All Green on EdReports

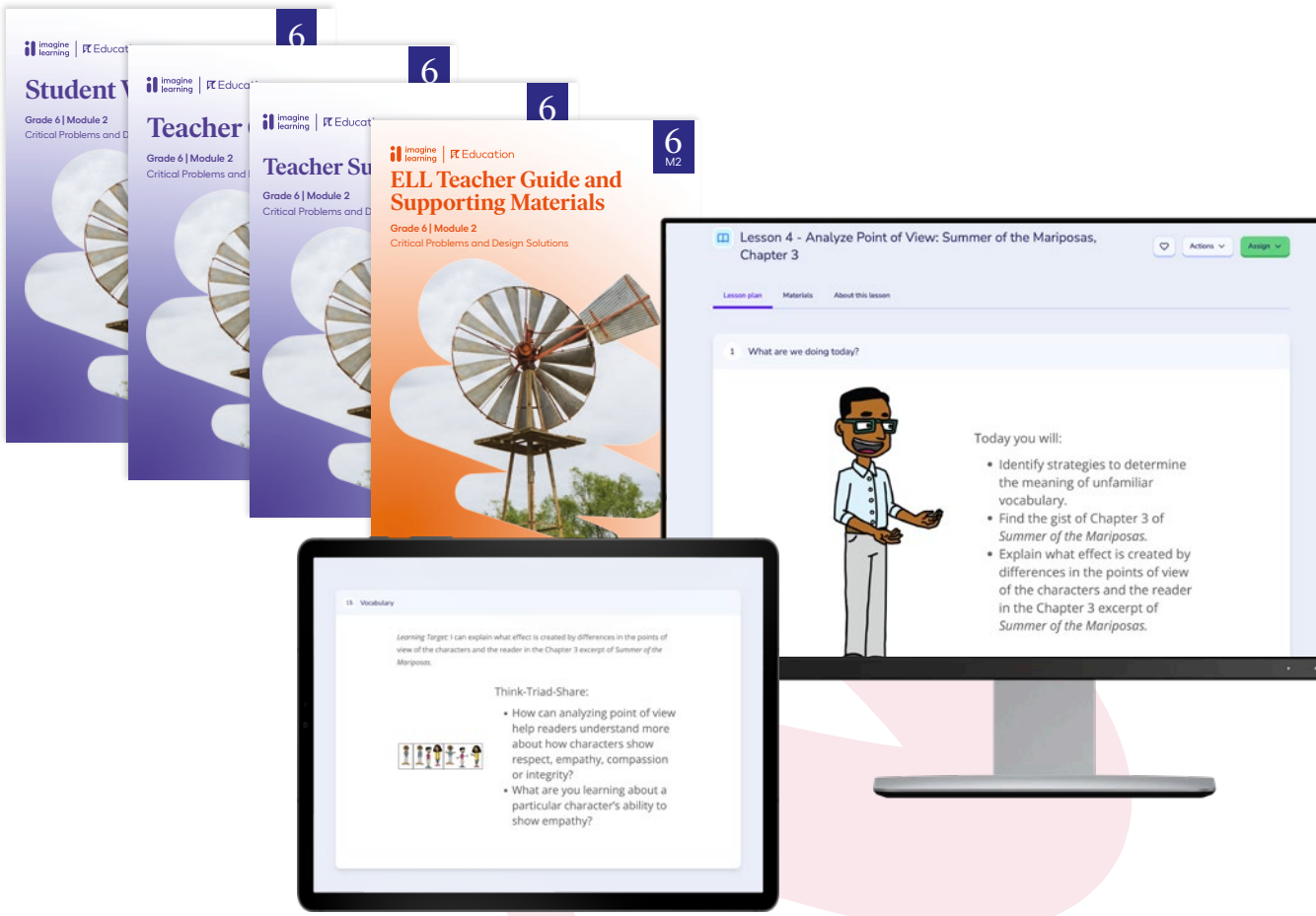
imagine learning | Education

Print Components Sampler

Grade 6 | Module 2

imagine learning | EL Education

Table of Contents



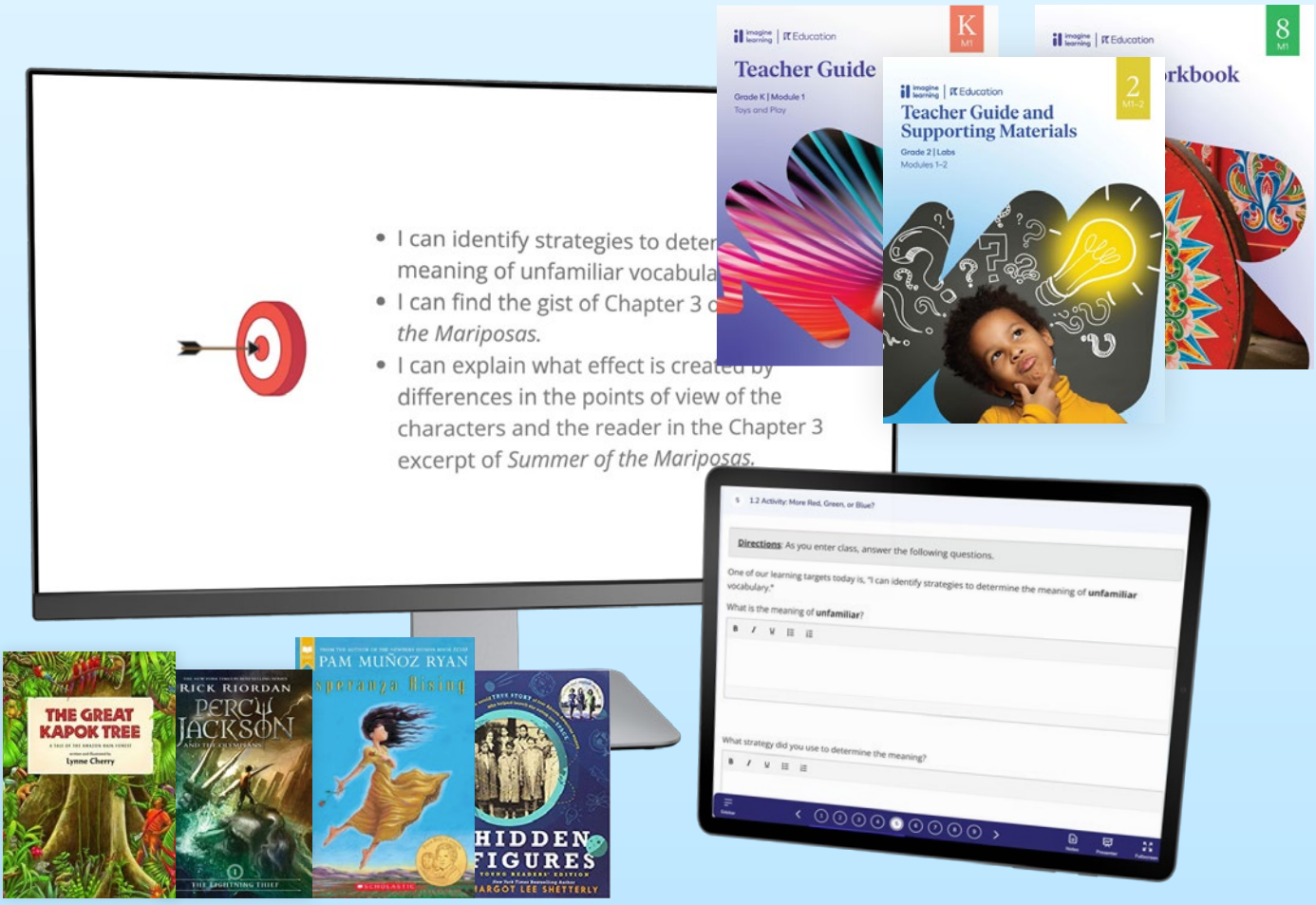
High-Quality Content-Based Literacy Instruction

Created by teachers for teachers, the Imagine Learning EL Education curriculum is a content-based, research-informed, core language arts program for Grades K–8. It features:

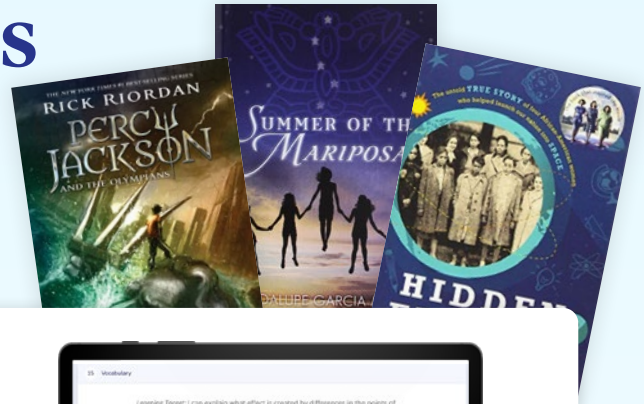
- Compelling, real-world content with engaging, complex texts
- Standards-based instruction to support the mastery of knowledge and skills
- Lessons and instruction designed to build habits of character
- A focus on producing high-quality student work
- Structured phonics to support foundational skills development
- Professional development to ensure implementation with integrity

A Platform that Supports Teachers

Our innovative platform empowers educators to spend more time teaching and less time planning. Teachers can more easily plan lessons with rich resources and instructional supports, while robust data and reporting allow them to differentiate instruction for students' needs.

