ARC CORE FUSION™

Grade 8

REPRESENTATIVE SAMPLE

Dear Middle School Teachers,

Your job is hard. It's also, as you know better than anyone, really important. The team of educators at American Reading Company® held onto these two obvious, big ideas when we designed ARC Core Fusion™.

ARC Core Fusion makes teachers' lives easier through clear, consistent routines. While it includes scripted lessons and answer keys for those who want that level of support, the predictability of the daily structures will make those scaffolds unnecessary for many educators, especially experienced ones. ARC Core Fusion includes a robust suite of digital supports for computer wizzes eager to embrace the latest technology, but it works just as well for those of us who still cherish the smell of an uncracked paperback.

Speaking of paperbacks, we know many of you came to be middle school teachers because you love books as much as the quirky, endlessly entertaining entities that are your students. ARC Core Fusion is full of great books—from classics you'll be familiar with to contemporary titles offering fresh perspectives. In ARC Core Fusion, students read select core texts in entirety along with their peers, providing your classroom community with a shared experience sure to spark lively discussions. Students also get regular opportunities to choose their own books, researching across a variety of titles to explore their unique interests.

If your middle school classes are like most across the country, every day you're faced with the challenge of meeting the individual needs of a variety of students, from multilingual learners still mastering the English language to students striving to read at grade level. ARC Core Fusion includes a host of student scaffolds—graphic organizers, student-friendly rubrics, writing exemplars, and more—to help all students be successful. In addition to these embedded supports throughout ARC Core Fusion, we created an optional, easy-to-use companion program called ARC Accelerator®. Designed for What-I-Need (WIN) or intervention blocks, ARC Accelerator follows a straightforward daily routine and provides teachers scripted small-group lessons to drive reading growth.

As you dig into the sample materials in this box, we hope you'll notice the ways our resources support the standards-based best practices you're likely already engaged in. That's intentional. We still want you to do all the important stuff. We still want you to read and write and talk with your students. We still want you to think hard about words and sentence structures and all the ways those might impact what an author communicates. We still want you to inspire your students and to be inspired by them. We hope these resources make teaching easier and more fun.

The ARC Program Design Team

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ARC Core Fusion™

The **NEW** Middle School Curriculum from American Reading Company

Featuring our enhanced interactive digital platform

Knowledge-Building Units

(45–60 minutes daily)

In every Unit, students will:

- Read and analyze complex texts
- Become proficient writers of a variety of text types
- Build knowledge and vocabulary through deep research into topics in Science, History, and Literary Genres
- Engage in an intellectual community that reads, writes, thinks, and debates together
- Engage in high-volume reading practice

Each Unit Includes

Grade 8: Unit 2, Environmental Studies Example

Digital-First Curriculum
Ensures teachers can lead every ELA lesson with confidence; includes supports for MLLs and striving readers
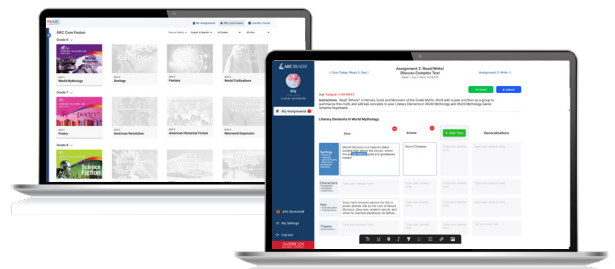

Core Texts
Class sets of multiple high-quality, authentic texts anchor the work of each Unit

Unit Library
Related texts at a range of text complexities provide choice for research and cross-textual analysis

Interactive Digital Platform
Hosts the collaborative intellectual community in which students read, write, research, and debate
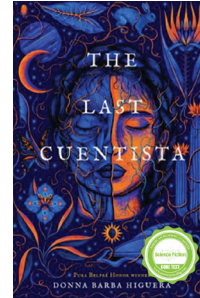
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8th-Grade - The Human Condition: Past, Present, and Future

Unit 1
RL.2, RL.4, RL.5, W.1, W.3

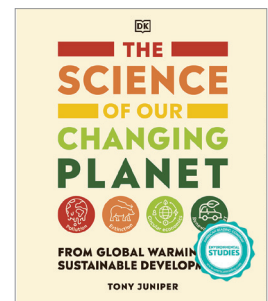Read, compare, analyze, and create

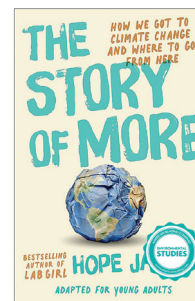# Science Fiction

Unit 2
RI.2, RI.3, RI.5, RI.7, W.2, W.7, W.8

Read informational and narrative nonfiction to write a research report on
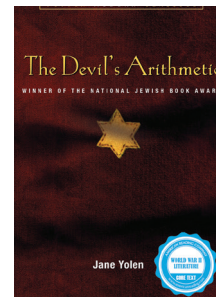
ENVIRONMENTAL STUDIES

Unit 3
RL.2, RL.3, RL.6, RL.9, W.1, W.3

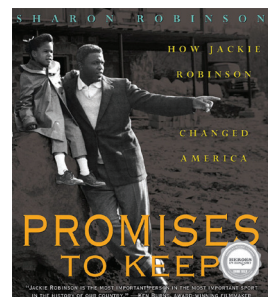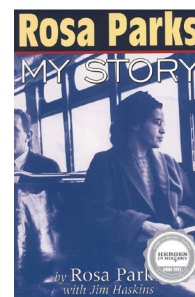Read, compare, and analyze

WORLD WAR II LITERATURE

Unit 4
RI.6, RI.8, RI.9, W.1, W.7, W.8

Research to create written and oral arguments and narrative texts about

HEROES IN HISTORY

45–60 Minute Literacy Block

5–10 minutes	**Do Now**	Students are primed for the lesson Focus Standards and/or demonstrate understanding of homework from the previous night.
20–25 minutes	**Whole-Group Instruction**	Teacher provides instruction in grade-level Reading and Writing Focus Standards; students practice with grade-level text or in writing.
15–20 minutes	**Application**	Students apply the Focus Standards: • To self-selected texts and resources. • To their own writing. • Independently or in peer groups. Teacher coaches, collecting information to inform instruction and intervention.
5 minutes	**Exit Ticket**	Students demonstrate current understanding of the Focus Standard/text/task.

Homework: 20–30 minutes

Homework assignments extend grade-level reading, writing, and/or research in a carefully scaffolded sequence to prepare students for the greater academic independence required in future grades.

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8th-Grade Yearlong Scope and Sequence

Unit 1 **Science Fiction** **Literary Analysis Lab** RL.8.2, RL.8.4, RL.8.5 W.8.1, W.8.3	Unit 2 **Environmental Studies** **Informational Research Lab** RI.8.2, RI.8.3, RI.8.5, RI.8.7 W.8.2, W.8.7, W.8.8	Unit 3 **World Historical Fiction** **Literature Genre Lab** RL.8.2, RL.8.3, RL.8.6, RL.8.9 W.8.1, W.8.3	Unit 4 **Civil Rights Era** **Argument Research Lab** RI.8.6, RI.8.8, RI.8.9 W.8.1, W.8.7, W.8.8
Literary Analysis • Apply literature standards to make arguments about literature. • Participate in rigorous academic discourse around literature. • Produce multiple short literary analyses.	**Learning to Learn from Informational Text** • Use grade-level Environmental Studies text to build knowledge and vocabulary. • Develop a research mindset: Generate questions and gather resources. • Demonstrate Science knowledge and informational reading and writing standards through writing.	**Genre as Literary Structure** • Apply literature standards to make arguments about literature. • Build genre-specific knowledge and vocabulary while exploring the lasting legacies of historical events. • Produce literary analysis essays.	**Research as the Basis for Analysis** • Apply research skills to grade-level History/Social Studies text to build knowledge and vocabulary. • Practice making and revising arguments based on evidence from both primary source artifacts and secondary sources. • Demonstrate increased command of History/Social Studies and reading and writing standards through weekly debates.
Thinking Like an Author • Use literature and narrative writing standards to compose Science Fiction narratives. • Reflect on authorial choices to drive more sophisticated literary analysis.	**Research Process** • Design and complete an independent research project on a self-selected Environmental Studies topic, with teacher support. • Learn to locate, evaluate, and integrate evidence from multiple sources. • Analyze how a work of Science Fiction relates to real-world environmental issues.	**Comparative Literary Analysis: Literature Circles** • Demonstrate increased independence with academic discourse and literary analysis. • Compare two texts in the Historical Fiction genre in a comparative essay.	**Research Process and Debate** • Design and complete an independent research project on a self-selected figure from the era. • Locate, evaluate, and integrate evidence from both primary and secondary sources. • Refine thinking through regular debate.
Literary Analysis Essay Make and defend a claim about a work of Science Fiction.	**Informational Research Paper** Synthesize and present research in an informational research paper.	**Narrative Text** Demonstrate command of literary and genre-specific knowledge, vocabulary, and structures by publishing a short story in the genre.	**Argument Research Paper** Make and defend a research-based claim in an argument paper and debate.

Standards Addressed across All Four Units: RL/I.8.1, R.L/I.8.4, RL/I.8.7, RL/I.8.10, W.8.4, W.8.5, W.8.6, W.8.9, W.8.10;
Speaking & Listening and Language Standards

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Supports for Multilingual Learners
Toward a Culturally and Linguistically Responsive Pedagogy

A culturally and linguistically responsive curriculum is one that meets language learners where they are, approaches their existing knowledge, language(s), and experiences as assets, and accelerates their academic trajectories in ways that are sensitive, appropriate to their needs, and rigorous all at once.
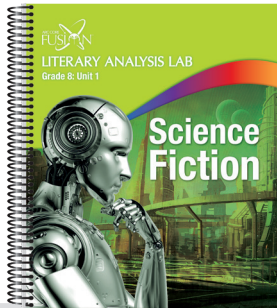
MLL-responsive instructional delivery that effectively reaches all students, at all times, in every component of the literacy block.

Thematically organized learning that:

- Integrates content, literacy, and language.
- Allows language learners to successfully navigate harder texts and tasks.
- Integrates language learners into the general education community.
- Builds higher-order thinking skills and academic habits in all four domains (speaking, listening, reading, and writing).

Expertly curated libraries that allow students to build language and vocabulary at a variety of levels of text complexity.

MLL Supports

An assessment and intervention program that accounts for language differences and includes scaffolds and supports for MLLs. The Guide to IRLA Coaching with Multilingual Learners provides teachers with support for specific and targeted intervention for every student.

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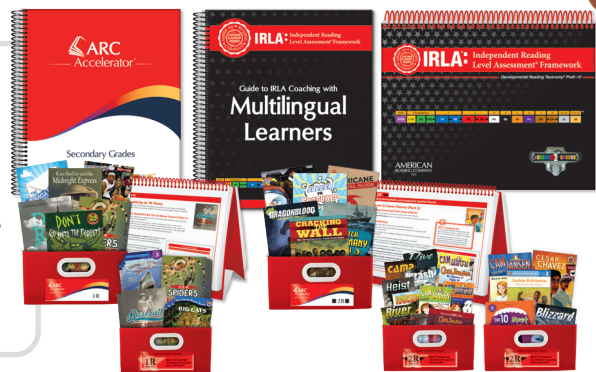
Lessons include actionable MLL supports, chosen to transform instructional delivery in ways that acknowledge, affirm, and empower language learners. The cumulative effect of this collection of tips and techniques is a dramatic shift in pedagogical practices, rooted in decades of ESL expertise and the most current research in the fields of multilingualism and multiliteracies.

