



Correlation to the Florida Course Description for M/J Comprehensive Science 3 Course Code 2002100

HMH Science Dimensions Grades 6–8 ©2018

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BENCHMARK CODE	BENCHMARK	LESSONS WHERE STANDARD/BENCHMARK IS DIRECTLY ADDRESSED IN MAJOR TOOL (MOST IN-DEPTH COVERAGE LISTED FIRST) (Include the student edition and teacher edition with the page numbers of lesson, a link to lesson, or other identifier for easy lookup by reviewers.)
SC.8.E.5.1	Recognize that there are enormous distances between objects in space and apply our	SE: Module H: 114–115, 63, 65, 96, 113, 116
	knowledge of light and space travel to understand this distance.	TE: Module H: 72, 95
		ScienceSaurus (Green Level, Grades 6-8): 239–240, 245
SC.8.E.5.2	Recognize that the universe contains many billions of galaxies and that each galaxy contains	SE: Module H: 113, 115–116
	many billions of stars.	ScienceSaurus (Green Level, Grades 6-8): 244, 247
SC.8.E.5.3	Distinguish the hierarchical relationships between planets and other astronomical bodies	SE: Module H: 63–65, 75, 92–94, 97, 107, 109, 115
	relative to solar system, galaxy, and universe, including distance, size, and composition.	ScienceSaurus (Green Level, Grades 6-8): 238–243, 247
		Florida Statewide Science Assessment (FSSA) Review and Practice: TE: 26; SE: 43–47

SC.8.E.5.4	Explore the Law of Universal Gravitation by explaining the role that gravity plays in the formation of planets, stars, and solar systems and in determining their motions.	SE: Module H: 63, 66–70, 71–76, 127, 129, 131, 134–135, 136–138, 144
SC.8.E.5.5	of stars: apparent magnitude (brightness),	ScienceSaurus (Green Level, Grades 6-8): 245–246 Florida Statewide Science Assessment (FSSA) Review and Practice: TE: 27; SE: 48–52
SC.8.E.5.6	Create models of solar properties including: rotation, structure of the Sun, convection, sunspots, solar flares, and prominences.	SE: Module H: 71
SC.8.E.5.7	in the Solar System including the Sun, planets, and moons to those of Earth, such as gravitational force, distance from the Sun,	SE: Module H: 63, 94, 97, 130 ScienceSaurus (Green Level, Grades 6-8): 238–240 Florida Statewide Science Assessment (FSSA) Review and Practice: TE: 28; SE: 53–56
SC.8.E.5.8	System, including geocentric and heliocentric.	SE: Module H: 86–87, 90 TE: Module H: 64 ScienceSaurus (Green Level, Grades 6-8): 234

other including:	
5	TE: Module H: 3K–3L
gravitational attraction	
	Florida Statewide Science Assessment (FSSA) Review and Practice: TE: 29; SE: 62–65
each body.	ScienceSaurus (Green Level, Grades 6-8): 235–237
Assess how technology is essential to science for	SE : Module H: 66, 72–73, 91–92, 106, 111, 114, 116
such purposes as access to outer space and	
other remote locations, sample collection,	
measurement, data collection and storage,	
computation, and communication of	
information.	
Identify and compare characteristics of the	SE: Module H: 72; Module L: 42–46, 47–50, 97–98, 113–114, 133, 144
electromagnetic spectrum such as wavelength,	
frequency, use, and hazards and recognize its	
application to an understanding of planetary	
images and satellite photographs.	
	This standard is beyond the scope of HMH Science Dimensions Grades $6-8$.
,	SE: Module C: 29–33, 36, 10, 12
	ScienceSaurus (Green Level, Grades 6-8): 078–079
food; release of oxygen.	
Describe and investigate how cellular respiration	SE: Module C: 34–36, 38
breaks down food to provide energy and	
releases carbon dioxide.	ScienceSaurus (Green Level, Grades 6-8): 079
	 2. the Moon on the Earth, including phases, tides, and eclipses, and the relative position of each body. Assess how technology is essential to science for such purposes as access to outer space and other remote locations, sample collection, measurement, data collection and storage, computation, and communication of information. Identify and compare characteristics of the electromagnetic spectrum such as wavelength, frequency, use, and hazards and recognize its application to an understanding of planetary images and satellite photographs. Summarize the effects of space exploration on the economy and culture of Florida. Describe and investigate the process of photosynthesis, such as the roles of light, carbon dioxide, water and chlorophyll; production of food; release of oxygen. Describe and investigate how cellular respiration breaks down food to provide energy and