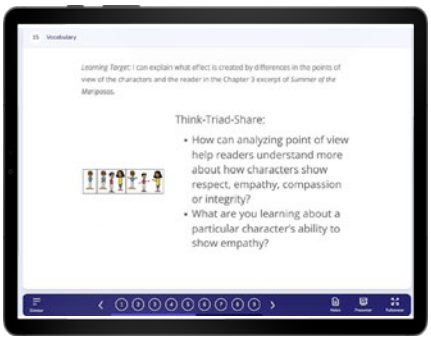


Curriculum Materials
for Grade 6–8

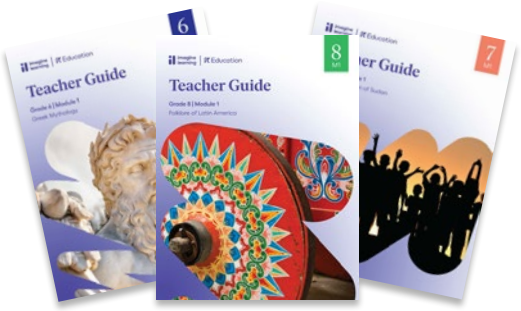


Module Lessons

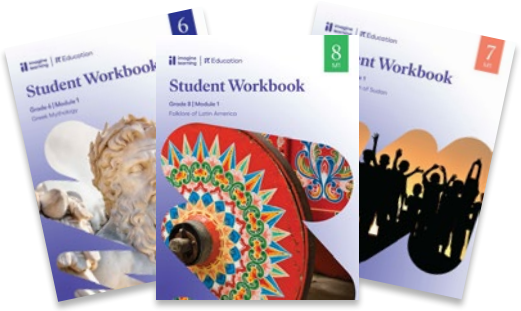
(60 minutes of daily instruction)
Explicitly teach and formally assess reading comprehension, writing, speaking and listening, and language.



Imagine Learning EL Education features 4 modules of content-based literacy instruction per grade



Teacher Guides
Modules 1–4
(1 book per module)



Student Workbooks
Modules 1–4
(1 book per module)

Teacher Supporting Materials
Modules 1–4
(1 book per module)

ELL Teacher Guide and Supporting Materials
Modules 1–4
(1 book per module)

Guiding Principles of EL Education

EL Education's curriculum centers around key guiding principles that support educators and students in their learning both inside and outside of the classroom.

Equity Matters

All children deserve an education that fosters their unique abilities, provides real opportunities to achieve high academic standards, and prepares them to take their place in society when they leave school. That's why EL Education's curriculum rests on a foundation of equity with the Dimensions of Student Achievement.

MASTERY OF KNOWLEDGE & SKILLS
Standards-aligned instruction and assessment
Focus on critical thinking, communication, and deeper learning

HIGH-QUALITY STUDENT WORK
Demonstrates complexity, craftsmanship, and authenticity
Evident in performance tasks, conversations, and responses to prompts

CHARACTER
Tools to become effective, ethical learners who work to make the world a better place
Integrated focus on developing charater within lesson context

Backward Design

EL Education centers around the guiding principle of backward design, meaning instructional planning keeps the end in mind and educators assess all along the way.

Substantive Content Matters

While students develop a deepening understanding of cross-curricular content – science, social studies, or literature – they simultaneously acquire all the key literacy standards of reading, writing, speaking, and listening, carefully embedded within the lessons.

Diverse and Inclusive Settings

The curriculum recognizes that students learn from one another and respect one another when they learn together in the same environment. In addition, teachers have various learning needs in the classroom, so the curriculum provides numerous supports and resources to differentiate instruction for all learners, from students with learning disabilities to those who need academic extensions.

Promote Student Thinking, Collaboration, and Respect

Clear and simple protocols and conversation cues support rich, purposeful, and collaborative conversations that deepen learning and allow students to appreciate diverse perspectives.

Students Own Their Learning

Students using EL Education become active learners with an agency in their education. They set goals, assess their own learning, and use feedback from peers, themselves, and their teachers to make progress.

Families and Guardians Are Partners

Students learn best when families can be part of the educational journey. The curriculum supports the home-to-school connection with various resources to encourage and extend learning at home.

Curriculum as Powerful Professional Development

The EL Education curriculum provides ample resources and opportunities for teachers to build on their existing expertise and improve their ability to make strong instructional decisions during planning and while teaching. In addition, with Imagine Learning, educators have access to ongoing professional learning and customer support to implement EL Education with integrity.

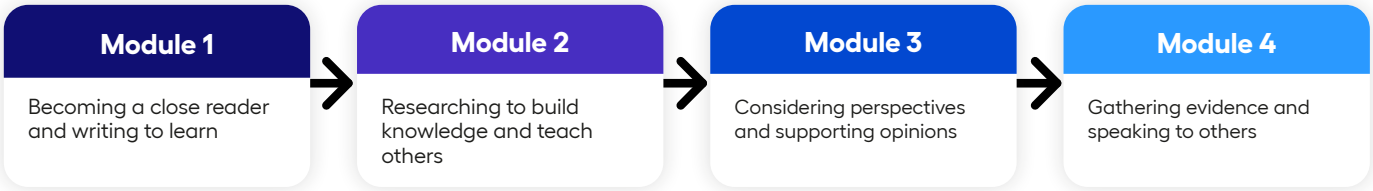
A Proven Instructional Model

Students engage in a consistent instructional routine centered around content-rich modules with compelling real-world examples. Students move from building background knowledge to extended reading and research and finally to extended writing. Each lesson and unit follow a cycle designed to give students time to process a text.

Imagine Learning EL Education is carefully structured to build literacy skills across K–8. Lessons provide a consistent focus on academic standards mastery for reading, writing, speaking, and listening.

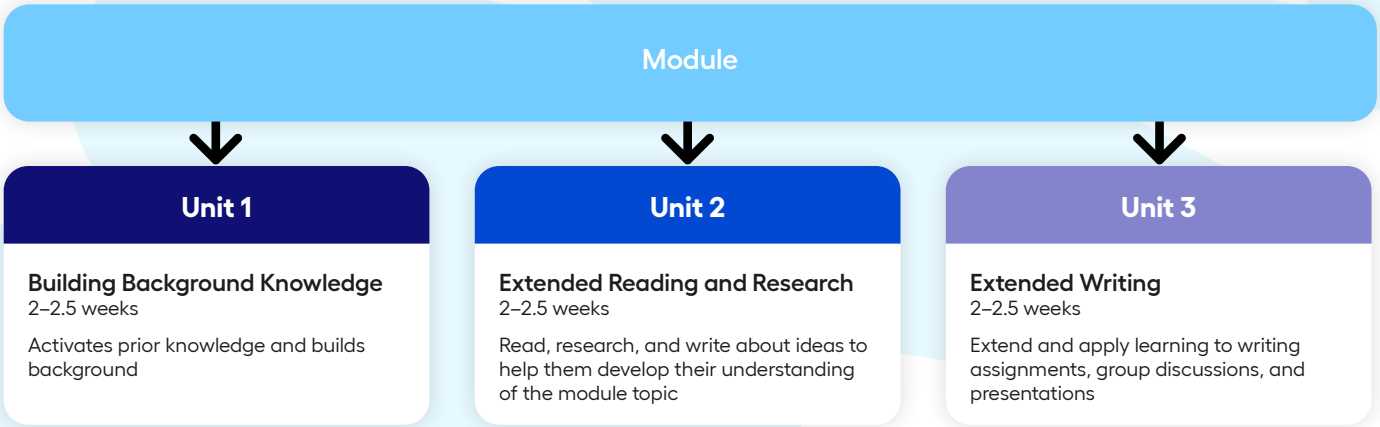
Literacy Instruction

Every grade has four modules, each comprising eight to nine weeks of instruction. These modules offer one hour of content-based literacy instruction to dive deep into the module topics.

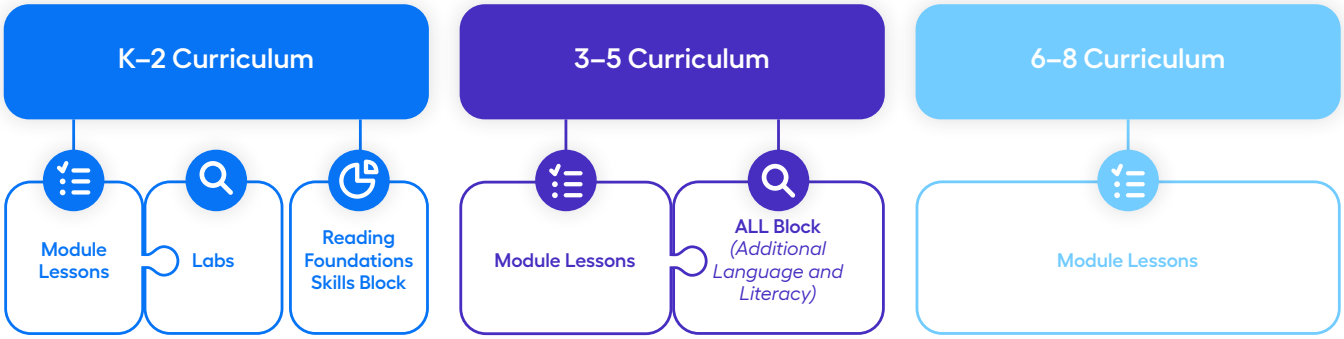


Module Example from Grades 3–5

Each module includes three units to build profound content knowledge on a topic or text.



