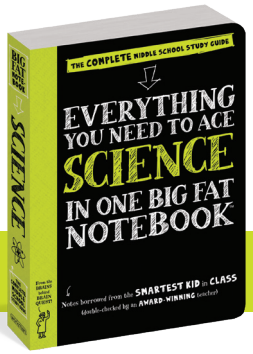

THE BIG FAT NOTEBOOK SERIES®

Everything You Need to Ace Science in One Big Fat Notebook

GRL: n/a **GLE: n/a** **ATOS: n/a** **RRL: n/a** **LEXILE: n/a**

GRADE	6	LANGUAGE	CCSS.ELA-LITERACY.L.6.4, 4A, 4B, 4C, 4D, 5, 5B, 6
	4		Determine or clarify the meaning of unknown and multiple-meaning words and phrases based on grade 6 reading and content, choosing flexibly from a range of strategies.
	4a		Use context (e.g., the overall meaning of a sentence or paragraph; a word's position or function in a sentence) as a clue to the meaning of a word or phrase.
	4b		Use common, grade-appropriate Greek or Latin affixes and roots as clues to the meaning of a word (e.g., *audience*, *auditory*, *audible*).
	4c		Consult reference materials (e.g., dictionaries, glossaries, thesauruses), both print and digital, to find the pronunciation of a word or determine or clarify its precise meaning or its part of speech.
	4d		Verify the preliminary determination of the meaning of a word or phrase (e.g., by checking the inferred meaning in context or in a dictionary).
	5		Demonstrate understanding of figurative language, word relationships, and nuances in word meanings.
	5b		Use the relationship between particular words (e.g., cause/effect, part/whole, item/category) to better understand each of the words.
	6		Acquire and use accurately grade-appropriate general academic and domain-specific words and phrases; gather vocabulary knowledge when considering a word or phrase important to comprehension or expression.

GRADE	6–8	READING SCIENCE & TECHNICAL SUBJECTS	CCSS.ELA-LITERACY.RST.6–8.1, 2, 3, 4, 5, 6, 7, 8, 9, 10
	1		Cite specific textual evidence to support analysis of science and technical texts.
	2		Determine the central ideas or conclusions of a text; provide an accurate summary of the text distinct from prior knowledge or opinions.
	3		Follow precisely a multistep procedure when carrying out experiments, taking measurements, or performing technical tasks.
	4		Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 6–8 texts and topics.
	5		Analyze the structure an author uses to organize a text, including how the major sections contribute to the whole and to an understanding of the topic.
	6		Analyze the author's purpose in providing an explanation, describing a procedure, or discussing an experiment in a text.
	7		Integrate quantitative or technical information expressed in words in a text with a version of that information expressed visually (e.g., in a flowchart, diagram, model, graph, or table).
	8		Distinguish among facts, reasoned judgment based on research findings, and speculation in a text.
	9		Compare and contrast the information gained from experiments, simulations, video, or multimedia sources with that gained from reading a text on the same topic.
	10		By the end of grade 8, read and comprehend science/technical texts in the grades 6–8 text complexity band independently and proficiently.

GRADE 6	SPEAKING & LISTENING	CCSS.ELA-LITERACY.SL.6.1, 1A, 1C, 2, 3, 4, 5, 6
	1	Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 6 topics, texts, and issues, building on others' ideas and expressing their own clearly.
	1a	Come to discussions prepared, having read or studied required material; explicitly draw on that preparation by referring to evidence on the topic, text, or issue to probe and reflect on ideas under discussion.
	1c	Pose and respond to specific questions with elaboration and detail by making comments that contribute to the topic, text, or issue under discussion.
	2	Interpret information presented in diverse media and formats (e.g., visually, quantitatively, orally) and explain how it contributes to a topic, text, or issue under study.
	3	Delineate a speaker's argument and specific claims, distinguishing claims that are supported by reasons and evidence from claims that are not.
	4	Present claims and findings, sequencing ideas logically and using pertinent descriptions, facts, and details to accentuate main ideas or themes; use appropriate eye contact, adequate volume, and clear pronunciation.
	5	Include multimedia components (e.g., graphics, images, music, sound) and visual displays in presentations to clarify information.
	6	Adapt speech to a variety of contexts and tasks, demonstrating command of formal English when indicated or appropriate. (See grade 6 Language standards 1 and 3 for specific expectations.)

