8th grade Science Curriculum

Concept	Content (DCI)	SEP	Assessment	Standard

Structure and Properties of Matter
 	
Matter and Its Interactions
	• atomic structure
	• Periodic Table
	• molecular structure
	• states of matter
	• changes in states of matter (focus on thermal energy)
	• chemical reactions
	  ○ chemical changes
	  ○ energy changes
	  ○ conservation of mass
		• analyzing and interpreting data
		• plan and carry out investigations
		• develop and use models
		• obtaining, evaluating, and communicating information
			• test/quizzes
			• labs/student directed investigations
			• changes in state of matter model
			• molecular structure model
			• conservation of mass model
			• discussions/feedback
				• MS PS1 – 1
				• MS PS1 – 2
				• MS PS1 – 3
				• MS PS1 – 4
				• MS PS1 – 5

For more information on DCI or Disciplinary Core Ideas:
https://www.nextgenscience.org/sites/default/files/resource/files/AppendixE-ProgressionswithinNGSS-061617.pdf

For more information on Science and Engineering Practices:
http://www.nextgenscience.org/sites/ngss/files/Appendix%20F%20%20Science%20and%20Engineering%20Practices%20in%20the%20NGSS%20-%20FINAL%20060513.pdf

For more information on the Next Generation Science Standards:
http://www.nextgenscience.org/msps1-matter-interactions

8th Grade Science Curriculum

Concept	Content (DCI)	SEP	Assessment	NGSS

From Molecules to Organisms: Structures and Process	• cell functions
	  • cellular respiration
	  • photosynthesis
		• planning and carrying out investigations
		• analyzing and interpreting data
		• constructing explanations and designing solutions
		• engaging in an argument from evidence
		• develop and use model
		• obtaining, evaluating, and communicating information
			• test/quizzes
			• labs/student directed investigations
			• soil formation model
			• discussions/feedback
				• MS PS4 – 1
				• MS PS4 – 2
				• MS PS4 – 3

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For more information on the Next Generation Science Standards:
http://www.nextgenscience.org/msess2-earth-systems

8th grade Science Curriculum

Concept	Content (DCI)	SEP	Assessment	Standard
Space Systems	• lunar phases • lunar relationship to the Earth • solar system • patterns of the Universe and movement • gravity within the Universe	• analyzing and interpreting data • develop and use models	• test/quizzes • labs/student directed investigations • Earth – sun – moon cycle model • gravitational force in the solar system model • discussions/feedback	• MS ESS1 – 1 • MS ESS1 – 2 • MS ESS1 – 3

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