EL Education Content Based Language Arts Curriculum



Grades K–2

In grades K–2, teachers have access to core literacy instruction through module lessons. In addition, there are areas for students to expand their learning through hands-on exploration and opportunities to build foundational reading skills.

READING FOUNDATIONS SKILLS BLOCK

This structured phonics program teaches and assesses all reading foundations standards and language standards associated with spelling and letter formation. Lessons and assessments offer one additional hour of foundational skills development.

LABS

Optional labs help reinforce literacy skills, content knowledge, and habits of character taught in the module lessons with hands-on exploration and inquiry-based lessons.

Grades 3–5

In grades 3–5, teachers have access to core literacy instruction through module lessons, plus an additional hour of practice through ALL Block.

ADDITIONAL LANGUAGE AND LITERACY (ALL) BLOCK

The **ALL Block** provides extra literacy and language practice for students, reinforcing the skills they learn in the module lessons. Teachers can use this time to differentiate instruction.

The ALL Block module focuses on five components:

- Accountable independent reading
- Additional work with complex texts
- Reading and speaking fluency
- Writing practice
- Word study/vocabulary

Grades 6–8

In grades 6–8, teachers have access to literacy instruction through module lessons, as well as additional English Learner instructional support.

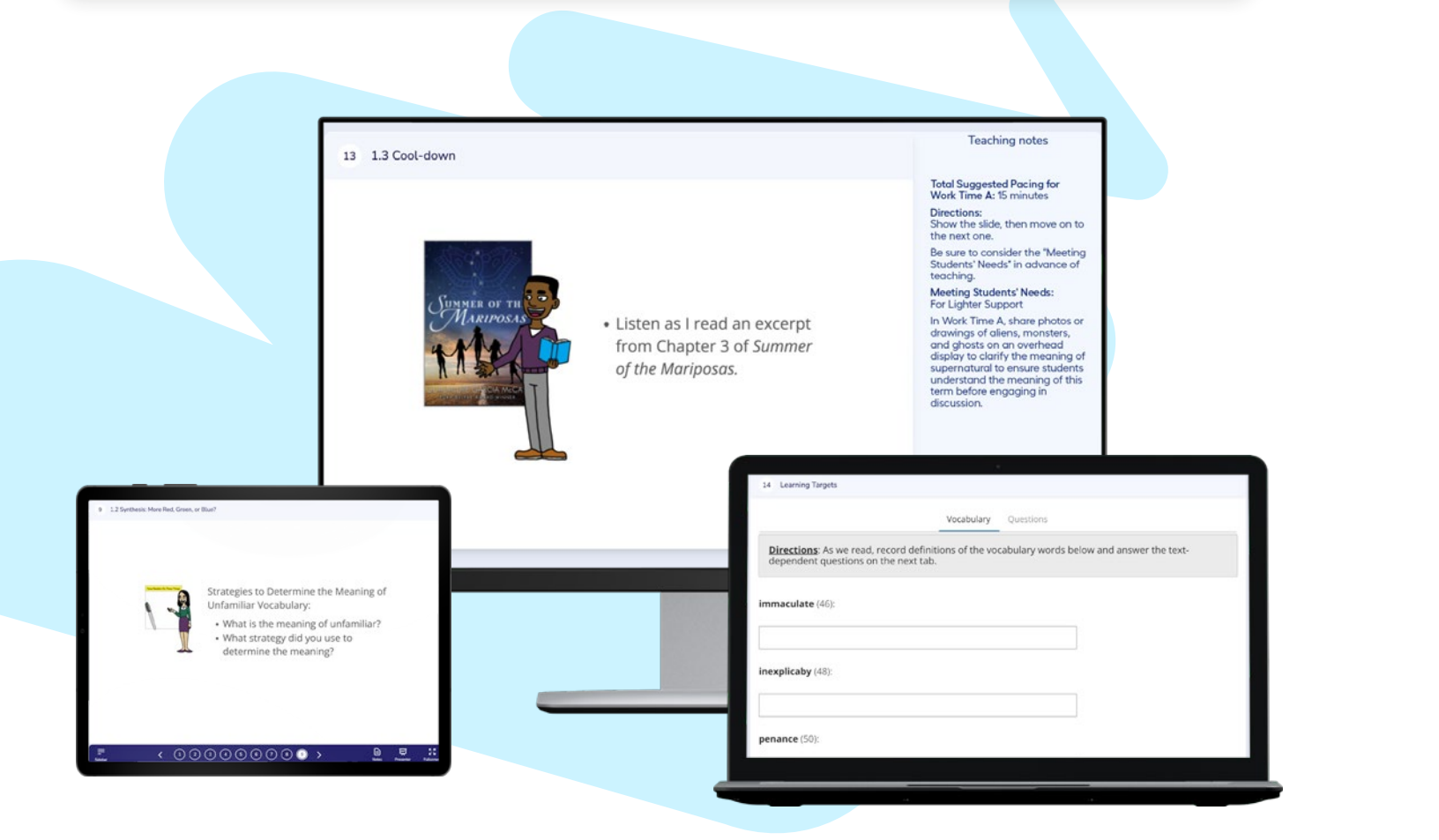
The Imagine Learning Difference

The highest quality English language arts curriculum, powered by a best-in-class digital delivery

Our unique platform allows teachers to connect with individual students, engage creatively, and customize the curriculum for greater impact. It's a tool that amplifies teachers' best instincts, better equipping them to do the same for their students.

The platform provides:

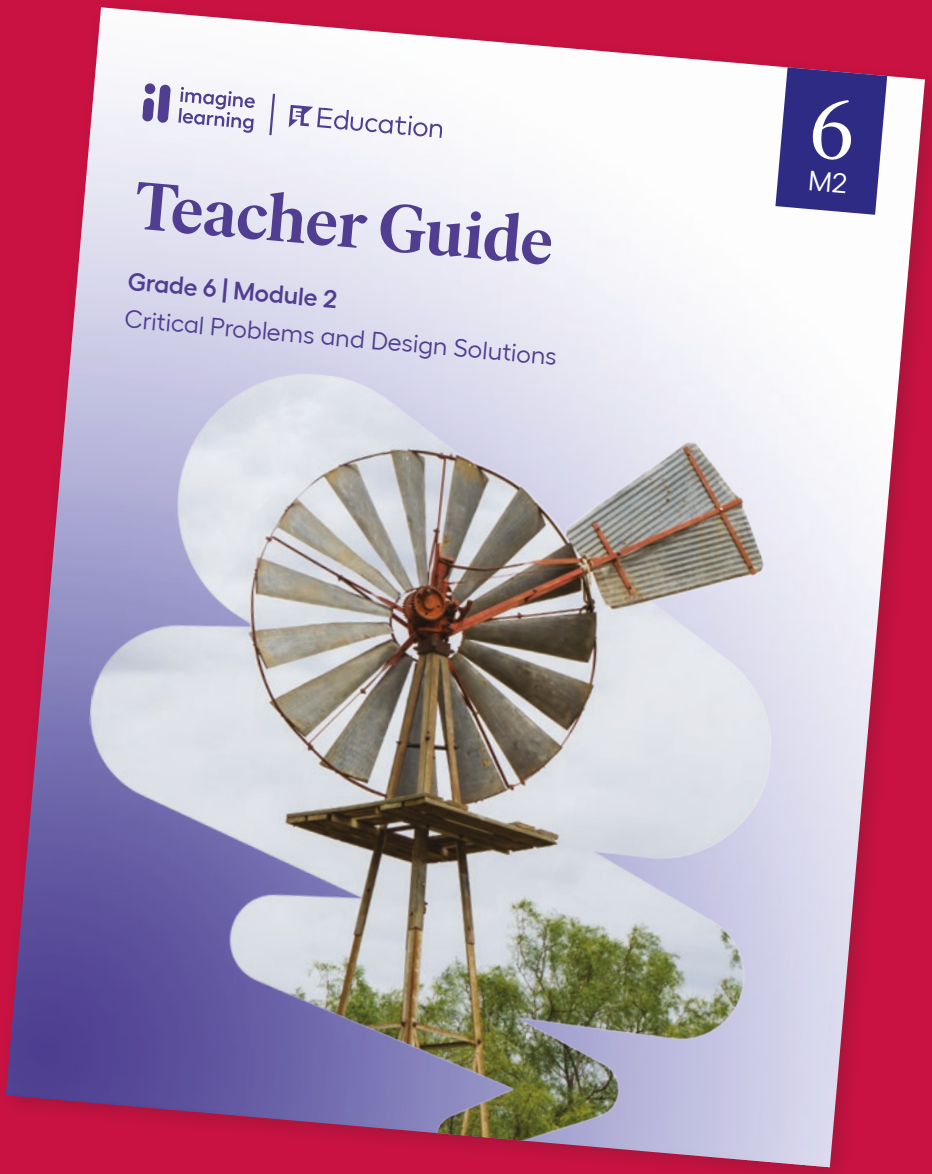
- ✓ Organized, classroom-ready curriculum and content to support teaching and learning
- ✓ Customizable lessons and assessments for flexibility and personalization
- ✓ Robust data and reporting to differentiate instruction to student needs
- ✓ Seamless integration with your district's LMS
- ✓ Hands-on platform training for teachers and leaders to implement with integrity



imagine learning | Education

Module Teacher Guide

Sample



Grade 6 Curriculum Map

	Module 1	Module 2	Module 3	Module 4
Focus	Reading, Writing, and Speaking Grounded in Evidence	Researching to Build and Present Knowledge (Science)	Analyzing, Interpreting, and Evaluating Text	Researching to Write and Present Arguments
Title	Greek Mythology	Critical Problems and Design Solutions	American Indian Boarding Schools	Remarkable Accomplishments in Space Science
Description	Students meet figures from ancient Greek mythology who are placed in a contemporary setting and evaluate how stories from a different time and place continue to resonate today.	Students read the true story of William Kamkwamba in *The Boy Who Harnessed the Wind* and about how he used design thinking to confront the devastating effects of famine on his country, Malawi.	Through their reading of the historical fictional narrative *Two Roads* by Joseph Bruchac and several supplemental primary texts, students uncover an unacknowledged aspect of US history—the forced acculturation of American Indians through boarding schools.	Students learn about remarkable accomplishments in space science, specifically the accomplishments and people that may have gone overlooked. *Hidden Figures* by Margot Lee Shetterly tells the story of the "West Computers," the first black women hired by NASA whose talents helped land human beings on the moon.

