VERMONT
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Vermont Middle Level Course Map: Standards-Organized Model

Grade 6—Course 1	Grade 7—Course 2	Grade 8—Course 3
Motion	**Energy**	**Matter**
MS-PS2-1 Newton's Laws—3 *	MS-PS3-1 Kinetic Energy	MS-PS1-1 Molecules
MS-PS2-2 Newton's Laws 1 & 2	MS-PS3-2 Potential Energy	MS-PS1-2 Chemical Reactions
MS-PS2-3 Electrical/Magnetic Forces	MS-PS3-3 Thermal Energy *	MS-PS1-3 Synthetic Materials
MS-PS2-4 Gravitational Interactions	MS-PS3-4 Matter/Mass/Energy	MS-PS1-4 Thermal/Particulates
MS-PS2-5 Forces Between Objects*	MS-PS3-5 Energy Transfer	MS-PS1-5 Conservation of Mass
		MS-PS1-6 Release/Absorb Energy*
		Waves
		MS-PS4-1 Wave Structure
		MS-PS4-2 Wave Behavior
		MS-PS4-3 Wave Application
Ecosystems	**Molecules to Organisms**	**Heredity/Evolution**
MS-LS2-1 Resources/Populations	MS-LS1-1 Cells	MS-LS3-1 Genes/Mutations
MS-LS2-2 Organisms/Ecosystems	MS-LS1-2 Cell Part s Functions	MS-LS3-2 Cellular Reproduction
MS-LS2-3 Cycling of Matter	MS-LS1-3 Body Systems/Tissues	MS-LS4-1 Fossil Record
MS-LS2-4 Biotic/Abiotic Effects on Populations	MS-LS1-4 Adaptations for Reproduction	MS-LS4-2 Anatomical Similarities of Organisms
MS-LS2-5 Biodiversity *	MS-LS1-5 Organism Growth	MS-LS4-3 Embryology
	MS-LS1-6 Photosynthesis	MS-LS4-4 Genetic Variation
	MS-LS1-7 Cellular Respiration	MS-LS4-5 Inheritance Technology
	MS-LS1-8 Nervous System	MS-LS4-6 Natural Selection
Earth/Human Impact	**Earth's Place in the Universe**	**Earth Systems**
MS-ESS3-1 Earth Resources	MS-ESS1-1 Earth/Moon/Sun	MS-ESS 2-1 Geologic Cycle
MS-ESS3-2 Natural Hazards	MS-ESS1-2 Gravity/Solar System	MS-ESS 2-2 Geologic Processes
MS-ESS3-3 Human Impact *	MS-ESS1-3 Scale Properties	MS-ESS 2-3 Plate Motion *
MS-ESS3-4 Human Populations	MS-ESS1-4 Rock Strata	MS-ESS 2-4 Water Cycle
MS-ESS 3-5 Climate questions	MS-ESS3-1 Geoscience Processes	MS-ESS 2-5 Air Masses/Weather
		MS-ESS 2-6 Oceans/Climate
* **Opportunity for Engineering**	* **Opportunity for Engineering**	* **Opportunity for Engineering**
MS-ETS 1-1 Design Criteria/ Constraints	MS-ETS 1-1 Design Criteria/ Constraints	MS-ETS 1-1 Design Criteria/ Constraints
MS-ETS 1-2 Evaluate Solutions	MS-ETS 1-2 Evaluate Solutions	MS-ETS 1-2 Evaluate Solutions
MS-ETS 1-3 Compare Design	MS-ETS 1-3 Compare Design	MS-ETS 1-3 Compare Design
MS-ETS 1-4 Optimal Design Process	MS-ETS 1-4 Optimal Design Process	MS-ETS 1-4 Optimal Design Process

*Indicates Engineering connections

Revised: October 22, 2015