

Connect Academy: Science Core Classes

Course	Description	Type	Grade	PreReq
Biology	This course provides learning experiences that will allow students to develop an appreciation for biological processes and to discover how life science is an integral part of other sciences and of society. Students will gain an understanding of the cell, molecular basis of heredity, and biological evolution. The course will direct students to investigate the interdependence of organisms as well as acquire an understanding of the matter, energy and organization in living systems, as well as their ability to demonstrate adaptive responses.	Standard	10-12	
Biology Honors	This course will provide learning experiences to aid students in developing an appreciation for biological processes and discovering how life science is an integral part of other sciences and society. Students will gain a deep understanding of the cell, the molecular basis of heredity, and biological evolution. Students will investigate the interdependence of organisms. The course will challenge students to acquire a thorough understanding of matter, energy, and organization in living systems, as well as their adaptive responses. Students will be expected to demonstrate independence in learning and to produce quality work.	Honors	9-10	

Chemistry	This course will provide an introduction to the structure of matter and chemical reactions. Topics will include structure of atoms, structure and properties of matter, and chemical reactions.	Standard	10-12	Math 3
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Honors Chemistry	<p>This course is designed to engage highly motivated students in inquiry-based instruction and to develop a conceptual understanding of matter, energy, and their interaction. Students will integrate science content, scientific inquiry, experimentation and technological design to build science literacy. The course will emphasize creativity, critical thinking, problem-solving, collaboration; communication, initiative, and accountability as students analyze the structure of atoms, form an understanding of the behavior of atoms and relationship among pressure, temperature, volume and phase, and analyze chemical reactions. The course will demonstrate a differentiated curriculum with enrichment and studies of reduction-oxidation and entropy.</p>	Honors	10-12	Math 3
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Earth/Environmental Science	<p>This course will provide learning opportunities for students so that they will build an understanding of earth materials, processes, changes, and uses with concerns for good stewardship. Students will also develop an understanding of plate tectonics and their human impacts and the origin and evolution of the earth system. The course will provide experiences to investigate the hydrosphere and its influences on the lithosphere, the atmosphere, and its processes influencing climate and air quality. Students will also acquire an understanding of the earth in the solar system and its position in the universe and will consider alternate choices facing human societies in their stewardship of the earth.</p>	Standard	9-10	
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Earth/Environmental Science Honors	<p>This course will provide learning opportunities for students to build an understanding of earth materials, processes, changes, and uses with concerns for good stewardship. Through a faster, more independently-focused pace, students will develop an understanding of plate tectonics, their human impacts, and the origin and evolution of the earth system. Students will explore the dynamics of the atmosphere and its processes influencing climate and air quality. A deep exploration of the earth in the solar system and its position in the universe will occur; students will consider alternative choices facing human societies in their stewardship of the earth using higher-order thinking and problem-solving strategies.</p>	Honors	9-10	
Physical Science	<p>This course will provide students a foundation for the study of matter - properties and change; energy - conservation and transfer; forces and motion; and the interaction of energy and matter. Topics from the fields of chemistry and physics will be investigated.</p>	Standard	10-12	