	Module 1	Module 2	Module 3	Module 4
Texts and Resources (central text[s] in bold)[1]	• ***The Lightning Thief***, Rick Riordan (RL 680L; one per student) • *Percy Jackson & The Olympians: The Lightning Thief* (DVD), Chris Columbus (director) (RL film; one per classroom) • "Why Ancient Greek Mythology Is Still Relevant Today," Geri Mlleff (RI; included in the module materials) • Greek Myths: "Theseus and the Minotaur" (RL 870L; included in the module materials), "Cronus" (RL 990L; included in the module materials), "Medusa" (RL 1000L; included in the module materials) "Hestia" (RL 870L; included in the module materials), "Prometheus" (RL 1030L; included in the module materials), and "Helios" (RL 1170L; included in the module materials)	• ***The Boy Who Harnessed the Wind*** (Young Readers Edition), William Kamkwamba and Bryan Mealer (RI 850L; one per student) • TED Talk Transcript: William Kamkwamba, "How I Built a Windmill" (RI; included in the module materials) • "William Kamkwamba's Electric Wind," Cynthia Levinson (RI 940L; included in the module materials) • "The Hippo Roller," EL Education (RI 1100L; included in the module materials)	• ***Two Roads***, Joseph Bruchac (RL 740L; one per student) • *The Problem of Indian Administration: Report of a Survey Made at the Request of Honorable Hubert Work, Secretary of the Interior, and Submitted to Him*, February 21, 1928, Lewis Meriam (RI; included in the module materials) • "The Land of Red Apples" (RI 1040L; included in the module materials) and "The Cutting of My Long Hair" (RI 900L; included in the module materials), from *American Indian Stories*, Zitkala-Sa • "The Advantage of Mingling Indians with Whites," *Proceedings of the National Conference of Charities and Correction at the Nineteenth Annual Session Held in Denver, Col., June 23–29, 1892* (RI; included in the module materials)	• ***Hidden Figures (Young Readers' Edition)***, Margot Lee Shetterly (RI 1120L; one per student) • *Hidden Figures: The True Story of Four Black Women and the Space Race*, Margot Lee Shetterly and Laura Freeman (RI 980L; six per class) • "Special Message to the Congress on Urgent National Needs," President John F. Kennedy (RI 1370L; included in the module materials) • "This Is How the Space Race Changed the Great Power Rivalry Forever," Martand Jha (RI 1310L; included in the module materials) • "Moon Dust and Black Disgust," Booker Griffin (RI 1190L; included in the module materials)
Lexile®	Common Core Band Level Text Difficulty Ranges for Grades 6–8[2]: 925L–1185L			
Performance Task	**Product:** Revised Scene of *The Lightning Thief* **Format:** multimedia presentation to a live audience **CCSS:** SL.6.4, SL.6.5, SL.6.6	**Product:** Solution Symposium **Format:** interactive presentation **CCSS:** RI.6.7, RI.6.10, W.6.7, W.6.8, SL.6.1, SL.6.2, SL.6.4, SL.6.5, SL.6.6	**Product:** Voices of American Indian Boarding Schools Audio Museum **Format:** audio recording presentation **CCSS:** W.6.10, SL.6.1d, SL.6.6, L.6.3, L.6.6	**Product:** Hidden Figures in Space Science Picture Book **Format:** children's picture book **CCSS:** RI.6.1, W.6.3, W.6.4, W.6.5, W.6.7, W.6.10, SL.6.1, SL.6.3, SL.6.4, SL.6.5, SL.6.6, L.6.3, L.6.6

[1] Texts are listed in this order: literature first, then informational texts. Both categories shown from most to least quantitatively complex (based on Lexile®). See the Required Trade Books and Resources Procurement List for ISBNs, etc.
[2] Supplemental Information for Appendix A of the Common Core State Standards for English Language Arts and Literacy: New Research on Text Complexity http://www.corestandards.org/assets/E0813_Appendix_A_New_Research_on_Text_Complexity.pdf

Unit-Level Assessments (ELA CCSS)

	Module 1	Module 2	Module 3	Module 4
Mid-Unit 1	**Title:** Analyze Language and Point of View: *The Lightning Thief*, Chapter 9 **Format:** Selected response and constructed response **CCSS:** RL.6.1, RL.6.4, RL.6.6, RL.6.10, L.6.4a, L.6.4c, L.6.4d, L.6.5, L.6.6	**Title:** Analyze Central Idea and Development of an Individual: *The Boy Who Harnessed the Wind*, Chapter 4 **Format:** Selected response **CCSS:** RI.6.1, RI.6.2, RI.6.3, RI.6.4, RI.6.10, L.6.4a	**Title:** Analyze Point of View and Integrate Information: "The Cutting of My Long Hair" and Photographs **Format:** Selected response **CCSS:** RI.6.1, RI.6.2, RI.6.4, RI.6.6, RI.6.7, RI.6.10, L.6.5a, L.6.5c	**Title:** Analyze Point of View: "An Account of the Moon Landing" **Format:** Constructed response **CCSS:** RI.6.1, RI.6.4, RI.6.6, RI.6.10, W.6.10, L.6.5c
End of Unit 1	**Title:** Text-Based Discussion: *The Lightning Thief*, Chapters 1–12 **Format:** Text-based discussion **CCSS:** RL.6.1, RL.6.3, RL.6.10, SL.6.1a, SL.6.1b	**Title:** Analyze Figurative Language, Central Idea, and Structure: *The Boy Who Harnessed the Wind*, Chapter 8 **Format:** Selected response and constructed response **CCSS:** RI.6.1, RI.6.2, RI.6.3, RI.6.4, RI.6.5, RI.6.10, W.6.10, L.6.5a	**Title:** Analyze Point of View, Structure, and Language: *Two Roads*, Chapter 18 **Format:** Selected response and short constructed responses **CCSS:** RL.6.1, RL.6.3, RL.6.5, RL.6.6, RL.6.10, L.6.1b, L.6.1e	**Title:** Analyze Argument and Point of View: "An Argument against the Moon Mission" **Format:** Constructed response **CCSS:** RI.6.1, RI.6.4, RI.6.6, RI.6.8, RI.6.10, W.6.10
Mid-Unit 2	**Title:** Compare and Contrast Themes in Literature **Format:** Selected response and constructed response **CCSS:** RL.6.1, RL.6.2, RL.6.4, RL.6.9, RL.6.10, L.6.4	**Title:** Analyze Figurative Language and Central Idea: "The Hippo Roller" **Format:** Selected response and constructed response **CCSS:** RI.6.1, RI.6.2, RI.6.3, RI.6.4, RI.6.5, RI.6.10, W.6.10 L.6.4a, L.6.5a, L.6.5c	**Title:** Analyze Character, Point of View, and Theme: *Two Roads*, Chapter 27 **Format:** Selected response and constructed response **CCSS:** RL.6.1, RL.6.2, RL.6.3, RL.6.6, RL.6.10, W.6.10	**Title:** Analyze Dorothy Vaughan: *Hidden Figures*, Chapter 9 **Format:** Selected response and constructed response **CCSS:** RI.6.1, RI.6.3, RI.6.6, RI.6.8, W.6.1b, W.6.10
End of Unit 2	**Title:** Compare and Contrast Essay **Format:** Informative essay **CCSS:** RL.6.1, RL.6.7, W.6.2, W.6.4, W.6.5, W.6.6, W.6.9a, W.6.10, L.6.2b, L.6.6	**Title:** Research Process **Format:** Selected response and constructed response **CCSS:** W.6.7, W.6.8	**Title:** Revise Narrative Writing for Pronoun Use and Sentence Variety **Format:** Two options: revise narrative writing for pronoun use and/or selected response and constructed response questions based on passages from *Two Roads* **CCSS:** W.6.5 (option 1 only), L.6.1a, L.6.1c, L.6.1d, L.6.3a	**Title:** Compare and Contrast Presentations of Events: *Hidden Figures* and "Katherine Johnson: A Lifetime of STEM" **Format:** Selected response and constructed response **CCSS:** RI.6.1, RI.6.3, RI.6.6, RI.6.9, RI.6.10, W.6.10
Mid-Unit 3	**Title:** "Helios" **Format:** Selected response and constructed response **CCSS:** RI.6.1, RI.6.2, RI.6.4, RI.6.10, L.6.4a, L.6.4c, L.6.4d, L.6.6	**Title:** Write a Problem-Solution Essay **Format:** Informative essay **CCSS:** RI.6.1, RI.6.7, RI.6.10, W.6.2, W.6.4, W.6.6, W.6.8, W.6.9b, W.6.10, SL.6.2, L.6.6	**Title:** Write a Literary Argument Essay **Format:** Argument essay **CCSS:** RL.6.1, RL.6.3, RL.6.10, W.6.1, W.6.4, W.6.6, W.6.9a, W.6.10, L.6.2, L.6.3, L.6.6	**Title:** Write an Argument Essay **Format:** Constructed response **CCSS:** RI.6.1, RI.6.3, RI.6.10, W.6.1, W.6.4, W.6.5, W.6.6, W.6.7, W.6.8, W.6.9b, W.6.10, L.6.2, L.6.3, L.6.6