SC.8.L.18.3	Construct a scientific model of the carbon cycle to show how matter and energy are continuously transferred within and between organisms and their physical environment.	SE: Module A: 28; Module C: 52, 50 ScienceSaurus (Green Level, Grades 6-8): 138
SC.8.L.18.4	Cite evidence that living systems follow the Laws of Conservation of Mass and Energy.	SE: Module C: 17–18, 12–13, 26, 28, 35 TE: Module C: 4, 24, 50 ScienceSaurus (Green Level, Grades 6-8): 137 Florida Statewide Science Assessment (FSSA) Review and Practice: TE: 52; SE: 156–159
SC.8.N.1.1	Define a problem from the eighth grade curriculum using appropriate reference materials to support scientific understanding, plan and carry out scientific investigations of various types, such as systematic observations or experiments, identify variables, collect and organize data, interpret data in charts, tables, and graphics, analyze information, make predictions, and defend conclusions.	This Benchmark is covered throughout the program. The following are some of the many examples: SE: Module H: 88–89, 132–133 TE: Module J: 115K–115L; Module A: 77K–77L; Florida Statewide Science Assessment (FSSA) Review and Practice: TE: 21; SE: 21–25
SC.8.N.1.2	Design and conduct a study using repeated trials and replication.	TE: Module A: 77L; Module J: 115L
SC.8.N.1.3	Use phrases such as "results support" or "fail to support" in science, understanding that science does not offer conclusive 'proof' of a knowledge claim.	SE: Module C: 31, 91 TE: Module H: 76, 87

SC.8.N.1.4	Explain how hypotheses are valuable if they lead to further investigations, even if they turn out not to be supported by the data.	TE: Module H: 68, 89
SC.8.N.1.5	Analyze the methods used to develop a scientific explanation as seen in different fields of science.	SE: Module H: 71–74, 128
SC.8.N.1.6	of imagination in devising hypotheses,	SE: Module H: 72, 127 TE: Module H: 71–72, 85, 89 ScienceSaurus (Green Level, Grades 6-8): 002
SC.8.N.2.1	Distinguish between scientific and pseudoscientific ideas.	ScienceSaurus (Green Level, Grades 6-8): 232
SC.8.N.2.2	Discuss what characterizes science and its methods.	SE: Module A: 59–62; Module H: 127 TE: Module H: 85 ScienceSaurus (Green Level, Grades 6-8): 002, 004–014, 017–018
SC.8.N.3.1	Select models useful in relating the results of their own investigations.	SE: Module A: 39; Module H: 55–56, 63, 97; Module J: 68 TE: Module A: 34, 38; Module C: 3L; Module H: 3L, 10, 21, 59M–59N; Module J: 3K, 71L ScienceSaurus (Green Level, Grades 6-8): 006, 013, 018

SC.8.N.3.2	Explain why theories may be modified but are rarely discarded.	TE: Module H: 76 ScienceSaurus (Green Level, Grades 6-8): 002
SC.8.N.4.1	Explain that science is one of the processes that can be used to inform decision making at the community, state, national, and international levels.	SE: Module C: 174, 184 TE: Module A: 100
SC.8.N.4.2	Explain how political, social, and economic concerns can affect science, and vice versa.	TE: Module A: 11–12 ScienceSaurus (Green Level, Grades 6-8): 365–368
SC.8.P.8.1	Explore the scientific theory of atoms (also known as atomic theory) by using models to explain the motion of particles in solids, liquids, and gases.	SE: Module J: 77–80, 91–92, 96–97, 100 TE: Module J: 88 ScienceSaurus (Green Level, Grades 6-8): 253
SC.8.P.8.2	Differentiate between weight and mass recognizing that weight is the amount of gravitational pull on an object and is distinct from, though proportional to, mass.	SE: Module H: 125, 127–128; Module J: 7–9 ScienceSaurus (Green Level, Grades 6-8): 276
SC.8.P.8.3	Explore and describe the densities of various materials through measurement of their masses and volumes.	SE: Module J: 11–13, 25–26 ScienceSaurus (Green Level, Grades 6-8): 068