All call-outs have been organized around six distinct categories:

Identity Affirmation

- Practices that notice and place value in the uniqueness of culturally and linguistically diverse students
- Actions that promote the values central to a student's identity and affirm the belief in the student's ability to succeed.

Learning Objectives

- Suggestions on how to address specific needs within the learning focus
- Guidance on how to maintain high expectations through appropriate supports

Frontloading

These help teachers in deciding the following:

- Which components (concept, language, skills essential to the student's success with the objectives) might require pre-teaching
- How to activate students' existing knowledge and interest
- How to deliver instruction to prepare students to fully participate in the lesson

Comprehensible Input

A repertoire of simple techniques that:

- Make oral/written language and key concepts more accessible for students.
- Develop awareness about the impact of comprehensible input on student outcomes and affects.

Oracy and Literacy Development

- Highlight components of the lesson intentionally designed to build the oracy and literacy skills of all students, including language learners at all levels of language proficiency
- Selected notes on oracy development bring attention to social and cultural norms and the need to establish, model, and practice these norms without assuming that they match those with which the student is familiar.

Differentiation and Formative Assessment

- Tips, reminders, modified tasks, and other suggestions to properly match reader/writer with task
- Insight into identifying students' strengths, gathering evidence of learning, and devising next steps within a lesson

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INFORMATIONAL RESEARCH LAB

Grade 8: Unit 2

ENVIRONMENTAL STUDIES

Unit 2

Informational Research Lab

An Inquiry Community of Researchers & Authors

Unit 2 builds on the routines, engagement, knowledge, and skills established in Unit 1. Thematic inquiry expands into a Science topic: Environmental Studies.

Students will continue to:	In this Unit:
Read grade-level Core Texts, as well as self-selected texts.	Focused on scientific nonfiction.
Participate in rigorous academic discourse as part of a whole-class intellectual community.	
Engage in high-volume reading through both assigned texts and at least 30 minutes of self-selected reading per day.	
Apply Reading Standards.	As a support for comprehending complex texts about Environmental Studies concepts.
Acquire academic vocabulary and high-utility morphemes.	Including scientific technical vocabulary.
Produce short constructed responses.	Now analyzing the central idea of informational text.
Integrate knowledge from multiple sources to produce a final paper.	Now with the addition of research skills to compose an informational research piece.
Practice applying a set of Focus Grade-Level Standards to reading, writing, speaking, and listening.	RI.8.1, RI.8.2, RI.8.3, RI.8.4, RI.8.5, RI.8.7, W.8.2, W.8.7, W.8.8, L.8.2, L.8.4, L.8.5, SL.8.2, SL.8.4, SL.8.5, SL.8.6
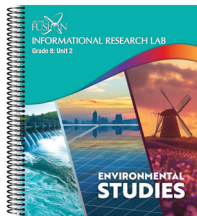
Teacher Guide

Core Text Section Sets

Classroom Core Text

Research Card

Informational Writing Cards

Environmental Studies
Research Library

Teacher- and Student-Facing Digital Platforms

REPRESENTATIVE SAMPLE

Unit 2 Informational Research Lab Pacing Guide: Grade 8

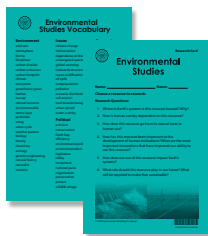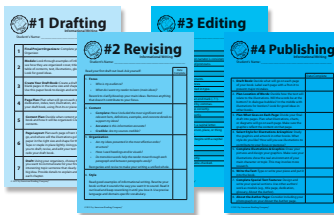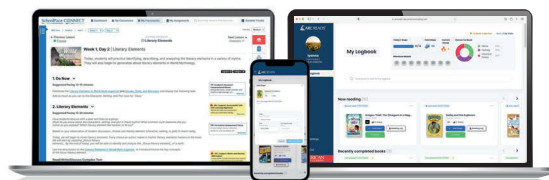| Phase	Week	Build Knowledge & Vocabulary	Learn & Apply Standards	Assess Progress
Phase I: Develop Expertise in the Unit and Individual Research Topics & Central Ideas	**1**	Introduction to Environmental Studies Research Topic Selection Morphemes: popul, -at(e), -ion (RI.4/L.4/L.5)	Marshall evidence, summarize, and identify bias as support for comprehending complex texts about Environmental Studies and for research topic selection. (RI.1/RI.2/RI.3/RI.6/W.7/W.8)	• Research Topic Selection • Morphology: Word Map • Key Question Pre-Assessment: *What is a central idea of "The Population Explosion" in* The Science of Our Changing Planet? *How does the author use supporting ideas and details to develop this central idea?* (RI.8.2 Rubric)
	2	RQ #1: Earth's Systems RQ #2: Resource Dependence Morphemes: con-, sum, -er (RI.4/L.4/L.5)	Use the analysis of central ideas and supporting ideas/key details as support for comprehending complex texts about Earth's systems and resource dependence. (RI.1/RI.2/RI.3/W.7/W.8)	• Knowledge: Use the FPOs to demonstrate knowledge of Earth's systems and resource dependence. • Morphology: Word Map • Constructed Response #1 (RI.8.2 Rubric)
	3	RQ #3: Human Use RQ #4: History Morphemes: in-, nov, -ate (RI.4/L.4/L.5)	Use organizing structures as supports for comprehending complex texts about the human use of resources and the related history and innovations. (RI.2/RI.3/RI.5/W.7/W.8)	• Knowledge: Use the FPOs to demonstrate knowledge of the human use of resources and the related history and innovations. • Morphology: Word Map • Constructed Response #2 (RI.8.2 Rubric)
	4	RQ #5: Impacts Morphemes: con-, sequ, -ence (RI.4/L.4/L.5)	Use analysis of central ideas and organizing structures as support for comprehending complex texts about the impacts of resource use on the Earth's systems. (RI.2/RI.3/RI.5/W.7/W.8)	• Knowledge: Use the FPOs to demonstrate knowledge of the impacts of resource use on the Earth's systems. • Morphology: Word Map • Constructed Response #3 (RI.8.2 Rubric)
	5	RQ #6: The Future Evaluate Informational Mentor Texts Morphemes: sus-, tain, -able (RI.4/L.4/L.5)	Use analysis of central ideas and organizing structures of text as support for comprehending complex texts about the future of resource use. Evaluate informational Mentor Texts. (RI.2/RI.3/RI.5/W.2/W.7/W.8)	• Knowledge: Use the FPOs to demonstrate knowledge of the future of resource use. • Morphology: Word Map • Key Question Mid-Assessment: *What is a central idea of "Invasive Species" in* The Science of Our Changing Planet? *How does the author use supporting ideas and details to develop this central idea?* (RI.8.2 Rubric)
Phase II: Research-Based Informational Writing	**6**	Drafting an Informational Research Paper (W.2/W.4) • Outlining (W.5) • Academic & Technical Vocabulary (RI.4/L.4) • Introduction, Conclusion & Text Features Morphemes: tra-, ject, -ory (RI.4/L.4/L.5)		• Informational Research Paper (W.8.2) Rubric for a Proficient Informational Text • Morphology: Word Maps
	7	Revising (W.2/W.4/W.5) • Focus • Content • Organization & Transitions • Word Choice & Style Morphemes: de-, grad, -at(e), -ion (RI.4/L.4/L.5)		
	8	Editing & Publishing (W.2/W.4/W.5/W.6/L.1/L.2) Morphemes: eco-, log(o), -ic, -al (RI.4/L.4/L.5)		
	9	Presenting (RI.7/SL.2/SL.4/SL.5/SL.6) Environmental Studies and Science Fiction (RL.2) Morphemes: pre-, serv(e), -at(e), -ion (RI.4/L.4/L.5)		• Presentation of Knowledge and Ideas Rubric (SL.8.4, SL.8.5, SL.8.6) • Morphology: Word Map • Key Question Post-Assessment: *What is a central idea of "Where Does It All Go?" in* The Science of Our Changing Planet? *How does the author use supporting ideas and details to develop this central idea?* (RI.8.2 Rubric)

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Core Texts

Exemplary in terms of both content and craft, grade-level Core Texts are curated from the best books publishers have to offer. The central work of the Unit is developing students' ability to read, understand, analyze, and create complex informational texts by using the Core Texts to build knowledge and vocabulary about Environmental Studies and scientific texts generally.

This informational text uses eye-catching graphics and the most up-to-date scientific evidence to demonstrate the unprecedented changes taking place around the planet. *The Science of Our Changing Planet* helps readers understand the complex relationships among human activity, natural systems, and environmental and social issues.

This narrative nonfiction text unpacks the immense changes to the human and natural world over the last half-century. Weaving together personal experience and scientific history and statistics, *The Story of More* documents how our world has changed, the impact of those changes, and humanity's capacity to resolve environmental issues.

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Multisource, Multicultural Collections

American Reading Company has been on a mission since 1998 to find books that reflect the experiences of all people. ARC supports small independent publishers and authors working toward this mission. ARC libraries include virtually every good book in print for children, with a special focus on books about and written by historically underrepresented people. Students will find themselves and their families represented in each collection, to the extent they are available from American publishers.

American Reading Company goes to great lengths to reflect multiple perspectives in all of our text sets. To the extent possible, each Informational Research Lab collection includes books written by and/or featuring scientists and researchers from diverse backgrounds and identities.

Strategically Designed Research Library

Students further investigate the key science concepts of Environmental Studies and become expert on a resource.

Solar Power

Wind Power

Hydropower

Geothermal Energy

Fossil Fuels

Biofuels

Nuclear Power

Overviews

Actual titles may vary.