	Module 1	Module 2	Module 3	Module 4
End of Unit 3	**Title:** Write a Narrative **Format:** Narrative essay **CCSS:** W.6.3, W.6.4, W.6.6, W.6.10	**Title:** Fishbowl Discussion: Habits of Character to Solve Critical Problems **Format:** Collaborative discussion **CCSS:** W.6.10, SL.6.1a, SL.6.1b, SL.6.1c, SL.6.2, SL.6.6	**Title:** Rehearse and Refine Performance Task Recording **Format:** Audio recording and written reflection on SL standards used for recording **CCSS:** RI.6.1, RI.6.6, SL.6.2, SL.6.6, L.6.3b, L.6.6 (L.6.1 optional)	**Title:** Part I: Present and Delineate Argument: Picture Book Presentation **Format:** Constructed response **CCSS:** SL.6.3, SL.6.4, SL.6.5, SL.6.6, L.6.6 **Title:** Part II: Collaborative Discussion **Format:** Collaborative discussion **CCSS:** W.6.10, SL.6.1

Common Core State Standards for ELA and Literacy Formally Assessed, by Module

- In the Curriculum Map on the following pages, any specific CCSS with a check mark indicates that standard is formally assessed in the given module.
- Some standards are formally assessed in multiple modules.
- Because of the integrated nature of the standards, even standards that are not formally assessed are often embedded in instruction throughout every module (e.g., RL.1, RI.1). Refer to the Unit-at-a-Glance in the Unit Overview to determine which standards are addressed (even if not formally assessed) in the instruction of each lesson.
- Many standards (e.g., W.2) have a main standard and then subcomponents (e.g., W.2a). Sometimes, students' mastery of the entirety of this standard is scaffolded across multiple modules. Therefore, in the Curriculum Map on the following pages, the "parent" standard is checked only if all components of that standard are formally assessed within that particular module. Otherwise, just the specific components are checked.
  - An exception to this, when assessed through writing, is that the L.1, L.2, and L.3 "parent" standards may be checked without the subcomponents, as the language skills demonstrated through student writing will vary.
  - For Language standards: Beginning in grade 3, skills and understandings that are particularly likely to require continued attention in higher grades as they are applied to increasingly sophisticated writing and speaking are marked with an asterisk (*).

Design thinking makes clear the systematic process that allows innovators to learn and apply techniques to solve critical problems in a creative way. In Module 2, students read the true story of William Kamkwamba in *The Boy Who Harnessed the Wind* (Young Readers edition) and how he used design thinking to confront the devastating effects of famine in his country, Malawi. In response to this seemingly insurmountable problem, William spent countless hours in the local library, reading science textbooks and searching for a possible solution. Through careful research, and after many rounds of trial and error, William used available materials and scraps from the local junkyard to construct a windmill that brought electricity to his community, allowing kids to study into the evening, adults to recharge their mobile phones, and water pumps to irrigate the fields and produce more abundant harvests. Propelled by unshakable perseverance, a keen awareness of his community's needs, and compassion for those suffering around him, William models how innovative thinkers can leverage design thinking to address critical problems in their own communities. Inspired by this concept, students work towards a performance task in which they research and present another innovative solution designed to address a critical issue. For this Solution Symposium, students interact with their audience to explain how design thinking and habits of character led to the development of a successful solution.

In Unit 1, students read the first nine chapters of the anchor text, building background on William Kamkwamba and the problems William's community faced in rural Malawi, in a village with limited resources and access to education. Through two Language Dives using key sentences in the anchor text and a close read of a supplemental text, students practice identifying the central idea, citing textual evidence, analyzing how individual sentences contribute to the development of a text's central ideas, and determining the meaning of words and phrases in a text.

In Unit 2, students finish reading the text, and demonstrate their continued reading-skill development in the Mid-Unit 2 Assessment, which uses an excerpt from the text to assess students' abilities to interpret the figurative and connotative meanings of unfamiliar words, analyze information portrayed in various media formats, and explain how a small portion of a text contributes to the central idea. By clearly delineating the many problems William faced, students see how each was addressed through science, research, and habits of character, like perseverance. With the support of explicit mini lessons on research skills, students then begin independent research on an innovator who, like William, designed a product to solve a critical problem. These research skills are assessed in the End of Unit 2 Assessment.

Through writing a collaborative informational essay about William in the first half of Unit 3, students deepen their understanding of the design thinking process and explore how William Kamkwamba used this process to solve a problem. The unit builds towards the performance task, a Solution Symposium, at which students present and share interactive displays of their research on an innovative solution to a critical problem. The Solution Symposium engages audience members in a conversation in which the student shares his or her answers to the following questions: (1) how was design thinking used to solve this problem and (2) how were habits of character used to solve this problem? Following the symposium, as the End of Unit 3 Assessment, students will collaborate to discuss how habits of character help people like those featured in their research solve critical problems.

Notes from the Designer

The anchor text, *The Boy Who Harnessed the Wind*, offers impactful and engaging examples of critical problems and their design solutions. William's perseverance, compassion, and willingness to try (and fail) highlight the role of character in solving critical community problems. However, in emphasizing the impact of the famine faced by William and his Malawian community, this text features occasional passages that may be difficult for students to read, as they detail the suffering felt by William and others in his village. Other elements of the text may also require heightened attention and sensitivity; for instance, told through the eyes of William as he grows up in an impoverished village, *The Boy Who Harnessed the Wind* presents a somewhat singular picture of Africa as poor, rather than as the diverse, heterogeneous continent that it is. The design of this module supports students as they process challenging passages, sensitive content, and/or textual information in need of additional context. Across lessons, notes emphasize specific passages that may require special attention and offer suggestions to help students interpret and process the text's content with strength, empathy, and a questioning spirit. Instructional decisions throughout the module also equip students with the literacy skills necessary to interpret the writers' choices, situate content with a larger problem-solution text structure, and responsibly challenge content with which they may disagree.

Guiding Questions and Big Ideas

How can design thinking help solve a critical problem?

- *Design thinking is a scientific and systematic practice of inquiry that allows for creativity and innovation.*
- *Design thinking requires scientists to identify and research problems, build prototypes, test and evaluate solutions, and redesign as needed.*

What habits of character can help solve a critical problem to contribute to a better community?

- *Effective learners demonstrate perseverance when they research, build prototypes, reflect, and revise.*
- *Ethical people contribute to a better world by applying their learning to help one's school, community, and the environment.*

Content Connections

This module is designed to address English Language Arts standards and to be taught during the literacy block. But the module intentionally incorporates science content that may align to additional teaching during other parts of the day. These intentional connections are described below.

Next Generation Science Standards

Engineering, Technology, and Applications of Science Performance Expectation

- ETS1.A: Defining and Delimiting Engineering Problems
  - MS-ETS1-1: The more precisely a design task's criteria and constraints can be defined, the more likely it is that the designed solution will be successful.
- ETS1.B: Developing Possible Solutions
  - MS-ETS1-4, MS-ETS1-3: A solution needs to be tested, and then modified on the basis of the test results, in order to improve it.
- ETS1.C: Optimizing the Design Solution
  - MS-ETS1-4: The iterative process of testing the most promising solutions and modifying what is proposed on the basis of the test results leads to greater refinement and ultimately to an optimal solution.

Earth and Space Science Performance Expectation

- MS-ESS3: Earth and Human Activity
- ESS3.A: Natural Resources
  - Humans depend on Earth's land, ocean, atmosphere, and biosphere for many different resources. Minerals, fresh water, and biosphere resources are limited, and many are not renewable or replaceable over human lifetimes. These resources are distributed unevenly around the planet as a result of past geologic processes. (MS-ESS3-1)

Physical Sciences Performance Expectation

- MS-PS3: Energy
- PS3.A: Definitions of Energy
  - Motion energy is properly called kinetic energy; it is proportional to the mass of the moving object and grows with the square of its speed. (MS-PS3-1)
  - A system of objects may also contain stored (potential) energy, depending on their relative positions. (MS-PS3-2)
- PS3.C: Relationship Between Energy and Forces
  - When two objects interact, each one exerts a force on the other that can cause energy to be transferred to or from the object. (MS-PS3-2)

Texts and Resources

Required Trade Books and Resources[1]	Unit 1	Unit 2	Unit 3
1. Kamkwamba, William, and Bryan Mealer. *The Boy Who Harnessed the Wind* (Young Readers Edition). Puffin Books, 2015. (one per student)	✓	✓	✓
Additional Texts (provided in curriculum materials)	**Unit 1**	**Unit 2**	**Unit 3**
2. Levinson, Cynthia. "William Kamwamba's Electric Wind." *Faces Magazine*, vol. 28, no. 2, pp. 10-13.	✓		
3. Kamkwamba, William. "How I Built a Windmill." *TED,* June 2007, www.ted.com/talks/william_kamkwamba_on_building_a_windmill.		✓	
4. "The Hippo Roller." Written by EL Education for instructional purposes.		✓	
Recommended Texts (for volume of reading on the module topic)			
See the 6–8 Recommended Texts list for suggestions of books, article, and videos on the module topic.			