SC.8.P.8.4		SE: Module J: 15, 27, 52–55, 120, 118–119, 184–185
	characteristic physical properties that can be demonstrated or measured; for example,	ScienceSaurus (Green Level, Grades 6-8): 251
	density, thermal or electrical conductivity,	
	solubility, magnetic properties, melting and	Florida Statewide Science Assessment (FSSA) Review and Practice: TE: 35; SE: 85–89
	boiling points, and know that these properties	
	are independent of the amount of the sample.	
SC.8.P.8.5	Recognize that there are a finite number of elements and that their atoms combine in a	SE : Module J: 43–45, 24, 46–51, 52–55
	multitude of ways to produce compounds that	TE: Module J: 3K
	make up all of the living and nonliving things	
	that we encounter.	ScienceSaurus (Green Level, Grades 6-8): 260
		Florida Statewide Science Assessment (FSSA) Review and Practice: TE: 36; SE: 90–93
SC.8.P.8.6	Recognize that elements are grouped in the	SE: Module J: 30–33, 35–36
	periodic table according to similarities of their	
	properties.	ScienceSaurus (Green Level, Grades 6-8): 265
SC.8.P.8.7	Explore the scientific theory of atoms (also	SE: Module J: 27
	known as atomic theory) by recognizing that	
	atoms are the smallest unit of an element and	ScienceSaurus (Green Level, Grades 6-8): 255–256
	are composed of sub-atomic particles (electrons surrounding a nucleus containing protons and	
	neutrons).	
SC.8.P.8.8	, , ,	SE: Module J: 43
	classify the properties of compounds, including	
	acids, bases, and salts.	ScienceSaurus (Green Level, Grades 6-8): 264

SC.8.P.8.9	Distinguish among mixtures (including solutions)	SE: Module J: 42–45, 52, 57–58, 186, 189, 193
	and pure substances.	TE: Module J: 24, 136
		ScienceSaurus (Green Level, Grades 6-8): 271
SC.8.P.9.1	Explore the Law of Conservation of Mass by demonstrating and concluding that mass is	SE: Module J: 143–146, 122, 137–142, 147–148
	conserved when substances undergo physical and chemical changes.	TE: Module J: 115M
		ScienceSaurus (Green Level, Grades 6-8): 270
SC.8.P.9.2	Differentiate between physical changes and chemical changes.	SE: Module J: 121–123, 16, 119, 193
		TE: Module C: 26
		ScienceSaurus (Green Level, Grades 6-8): 252
		Florida Statewide Science Assessment (FSSA) Review and Practice: TE: 37; SE: 94–97
SC.8.P.9.3	Investigate and describe how temperature influences chemical changes.	SE : Module J: 160, 167–168
LAFS.68.RST.1.1	Cite specific textual evidence to support analysis	
	of science and technical texts.	SE: Module A: 13, 32; Module C: 7, 18, 156; Module H: 94, 134, 210; Module L: 45, 56
		TE: Module A: 11; Module C: 140; Module L: 70, 109

LAFS.68.RST.1.2	Determine the central ideas or conclusions of a	Representative Examples:
	text; provide an accurate summary of the text	SE: Module A: 32; Module C: 36, 52, 120, 156; Module H: 118; Module L: 135
	distinct from prior knowledge or opinions.	
		TE: Module J: 98; Module L: 89K
		ScienceSaurus (Green Level, Grades 6-8): 415
LAFS.68.RST.1.3	Follow precisely a multistep procedure when	Representative Examples:
	carrying out experiments, taking measurements,	SE: Module C: 14–15, 30–31, 77, 91; Module H: 13–14, 18–19, 35, 88, 132; Module J: 12–13, 25–26, 141, 161, 163–164; Module L: 14
	or performing technical tasks.	
LAFS.68.RST.2.4	Determine the meaning of symbols, key terms,	Representative Examples:
	and other domain-specific words and phrases as	SE : Module C: 73, 76, 170; Module H: 15, 62, 85, 134; Module J: 14; Module L: 11, 109
	they are used in a specific scientific or technical	
	context relevant to grades 6–8 texts and topics.	TE: Module H: 10, 63, 66, 84; Module L: 49
LAFS.68.RST.2.5	Analyze the structure an author uses to organize	This standard is beyond the scope of <i>HMH Science Dimensions Grades 6 –8</i> .
	a text, including how the major sections	
	contribute to the whole and to an	
	understanding of the topic.	
LAFS.68.RST.2.6	Analyze the author's purpose in providing an	This standard is beyond the scope of HMH Science Dimensions Grades 6 –8.
	explanation, describing a procedure, or	
	discussing an experiment in a text.	
LAFS.68.RST.3.7	Integrate quantitative or technical information	Representative Examples:
	expressed in words in a text with a version of	SE: Module C: 72, 120; Module H: 68, 85; Module J: 16, 30, 51; Module L: 28, 56, 64
	that information expressed visually (e.g., in a	
	flowchart, diagram, model, graph, or table).	TE: Module A: 121; Module H: 90; Module J: 11, 45; Module L: 69