GRADE 6–8	WRITING HISTORY, SCIENCE & TECHNOLOGY	CCSS.ELA-LITERACY.WHST.6–8.2, 2A, 2B, 2C, 2D, 2E, 2F, 4, 6, 7, 8, 9, 10
	2	Write informative/explanatory texts, including the narration of historical events, scientific procedures/experiments, or technical processes.
	2a	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.
	2b	Develop the topic with relevant, well-chosen facts, definitions, concrete details, quotations, or other information and examples.
	2c	Use appropriate and varied transitions to create cohesion and clarify the relationships among ideas and concepts.
	2d	Use precise language and domain-specific vocabulary to inform about or explain the topic.
	2e	Establish and maintain a formal style and objective tone.
	2f	Provide a concluding statement or section that follows from and supports the information or explanation presented.
	4	Produce clear and coherent writing in which the development, organization, and style are appropriate to task, purpose, and audience.
	6	Use technology, including the Internet, to produce and publish writing and present the relationships between information and ideas clearly and efficiently.
	7	Conduct short research projects to answer a question (including a self-generated question), drawing on several sources and generating additional related, focused questions that allow for multiple avenues of exploration.
	8	Gather relevant information from multiple print and digital sources, using search terms effectively; assess the credibility and accuracy of each source; and quote or paraphrase the data and conclusions of others while avoiding plagiarism and following a standard format for citation.
	9	Draw evidence from informational texts to support analysis reflection, and research.
	10	Write routinely over extended time frames (time for reflection and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences.

NEXT GENERATION SCIENCE STANDARDS	EARTH AND HUMAN ACTIVITY	MS-ESS3-1

Construct a scientific explanation based on evidence for how the uneven distributions of Earth's mineral, energy, and groundwater resources are the result of past and current geoscience processes.

Science and Engineering Practices

Constructing Explanations and Designing Solutions: Constructing explanations and designing solutions in 6–8 builds on K–5 experiences and progresses to include constructing explanations and designing solutions supported by multiple sources of evidence consistent with scientific ideas, principles, and theories.

- Construct a scientific explanation based on valid and reliable evidence obtained from sources (including the students' own experiments) and the assumption that theories and laws that describe the natural world operate today as they did in the past and will continue to do so in the future.

Disciplinary Core Ideas

ESS3.A

Natural Resources: Humans depend on Earth's land, ocean, atmosphere, and biosphere for many different resources. Minerals, fresh water, and biosphere resources are limited, and many are not renewable or replaceable over human lifetimes. These resources are distributed unevenly around the planet as a result of past geologic processes.

Crosscutting Concepts

Cause and Effect: Cause and effect relationships may be used to predict phenomena in natural or designed systems.

Connections to Engineering, Technology, and Applications of Science

Influence of Science, Engineering, and Technology on Society and the Natural World: All Human Activity draws on natural resources and has both short and long-term consequences, positive as well as negative, for the health of people and the natural environment.

Connections to other DCIs in this grade-band:
MS.PS1.A; MS.PS1.B; MS.ESS2.D

Articulation of DCIs across grade-bands
4.PS3.D; 4.ESS3.A; HS.PS3.B; HS.LS1.C; HS.ESS2.A; HS.ESS2.B; HS.ESS2.C; HS.ESS3.A

NEXT GENERATION SCIENCE STANDARDS	ENGINEERING DESIGN	MS-ETS1-2

Evaluate competing design solutions using a systematic process to determine how well they meet the criteria and constraints of the problem.

Science and Engineering Practices

Engaging in Argument from Evidence: Engaging in argument from evidence in 6–8 builds on K–5 experiences and progresses to constructing a convincing argument that supports or refutes claims for either explanations or solutions about the natural and designed world.

- Evaluate competing design solutions based on jointly developed and agreed-upon design criteria.

Disciplinary Core Ideas

ETS1.B

Developing Possible Solutions: There are systematic processes for evaluating solutions with respect to how well they meet the criteria and constraints of a problem.

Connections to MS-ETS1.B: Developing Possible Solutions Problems include:
PHYSICAL SCIENCE: MS-PS1-6, MS-PS3-3, LIFE SCIENCE: MS-LS2-5

Articulation of DCIs across grade-bands:
3-5.ETS1.A; 3-5.ETS1.B; 3-5.ETS1.C; HS.ETS1.A; HS.ETS1.B