[1] See stand-alone Required Trade Books and Resources Procurement List for procurement details, including the number of copies of each text.

Module-at-a-Glance

Unit 1

Unit 1: Build Background: William Kamkwamba and Design Thinking

Weeks 1–2 (Lessons 1–6)

Students begin reading the anchor text, *The Boy Who Harnessed the Wind*, focusing on strategies to determine the central idea of a text and writing an effective summary.

Mid-Unit 1 Assessment: Analyze Central Idea and Development of an Individual: *The Boy Who Harnessed the Wind,* Chapter 4.

Weeks 2–3 (Lessons 7–15)

Students read several more chapters in their anchor text, paying close attention to how the authors use figurative language to enhance meaning. Students also prepare for and practice a text-based discussion to answer the following prompt: What critical problems does William face? What makes them critical?

End of Unit 1 Assessment: Analyze Figurative Language, Central Idea, and Structure: *The Boy Who Harnessed the Wind,* Chapter 8.

Unit 2

Unit 2: Research to Discover Innovative Designers

Week 1 (Lessons 1–4)

Students continue to read *The Boy Who Harnessed the Wind* while practicing analyzing figurative language and identifying central ideas and key details. Students are also introduced to the design thinking process and begin compiling notes on how William Kamkwamba applies this process to his own design work.

- Mid-Unit 2 Assessment: Analyze Figurative Language and Central Idea: "The Hippo Roller"

Weeks 2–3 (Lessons 5–12)

Students are guided through the steps of the research process to find another intriguing innovator who followed the design thinking process to address a critical problem. Students learn how to gather evidence from multiple sources, determine the credibility and relevance of those sources, and paraphrase and quote accurately.

- End of Unit 2 Assessment: Research Process

Unit 3

Unit 3: Write to Inform: Problem-Solution Essay

Weeks 1–2 (Lessons 1–9)

Students analyze a model problem-solution essay while practicing writing their own with a partner based on William Kamkwamba's experience. These steps scaffold students to independently write a problem-solution essay based on the innovator they researched in Unit 2.

- Mid-Unit 3 Assessment: Write a Problem-Solution Essay

Week 3 (Lessons 10–15)

Students work towards the performance task by preparing their problem-solution visual and responses to the presentation prompts for the Solution Symposium. Using their learning from the anchor text, their research, and their peers' presentations, students conclude the module with a fishbowl discussion to answer the following prompt: how do habits of character help people solve critical problems?

- End of Unit 3 Assessment: Fishbowl Discussion: Habits of Character to Solve Critical Problems

Technology & Multimedia

Tool	Purpose	Suggested Use	Website URL
Online word processing tool	Complete note-catchers	• Students complete their note-catchers and compose their essays online.	http://eled.org/0158
Speech-to-text/ text-to-speech tool	Compose essays	• Increase writing fluency by allowing students to fill in note-catchers and compose essays using this function.	Many newer devices already have this capability; there are also free apps for this purpose, including http://eled.org/0103.
Online parent communication tool	Create student learning portfolios	• Video/audio record students presenting their Solution Symposium presentations to share their work with other students and families.	http://eled.org/0120
TED Talks	Explore innovative designers	• Students choose a topic for their research from a curated list of TED Talks. Students become familiar with the TED institution and the benefit of this resource.	https://www.TED.com
Moving Windmills Project	Build background on William Kamkwamba's accomplishments	• Students can explore images to better visualize William's village and windmill. They also learn about William's continued success since first appearing on TED.	https://movingwindmills.org/
Student-friendly design websites	Understand design thinking in everyday life	• Students can watch videos, play games, and take on projects all on the topic of design thinking.	http://eled.org/0162

Refer to each Unit Overview for more details, including information about what to prepare in advance.

Optional: Community, Experts, Fieldwork, Service, and Extensions

Community

- Invite members of the community (parents, administrators, other students, etc.) in to view the students' performance tasks. Students could also record their presentations for the Solution Symposium using a video recording app, such as http://eled.org/0120, to then share with an outside audience at a different time.
- Set up a TEDx Conference at the school. Information about hosting a TEDx event can be found at http://eled.org/0191.

Experts

- If a local TED or TEDx conference is being held nearby, invite experts to meet with and talk to students.
- Read the description at http://eled.org/0192. Build excitement about and relevance around students' work by showing them how the skills they are applying in this module extend into college and beyond.
- Emphasize for students the iterative nature of the design thinking process by inviting guests into the classroom to discuss how they learned from their failures and built on this experience to improve their own skills or products.

Fieldwork

- Search for a local TEDx conference at http://eled.org/0193, and arrange to attend with students.
- Share a documentary such as http://eled.org/0194 that celebrates the human ingenuity responsible for engineering feats such as the Great Wall of China and SpaceX's Hyperloop.

Service

- Set up a design challenge to address a critical problem in the school or local community. Guide students through the design thinking process to come up with a solution. Explore examples from EL Education's Better World Day initiative (http://eled.org/better-world-day) to gain inspiration.

Extensions

- Several podcasts have individual episodes or entire libraries of episodes all focused on the power of effective design. Invite students to listen to the *TED Radio Hour* podcast episode entitled "The Power of Design." For students interested in a deeper dive of this topic, suggest the podcast *99 Percent Invisible*, every episode of which explores the subtle ways in which design and architecture shape our world.

Mid-Unit 1 Assessment

Analyze Central Idea and Development of an Individual: *The Boy Who Harnessed the Wind,* Chapter 4.

This assessment centers on CCSS ELA RI.6.1, RI.6.2, RI.6.3, RI.6.4, RI.6.10, and L.6.4a.

The Module 2 Mid-Unit 1 Assessment is a reading assessment (RI.6.10). Students read chapter 4 of *The Boy Who Harnessed the Wind* and answer selected response questions about vocabulary in context (RI.6.1, RI.6.4, L.6.4a), central idea (RI.6.1, RI.6.2), and a method used by the authors (RI.6.3) to develop the reader's understanding of William's character in this chapter (RI.6.1, RI.6.3).

End of Unit 1 Assessment

Analyze Figurative Language, Central Idea, and Structure: *The Boy Who Harnessed the Wind,* Chapter 8.

This assessment centers on CCSS ELA RI.6.1, RI.6.2, RI.6.3, RI.6.4, RI.6.5, RI.6.10, W.6.10, and L.6.5a.

The Module 2 End of Unit 1 Assessment is a reading assessment (RI.6.10). Students read chapter 8 of *The Boy Who Harnessed the Wind* and answer selected response and constructed response questions about figurative language in context (RI.6.1, RI.6.4, L.6.5a), central idea and summary (RI.6.1, RI.6.2), chapter structure and the contribution of single sentences to the development of ideas (RI.6.1, RI.6.5), and methods used by the writers (RI.6.3) to develop our understanding of William's character and central idea (RI.6.1, RI.6.3). Through constructed response items, students also practice summary and informal writing (RI.6.2, W.6.10).

Mid-Unit 2 Assessment

Analyze Figurative Language and Central Idea: "The Hippo Roller"

This assessment centers on CCSS ELA RI.6.1, RI.6.2, RI.6.3, RI.6.4, RI.6.5, RI.6.10, W.6.10, L.6.4a, L.6.5a, and L.6.5c

The Module 2 Mid-Unit 2 Assessment is a reading assessment (RI.6.10). Students read a new informational text about another design solution to a critical problem, and answer selected response and constructed response items questions about figurative language, connotative meanings, and vocabulary in context (RI.6.1, RI.6.4, L.6.4a, L.6.5a, L.6.5c), central idea (RI.6.1, RI.6.2), methods used to introduce and develop the reader's understanding of the ideas in the text (RI.6.1, RI.6.3), and how structure and particular sentences contribute to the development of ideas (RI.6.1, RI.6.5). Students also write a brief summary of the text (RI.6.2, W.6.10).

End of Unit 2 Assessment

Research Process

This assessment centers on CCSS ELA W.6.7 and W.6.8.

The Module 2 End of Unit 2 Assessment is a research skills assessment. Students answer selected response and constructed response items to demonstrate their abilities with choosing the most relevant search results, understanding how the quality and specificity of search terms impacts search results (W.6.7), identifying types of sources, assessing reliability and credibility of possible sources, evaluating paraphrasing, paraphrasing information from a source, and gathering bibliographic information from a source (W.6.8).

Important note: As process standards, W.6.7 and W.6.8 are more fully, authentically, and meaningfully assessed when students are engaged in their actual research that occurs in this unit. The items included on this assessment address these standards in only a perfunctory way due to the nature and limitations of an on-demand assessment. More accurate and nuanced evidence of student achievement toward these standards can be gathered from their research note-catcher completed during Unit 2 (W.6.7, W.6.8) and their problem-solution essay written from their research during Unit 3 (W.6.8). Using this assessment in conjunction with those other artifacts affords a richer picture of student performance toward these research standards.

Mid-Unit 3 Assessment

Write a Problem-Solution Essay

This assessment centers on CCSS ELA RI.6.1, RI.6.7, RI.6.10, W.6.2, W.6.4, W.6.6, W.6.8, W.6.9b, W.6.10, SL.6.2, and L.6.6.