LAFS.68.RST.3.8	Distinguish among facts, reasoned judgment based on research findings, and speculation in a text.	This standard is beyond the scope of HMH Science Dimensions Grades 6–8.
LAFS.68.RST.3.9	from experiments, simulations, video, or multimedia sources with that gained from	Representative Examples: SE: Module A: 62; Module H: 14, 37; Module L: 10–11, 52–54, 101–102 TE: Module H: 19, 42; Module L: 97, 117
LAFS.68.RST.4.10		Representative Examples: SE: Module A: 80–95; Module C: 42–57; Module H: 4–27; Module J: 4–21; Module L: 4–21

LAFS.68.WHST.1.1	Write arguments focused on discipline-specific	Representative Examples:
	content.	SE: Module A: 13, 111, 127; Module C: 7, 81, 99, 141; Module H: 16, 25, 72, 111; Module L: 9, 45, 57
	a. Introduce claim(s) about a topic or issue,	
	acknowledge and distinguish the claim(s) from	TE: Module C: 67L; Module L: 128
	alternate or opposing claims, and organize the	
	reasons and evidence logically.	
	b. Support claim(s) with logical reasoning and	
	relevant, accurate data and evidence that	
	demonstrate an understanding of the topic or	
	text, using credible sources.	
	c. Use words, phrases, and clauses to create	
	cohesion and clarify the relationships among	
	claim(s), counterclaims, reasons, and evidence.	
	d. Establish and maintain a formal style.	
	e. Provide a concluding statement or section	
	that follows from and supports the argument	
	presented.	

LAFS.68.WHST.1.2	Write informative/explanatory texts, including	Representative Examples:
	the narration of historical events, scientific	SE : Module C: 126, 190, 196; Module H: 31–32, 37, 73, 144; Module J: 68, 102; Module L: 80
	procedures/ experiments, or technical	
	processes.	TE: Module C: 27
	a. Introduce a topic clearly, previewing what is	
	to follow; organize ideas, concepts, and	
	information into broader categories as	
	appropriate to achieving purpose; include	
	formatting (e.g., headings), graphics (e.g.,	
	charts, tables), and multimedia when useful to	
	aiding comprehension.	
	b. Develop the topic with relevant, well-chosen	
	facts, definitions, concrete details, quotations,	
	or other information and examples.	
	c. Use appropriate and varied transitions to	
	create cohesion and clarify the relationships	
	among ideas and concepts.	
	d. Use precise language and domain-specific	
	vocabulary to inform about or explain the topic.	
	e. Establish and maintain a formal style and	
	objective tone.	
	f. Provide a concluding statement or section that	
	follows from and supports the information or	
	explanation presented.	
LAFS.68.WHST.2.4	Produce clear and coherent writing in which the	Representative Examples:
	-	SE: Module A: 11, 82, 86; Module C: 64, 90, 120, 126; Module H: 37, 73, 130; Module L: 45, 80
	appropriate to task, purpose, and audience.	
		TE: Module C: 49, 129L; Module H: 3L

LAFS.68.WHST.2.5	With some guidance and support from peers	TE: Module C: 141
	and adults, develop and strengthen writing as	
	needed by planning, revising, editing, rewriting,	
	or trying a new approach, focusing on how well	
	purpose and audience have been addressed.	
LAFS.68.WHST.2.6	Use technology, including the Internet, to	Representative Examples:
	produce and publish writing and present the	SE: Module C: 58
	relationships between information and ideas	
	clearly and efficiently.	TE: Module C: 3I–5L; 67I–67L; 129I–129L
LAFS.68.WHST.3.7	Conduct short research projects to answer a	Representative Examples:
	question (including a self-generated question),	SE: Module C: 58, 120; Module H: 150; Module J: 198; Module L: 86
	drawing on several sources and generating	
	additional related, focused questions that allow	TE: Module C: 3I–5L; 67I–67L; 129I–129L; Module A: 3K, 11, 99; Module J: 3K, 71K, 115K, 181K
	for multiple avenues of exploration.	
LAFS.68.WHST.3.8	Gather relevant information from multiple print	Representative Examples:
	and digital sources, using search terms	SE: Module C: 120; Module H: 150; Module J: 198; Module L: 86
	effectively; assess the credibility and accuracy of	
		TE: Module A: 3K, 11, 99; Module C: 129K; Module J: 3K, 71K, 115K, 181K
	and conclusions of others while avoiding	
	plagiarism and following a standard format for	
	citation.	
LAFS.68.WHST.3.9	Draw evidence from informational texts to	Representative Examples:
	support analysis reflection, and research.	SE: Module A: 50; Module C: 90, 114, 173; Module H: 130; Module L: 68, 86, 96, 113
		TE: Module A: 84; Module C: 12, 35, 109, 129L; Module L: 128