Grade 8 Rubric for a Proficient Informational Piece	
Introduction	
___/2	☐ States the main topic or subject matter and previews the information to follow ☐ Makes the reader want to keep reading
Central Idea	
___/4	☐ Clearly stated or deliberately implied
Supporting Ideas	
___/6	☐ Organized into logical categories ☐ Work together to convey the central idea ☐ Organized in an order that makes sense for the central idea
Details	
___/6	☐ Well-chosen facts, definitions and/or other information and examples that are relevant to the central/supporting ideas ☐ Sufficient ☐ Properly cited from appropriate sources
Organization: I organize my piece by:	
___/1	☐ Using and maintaining a logical structure(s) that communicates my central idea (e.g., description, chronological/sequential order, cause/effect, problem/solution, compare/contrast).
Formatting/Graphics: I use formatting/graphics to:	
___/2	☐ Develop my ideas and add to my text (e.g., diagrams, graphs, charts, photographs, illustrations). ☐ Help the reader navigate the structure and development of ideas.
Transitions	
___/1	☐ Appropriate and varied ☐ Create cohesion and clarify relationships among ideas and concepts
Word Choice	
___/3	☐ Precise and descriptive ☐ Includes domain-specific vocabulary ☐ Domain-specific vocabulary is used correctly and appropriately
Formal Style, Syntax & Conventions: I use accurate syntax and proper conventions by:	
___/3	☐ Maintaining a formal style throughout. ☐ Writing sentences that are clear and complete (no run-ons or fragments) and of varied lengths and construction to create interest. ☐ Using correct grammar, spelling, and punctuation.
Conclusion	
___/2	☐ Summarizes the information presented and conveys a sense of completeness
___/30	Total Points Earned

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RI.8.2 Rubric

1 pt.	Introduce the text with an objective summary that includes the topic. *The text __ by __ (is mostly about/describes/discusses/explains)...*
2 pts.	Identify a central idea.
2 pts.	Identify the key supporting ideas, including their relationships to this central idea.
2 pts.	Explain how the author uses particular details to develop each supporting idea.
2 pts.	Explain how the organizing structure of a specific paragraph develops and refines a key concept related to the central idea.
1 pt.	Conclude by synthesizing how the central idea is developed.
10 pts.	**Proficient Answer**

Grade 8 Rubric for the Presentation of Knowledge and Ideas	
Content: I demonstrate expertise in my topic by:	
___/6	☐ Presenting accurate claims/findings. ☐ Using domain-specific/technical vocabulary correctly and appropriately. ☐ Answering questions from the audience.
Organization: My organizing structure transitions the audience easily through:	
___/3	☐ The presentation of central/main ideas or themes. ☐ The emphasis of salient points in a focused, coherent manner. ☐ The use of relevant evidence, sound valid reasoning, and well-chosen details to support central/main ideas or themes.
Style: My presentation style matches my audience and the task through:	
___/4	☐ Appropriate eye contact and use of gestures. ☐ Adequate volume, appropriate rate, and clear pronunciation.* ☐ Use of formal English as appropriate to the task and audience. ☐ Use of humor, pathos, and/or shifts in register/language as appropriate to task and audience.
Multimedia: I enhance my presentation by:	
___/2	☐ Integrating multimedia and visual displays into presentations to clarify information, strengthen claims and evidence, and add interest.
___/15	Total Points Earned

*Student accent or pronunciation/articulation differences cannot count against them in this scoring.   Option 1

See Week 9 for additional options for the Rubric for the Presentation of Knowledge and Ideas.

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INFORMATIONAL RESEARCH LAB

Week 1

Unit Introduction
& Topic Selection

Education is not the filling of a pail, but the lighting of a fire.

—William Butler Yeats

Reading: Informational Text 8.1

Cite the textual evidence that most strongly supports an analysis of what the text says explicitly as well as inferences drawn from the text.

Reading: Informational Text 8.2

Determine a central idea of a text and analyze its development over the course of the text, including its relationship to supporting ideas; provide an objective summary of the text.

Reading: Informational Text 8.4

Determine the meaning of words and phrases as they are used in a text, including figurative, connotative, and technical meanings; analyze the impact of specific word choices on meaning and tone, including analogies or allusions to other texts.

Reading: Informational Text 8.6

Determine an author's point of view or purpose in a text and analyze how the author acknowledges and responds to conflicting evidence or viewpoints.

Writing 8.7

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.

Writing 8.8

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.

Language 8.4

Determine or clarify the meaning of unknown and multiple-meaning words or phrases based on grade 8 reading and content, choosing flexibly from a range of strategies.

Language 8.5

Demonstrate understanding of figurative language, word relationships, and nuances in word meanings.

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Week 1

**Unit Introduction
& Topic Selection**

Lesson Plans

	Pre-Assessment on Key Question
1.1	Engage Students in the Unit of Study: Environmental Studies
1.2	Reading Informational Text
1.3	Informational Text Is More Than Just Facts
1.4	Introduction to Research Topics: Resources
1.5	Select Research Topic

CAPTURE and INSPIRE first, then TEACH.

—Peters, *Teaching to Capture and Inspire All Learners*, 2007

Before You Begin: Week 1 Tools

Pre-Assessment on Key Question	
Prepare copies of assessments (if working on paper) and access to *The Science of Our Changing Planet*	
1.1: Engage Students in the Unit of Study: Environmental Studies	
Final Project Organizer Packet You will use large versions (physical or digital) of the Final Project Organizers throughout the Unit.	
Research Card	
Core Texts	
Sticky Notes	
"Questions" and "WOW!" Facts Anchor Charts	
Research Library	
"Possible Research Topics" Anchor Chart	
Family Letter	
Home Connection	
1.2: Reading Informational Text	
"Word Map: *population*" (class and student versions)	
Classroom Glossary	
RI.8.2 Practice Rubric	
MLA Citations and MLA Citations for Web Pages	
1.3: Informational Text Is More Than Just Facts	
"Investigating Bias"	
"Loaded Language" Anchor Chart	
1.4: Introduction to Research Topics: Resources	
Resources Check Sheet (class and student versions)	
1.5: Select Research Topic	
Choose a book from the Research Library to evaluate as a resource for tidal energy	

Week 1, Unit Introduction, and Frontloading
The frontloading strategies (e.g., KW, "WOW!" Chart, Possible Research Topics, etc.) suggested throughout this week ensure that all students have the opportunities to show you what they already know, using whatever means or languages they feel comfortable with, including drawings, single words, their native languages, etc.

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WOW!

NASA wants to use nuclear energy for long-distance space exploration.

Coal is made from plants that died hundreds of millions of years ago.

The biggest wind turbine is in China. Each blade weighs 54 tons and is 123 meters long.

Questions We Have About Environmental Studies

How does solar power work?

How do we get natural gas?

What's the most sustainable energy source?

How does using fossil fuels impact the environment?

Environmental Studies Possible Research Topics

solar power
wind power
fossil fuels
hydropower
geothermal energy
biofuels
nuclear energy
oil
coal
natural gas
hydroelectricity
tidal energy

Environmental Studies Glossary

Environmental Studies: the multidisciplinary study of human interaction with and impact on the environment

biofuel: fuel derived directly from living matter (e.g., corn, soy, etc.)

resource: anything used to satisfy human needs (e.g, natural materials, energy, technology, etc.)

nonrenewable resource: a natural resource that is not replenished at the same rate at which it is consumed (e.g., oil, natural gas, coal, etc.)

Loaded Language

"crisis"
"mature"
"addiction"

The Fixed Mindset Versus the Growth (or Dynamic) Mindset

**Descriptions from Carol Dweck's (2006) *Mindset* and
Peter H. Johnston's (2012) *Opening Minds***

Fixed Mindsets	Growth (or Dynamic) Mindsets
Intelligence and abilities are static.	Intelligence and abilities can be developed and cultivated.
Tends to avoid challenges.	Tends to lead to embracing challenges.
Tends to be defensive or give up easily when faced with challenges.	Tends to be persistent in the face of setbacks.
Tends to see effort as fruitless or worse.	Tends to see effort as the path to mastery.
Tends to ignore useful feedback, particularly as negative—sees it as judgment.	Tends to learn from criticism, framing it in causal or procedural terms informing principles of how to do things in the future.
Tends to feel threatened by the success of others.	Tends to find lessons and inspiration in the success of others.
Learning goal tends to be to look as smart as you can.	Learning goal tends to be to learn as much as you can.
The most important information is whether one is successful. It shows who is smart and more valuable. "How" is irrelevant.	The most important information is "how" someone did (or could do) something because that's what we can learn from.
When encountering difficulty, views the difficulty as failure, questions one's ability, assigns blame for failure, and ceases to act strategically.	When encountering difficulty, engages in self-monitoring and self-instruction, increases strategic efforts, and doesn't see self as failing. "I don't have it quite YET." Consciously builds a toolbox for problem-solving success. Sees learning as a process.
When asked "When do you feel smart?", they say things like "It's when I don't make any mistakes.", "When I finish something fast and it's perfect.", and "When something is easy for me, but other people can't do it."	When asked "When do you feel smart?", says things like "When it's really hard", "I try really hard", "I can do something I couldn't do before.", and "[When] I work on something a long time and I start to figure it out."
Everything is about the outcome.	Allows people to value what they're doing regardless of the outcome.
When teaching, asks questions like "Can I teach them?" and "Can they learn?"	When teaching, asks questions like "How can I teach them?" and "How will they learn best?" (p. 36)

—Wilhelm, J. D., Douglas, W., Fry, S. W., Tinker, M. B., & Novak, B. (2014). *The activist learner: Inquiry, literacy, and service to make learning matter*. Teachers College Press.

REPRESENTATIVE SAMPLE

Week 1

Pre-Assessment on Key Question

Reading: Informational Text 8.2: Determine a central idea of a text and analyze its development over the course of the text, including its relationship to supporting ideas; provide an objective summary of the text.

Reading: Informational Text 8.5: Analyze in detail the structure of a specific paragraph in a text, including the role of particular sentences in developing and refining a key concept.

Before You Begin: Pre-/Mid-/Post-Assessment

Part 1: Have students read a short passage of grade-level literary text.

- Pre-Assessment: "The Population Explosion" in *The Science of Our Changing Planet*, pages 16–17
- Mid-Assessment: "Invasive Species" in *The Science of Our Changing Planet*, pages 162–163
- Post-Assessment: "Where Does It All Go?" in *The Science of Our Changing Planet*, pages 84–85

Part 2: Have students complete constructed responses to this prompt: *What is a central idea of this text? How does the author use supporting ideas and details to develop this central idea?*

Materials

- Copies of the assessment
- Access to the text
- Pencils

Evaluation

Use a state test rubric and/or the RI.8.2 Rubric to sort students' completed work into four piles:

- Proficient: Understood the text, correctly answered the question, and wrote a well-constructed essay. Keep your standard of proficiency high—you may not yet have any students who score proficient.
- Approaching proficient: Understood the text and correctly answered the content of the question but needs work on informational text analysis.
- Developing: Understood the text but doesn't seem to understand what a central idea is or how the author uses supporting ideas and key details to develop it.
- Emergency: Did not understand the text.

Implications for Instruction

Use the results of your sort to determine the following:

- Whole-group instructional needs
- Small-group instructional needs
- Intensive individual interventions

REPRESENTATIVE SAMPLE

Read "The Population Explosion" in *The Science of Our Changing Planet, pages 16–17,* and answer the following prompt: *What is a central idea of this text? How does the author use supporting ideas and details to develop this central idea?*

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Weekly Homework

This week, students are responsible for the following:

- **Reading:** Read for at least thirty minutes nightly (including chapter 3 of *The Story of More* by Lesson 1.3 and chapter 4 by Lesson 1.4).
- **Family Letter:** Share the Family Letter with your family.
- **Home Connection:** Complete the Home Connection with a family member. Due at the end of Lesson 1.5.
- **Writing:** Compose a 4-point response on the RI.8.2 Practice Rubric for chapter 3 of *The Story of More*, due by Lesson 1.3. Repeat for chapter 4, due by Lesson 1.4.
- **Vocabulary:** Make at least ten additions to your Word Map by the end of the week.

Note: Help students understand the weekly expectation so they can plan accordingly. For example, if they know they'll be too busy to read one night, they need to plan to make up that thirty minutes another night.

REPRESENTATIVE SAMPLE

Lesson 1.1

Engage Students in the Unit of Study: Environmental Studies

This week, students will engage in Environmental Studies and the critical reading of informational text. Students will select research topics by the end of the week.

The primary goal of today is to capture and engage students in the Unit. Students will generate questions about and cite textual evidence from informational texts.

Reading: Informational Text 8.1: Cite the textual evidence that most strongly supports an analysis of what the text says explicitly as well as inferences drawn from the text.

Writing 8.7: 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.

Establishing Intellectual Community

Goal: All students are active and valued participants in class discussion.