The Module 2 Mid-Unit 3 Assessment is a writing assessment. Students write an informative problem-solution essay (W.6.2, W.6.4, W.6.6, W.6.9b, W.6.10, L.6.6) focused on their research (W.6.8) about a solution that an innovator developed using design thinking to solve a critical problem (RI.6.1, RI.6.7, RI.6.10, SL.6.2). The essay explains the problem in detail and then describes the process by which a solution was designed, tested, and revised.

End of Unit 3 Assessment

Fishbowl Discussion: Habits of Character to Solve Critical Problems

This assessment centers on CCSS ELA W.6.10, SL.6.1a, SL.6.1b, SL.6.1c, SL.6.2, and SL.6.6.

The Module 2 End of Unit 3 Assessment is a speaking and listening assessment. Students synthesize their learning from the module by engaging in a QuickWrite (W.6.10, SL.6.1a, SL.6.2) and an academic discussion (SL.6.1b, SL.6.1c, SL.6.2, SL.6.6) centered on the question: how do habits of character help people solve critical problems? The academic discussion uses a Fishbowl protocol, which students were first introduced to in Unit 1. Prior to this discussion assessment, students complete a graphic organizer to track their learning during the Solution

Symposium. Options for facilitating the fishbowl discussion are provided: Option 1 spreads the assessment over two days, with half the class engaging in the fishbowl while the other half reads, and then the groups are flipped on Day 2. Option 2 uses an inner and outer circle, with the outer circle acting as "coaches" for the inner circle, forcing students to listen attentively even when not directly involved in the discussion.

Summary of Task

Solution Symposium

The performance task is a student-hosted Solution Symposium during which students present the problem and design-solution that they researched in Unit 2 and about which they wrote a problem-solution essay in Unit 3. To prepare for the Solution Symposium, students create flip-down visual representations of their essay content and post these visuals for the Solution Symposium event.

During the symposium, guests (i.e., other students, parents, members of the local community) will circulate around with a presentation prompts card: an index card with two questions to ask the presenters. These Presentation Prompts ask, (1) how was design thinking used to solve this problem and (2) how were habits of character used to solve this problem? Presenters answer questions, and guests record a new insight on a sticky note next to the presenters' work.

Each student's participation in the Solution Symposium includes five steps, repeated multiple times throughout the event, as new visitors arrive at the student's station.

- Step 1: The student-presenter describes the problem they researched to guest(s) visiting their station. The solution to this problem is, at this point, concealed from the guest's view.
- Step 2: The presenter invites guest to brainstorm one or two possible solutions to the problem.
- Step 3: The presenter uses a flip-down visual to reveal the solution, as illustrated through an illustration or diagram. The presenter explains the solution they researched, referring to the accompanying visual as needed.
- Step 4: The guest uses the presentation prompts card to ask two follow-up questions of the presenter: (1) how was design thinking used to solve this problem and (2) how were habits of character used to solve this problem? The presenter answers the questions.
- Step 5: The presentation concludes, and the guest uses a sticky note to record one insight or piece of learning gained during the presentation. The guest leaves the sticky note with the presenter.

Format

Short, interactive presentations, with a visual component. Students' presentations are held simultaneously and repeated as new visiting guests arrive at each student's station.

Standards Addressed through This Task

The performance tasks at the end of every module are neither formative nor summative assessments. They are not formative since they come at the end of the module, concluding students' learning about the module topic, the habits of character, and the literacy skills they have built over 8 or 9 weeks. However, they are also not summative because they are

heavily scaffolded to help students create high-quality work and so are not a strong measure of what students can do independently. For these reasons, we do not recommend analyzing performance tasks with the same lens used to analyze assessments.

Although the Solution Symposium addresses standards important for student success (listed below), consider looking instead at students' performance tasks through the lens of the attributes of high-quality student work (authenticity, complexity, and craftsmanship). Below are possible questions to keep in mind when considering these attributes:

- **Authenticity:** Does the student demonstrate interest and investment in their chosen problem and design-solution? Does the student provide appropriate answers to the guests' presentation prompts? Is the student able to meaningfully respond to any spontaneous, clarifying, or follow-up questions? Do students address the real-life impact of the design-solution they researched?
- **Complexity:** Does the student demonstrate deep knowledge of their researched problem and design-solution? Has the student effectively synthesized the content of their essays into a short-presentation format? Do students include relevant details in their responses to guests' questions? Do they maximize opportunities to engage with the guests visiting their station?
- **Craftsmanship:** Do the student's visuals artfully and meticulously represent their research problem and design-solution? Is any accompanying text accurate and thoughtfully crafted? Do students speak carefully, with attention to purpose and audience?

The following standards are addressed, but not assessed:

- **RI.6.7:** Integrate information presented in different media or formats (e.g., visually, quantitatively) as well as in words to develop a coherent understanding of a topic or issue.
- **RI.6.10:** By the end of the year, read and comprehend literary nonfiction in the grades 6-8 text complexity band proficiently, with scaffolding as needed at the high end of the range.
- **W.6.7:** Conduct short research projects to answer a question, drawing on several sources and refocusing the inquiry when appropriate.
- **W.6.8:** Gather relevant information from multiple print and digital sources; assess the credibility of each source; and quote or paraphrase the data and conclusions of others while avoiding plagiarism and providing basic bibliographic information for sources.
- **SL.6.1:** Engage effectively in a range of collaborative discussions (one-on-one, in groups, and teacher-led) with diverse partners on grade 6 topics, texts, and issues, building on others' ideas and expressing their own clearly.
- **SL.6.2:** Interpret information presented in diverse media and formats (e.g., visually, quantitatively, orally) and explain how it contributes to a topic, text, or issue under study.
- **SL.6.4:** Present claims and findings, sequencing ideas logically and using pertinent descriptions, facts, and details to accentuate main ideas or themes; use appropriate eye contact, adequate volume, and clear pronunciation.
- **SL.6.5:** Include multimedia components (e.g., graphics, images, music, sound) and visual displays in presentations to clarify information.
- **SL.6.6:** Adapt speech to a variety of contexts and tasks, demonstrating command of formal English when indicated or appropriate. (See grade 6 Language standards 1 and 3 for specific expectations.)

Student-Friendly Writing Invitation/Task Description

You uncovered a critical problem. You researched a design-solution. Now, you'll share your learning with others during a **Solution Symposium**!

What Is a Solution Symposium?

sym-po-si-um: a formal meeting or conference, where experts discuss a particular subject

The subject of *our* symposium is "critical problems and their design-solutions" and the experts are . . . you! Each of you will create a visual representation on paper of the problem and design-solution that you researched for your essays. You will hang the visuals on the wall, and, during the symposium, you will stand next to them. That will be your "station." Guests will visit your station and you will present your problem and solution, using your visuals to help you explain. When you are the visitor at a station, you will use a note-catcher to record the key details from your peers' presentations.

Preparing for the Symposium

You'll use the information you gathered and wrote about for your problem-solution essay to prepare for the Solution Symposium. You might also have to do some additional research to gather images or other graphics for your presentation materials.

Flip-Down Visual

The flip-down visual will contain two sections: one for the problem and one for the solution. You'll create each section using illustrations, diagrams, collages, or something else. And you will write some text to explain them, too.

Be creative when designing your visuals. You may choose to draw your problem and its solution, or you may be more comfortable using a computer program to create a diagram or making a collage of images you find online. Your visuals are meant to help guests better understand the problems and solutions you describe, but how you do that is up to you. Use your imagination!

Memorize your explanations of the problem and solution or put them on notecards to use during the symposium.

Think about other ways to make your presentation engaging for guests who visit your station. For example, depending on the problem and solution you researched, you may wish to have something physical (like a model) that guests can touch or hold.

Practice incorporating your flip-down visual into your presentation, making sure that your audience cannot see the solution until you have described the problem and given them a chance to brainstorm possible solutions.

Presentation Prompt Preparation Notes

Prepare your responses to these two questions, and either memorize them or put them on notecards to use during the symposium. Your guests will ask you two questions, after you present your problem and solution flip-down visual:

- How was design thinking used to solve this problem?
- How were habits of character used to solve this problem?

During the Symposium

Symposiums make presentations look a little different than you might be used to. Instead of presenting one at a time to the class, many of you will present at the same time to different people! You will also be giving the same presentation several times in a row to new guests. The guests who attend the symposium might be your classmates, other students, friends or family members, or other people in our community. Guests will walk from station to station to learn more about the problems and solutions you have researched. Whenever someone new comes to your station, you will follow a series of steps:

1. First, you welcome your guests, introduce yourself, and describe the problem you researched. The top of your visual should cover the solution underneath.
2. You ask the guests to guess one or two possible solutions to the problem. You discuss their ideas with them.
3. Then, you flip down the top layer (the problem) of the visual to reveal the bottom layer (the solution). You explain the solution to the guest.
4. Next, the guest will ask you two questions: (1) how was design thinking used to solve this problem and (2) how were habits of character used to solve this problem? These questions are called presentation prompts, and each guest will have them written down on a card. You answer these questions, one at a time.
5. The guest uses a sticky note to write down one thing they learned from your presentation. Thank your guests as they leave the sticky note with you and move on to the next station. You get ready for your next guest, and the process starts again!

Our Solution Symposium is a great way to celebrate all the learning you have done during this module!

