

Grade 8, arranged by DCI	Content Alignment Level	Content Alignment	Cluster & Item Ranges - Operational					
			Min Clusters	Max Clusters	Min Stand Alone Items	Max Stand Alone Items	Min Clusters + Stand Alone Items	Max Clusters + Stand Alone Items
Discipline - Physical Science, PE Total = 19	Science Disciplin	PS	2	2	4	4	6	6
DCI - Matter and Its Interactions	DCI	PS1	0	1	0	2	0	3
MS-PS1-1 : Structure & Properties of Matter	PE	MS-PS1-1	0	1	0	1	0	1
MS-PS1-2 : Structure & Properties of Matter, Chemical Reactions	PE	MS-PS1-2	0	1	0	1	0	1
MS-PS1-3 : Structure & Properties of Matter, Chemical Reactions	PE	MS-PS1-3	0	1	0	1	0	1
MS-PS1-4 : Structure & Properties of Matter, Energy	PE	MS-PS1-4	0	1	0	1	0	1
MS-PS1-5 : Chemical Reactions	PE	MS-PS1-5	0	1	0	1	0	1
MS-PS1-6 : Chemical Reactions*	PE	MS-PS1-6	0	1	0	1	0	1
DCI - Motion and Stability: Forces and Interactions	DCI	PS2	0	1	0	2	0	3
MS-PS2-1 : Forces & Motion*	PE	MS-PS2-1	0	1	0	1	0	1
MS-PS2-2 : Forces & Motion	PE	MS-PS2-2	0	1	0	1	0	1
MS-PS2-3 : Types of Interactions	PE	MS-PS2-3	0	1	0	1	0	1
MS-PS2-4 : Types of Interactions	PE	MS-PS2-4	0	1	0	1	0	1
MS-PS2-5: Types of Interactions	PE	MS-PS2-5	0	1	0	1	0	1
DCI - Energy	DCI	PS3	0	1	0	2	0	3
MS-PS3-1 : Energy	PE	MS-PS3-1	0	1	0	1	0	1
MS-PS3-2 : Energy, Relationship Between Energy and Forces	PE	MS-PS3-2	0	1	0	1	0	1
MS-PS3-3 : Energy, Conservation of Energy*	PE	MS-PS3-3	0	1	0	1	0	1
MS-PS3-4 : Energy, Conservation and Transfer of Energy	PE	MS-PS3-4	0	1	0	1	0	1
MS-PS3-5 : Conservation and Transfer of Energy	PE	MS-PS3-5	0	1	0	1	0	1
DCI - Waves and Their Applications in Technologies for Information Transfer	DCI	PS4	0	1	0	2	0	3
MS-PS4-1 : Wave Properties	PE	MS-PS4-1	0	1	0	1	0	1
MS-PS4-2 : Wave Properties & Electromagnetic Radiation	PE	MS-PS4-2	0	1	0	1	0	1
MS-PS4-3 : Information Technologies	PE	MS-PS4-3	0	1	0	1	0	1
Discipline - Life Science, PE Total = 19	Science Disciplin	LS	2	2	4	4	6	6
DCI - From Molecules to Organisms: Structures and Processes	DCI	LS1	0	1	0	2	0	3
MS-LS1-1 : Structure and Function	PE	MS-LS1-1	0	1	0	1	0	1
MS-LS1-2 : Structure and Function	PE	MS-LS1-2	0	1	0	1	0	1
MS-LS1-3 : Structure and Function	PE	MS-LS1-3	0	1	0	1	0	1
MS-LS1-4 : Growth and Development of Organisms	PE	MS-LS1-4	0	1	0	1	0	1
MS-LS1-5 : Growth and Development of Organisms	PE	MS-LS1-5	0	1	0	1	0	1
MS-LS1-6 : Organization of Matter and Energy Flow in Organisms	PE	MS-LS1-6	0	1	0	1	0	1
MS-LS1-7 : Organization of Matter and Energy Flow in Organisms	PE	MS-LS1-7	0	1	0	1	0	1
DCI - Ecosystems: Interactions, Energy, and Dynamics	DCI	LS2	0	1	0	2	0	3
MS-LS2-1 : Interdependent Relationships in Ecosystems	PE	MS-LS2-1	0	1	0	1	0	1
MS-LS2-2 : Interdependent Relationships in Ecosystems	PE	MS-LS2-2	0	1	0	1	0	1
MS-LS2-3 : Cycle of Matter & Energy in Ecosystems	PE	MS-LS2-3	0	1	0	1	0	1
MS-LS2-4 : Ecosystem Dynamics, Functioning, and Resilience	PE	MS-LS2-4	0	1	0	1	0	1
MS-LS2-5 : Ecosystem Dynamics, Biodiversity and Humans*	PE	MS-LS2-5	0	1	0	1	0	1
DCI - Hereditary: Inheritance and Variation of Traits	DCI	LS3	0	1	0	2	0	3
MS-LS3-1 : Inheritance and Variation of Traits	PE	MS-LS3-1	0	1	0	1	0	1