Discussion Protocol

Use the following protocol during Read/Write/Discuss Complex Text to encourage student-to-student discussion.

- Read the text (independently, in pairs, out loud, or some combination).
- Have students work with a peer to answer today's questions and/or complete today's task.
- Circulate and listen in on student discussions.
  - As soon as you hear a student say something surprising, insightful, or controversial about the lesson focus, ask them to share with the class. Invite students to extend or debate their peers' remarks before you respond. Reinforce that students use evidence from the text to support their responses. If no one responds, follow up with questions like: *Who agrees? Who disagrees? Who has a different interpretation?*
  - If you observe that students are confused, stuck, etc., call the class back together and invite students to help each other work through the challenge. A challenge shared by many students indicates a coaching opportunity.

Encourage Student-to-Student Discussion

Suggested questions:

- *Who wants to expand on ___'s response?*
- *Who wants to build on what __ just said?*
- *Who disagrees with __?*
- *Is __ correct? Why or why not?*

- *Who has a different interpretation?*
- *What else?*
- *Who noticed something else in the text?*
- *Who has a question about what __ just said?*

Criteria for Success: Academic Discourse

In this class, you'll be practicing the kinds of academic discussions expected to be used in high school, college, and any time you discuss ideas with others. We'll have a list of the expectations we hold for each other during discussions. What should we include on our list?

Create a list with your class, adding/amending as appropriate throughout the year. Be sure to include expectations like the following:

- I work to answer every question.
- I ask questions for clarification.
- I cite evidence from the text when I respond.
- I explain my thinking.
- I restate ideas to confirm understanding.
- I provide thoughtful feedback to my peers.
- I use academic and technical vocabulary related to the topic.
- I expand on my peer's ideas when I agree and debate my peer's ideas respectfully when I disagree.
- I ask for help when I need it and provide help to my peers.
- I listen to understand, not just to respond.
- I change my mind when presented with compelling evidence.
- I monitor how much I talk and allow space for others to contribute.

REPRESENTATIVE SAMPLE

Scaffolding for Success With Grade-Level Texts

This curriculum is designed to provide all students with daily access to complex texts. Complex texts will generate at least some productive struggle for most students—struggle that is worth it to understand new, harder texts and ideas more deeply. Use the chart below to determine which supports to provide to whom to ensure all students succeed in your classroom.

NOTE: Any student not yet reading in at least the Purple IRLA level should also be in an ARC Accelerator classroom as a temporary intervention.

Challenge	For Whom	Supports
New genre or form (including navigating informational text and unfamiliar Science or History content)	All students (unless a student is already an avid reader of this genre/form)	Daily genre or form-specific lessons; graphic organizers; class discussion. Text-specific questions at key pause points are provided for in-class reading passages to scaffold comprehension.
New, more complex vocabulary/sentence structures	Any student reading below the IRLA level of this text (You can access your students' IRLA data in SchoolPace.)	Context clues and word parts lessons; daily vocabulary work; generative Word Maps, reading volume (The best way to build vocabulary is through high-volume independent reading. Don't skip this part.) Text-specific questions at key pause points are provided for in-class reading passages to scaffold comprehension.
Decoding/phonics	Any student reading below the White IRLA level (You can access your students' IRLA data in SchoolPace.)	Listen to the book read aloud (by you, another student, an audiobook, etc.) while following along. Any student reading below the White IRLA level is facing an academic emergency. Their ARC Accelerator teacher is working on it, but they need your help, too. You can use the IRLA Toolkit Lessons in SchoolPace Connect to "double dose" the Accelerator intervention and help them master phonics faster.
English is a new language	Any student for whom English is a new language	Allow students to bring their home language into the classroom to tap into their prior knowledge. Provide bilingual glossaries in the student's home language(s) as they read and write. Offer students access to a translation device (e.g., computer, laptop, tablet) to give students an opportunity to access the text/materials in their home language(s). Some translation apps, such as Google Translate, allow students to take a picture of a text in English and immediately translate it into the student's home language. **Note:** While translation tools may support students' overall understanding of a text, it may result in an inaccurate rendering from one language to another. Whenever possible, pair student(s) with a "Language Buddy" who speaks their home language(s). If this is not possible, pair the student with someone who is curious and excited to learn a new language.

Lesson 1.1: Engage Students in the Unit of Study

1. Do Now

Distribute the **Final Project Organizer packet** and **Research Card**, and display the following task:

Discuss with a peer: What do you already know about Environmental Studies? What questions do you have? Add to your "Know and Want to Know" chart.

Invite students to share responses with the whole class.

2. Unit Introduction

Welcome to our Informational Research Lab: Environmental Studies. We will spend the next nine weeks reading, writing, and talking about humanity's interaction with and impact on the environment. You will choose one resource to research and write an informational research paper about.

Research papers are a type of informational/explanatory text. An informational/explanatory text is a nonfiction text written to teach the reader information about a topic/subject in the natural or social world. You will read many pieces of informational/ explanatory texts in this Unit.

By the end of this Unit, you will:

- *Be an expert on Environmental Studies.*
- *Be an expert on your chosen resource.*
- *Write and publish an informational research paper on your topic.*

Today, we'll preview the Core Texts, Research Library, and some other tools we'll use throughout the Unit to support our work.

Read/Write/Discuss Complex Text

Distribute the **Unit 2 Core Texts and sticky notes** (or other note-jotting paper). The Core Texts for this Unit are *The Story of More* by Hope Jahren and *The Science of Our Changing Planet* by Tony Juniper.

Today, we'll begin our research into the field of Environmental Studies by generating questions and collecting facts. As we read, jot down any questions you have or interesting facts you hear. Let's dive into **The Story of More** *first. Preview it with a peer (e.g., look at the front and back covers, read/skim the first few pages, etc.).*

Students read **chapters 1–2 (pages 3–12) of *The Story of More.*** After reading, students work with a peer and then as a class to briefly discuss using the evidence from the text that most strongly supports their response:

- *What did this text teach us?*
- *Why does it matter? To Environmental Studies? To us?*

Suggested Lesson Pacing

Do Now: 5–10 minutes

Whole-Group Instruction: 20–25 minutes

Application: 15–20 minutes

Exit Ticket: 5 minutes

Coaching Focus

Students can generate questions about and cite the textual evidence that most strongly supports the analysis of informational texts.

Publishing Options

In Week 6, you/your students will decide whether to publish the final piece as a paper or a book.

Who Reads the Text?

Who reads the text depends on the students, the text, and the purpose. If this text is too hard for your students to read on their own, why? What is the least help you can provide that will ensure they do most of the work of accessing and processing the text? Examples of scaffolds include the following:

- Breaking the text into manageable pieces, asking more frequent questions to foster comprehension, providing opportunities to reread, etc.
- Students engaging in productive struggle in the text with minimal support (such as regular pair/ share).
- Students reading with a peer.
- Students listening to the teacher read aloud.
- Teaching key concepts in native language, same-language partners, sentence frames, pre-teaching of specific vocabulary or language structures, etc.

Key Science Concepts & Vocabulary

Discuss the following questions, using evidence from the text to scaffold comprehension and analysis.

Chapter 1

- p. 4: *What is **climate change**? How do you know?*
- p. 5: *What do we know so far about the author? Her parents?*
- p. 6: *What does the data Jahren cataloged describe?*
- p. 7: *What resources does Jahren claim we have? What happened to the world?*

Text-specific questions continued on next page.

REPRESENTATIVE SAMPLE

Display the Questions Chart and "WOW!" Facts Chart.

- **Questions Chart:** *Did we find the answers to any of the questions we had before reading today? What new questions do we have?*
- **"WOW!" Facts Chart:** *Who learned an interesting or surprising fact?*

Set the expectation that students ground all their responses in the most supportive evidence from the text.

Students work with a peer to preview ***The Science of Our Changing Planet***. Discuss any new questions and interesting/surprising facts and add them to the class charts.

3. Application

Set Focus

Read from the Research Library. Be ready to share:

- *At least one question you want to answer in this Unit.*
- *The most interesting or surprising fact you read.*

Student Work

Students read. Allow students to jot/flag questions and facts as they read.

Teacher Work

Monitor the class for 100% engaged and focused reading, redirecting students as necessary.

Accountable Talk

Students discuss the following questions with a peer then as a class. Reinforce the expectation that students ground all their responses in the most supportive evidence from the text.

- *What is the most interesting thing you learned? The most surprising? Did anything contradict what you previously thought? Explain.*
- *What is a question you want to answer in this Unit?*
- *What resources did you read about?*

"Possible Research Topics"

As a class, begin a "Possible Research Topics" chart. Make sure that each of the topics is a resource (e.g., "wind power" rather than "wind turbines"). Continue to refine this list of possible research topics throughout the week as students continue exploring the Research Library.

Work with students to add to the class charts. Then, discuss: *Why does what you read today matter? To Environmental Studies? To us?*

Key Science Concepts & Vocabulary (cont.)

Chapter 2

- p. 8, after paragraph 1: *What were the people of Mesopotamia worried about?*
- p. 9, after "doubled yet again": *What did Aristotle believe about Earth's population? Suger?*
- p. 10
  - After "doubled again": *Who is Thomas Malthus? What did he argue?*
  - After par. 1: *What is the "penalty attached to over-population"?*
- p. 11, section break: *Who was Henry George? According to Jahren, what was he right about?*
- End of chapter: *Why does Jahren repeat the statement about the "population doubling" throughout this chapter?*

Informational/Explanatory Text

Informational/explanatory writing includes a wide array of genres, such as the following:

- **Academic Genres:** literary analyses, scientific and historical reports, summaries, précis writing
- **Workplace/Functional:** instruction manuals, memos, reports, applications and résumés, essays

Academic Discourse: Routines for Discussion

A new Unit offers the opportunities to reset classroom routines. Review and reinforce practices that promote academic discussion, such as the following:

- Provide wait time to allow all students time to think and respond.
- Introduce clear routines for peer discussion during Accountable Talk.
- Model and practice using academic vocabulary (e.g., "schema") during discussion.
- Set the expectation that students confirm, contradict, or extend their peers' remarks.
- Reinforce that students use evidence from the text to support their responses.

Accountable Talk and Oracy Development

Some Multilingual Learners might need guidance with norms and expectations for social interaction. These include facets of the culture (e.g., personal space, eye contact, appropriate ways to make a request, etc.) they might not be familiar with. Use modeling, role play, visual supports, etc., to make them more comprehensible.

4. Exit Ticket

Add at least one additional question or fact to your "Know and Want to Know" organizer.

5. Homework

Distribute the Family Letter and Home Connection, located in the Introduction in English and Spanish.

Reading: Read for at least 30 minutes. Log your reading in your ARC Reads Logbook.

Family Letter: Share the Family Letter with your family.

Home Connection: Complete the Home Connection with a family member. Due at the end of Lesson 1.5.
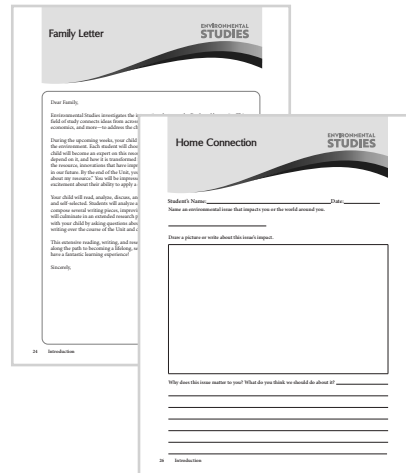
Home Connection

The Home Connection, available in both English and Spanish, provides an opportunity for students to engage in the big ideas of the Unit with a member(s) of their family.

