	CONTENT	SKILLS	ASSESSMENTS
	<ul> <li>UNIT 1: LIFE PROCESSES</li> <li>How do we determine living from non-living?</li> <li>What are the unifying processes of life?</li> </ul>	<ul><li>Concept maps</li><li>Venn diagrams</li><li>Word splash</li></ul>	Tests, quizzes
septemb	<ul> <li>UNIT 2: TOOLS USED BY BIOLOGISTS</li> <li>What are the essential steps of any scientific investigation?</li> <li>How do we interpret scientific information?</li> </ul>	<ul> <li>Ability to use tools (centrifuge, chromatography, etc.)</li> <li>Develop a hypothesis</li> <li>Write a lab procedure</li> <li>Observation skills</li> <li>Demonstrate safety procedures</li> </ul>	<ul><li>Tests, Quizzes</li><li>Labs</li></ul>
r	<ul> <li>UNIT 3: CLASSIFICATION OF ORGANISMS</li> <li>Why is a system of classification required in biology?</li> <li>What is the essence of a good classification scheme?</li> </ul>	Read and analyze a scientific article	<ul> <li>Written analysis of scientific article</li> <li>Powerpoint project</li> <li>Tests, quizzes</li> <li>Labs</li> </ul>
October	<ul> <li>UNIT 4: EVOLUTION</li> <li>What evidence do we have of past life?</li> <li>How do we interpret our fossil record?</li> </ul>	<ul> <li>Read and analyze a scientific article</li> </ul>	<ul> <li>Written analysis of scientific article</li> <li>Tests and quizzes</li> <li>Labs</li> </ul>

	CONTENT	SKILLS	ASSESSMENTS
N o v e m b e r	<ul> <li>UNIT 5: BIOCHEMISTRY</li> <li>How do we differentiate between organic and inorganic compounds?</li> <li>What are the essential biochemical molecules of life?</li> <li>Why are enzymes so important to life functions?</li> </ul>	<ul> <li>Model building</li> <li>Writing and identifying chemical structures</li> <li>Identify chemical reaction of hydrolysis and dehydration synthesis</li> <li>Design a controlled experiment</li> </ul>	<ul> <li>Enzyme cartoon</li> <li>Enzyme essay</li> <li>Written analysis of scientific article</li> <li>Complete lab write-up of student-designed controlled experiment</li> <li>Tests and quizzes</li> <li>Labs</li> </ul>
December	<ul> <li>UNIT 6: CELL STRUCTURES AND FUNCTION/CELLULAR</li> <li>TRANSPORT</li> <li>How is "cell theory" fundamental to understanding life's basic building blocks?</li> <li>What is the hierarchy of a cell's internal organization?</li> </ul>	<ul> <li>Make wet mount slides</li> <li>Identify cell parts and functions</li> <li>Focus microscope</li> <li>Measure cells with microscope</li> </ul>	<ul> <li>Cell cookies</li> <li>Cell analogy project</li> <li>Edible cell project</li> <li>Tests and quizzes</li> <li>Labs</li> </ul>

	CONTENT		SKILLS		ASSESSMENTS
Januar y	<ul> <li>UNIT 7: CELLULAR RESPIRATION/PHOTOSYNTHESIS</li> <li>Why is cellular respiration important for living things?</li> <li>Why do we breathe?</li> <li>Why do we breathe?</li> <li>What is the role of ATP in living systems?</li> <li>Why are oxidation-reduction reactions essential to life?</li> </ul>	•	Read and analyze a scientific article	•	Written analysis of scientific article Tests and quizzes Midterm examination Labs
February	<ul> <li>UNIT 8: ANATOMY AND PHYSIOLOGY</li> <li>How is form related to function in living organisms?</li> <li>How does the interrelation of organ systems maintain homeostasis?</li> <li>How do anatomy and physiology reveal unifying features of biology?</li> <li>What are the functions of the seven basic organ systems?</li> </ul>	•	Dissection Identify parts and functions Take pulse rate using sphignometer to get Diastolic/Systolic numbers Design a controlled experiment	•	Medical Book (relate to the disruption of homeostasis) New Drug analysis paper- using advertisement Written analysis of scientific article Complete lab write-up of student-designed controlled experiment Tests and quizzes Labs

March - Apr	<ul> <li>UNIT 9: GENETICS</li> <li>What are Mendel's laws and how did they impact genetics?</li> <li>What are the roles of DNA and RNA in living things?</li> <li>How does the process of gene expression work in living cells?</li> </ul>	<ul> <li>Use Punnett Squares to complete genetics problems</li> <li>Construct a simple DNA Model</li> <li>Use a genetic code chart to arrange sequence of amino acids</li> <li>Transcribe RNA from DNA and to Codons</li> <li>Interpret DNA fingerprints- DNA mapping</li> <li>Do test crosses graphically to construct a simple family</li> </ul>	<ul> <li>Article analysis on modern genetics/genetic engineering</li> <li>Complete lab write up of student-designed controlled experiment</li> <li>Tests and quizzes</li> <li>Labs</li> </ul>
i I M a Y	<ul> <li>UNIT 10: ECOLOGY</li> <li>What is the relationship between biotic and abiotic factors in the environment?</li> <li>What kind of energy flow is required to maintain a stable, self-sustaining ecosystem?</li> <li>What impact have humans had on the natural ecosystems found on our planet?</li> </ul>	<ul> <li>Read and analyze a scientific article</li> <li>Design a controlled experiment</li> </ul>	<ul> <li>Written analysis of scientific article</li> <li>Complete lab write-up of student designed controlled experiment</li> <li>Tests and quizzes</li> <li>Labs</li> </ul>

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10 Week Mini- Course	<ul> <li>REPRODUTION AND DEVELOPMENT</li> <li>What is the genetic code and how does it affect living things?</li> <li>Why is reproduction so important to living organisms?</li> <li>How are sexual and asexual reproduction similar yet</li> </ul>	Read and analyze a scientific article	<ul> <li>Written analysis of scientific article</li> <li>Embryology book</li> <li>Cancer paper</li> <li>Birth defects paper</li> <li>Tests and quizzes</li> <li>Labs</li> </ul>
	<ul> <li>How are sexual and asexual reproduction similar yet different?</li> <li>What is the process by which new cells arise from old cells?</li> <li>How do cells differentiate to produce all the structures found in living things?</li> <li>What are the structures and functions of the male and female reproductive systems and what role do hormones play in each?</li> <li>How do fertilization</li> </ul>		
	implantation, and embryonic development work to create a human being?		