MS-LS3-2 : Inheritance and Variation of Traits	PE	MS-LS3-2	0	1	0	1	0	1
DCI - Biological Evolution: Unity and Diversity	DCI	LS4	0	1	0	2	0	3
MS-LS4-1 : Evidence of Common Ancestry and Diversity	PE	MS-LS4-1	0	1	0	1	0	1
MS-LS4-2 : Evidence of Common Ancestry and Diversity	PE	MS-LS4-2	0	1	0	1	0	1
MS-LS4-4 : Natural Selection	PE	MS-LS4-4	0	1	0	1	0	1
MS-LS4-5 : Natural Selection	PE	MS-LS4-5	0	1	0	1	0	1
MS-LS4-6 : Adaptation	PE	MS-LS4-6	0	1	0	1	0	1
Discipline - Earth and Space Science, PE Total = 14	Science Disciplin	ESS	2	2	4	4	6	6
DCI - Earth's Place in the Universe	DCI	ESS1	0	1	0	2	0	3
MS-ESS1-1 : The Universe and Its Stars, Earth and the Solar System	PE	MS-ESS1-1	0	1	0	1	0	1
MS-ESS1-2 : The Universe and Its Stars, Earth and the Solar System	PE	MS-ESS1-2	0	1	0	1	0	1
MS-ESS1-3 : Earth and the Solar System	PE	MS-ESS1-3	0	1	0	1	0	1
DCI - Earth's Systems	DCI	ESS2	0	1	0	2	0	3
MS-ESS2-1 : Earth's Materials & Systems	PE	MS-ESS2-1	0	1	0	1	0	1
MS-ESS2-2 : Earth's Materials & Systems, Roles of Water	PE	MS-ESS2-2	0	1	0	1	0	1
MS-ESS2-3 : Plate Tectonics	PE	MS-ESS2-3	0	1	0	1	0	1
MS-ESS2-4 : Roles of Water in Earth's Surface Processes	PE	MS-ESS2-4	0	1	0	1	0	1
MS-ESS2-5 : Roles of Water, Weather & Climate	PE	MS-ESS2-5	0	1	0	1	0	1
MS-ESS2-6 : Roles of Water, Weather & Climate	PE	MS-ESS2-6	0	1	0	1	0	1
DCI - Earth and Human Activity	DCI	ESS3	0	1	0	2	0	3
MS-ESS3-1 : Natural Resources	PE	MS-ESS3-1	0	1	0	1	0	1
MS-ESS3-2 : Natural Hazards	PE	MS-ESS3-2	0	1	0	1	0	1
MS-ESS3-3 : Human Impacts*	PE	MS-ESS3-3	0	1	0	1	0	1
MS-ESS3-4 : Human Impacts	PE	MS-ESS3-4	0	1	0	1	0	1
ME-ESS3-5 : Global Climate Change	PE	ME-ESS3-5	0	1	0	1	0	1
Total PE= 55			6	6	12	12	18	18

*These PE's have an Engineering component