REPRESENTATIVE SAMPLE

Environmental Studies Vocabulary

Environment

acid rain
atmosphere
biome
biosphere
carbon dioxide
carbon emissions
carbon footprint
climate
ecosystem
greenhouse gases
habitat
ice cap
natural resource
(non)renewable
ozone layer
pesticides
smog
water cycle
weather pattern
biology
botany
chemistry
ecology
genetic engineering
natural history
naturalist
scientist

Issues

climate change
deforestation
dependence on fossil fuels
endangered species
global warming
habitat destruction
ocean acidification
oil spills
overpopulation
pollution
resource distribution
soil erosion
trash & waste management
urban sprawl
water scarcity

Political

activism
conservation
Earth Day
efficiency
environmental policy
environmentalism
legislation
lobby
movement
national parks
organization
preservation
protest
wildlife refuge

Economic

agriculture
alternative energy
biodegradable
biofuel
geothermal energy
green building
hybrid
hydroelectricity
industrialization
mass production
nuclear energy
organic
solar power
sustainable
urban farming
wind turbine

Environmental Studies

Name: _____ **Room:** _____

Choose a resource to research.

Research Questions:

1. Where in Earth's systems is this resource located? Why?

2. How is human society dependent on this resource?

3. How does this resource go from its natural state to human use?

4. How has this resource been important to the development of human civilizations? What are the most important innovations that have improved our ability to use this resource?

5. How does our use of this resource impact Earth's systems?

6. What role should this resource play in our future? What will be required to make that sustainable?

Name: _____

Final Project Organizer

Know/Want to Know About Environmental Studies

K	W
What do you already know about Environmental Studies?	What do you want to know about Environmental Studies? What questions do you have?

REPRESENTATIVE SAMPLE

Lesson 1.2

Reading Informational Text

Today, students will review two essential skills for reading informational text: investigating academic/technical vocabulary and summarizing.

Reading: Informational Text 8.2: Determine a central idea of a text and analyze its development over the course of the text, including its relationship to supporting ideas; provide an objective summary of the text.

Reading: Informational Text 8.4: Determine the meaning of words and phrases as they are used in a text, including figurative, connotative, and technical meanings; analyze the impact of specific word choices on meaning and tone, including analogies or allusions to other texts.

Language 8.4: Determine or clarify the meaning of unknown and multiple-meaning words or phrases based on grade 8 reading and content, choosing flexibly from a range of strategies.

Language 8.5: Demonstrate understanding of figurative language, word relationships, and nuances in word meanings.

Lesson 1.2: Reading Informational Text

1. Do Now

Distribute **"Word Map: *population*"** and the following task:

Today, we will read about how the population of the Earth has changed over time. Work with a peer to fill out as much of "Word Map: population*" as you can.*

2. Reading Informational Text

In this Unit, we'll spend a lot of time reading and discussing informational texts. We will all read some of the same books, but everyone will read some books of their own choice. To read and discuss any informational text you encounter, you will need to be an expert in determining the meaning of academic and technical vocabulary and summarizing texts.

We will study some words closely. Studying some words closely helps you become a better reader, writer, thinker, scientist, and researcher and helps you analyze and acquire even more words.

Work with students to complete as much of the Word Map as possible. See the example at the end of this lesson for support. The example is not exhaustive, and students do not need to complete every section for every word. Students continue to add to their Word Map throughout the week and submit at the end of Lesson 1.5.

Post the large class version of each Word Map as it is introduced. Continue to add to them throughout the Unit.

Display a **Class Glossary** and have students open to their personal glossary, located in their Final Project Organizer packet.

Let's add this word to our glossary and be on the lookout for other words we should add throughout the Unit.

Read/Write/Discuss Complex Text

Students read **"The Population Explosion," pages 16–21, in** *The Science of Our Changing Planet* in appropriate chunks. During reading, use the questions in the right-hand column to support comprehension of complex text.

Suggested Lesson Pacing

Do Now: 5 minutes
Whole-Group Instruction: 20–25 minutes
Application: 15–20 minutes
Exit Ticket: 5–10 minutes

Coaching Focus

Students can:

- Determine or clarify the meaning of words and phrases.
- Provide an objective summary of a text.

You've Seen This Before: Vocabulary Strategies

Remind students to continue to use context clues, including morphological clues (roots and affixes), to determine the meaning of unfamiliar words and to use reference materials to confirm accuracy if/when needed. Encourage students to explain *how* the meaning was determined. Students in ARC Core have been practicing these skills since early elementary grades.

Key Science Concepts & Vocabulary

Discuss the following questions, using evidence from the text to scaffold comprehension and analysis.

Pages 16–17

- After first paragraph
  - *What does **"fundamental"** mean? How do you know?* (Repeat for **"demand."**)
  - *What does it mean to "drive pressure"?*
- "Expanding Planet"
  - *"Mortality rates" means number of deaths. What caused mortality rates to go down?*
  - *What does **"unprecedented"** mean? How do you know?*
- End of spread: *What does this timeline teach us?*

Pages 18–19

- *Who are **"migratory workers"**? How do you know?*
- *Where is the population still growing quickly? Where is population growth slowing down?*

Pages 20–21

- *What does **"proportion"** mean? How do you know?*
- *What are the concerns about population aging?*
- *What is **"life expectancy"**? How do you know?*
- *What do these pyramids teach us about the world's population?*

REPRESENTATIVE SAMPLE

After reading, students work with a peer and then as a class to briefly discuss the following:

- *What did this text teach us?*
- *What is the most interesting or surprising thing you learned?*
- **Vocabulary:** *Who noticed an unfamiliar word or phrase? Work with a peer: What does __ mean? How do you know?*
- *Why does what the text taught us matter? To Environmental Studies? To us?*

Display and distribute the **RI.8.2 Practice Rubric**.

Now, we'll summarize: give the "gist" or just the most important information from a text.

Work with students to write a summary of the text.

The first point is pretty straightforward. "We read 'The Population Explosion' in The Science of Our Changing Planet *by Tony Juniper (2024)." Tell your neighbor—what was this section mostly about?... I'll write: "In this fascinating section, Juniper explains the rapid rise in Earth's population." What evidence can I include to prove my summary?... What about... "He describes the factors that have caused this population explosion, such as improved food production and distribution, improved sanitation, and better public health." Let's see... Is this the strongest evidence I can find? I think I could prove the accuracy of my statement better by providing an example from the text. I'll write: "For example, the introduction of the smallpox vaccine in 1798 and penicillin in 1928 has resulted in lower mortality rates." Is my summary objective? Let me read it back—I wrote "this fascinating section." I found it interesting, but my summary should be free of my personal opinion. I'll cross out "fascinating" and just write "In this section..." Now I'll make sure I have all the correct citation information: title, author, and page numbers... Yes!*

RI.8.2 Practice Rubric

1 pt.	Introduce the Text/Topic: *I read ___ by ___.*
1 pt.	Objective Summary: *It is mostly about/describes/discusses/explains...*
1 pt.	Evidence: Use the text evidence that most strongly proves the truth/accuracy of your statement.
1 pt.	Citation: title, author, page number
4 pts.	**Proficient Answer**

Scaffold Complex Text: *The Science of Our Changing Planet*

The Science of Our Changing Planet is complex, in part, due to the graphics and visual aids. Help students do the following:

- Notice the predictable format. Most spreads include a title, a bolded "big idea," supporting paragraphs, a "main" graphic/visual and additional, inset graphics.
- Leverage this format for comprehension. Students may read some elements closely and may skim and scan others, depending on their purpose for reading.

Vocabulary & Literacy/Oracy Development

When possible, have students identify cognates in their home language that connect to content learned and words studied in English (e.g., *energy/energía*). This work can benefit students in noticing helpful patterns (suffixes, prefixes, roots) and in understanding the meaning of morphemes within and across languages.

You've Seen This Before: MLA Citations

In Unit 1, students learned/reviewed the MLA style of citations. Although many scientific fields of study use different styles of citations, this Unit continues to teach and reinforce MLA style, which is the most common style for English and the humanities. See the end of this lesson for review of MLA Citations of print sources. Since students may be conducting some research online, see the end of this lesson for guidance on MLA citations and digital sources.

3. Application

Set Focus

Continue reading from the Research Library. Be prepared to share:

- *A 4-point response that includes an objective summary of a section you read today.*
- *An academic or technical vocabulary word related to Environmental Studies that everyone should know.*

Student Work

Students read.

Teacher Work

Circulate and ask students to give a short summary of a section they have read. Coach students on giving objective summaries that do not include personal opinions.

Accountable Talk

Students work with a peer: One student shares their oral summary, using the RI.8.2 Practice Rubric for support as necessary. Their peer holds up a finger for each rubric point they hear. Students discuss any areas of disagreement. Switch and repeat.

Students share good examples and discuss challenges as a class. Then, discuss the following:

- *Who encountered a vocabulary word related to Environmental Studies that everyone should know? What does it mean?*
- *When else might you use these skills* (investigating vocabulary and summarizing)*?*

Continue to add to the class and individual organizers (e.g., Questions Chart, "WOW!" Chart, "Possible Research Topics" chart, Glossary, and Word Map).

4. Exit Ticket

Write a 4-point response that includes an objective summary. Make sure to include at least one academic or technical vocabulary word.

5. Homework

Reading: Read for at least 30 minutes, starting with chapter 3 of *The Story of More*. Log your reading in your ARC Reads Logbook.

Writing: Write a 4-point response for chapter 3 of *The Story of More* that includes an objective summary.

Vocabulary: Make at least ten additions to your Word Map by the end of the week.

MLL Supports

Accountable Talk and Oracy Development

The RI.8.2 Practice Rubric provides sentence frames to support oracy development and successful academic interaction from the start.

REPRESENTATIVE SAMPLE

Word Map: *population*

Root

popul
Latin: "populus," people, inhabitants

popular

Suffix

-at(e)
to cause, make (verb)

alternate

full of, having the quality of (adj.)

alternate

Suffix

-ion
the state or act of (noun)

conservation

Word Forms & Related Words

populational

---

population

1. (n.) the total number of people living in a country or region
2. (n.) a group of one or more species of organisms living in a particular area or habitat

---

Interdisciplinary Connections

Math: sample vs. population in statistics

Cognates

Spanish: población

Compare

Synonyms:
community

Contrast

Antonyms:
sample

Root

popul
Latin: "populus," people, inhabitants

popular

popularity

popularize

populate, overpopulate

populism

populist

Suffix

-at(e)
to cause, make (verb)

alternate

appropriate

locate

originate

regulate

validate

full of, having the quality of (adj.)

alternate

appropriate

Suffix

-ion
the state or act of (noun)

conservation

description

estimation

extinction

invasion

moderation

observation

Word Forms & Related Words

populational

populations

overpopulation

population

1. (n.) the total number of people living in a country or region
2. (n.) a group of one or more species of organisms living in a particular area or habitat

Interdisciplinary Connections

Math: sample vs. population in statistics

Social Studies: human population densities and drifts

Science: studying populations of living organisms

Cognates

Spanish: población

French: population

Haitian Creole: popilasyon

Italian: popolazione

Portuguese: população

Tagalog: populasyon

Compare

Synonyms:

community

group

Contrast

Antonyms:

sample

subsect

REPRESENTATIVE SAMPLE

Objective Summary (of Informational Text): Brief statement/synopsis that includes the topic and ONLY the essential points/details of a text. An objective summary does not include any personal opinion about the text.