LAFS.68.WHST.4.10	Write routinely over extended time frames	Representative Examples:
	(time for reflection and revision) and shorter	SE: Module A: 23, 45, 93; Module C: 21, 39, 81, 90; Module H: 25, 37, 47, 73, 130; Module L: 37, 77, 80
	time frames (a single sitting or a day or two) for	
	a range of discipline-specific tasks, purposes,	
	and audiences.	
LAFS.8.SL.1.1	Engage effectively in a range of collaborative	Representative Examples:
	discussions (one-on-one, in groups, and teacher-	SE: Module C: 11, 104; Module L: 13, 25, 36, 51
	led) with diverse partners on grade 8 topics,	
	texts, and issues, building on others' ideas and	TE: Module A: 12, 36, 62; Module C: 21, 89, 178; Module H: 6, 22, 36; Module L: 6–7, 31, 32
	expressing their own clearly.	
	a. Come to discussions prepared, having read or	
	researched material under study; explicitly draw	
	on that preparation by referring to evidence on	
	the topic, text, or issue to probe and reflect on	
	ideas under discussion.	
	b. Follow rules for collegial discussions and	
	decision-making, track progress toward specific	
	goals and deadlines, and define individual roles	
	as needed.	
	c. Pose questions that connect the ideas of	
	several speakers and respond to others'	
	questions and comments with relevant	
	evidence, observations, and ideas.	
	d. Acknowledge new information expressed by	
	others, and, when warranted, qualify or justify	
	their own views in light of the evidence	
	presented.	

LAFS.8.SL.1.2	Analyze the purpose of information presented in diverse media and formats (e.g., visually, quantitatively, orally) and evaluate the motives (e.g., social, commercial, political) behind its presentation.	This standard is beyond the scope of <i>HMH Science Dimensions Grades 6 –8</i> .
LAFS.8.SL.1.3	Delineate a speaker's argument and specific claims, evaluating the soundness of the reasoning and relevance and sufficiency of the evidence and identifying when irrelevant evidence is introduced.	Representative Examples: TE: Module A: 57, 103; Module C: 51, 157; Module J: 123, 229; Module L: 31, 45, 117, 129
LAFS.8.SL.2.4	points in a focused, coherent manner with relevant evidence, sound valid reasoning, and	Representative Examples: SE: Module A: 44, 68, 74, 130, 136; Module C: 38, 54, 58, 64; Module H: 24; Module L: 25, 80, 86, 144 TE: Module L: 6
LAFS.8.SL.2.5	claims and evidence, and add interest.	Representative Examples: SE: Module A: 44, 68, 130; Module C: 54, 58, 64; Module H: 24, 50, 73; Module L: 25, 80, 86, 144 TE: Module H: 20; Module L: 6, 45
MAFS.8.F.2.5	between two quantities by analyzing a graph	SE: Module A: 20, 35; Module C: 87, 157; Module L: 30, 51 ScienceSaurus (Green Level, Grades 6-8): 399

MAFS.8.G.3.9	Know the formulas for the volumes of cones, cylinders, and spheres and use them to solve real-world and mathematical problems.	This standard is beyond the scope of HMH Science Dimensions Grades 6–8.
ELD.K12.ELL.SC.1	information, ideas and concepts necessary for academic success in the content area of Science.	Representative Examples: SE: Module A: 8; Module C: 17, 104; Module H: 22, 124; Module L: 13 TE: Module C: 69; Module H: 34, 36; Module L: 7, 32
ELD.K12.ELL.SI.1	social and instructional purposes within the school setting.	Representative Examples: SE: Module A: 8; Module C: 11, 17, 104; Module H: 22, 124; Module L: 13 TE: Module A: 36, 79; Module C: 69; Module H: 36; Module L: 7, 32