

MODESTO CITY SCHOOLS COURSE OUTLINE

Course Title	Biology OLL S1	Biology OLL S2
Course Number	Oll54101	Oll54102
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	9324	
CALPADS Course Name	Biology	
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: Biology v20 (GS)

Course Credit: 1.0

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

Course Description: The Biology course guides students through the study of living and non-living systems and how they interact with one another. Students explore the world they live in by posing questions and seeking answers through scientific inquiry. Discovery takes place through observation and data collection. The students will be introduced to the structure, function, diversity, and evolution of living matter. This is a course with real relevance. It encourages curiosity and provides opportunity for students to work on hands on lab activities and develop relationships through collaboratively learning. Engaging in the study of biological science broadens the picture of the world around us.

Prerequisites: None

Honors Lessons: Yes

Course Profile (Includes Honors, if applicable)

Type of Assessment	Quantity	Location(s)
Teacher-graded	21	
Auto-graded	33	
Partial Auto-graded	14	
Discussion-Based (DBA)	7	1.04, 2.08, 3.09, 4.06, 5.04, 6.09, 7.07
Collaboration	2	Index page
Project-based		
Total Assessments	68	

Types of Assessments (Includes Honors, if applicable)

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

Scope and Sequence

Starting Segment 1 or Segment 2:

Foundations of Biology

- Science processes
- Observations and inferences
- Historical frame of reference- scientists and explorers
- Theory vs. law, science vs. pseudoscience
- Properties of Carbon Atoms
- Carbohydrates / Proteins/Lipids/Nucleic Acids
- The origin of life on Earth
- Universal genetic code
- Anaerobic respiration (honors)
- Discovery of cells

Segment 1

Life's Origin

- Properties of water
- Technology / Microscopes
- Cell Theory
- Theory of Endosymbiosis (honors)
- Cell Membrane
- Osmosis / Diffusion
- Active Transport
- Prokaryotic and Eukaryotic Cells
- Comparison of plant and animal cells
- Energy and ATP
- Cell Respiration
- Fermentation
- Glycolysis
- Krebs cycle / Calvin cycle
- Stages of Photosynthesis
- Light Dependent/Independent Reactions

Cell Reproduction

- Cell Cycle
- Mitosis
- Meiosis
- Binary Fission (honors)
- Cancer
- History of Genetics
- Discovery of DNA and its role in genetics and heredity
- Principles of Genetics and Heredity
- Mutations
- Biotechnology

Earth's Diversity

- Levels of Organization
- Biotic and Abiotic Factors
- Energy in the Ecosystem
- Food Chains and Food Webs
- Climate / Climate Zones
- Biomes
- Marine Ecosystems
- Habitat / Niche

- Successions
- Populations
- Threats to Biodiversity
- Air / Water Quality
- Human Population growth
- Cycling Matter
- Making Informed Decisions
- Earth's Hydrologic and Biogeochemical cycles (honors)

Segment 2

Scientific Connections

- Theories on Evolution
- Catastrophism / Gradualism / Uniformitarianism
- Evidence of Evolution
- Artificial Selection
- Natural Selection
- Patterns of Evolution
- Primate Evolution
- Molecular Evolution (honors)

Classification and Diversity

- Classification Systems
- Introduction to the kingdoms of life
- Taxonomy of bacteria
- Viruses vs. bacteria
- Taxonomy of protists
- General characteristics of protists
- Taxonomy of Fungi
- General characteristics of fungi
- Taxonomy of plants
- Adaptations of plants
- Structure and function in plants
- Importance of plants
- Plant reproduction, pollination
- Fruits, seeds, seed dispersal
- Taxonomy of animals
- Characteristics of invertebrates
- Characteristics of vertebrates

Human Body Systems

- Nervous and Endocrine Systems
- Respiratory and Circulatory Systems
- Digestive and Excretory Systems
- Muscular/Skeletal/Integumentary Systems
- Reproductive System
- Immune System