RI.8.2 Practice Rubric

1 pt.	Introduce the Text/Topic: *I read ___ by ___.*
1 pt.	Objective Summary: *It is mostly about/describes/discusses/explains...*
1 pt.	Evidence: Use the text evidence that most strongly proves the truth/accuracy of your statement.
1 pt.	Citation: title, author, page number
4 pts.	**Proficient Answer**

Name: _____

- -

MLA Citations for Print Sources*

In-Text Citations: Author-Page Style

Cite the name of the author and the page number(s) from which the quotation is taken. For example:

- According to **Murphy**, "Coal made our modern lives possible. But if we keep living this way, coal will threaten all life on earth" **(3)**.

- Despite its importance to modern life, "[c]oal will threaten all life on earth" if changes aren't made **(Murphy 3)**.

- **Murphy** writes that coal has been important to modern life, but it is a threat to life on the planet if changes aren't made **(3)**.

Note: If you include the author's name in the sentence, you do not need to include it in the parenthetical. Pay attention to the placement of quotation marks, parentheses, and end punctuation.

Works Cited

Use the following formats for citing a book in a bibliography or works cited.

Citing a Book

Last name, First name. *Title of Book.* Edition (if any), Publisher, Publication Date.

For example: Murphy, Sara. *How Coal Changed the World.* American Reading Company, 2021.

Citing an Article from a Periodical (Journal, Magazine, Newspaper)

Last name, First name. "Title of Article." *Title of Periodical*, Volume, Number, Year, Page range of entry.

For example: Klein, Andrew. "'Burning Up." *Science World*, vol. 77, no. 6, 18 Jan. 2021, pp. 18–19.

*Adapted from the Online Writing Lab at Purdue University

REPRESENTATIVE SAMPLE

MLA Citations for Web Pages*

In-Text Citations

Not all web pages identify an author. Cite the first item in the works cited entry. If that item is a website, try to use a shortened version of the URL (e.g., just www.nationalgeographic.com, not the entire URL). Do not include paragraph numbers.

- In Britain, many workers are switching from working with fossil fuels, such as coal, oil, and gas, to jobs in renewable energy, such as solar, wind, and geothermal (**Ambrose**).

- "Humans currently demand 1.6 times *more* resources than Earth can regenerate (**"Let's Make a Change: Sustainability"**)."

Note: If you cite two web pages with the same author, include the author and the title of the work.

Works Cited

Leave out anything that does not apply to your source.

> Author. "Web Page Title." *Title of Web Site*, Other Contributors, Version (edition), Number, Publisher, Publication Date, Location. Date of access.

For example:

- **Ambrose**, Jillian. "'It'll Be Around Forever': Fossil Fuel Workers Switch to New Jobs in Renewables." *The Guardian*, 6 Oct. 2020, https://www.theguardian.com/environment/2020/oct/06/growth-renewable-energy-wind-solar-generates-jobs-uk. Accessed 9 Oct. 2024.

- "**Let's Make a Change: Sustainability**." *National Geographic Kids*, https://www.natgeokids.com/uk/kids-club/cool-kids/general-kids-club/lets-make-a-change-sustainability/. Accessed 9 Oct. 2024.

A Note on Videos

When you cite a print source, you include the page number. When you cite a video, include the time stamp, using the format hours:minutes:seconds. For example:

According to the video "What Are Fossil Fuels?," fossil fuels are the source of most human-caused greenhouse gas emissions (00:00:50).

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*Adapted from the Online Writing Lab at Purdue University

Lesson 1.3

Informational Text Is More Than Just Facts

Our favorite informational authors help us see the world in a new way... [They] deepen our understanding and lead us to reformed ways of thinking and of living.

—Wilhelm, Smith, & Fredricksen, *Get It Done! Writing and Analyzing Informational Texts to Make Things Happen*, 2012, p. 226

Today, students will become skeptical consumers of informational text, looking for (intentionally and unintentionally) biased portrayals of concepts/ideas and outdated versions of the facts.

Reading: Informational Text 8.2: Determine a central idea of a text and analyze its development over the course of the text, including its relationship to supporting ideas; provide an objective summary of the text.

Reading: Informational Text 8.6: Determine an author's point of view or purpose in a text and analyze how the author acknowledges and responds to conflicting evidence or viewpoints.

Lesson 1.3: Informational Text Is More Than Just Facts

1. Do Now

Display the following task.

*Share your objective summary of **chapter 3 of The Story of More** with a peer. Then, discuss: How does* The Story of More *confirm, contradict, or extend what you read yesterday in* The Science of Our Changing Planet?

Discuss briefly as a class.

2. Informational Text Is More Than Just Facts

*In order to write an informational research paper in which you develop complex, compelling ideas about your topic, you will have to understand your topic deeply. Reading a few books will not be enough. You will need to very carefully read a lot of books by many different authors. You'll need to be able to judge what parts of what you read are actually factual/truthful and what parts are the author's opinion. Most of the content of informational texts **is** historic or scientific fact. A competent reader needs to notice bias as they decide what to accept as fact and what is the author's interpretation, which might be up for debate.*

Today, you will practice reading carefully, and by the end of the day, you will identify examples of bias in informational text.

Display/distribute "Investigating Bias." Students discuss the following with a peer and then as a class:

- *Read the definition of bias at the top of this page. Then, tell a peer in your own words: What is bias?*

- *What examples of bias have you encountered in what you've read so far in this course or elsewhere? Explain.*

Informational Text Is More Than Just Facts continued on next page.

Suggested Lesson Pacing

Do Now: 5–10 minutes

Whole-Group Instruction: 20–25 minutes

Application: 15–20 minutes

Exit Ticket: 5 minutes

Coaching Focus

Students can assess how point of view or purpose shapes the content and style of a text.

Related Key Concepts

Fact: knowledge or information based on a real/observable occurrence; something that can be proven; something that experts agree on.

Opinion: something one thinks, believes, or feels about a topic.

Author's Purpose: a person's reason for writing (often includes to communicate their central idea(s) and/or messages about a topic).

Point of View: a way of thinking about something; the position (bias, worldview, background/cultural angle) from which something/ someone is observed. Synonyms: "outlook," "viewpoint," and "perspective."

Tell-Tale Signs of Bias

1. The author uses inflammatory language: in the most extreme cases, racial epithets, slurs, etc.

2. The author consistently makes claims whose larger purpose is to elevate (or demean) one social, ethnic, national, religious, or gender group as compared to another or all others.

3. The author consciously presents evidence that serves to tell only one side of an event or issue, purposefully withholding or ignoring information that may shed the opposing view in a more positive light.

4. The author manufactures, falsifies and/or dishonestly cites evidence in order to present his or her case in a more positive light.

—Conolly-Smith, "Bias/Prejudice," 2007

Errors vs. Out-of-Date

Human understanding of Science and History is constantly evolving.

Books may contradict each other, not because of errors but because our knowledge about the world is growing and changing over time.

Error: Experts in the field would agree that the information presented was inaccurate at the time at which the author wrote it.

NOT an Error: Information WAS accurate at the time at which the author wrote it, but since then, the field has learned more about it and our idea of what is true has changed.

Teach students to notice copyright dates.

REPRESENTATIVE SAMPLE

Read/Write/Discuss Complex Text

Students read pages **"Fuel for Growth," pages 40–45, in *The Science of Our Changing Planet*.** During reading, use the questions in the right-hand column to support comprehension of complex text.

After reading, students work with a peer and then as a class to briefly discuss the following, using evidence from the text:

- **Summarize:** *Give an objective summary of this section.*
- *What did this text teach us?*
- *What is the most interesting or surprising thing you learned?*
- **Vocabulary:** *Who noticed an unfamiliar word or phrase? Work with a peer: What does __ mean? How do you know?*
- **Bias:** Use the "Investigating Bias" questions to analyze this text. Create a **"Loaded Language" chart**. Collect any words or phrases students find that signal bias (e.g., "crisis," "addiction," etc.).
- *What is the author's point of view? How do you know? How does the author respond to conflicting evidence or viewpoints?* (e.g., in "Surge in Demand": a call to increase renewable energy sources and an acknowledgement of the challenges posed by renewable energy sources)
- *Why does what the text taught us matter? To Environmental Studies? To us?*

Lesoon continued on next page.

Key Science Vocabulary & Concepts

Discuss the following questions, using evidence from the text to scaffold comprehension and analysis.

"Fuel for Growth" (pages 40–41)

- Bold paragraph: *What does **"access"** mean? What does it mean to "seek access"? How do you know?*
- "The energy revolution"
  - *What does **"revolution"** mean in this context? How do you know?*
  - *What does it mean to "harness energy"? How do you know?*
  - *What resources can we add to our possible topics list?*
- Energy Use Graph
  - *What does this graph show? How do you know?*
  - *During which period did the world see the fastest rate of energy use growth?*
- End of spread: *After reading this spread, what does the author mean by "higher-consumption lifestyles"? How have we developed higher-consumption lifestyles?*

"Surge in Demand" (pages 42–43)

- *What is **industrialization**? How do you know?*
- *What does it mean to "curb emissions"? Why is curbing emissions important?*
- *According to Juniper, why is the demand for energy rising?*
- "Energy usage: present": *What does the graphic show? How does it support Juniper's argument?*
- "The future of energy": *What are some challenges of renewable energy?*

"Carbon Footprint" (pp. 44–45)

- *What is a **carbon footprint**? How do you know?*
- *Why do carbon footprints "vary hugely"?*
- *What choices does knowing your carbon footprint enable? Why?*
- "Personal footprint": *What does the graphic show? What surprises you about the average carbon footprint? What doesn't surprise you?*

3. Application

Set Focus

Continue reading from the Research Library. Be ready to share an objective summary and any instances of bias that you read. Use the "Investigating Bias" questions to help you.

Student Work

Students read.

Teacher Work

Circulate and coach students on investigating bias in informational text using the "Investigating Bias" questions. Don't worry about students being able to answer every question; rather, focus on encouraging them to think critically about what they read.

Accountable Talk

Students discuss the following with a peer and then as a group:

- *Share an objective summary of what you read today.*
- *Share an example of bias in this text. Explain.*

Then, discuss the following as a group:

- *What is the author's point of view? How do you know? How does the author respond to conflicting evidence or viewpoints?*
- *What words did you notice that explicitly signal an opinion? Implicitly signal an opinion? Let's add those words to our "Loaded Language" chart.*
- *How does point of view or purpose shape the content and style of a text?*
- *Why does this matter to Environmental Studies? To us? How might you use this skill* (investigating bias) *in another class?*

Continue to add to the class and individual organizers.

4. Exit Ticket

Return to a text you read today. How does the author's point of view or purpose shape the content or style of the text?

5. Homework

Reading: Read for at least 30 minutes, starting with chapter 4 of *The Story of More*. Log your reading in your ARC Reads Logbook.

Writing: Write a 4-point response for chapter 4 of *The Story of More* that includes an objective summary.

Vocabulary: Make at least ten additions to your Word Map by the end of the week.

Investigating Bias

Bias: How a person's opinion and knowledge about the topic shapes what they write.

