universe Pretest 04.01: Light and the Universe 04.02: Exploring the Universe (Honors) 04.03: Life Cycle of a Star 04.06: Our Universe Module Exam 04.06: Our Universe Module Exam (Honors) 05.00: Rocks and Minerals Pretest 05.01: Minerals Active 05.02: Rocks and the Rock Cycle Active 05.03: Rocks and Minerals as Resources 05.04: Soil and Soil Formation 05.06: Rocks and Minerals Module Exam 05.06: Rocks and Minerals Module Exam (Honors) 06.00: Geologic Time Pretest 06.02: Relative and Absolute Time 06.02: Relative and Absolute Time (Honors) 06.05: Geologic Time Module Exam 06.05: Geologic Time Module Exam (Honors) 07.00: Oceans Pretest 07.01: Characteristics of the Ocean 07.03: Waves 07.04: Tides and Water Power 07.05: Ocean Interactions 07.07: Oceans Module Exam 07.07: Oceans Module Exam (Honors) 08.00: Our Solar System Pretest 08.01: Formation of Our Solar System 08.03: Physical Properties of the Sun 08.04: Objects in Our Solar System 08.04: Objects in Our Solar System (Honors) 08.05: The Earth in Space 08.08: Our Solar System Module Exam 08.08: Our Solar System Module Exam (Honors) 09.00: The Geosphere Pretest 09.01: Structure of the Earth 09.02: The Carbon Cycle Active 09.04: Structural Geology 09.05: Geologic Events (Honors) 09.07: The Geosphere Module Exam 09.07: The Geosphere Module Exam (Honors)
Partial Auto-graded	4	05.07 Segment One Exam 05.07 Segment One Exam (Honors) 09.08 Segment Two Exam 09.07 Segment Two Exam (Honors)
Discussion-Based (DBA)	9	01.07 Beginning With Science 02.07 Climate and Meteorology 03.05 Fresh Water 04.05 Our Universe 05.05 Rocks and Minerals 06.04 Geologic Time 07.06 Oceans 08.07 Our Solar System 09.06 The Geosphere
Collaboration	2	Collaboration Module Segment 01 Collaboration Module Segment 02
Project-based	6	Beginning with Science 01.05 Climate and Meteorology 02.05 (Honors) Rocks and Minerals 05.03 (Honors) Geologic Time 06.01 Geologic Time 06.03 Oceans 07.04 (Honors)
Total Assessments	90	

Types of Assessments (Includes Honors, if applicable)

Type of Assessment	Available	Type of Assessment	Available
Multiple Choice	Yes	Essay	No
Worksheets	No	Collaborative	Yes
Web 2.0	Yes	Short Response	Yes
Project - Based	Yes	Labs	Yes
Self - Check	No	DBAs	Yes

Scope and Sequence

Segment 1:

Module 01—Beginning with Science

- Earth spheres and systems
- Science processes, observations, and inferences
- Steps of the scientific method
- Science vs. pseudoscience
- Theory vs. law
- Units of measurements
- Precision and accuracy
- Dimensional analysis
- Weight vs. mass
- Volume and density
- Physical properties of matter
- Atomic theory and structure
- Fundamental forces
- States of matter
- Heat and energy

Module 02 – Climate and Meteorology

- Water cycle
- Water conservation
- Wind energy
- Composition and structure of Earth's atmosphere
- Weather vs. climate
- Measuring, detecting, and predicting weather
- Factors of severe weather

- Human impact on global climate
- Earth-Sun-Moon relationships

Module 03 – Fresh Water

- Distribution of surface water
- Hydroelectric power
- Groundwater processes and geological features
- Sources and types of water pollution
- Water management and conservation
- Fresh water sources (CA only)
- Relationship between CA economy and natural resources (CA only)

Module 04 – Our Universe

- Life cycle of stars
- Properties of waves
- Star energy and radiation
- Gravitational forces
- Big bang and supporting evidence
- Electromagnetic radiation and technology
- Nuclear fusion within stars
- Origin of the moon (TX only)

Module 05 – Rocks and Minerals

- Properties of minerals
- Identifying rocks and minerals
- Rock cycle
- Rocks and minerals as resources
- Formation of soils
- Geological features formed by rock cycle

- Interactions and changes between Earth systems

SEGMENT 2

Module 06 – Geologic Time

- Major events of Earth's history
- Fossil and rock dating
- Conditions of early Earth
- Development of life
- Coevolution of Earth systems

Module 07 – Oceans

- Ocean structure and composition
- Ocean currents and circulation
- Interaction of ocean and climate
- Energy transfer through waves
- Ocean tides
- Ocean impact on other systems

Module 08 – Our Solar System

- Formation of the solar system
- Gravity and planetary motion
- Structure of the solar system
- Properties of planets
- Creation of moon
- Seasons
- Tides
- Eclipses
- Moon phases

Module 09 – The Geosphere

- Structure of the Earth
- Earth's characteristics and composition
- Carbon cycle
- Continental drift
- Plate tectonics
- Land formations
- Types of faults
- Weathering and erosion
- Earthquakes
- Volcanic activity
- Geological hazards of California (CA only)