- Bias isn't necessarily bad or good. An author's interpretation of facts may involve bias, but it is most of what makes a text interesting to read and helps us interpret the facts ourselves.
- Bias can be intentional or unintentional.
- Bias can cause a text to inaccurately represent the facts.
- Bias comes as much from what is left out as from what is included.

Investigate using questions like the following:

- **Author:** Who wrote the text? What is their purpose? How are they qualified to write about this topic? Is it related to their personal identity? Is it related to their field of expertise? How do you know? How could we find out?
- **Facts:** __ is presented as a fact/the truth. Is it completely true/factual? How do you know? Who else thinks it's true/factual besides the author? How could you confirm? What else is presented as fact?
- **Opinions:** What words do you notice that explicitly signal an opinion (e.g., "I believe," "They think," etc.)? What words do you notice that implicitly signal an opinion/judgment (e.g., "dirty," "best," etc.)?
- **What's Missing?** Based on what you know, what information is missing? Whose perspectives are missing? Do you think these exclusions were intentional or unintentional? What makes you think that?

Digging Deeper: Identifying Bias
A Resource for Teachers

As you develop rapport with students, they develop relationships with each other, and the classroom culture is safe for difficult but necessary conversations, dig deeper in conversations about bias in text (and other sources). The suggestions below from "Guide for Selecting Anti-Bias Children's Books" are a great starting place for evaluating bias in all text.

- **Look for Stereotypes:** A stereotype is an oversimplified generalization about a particular identity group (e.g., gender, race, ethnicity, class, sexual orientation, ability/disability), which usually carries derogatory, inaccurate messages and applies them to ALL people in the group. Stereotypes dehumanize people. So, too, does misinformation.

- **Look for Tokenism:** This is the "one only" message. Regularly seeing only "one" person of any group in a book teaches young children about who is more or less important. Examples of tokenism include books with only one African American child among many white children or having only one book about children with disabilities among many other books. Tokenism also becomes stereotypical. It only allows children to see one view of a group of people, rather than the diversity that exists among all groups.

- **Look for Invisibility:** What children do not see in their books also teaches them about who matters and who doesn't in our society. Invisibility in their storybooks—as well as in textbooks as they get older—undermines children's affirmative sense of themselves and reinforces prejudiced ideas about people who are not seen...

- **Check the Story Line and the Relationships Between People**: Even if a book shows visual diversity, the story line may carry biases related to how it handles power relationships among people of various identities. Are whites or male characters the central figures with people of color or female characters in essentially supporting roles?... Are people of color, women, low-income families, or people with disabilities depicted as needing help or in passive roles, while whites, men, and "able-bodied" people are in leadership and action roles?...

- **Look at Messages About Different Lifestyles:** Do the lives of people of color or people living in poverty in the story contrast unfavorably with the norm of white, middle-class suburban life? Are negative value judgments implied about ways of life that differ from the dominant culture or economic class (e.g., people are to be pitied, or the story is about one person who "gets out" of the less desirable way of life)?...

- **Consider the Author's or Illustrator's Background & Perspectiv**e: All authors write from a cultural as well as from a personal context... Consider the biographical material on the jacket flap or back of the book. What qualifies the author or illustrator to deal with the subject? If the book is not about people or events similar to the author or illustrator's background, what specifically recommends them as creators of the book?...

- **Watch for Loaded Words:** A word is loaded when it in any way demeans or makes people invisible because of any of their identities. One example is the generic use of the word "man" to stand for women as well as men (although the opposite never occurs)... Examples of adjectives applied to people of color that carry racist messages include: "savage," "primitive," "superstitious," "backward," "inscrutable" and "treacherous." Always consider the context in which a word is used and to whom it applies.

- **Look at the Copyright Date:** Copyright dates indicate the publication year, not the time of its writing, which might be two to three years before the copyright date. Although a recent copyright date is no guarantee of a book's relevance or sensitivity, copyright dates are useful information...

Excerpted from Louise Derman-Sparks, "Guide for Selecting Anti-Bias Children's Books", 2016.
https://socialjusticebooks.org/guide-for-selecting-anti-bias-childrens-books

REPRESENTATIVE SAMPLE

Research Topics: Content-Area Learning, College Preparation

The Research Lab structure mimics the kind of research work students will do in college, where the entire class studies a Science or Social Studies discipline. Then, each student is asked to select a topic to research on their own. The student applies disciplinary reading and writing skills to learn everything they can about this topic and present what they know in a Final Project—in this case an informational research paper.

Research Topics — ENVIRONMENTAL **STUDIES**

Use the following lists to help build your "Possible Research Topics" chart and guide students toward high-success research topics* in Week 1 of this Research Lab.

Most Highly Represented in Research Library	Possible with Additional Research
• Solar Power	• Specific Fossil Fuels
• Wind Power	• Oil
• Fossil Fuels	• Coal
• Geothermal Energy	• Natural Gas
• Biofuels	• Hydropower
• Nuclear Energy	• Specific Forms of Hydropower
	• Hydroelectricity
	• Tidal Energy

*Research topics are subject to change based on title availability.

Resources Check Sheet   Name:_____

Where's the information I want? Is there enough?

Before choosing a topic on which to become an expert, make sure there is enough information available on that topic to make it possible to complete a whole project about it. Use the Research Card to help you.

Topics	Major Sources	Minor Sources
	Titles of Books	Titles of Books
1.	A.	A.
	B.	B.
	C.	C.
2.	A.	A.
	B.	B.
	C.	C.
3.	A.	A.
	B.	B.
	C.	C.

Lesson 1.4

Introduction to Research Topics: Resources

Today, students will begin the process of selecting their research topics. By the end of this week, each student will select the topic they will research for the rest of the Unit.

Writing 8.7: 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.

Writing 8.8: 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.

Lesson 1.4: Research Topics

1. Do Now

Display the following task.

*Share your objective summary of **chapter 4 of** **The Story of More** with a peer. Then, discuss: How does* The Story of More *confirm, contradict, or extend what you read yesterday in* The Science of Our Changing Planet?

Discuss briefly as a class.

2. Research Topics

By the end of this week, each of you will choose a resource on which to become an expert. In order to select a topic, you need to be able to gather and assess potential sources. All of the skills we practiced this week—determining the meaning of vocabulary, summarizing, investigating bias—will help you. Today, you will evaluate the sources available in our Research Library for three possible topics. You will choose your research topic by the end of class tomorrow.

Read/Write/Discuss Complex Text

Display the **Resources Check Sheet.**

Students read **"Renewable Revolution," pages 46–47 in *The Science of Our Changing Planet***, in appropriate chunks. During reading, use the questions in the right-hand column to support comprehension of complex text.

After reading, students work with a peer and then as a class to briefly discuss the following, using evidence from the text:

- **Summarize:** *Give an objective summary of this text.*
- *What did this text teach us?*
- *What is the most interesting or surprising thing you learned?*
- **Vocabulary:** *Who noticed an unfamiliar word or phrase? Work with a peer: What does __ mean? How do you know?*
- **Bias:** *Did you find an example of bias in this text? Explain.*
- *Why does what the text taught us matter? To Environmental Studies? To us?*
- **Research Topics:** *What possible research topics did you hear in this section? Let's start a list.* (e.g., wind power, solar power, biogas/biofuel, hydropower)

Think aloud as you model assessing *The Science of Our Changing Planet* as a possible source for research (e.g., *One possible topic I'm interested in is tidal energy. First, let's check the table of contents and index—look, there's a section on tidal energy. Hmm, it seems short though. Next, I'll skim and scan that section...*).

Students choose one possible research topic from "Renewable Revolution" and work with a peer to read the related section of *The Science of Our Changing Planet* and assess whether the text is a possible source to research that topic. Then, discuss the following as a class:

- **Research Topic:** *What possible research topic am I investigating here?*
- **Assess:** *Is the content here mostly related to the possible research topic? Is it deep and interesting, or is it basic and obvious?*
- *How useful will this resource be to research this topic? Is it a major source—a book that is entirely or mostly about my topic? Or a minor source—a book that only has a section about my topic?* (e.g., *The Science of Our Changing Planet* is a minor source for tidal energy, since it only has two pages about it.)

Coaching Focus

Students can assess potential sources for a research project.

Key Science Concepts & Vocabulary

Discuss the following questions, using evidence from the text to scaffold comprehension and analysis.

Renewable Revolution (pages 46–47)

- Bold paragraph: *What does **"vital"** mean? How do you know?*
- After par. 2
  - *What does **"replenished"** mean? How do you know?*
  - *What does it mean to be "replenished indefinitely"? Why is it important that renewable energy can be replenished indefinitely?*
- "Growth of renewable energy"
  - *How much renewable energy did the world add in 2017?*
  - *What do researchers predict about renewable energy for 2030? 2040?*
  - *What does the graph show? How does it support this section?*
- "Electricity Storage": *Why are energy-storage technologies important for renewable energy?*

REPRESENTATIVE SAMPLE

3. Application

Set Focus

Distribute the Resources Check Sheet to students.

Investigate and assess potential sources for three topics you might want to research.

Add sources to your Resources Check Sheet. Don't rule out a book based on its cover and title. Some sources in the Research Library are titled after one resource (e.g., "Solar Power") *but include valuable information on other topics as well. You have to look inside a book before ruling it out as a source for a topic.*

Student Work

Students read and add to their Resources Check Sheet. Expect a reasonable level of conversation as students exchange books, share what they learn, and start to get excited about their research.

Teacher Work

Circulate and coach students as they search for books on their three possible topics.

Accountable Talk

Have students work with a peer who has at least one potential research topic in common to discuss: *What sources did you find that may be useful to your research? Are they mostly major or minor sources? Did you notice any instances of bias?*

Switch partners and repeat for a new research topic. Then, discuss as a group: *Which topics have enough information to research? Which might require additional research? Which topics have little to no information available in our library?*

As students discuss, add to/remove topics from the "Possible Research Topics" chart. Help students notice where topics are too densely or sparsely covered and to reflect on the implications of this for the class's knowledge. Coach flexibility early, and you will find that most students are willing to switch topics when necessary.

Continue to add to the class and individual organizers.

Then, discuss: *How might you use these research skills in other classes?*

4. Exit Ticket

Which topic is your current top choice? Why?

5. Homework

Reading: Read for at least 30 minutes. Log your reading in your ARC Reads Logbook.

Vocabulary: Your Word Map is due tomorrow. Make sure you have at least ten additions.

Prevent Frustration and Failure

Only topics with at least some information in the Research Library should be approved. Don't assign topics to students. Allowing them to choose is their first step toward real engagement in the materials. Note that solar power, wind power, and fossil fuels are the most accessible topics in terms of text complexity. Don't allow students to choose topics that:

- Have little to no information in the Research Library. Although the Research Library is only the start of the research materials students might use (e.g., other texts, the Internet, etc.), it may be difficult to have a student productively engaged in independent research each day without at least some resources from the Research Library.

- Don't fit the assignment. For example, don't let students pick an environmental issue to research. All of the Research Questions and graphic organizers are structured to provide content and research scaffolds based on the assigned type of research topic. These scaffolds support the success of both whole-group instruction, collaboration with peers, and independent work. If you allow students to select other types of topics, you may end up with a lot more work for yourself.

- Require a student to work exclusively on their own.

Research Topics and Oracy/Literacy Development

Beginning Multilingual Learners and readers not yet working on grade level can be paired with partners who have chosen the same topics. Students will still be responsible for their own Final Projects and all writing assignments, etc., but they will all benefit from reading and discussion with their partners around their shared topics.

Resources Check Sheet

Where's the information I want? Is there enough?

Before choosing a topic on which to become an expert, make sure there is enough information available on that topic to make it possible to complete a whole project about it. Use the Research Card to help you.

Topics	Major Sources	Minor Sources
	Titles of Books	**Titles of Books**
1.	A.	A.
	B.	B.
	C.	C.
2.	A.	A.
	B.	B.
	C.	C.
3.	A.	A.
	B.	B.
	C.	C.

REPRESENTATIVE SAMPLE

Lesson 1.5

Select Research Topic

Today, students will continue the process of selecting their research topics. By the end of this lesson, each student will select the topic they will research for the rest of the Unit.

Writing 8.7: 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.

Writing 8.8: 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.

Lesson 1.5: Select Research Topic

1. Do Now

Display the **Environmental Studies Research Card** and the following task.

Find a peer who has the same first choice research topic as you. Discuss the following:

- *What is the most interesting thing you know about this topic?*
- *What are your other two top choices?*
- *Read the questions on the Research Card. These are the questions that will drive your research on your topic. What do you want to investigate today before you make your final topic choice?*

Discuss briefly as a class.

2. Select Research Topic

The Environmental Studies Research Card provides questions that will guide our research. These questions will also help you assess potential resources more deeply as you choose a topic. By the end of today, each of you will decide which topic you will research.

Model/Guided Practice

Refer back to your **Resources Check Sheet**.

Choose a book from the Research Library to evaluate as a resource for wind power, or another topic.

Engage in Model/Guided Practice only as needed to release students to Application as quickly as possible. Think aloud as you evaluate the amount and quality of coverage, using strategies such as the following:

- Read the table of contents for chapters related to your topic.
- Check the index for key terms related to your topic. Use the vocabulary on the back of the Research Card to help determine key terms to look for.
- Read a few of the pages on your topic. Use the Research Card to evaluate: Is the content on these pages deep and interesting, or is the topic barely mentioned or the information on it basic and obvious? Do you think it will help you answer any of the Research Questions? Which ones?
- Use other text features (e.g., headings, bold print, illustrations, etc.) to help evaluate if the text will be a good source.

MLL Supports

Modeling and Oracy/Literacy Development
When introducing text features, start with just the one or two that you will be using today. Keep circling back to those one or two, introducing new ones in subsequent lessons.

Suggested Lesson Pacing

Do Now: 10 minutes
Whole-Group Instruction: 5–10 minutes
Application: 25–35 minutes
Exit Ticket: 5 minutes

Coaching Focus

Students can assess sources to select a research topic.

Text Features

In addition to the internal structure common to informational texts, most texts of this type use features designed to assist the reader in making sense of the information.

Category of Text Feature	Examples
Print Features help readers locate information SURROUNDING the text.	- Table of contents - Index - Glossary - Preface - Introduction - Appendix
Organizational Aids help readers locate information WITHIN the text.	- Bold Print - Italics - Bulleted lists - Headings and titles - Captions - Labels - Sidebars
Graphic Aids/Visuals reinforce or provide additional information related to the information stated in the text.	- Diagrams - Graphs - Charts - Figures - Maps - Tables - Time lines - Photographs - Illustrations - Drawings

—Adapted from Fisher, Frey, & Lapp, *Teaching Students to Read Like Detectives*, 2011, p. 96

REPRESENTATIVE SAMPLE

3. Application

Set Focus

Continue to investigate sources for your three possible research topics. Make sure that there are enough sources available for you to research for the next few weeks. At the end of your research, you will select your topic.

Student Work

Students read and add to their Resources Check Sheet. Expect a reasonable level of conversation as students trade books, share what they discover, and start to get excited about their research.

Teacher Work

Approve as many viable Research Topics as you can. Ensure every student has selected a research topic by the end of the day. Insist that topics meet the "Prevent Frustration and Failure" criteria (see Day 4).

For any student struggling to locate a successful topic of interest, consider the following:

- Going larger (ethanol to biofuels) or smaller (renewable energy to solar power), or sideways (wind turbines to wind power).
- Who is this student? What do they like to do? What do they like to read? What do they care about? What connection can you help them make to a possible research topic?

Accountable Talk

Students discuss with a peer and then as a class: *Which topic will you research? Why?*

Continue to add to the class and individual organizers.

4. Exit Ticket

Write your topic on the top of your Resources Check Sheet and turn it in.

Turn in this week's Word Map and your Home Connection.

5. Homework

Reading: Read for at least 30 minutes. Log your reading in your ARC Reads Logbook.

MLL Supports

Accountable Talk, Socialization, and Oracy Development

Set up one or two examples from the "Conversational Moves" chart or the "Instead of *I Don't Know*" chart for use during today's Accountable Talk. This language supports students in negotiating the selection of research topics AND in many daily interactions inside and outside the classroom.

Conversational Moves

★ Great ways to start your thoughts.
★ We value what you have to say!
★ Our conversation should deepen & extend our thinking about the topic.

"I agree/disagree with ___ because..."

"I think the author is trying to..."

"I infer that ___ because..."

"I noticed that..."

"I can connect/relate to that because..."

"I'd like to go back to what ___ said about..."

"I wonder..."

"Do you think that..."

"The lesson we can learn is..."

"I was confused when..."

"I predict that..."

"The main idea might be..."

Instead of "I don't know"

May I please have some more information?

May I please have some more time to think?

Would you please repeat the question?

Where could I find more information about that?

May I ask a friend for help?

Investigating Bias & Topic Selection

As students delve into research on the Unit, they may discover biases in the field around particular topics. Students may decide to select a topic to research that allows them to expose and work to correct these biases (e.g., a student may note that many authors leave non-European/American scientists out of environmental advances and choose a resource that involves scientists from other parts of the world to research).

Digital Resources

SchoolPace

myARC

- ✓ *Interactive* Teacher Guides and Student Assignments
- ✓ Writing
- ✓ Thematic eLibrary (yearlong)
- ✓ Assignment Management
- ✓ Student-Editable Documents
- ✓ Online Feedback

myARC

ARC Bookshelf

ARC READS™

REPRESENTATIVE SAMPLE
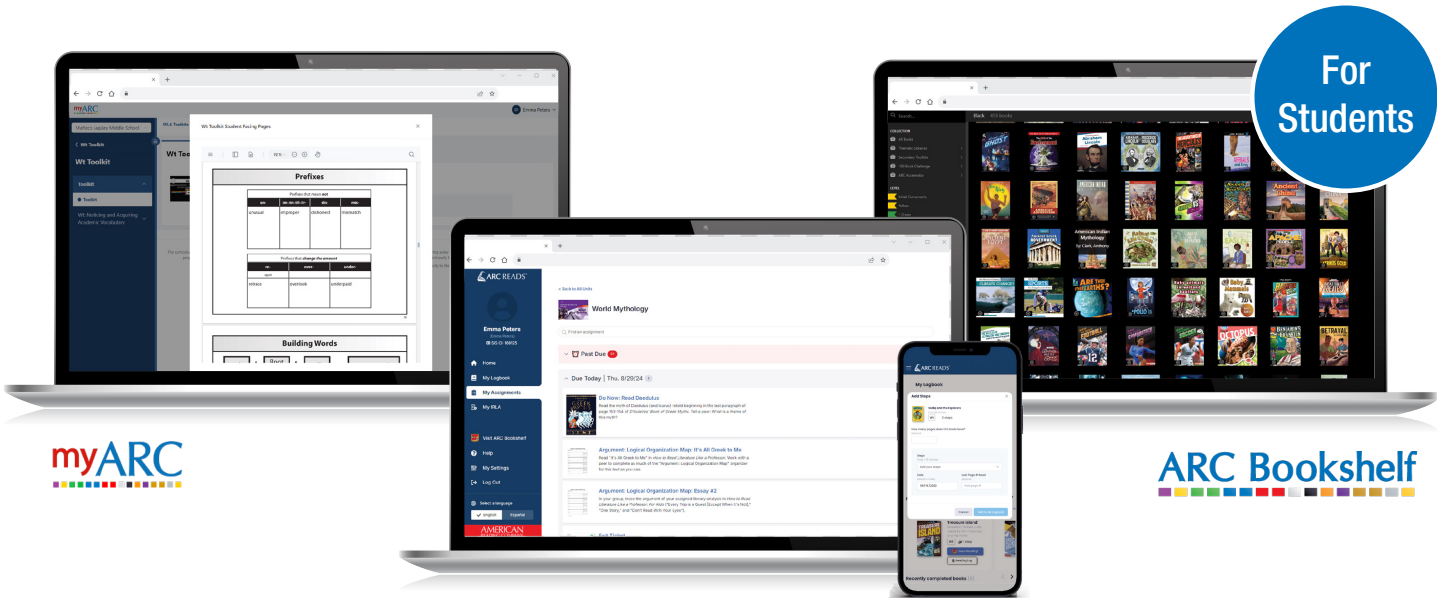
Job-Embedded Professional Learning

All ARC® professional learning is structured around a cognitive apprenticeship model, including but not limited to a workshop, leadership learning sessions, collaborative planning/grade group meetings, "fishbowl" demonstration lessons, and 1:1 support, as needed. Blended professional learning combines the familiar impact of face-to-face coaching with the enhanced differentiation of virtual learning.

Types of Professional Learning Sessions

1. Leadership Team Meetings

- Leadership Team Meetings are held each visit to review data that informs professional learning and can be used to provide feedback and support to teachers.
- Leadership has opportunities to refine their skills, with support from the ARC Executive Coach as a model/thinking partner.

2. On-Site Workshop

- Participants work in a whole-group setting with interactive model lessons, hands-on learning experiences, simulations, videos, practical applications, and current professional literature.

3. Collaborative Planning Meetings

- Grade Group Teams meet in research teams to plan for literacy instruction around four key components: task, skills required, instruction, and results.
- Grade groups monitor, plan, and edit student intervention plans and track rate of progress and/or focus on a specific Action Step as a grade group.

4. Research Lessons and Modeling

- ARC Executive Coach leads or co-facilitates demonstration lessons in classrooms with teacher grade groups while peer colleagues observe.
- Elbow-to-elbow coaching sessions with one teacher and one child, or one teacher and a small group of students, working together with an ARC Executive Coach while peer colleagues observe.

5. Accountability Systems/Feedback Loops

- **Levels Accuracy**

  To ensure students get the right instruction and practice at their point of need, school teams conduct reviews to ensure IRLA scoring accuracy and provide additional support for teachers to calibrate assessment practices.

- **Learning Walks**

  Classroom visits during which the ARC Coach, Principal, and Leadership Team observe and collect data on a specific metric for 15 minutes and then debrief and transition to the next classroom.

- **One-on-One**

  ARC Executive Coach provides differentiated support to individual teachers.

- **Quarterly Review**

  Meeting with the ARC Executive Coach and Leadership Team to review quarterly data and to ensure the alignment of school systems.

6. Family Workshops

- ARC Executive Coach works with the school to establish and maintain academically successful reading routines at home.
- ARC Executive Coach participates and supports during parent/teacher meetings.
- ARC Executive Coach supports school implementation of parent coaches and volunteers.

REPRESENTATIVE SAMPLE