Key Criteria for Success (Aligned with CCSS ELA)

Below are key criteria students need to address when completing this task. Specific lessons during the module build in opportunities for students to understand the criteria, offer additional criteria, and work with support to construct a criteria list by which their work will be critiqued and formally assessed.

Your participation in the Solution Symposium will include the following:

- Relevant informational text to describe the problem you researched.
- A clear explanation of the design-solution you researched.
- Artful visuals (e.g., illustrations, diagrams) that depict the problem and the solution.
- Carefully organized visuals to guide guests through your presentation.
  - This includes a flip-down visual that hides the solution while you present the problem.
- Thoughtful answers to questions about how design thinking and habits of character were used to solve your problem.
- The ability to repeat your presentation as new guests arrive at your station, improving or adapting as needed.

Options for Students

Be creative when designing your visuals. You may choose to draw your problem and its solution, or you may be more comfortable using a computer program to create a diagram or making a collage of images you find online. Your visuals are meant to help guests better understand the problems and solutions you describe, but how you do that is up to you. Use your imagination!

Think about other ways to make your presentation engaging for guests who visit your station. For example, depending on the problem and solution you researched, you may wish to have something physical (like a model) that guests can touch or hold.

Options for Teachers

Guest visitors to the symposium can include classmates, students in other classes, parents or other family members, and/or members of the local community. This will vary depending on accessibility and/or school and community attitudes and expectations.

Consider splitting the Solution Symposium into two parts. First, randomly assign students to Group A or Group B. During the first half of the symposium, students in Group A are the presenters, standing with their visuals and sharing their work, while students in Group B are guests, circulating with presentation prompt cards, asking questions, giving sticky-note feedback, and taking notes on their note-catchers. Halfway through the time allotted for the presentation task, Group A and B switch roles.

Consider ways to help students adapt the visual display of their information to best reflect the content of their essays. For example, if students researched problems whose initial solutions were inadequate or incomplete, students may wish to include visuals that show some of these steps. This might require a flip-down visual that contains multiple components underneath.

If there is concern that presenters may answer their questions too quickly or briefly, consider including a third question on the presentation prompt cards. This question could, for example, invite presenters to reflect on their learning or describe their interest in the problem and solution they choose. Alternatively, leave a blank space on the presentation prompts card underneath the two questions, and encourage guests to write their own third question to students. Note that this iteration of the task poses an increased challenge for presenters, as it will require presenters to respond spontaneously to questions for which they have not prepared answers.

CCS Standards

Below are the standards that are formally assessed in this unit.

Reading—Informational Text

- **RI.6.1:** Cite textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.
- **RI.6.2:** Determine a central idea of a text and how it is conveyed through particular details; provide a summary of the text distinct from personal opinions or judgments.
- **RI.6.3:** Analyze in detail how a key individual, event, or idea is introduced, illustrated, and elaborated in a text (e.g., through examples or anecdotes).
- **RI.6.4:** Determine the meaning of words and phrases as they are used in a text, including figurative, connotative, and technical meanings.
- **RI.6.5:** Analyze how a particular sentence, paragraph, chapter, or section fits into the overall structure of a text and contributes to the development of the ideas.

Writing

- **W.6.7:** Conduct short research projects to answer a question, drawing on several sources and refocusing the inquiry when appropriate.
- **W.6.8:** Gather relevant information from multiple print and digital sources; assess the credibility of each source; and quote or paraphrase the data and conclusions of others while avoiding plagiarism and providing basic bibliographic information for sources.
- **W.6.10:** Write routinely over extended time frames (time for research, reflection, and revision) and shorter time frames (a single sitting or a day or two) for a range of discipline-specific tasks, purposes, and audiences.

Language

- **L.6.4a:** Use context (e.g., the overall meaning of a sentence or paragraph; a word's position or function in a sentence) as a clue to the meaning of a word or phrase.
- **L.6.5a:** Interpret figures of speech (e.g., personification) in context.

Habits of Character | Social-Emotional Learning Focus

Central to the EL Education curriculum is a focus on "habits of character" and social-emotional learning. Students work to become effective learners, developing mindsets and skills for success in college, career, and life (e.g., initiative, responsibility, perseverance, collaboration); work to become ethical people, treating others well and standing up for what is right (e.g., empathy, integrity, respect, compassion); and work to contribute to a better world, putting their learning to use to improve communities (e.g., citizenship, service).

In this unit, students work to become effective learners by taking initiative during collaborative activities and discussion protocols that include minimal teacher participation. They show responsibility by carefully and independently prereading chapters of the anchor text before examining them during class time. They work to become effective learners by showing perseverance as they read large portions of the text and add ideas to detailed note-catchers over time. Students work to become ethical people by showing empathy and compassion towards the Malawians' suffering as a result of the famine described in the text. By digging into the question of what makes a problem critical, students practice extending empathy to other communities and individuals facing a wide range of critical problems. They show compassion towards their classmates as the text brings up personal connections and reflections that may be difficult for others to share.

Unit-at-a-Glance

This unit is approximately 3 weeks or 15 sessions of instruction.

Lesson and Focus CCS Standards	Lesson Summary	Daily Learning Targets	Ongoing Assessment
Lesson 1 RI.6.1	**Discover Our Topic: Design Thinking** **Opening** A. Engage the Learner – L.6.4 (5 minutes) **Work Time** A. Infer the Topic – RI.6.1 (15 minutes) B. Introduce the Performance Task and Module Guiding Questions (10 minutes) C. Launch the Text: *The Boy Who Harnessed the Wind* (10 minutes) **Closing and Assessment** A. QuickWrite: Design Thinking – W.6.10 (5 minutes) **Homework** A. Read and Reflect: Students read and reflect on the guiding questions for the module and discuss them with their families. They should consider how the guiding questions make them feel. They can sketch or write about their ideas. B. Preread Anchor Text: Students preread the first half of chapter 1 (pages 4–17) of *The Boy Who Harnessed the Wind* in preparation for studying an excerpt from the chapter in the next lesson. Students participate in the Infer the Topic protocol by engaging with resources related to the topic of the module. Then, the performance task and module guiding questions are introduced, and the anchor text, *The Boy Who Harnessed the Wind*, is launched.	• I can infer the topic of this module from the resources. (RI.6.1)	• Opening A: Entrance Ticket (L.6.4) • Work Time A: Infer the Topic: I Notice/I Wonder note-catcher (RI.6.1) • Closing and Assessment A: QuickWrite (W.6.10)

Lesson and Focus CCS Standards	Lesson Summary	Daily Learning Targets	Ongoing Assessment
Lesson 2 RI.6.1, RI.6.3	**Establish Reading Routines: *The Boy Who Harnessed the Wind*, Chapter 1** **Opening** A. Engage the Learner – RI.6.3 (5 minutes) **Work Time** A. Read *The Boy Who Harnessed the Wind*, Chapter 1 Excerpt (15 minutes) B. Analyze Introduction of Key Individual: *The Boy Who Harnessed the Wind* – RI.6.3 (10 minutes) C. View TED Talk: "How I Built a Windmill" – RI.6.3 (10 minutes) **Closing and Assessment** A. Reflect on the Module Guiding Questions (5 minutes) **Homework** A. Preread Anchor Text: Students preread the second half of chapter 1 (pages 17–35) of *The Boy Who Harnessed the Wind* in preparation for studying an excerpt from chapter in the next lesson. Students read the chapter 1 excerpt of *The Boy Who Harnessed the Wind* and determine its gist. Then, they practice analyzing how a key individual (the narrator, William) is introduced in the text and in a related TED Talk.	• I can analyze how William is introduced and developed in *The Boy Who Harnessed the Wind*. (RI.6.3) • I can analyze how William is introduced in the TED Talk. (RI.6.3)	• Opening A: Entrance Ticket (RI.6.3) • Work Time B and C: Analyze Key Individual: William note-catcher (RI.6.1, RI.6.3, RI.6.7, SL.6.2)
Lesson 3 RI.6.1, RI.6.2, RI.6.3	**Determine Central Idea: *The Boy Who Harnessed the Wind*, Chapter 1** **Opening** A. Engage the Learner – L.6.4b (5 minutes) **Work Time** A. Read *The Boy Who Harnessed the Wind*, Chapter 1 Excerpt – RI.6.3 (25 minutes) B. Determine Central Idea: *The Boy Who Harnessed the Wind*, Chapter 1 – RI.6.2 (10 minutes) **Closing and Assessment** A. QuickWrite: Connect Text to Self – W.6.10 (5 minutes) **Homework** A. Analyze Author Methods and Central Idea: Students complete Homework: Analyze Author Methods and Central Idea: *The Boy Who Harnessed the Wind*, Chapter 1. B. Preread Anchor Text: Students preread chapter 2 of *The Boy Who Harnessed the Wind* in preparation for studying the chapter in the next lesson. Students read the chapter 1 excerpt of *The Boy Who Harnessed the Wind*. Then, they analyze the central idea of chapter 1 by locating recurrent details and distilling them into a single idea. They represent these details and central idea(s) with a simple visual.	• I can find the gist of chapter 1 of *The Boy Who Harnessed the Wind*. • I can analyze how William is introduced and developed in *The Boy Who Harnessed the Wind*. (RI.6.3) • I can determine a central idea in the text and how it is conveyed through particular details. (RI.6.2)	• Opening A: Entrance Ticket (RI.6.4, L.6.4b) • Work Time A: Gist on sticky notes • Work Time A: Analyze Key Individual: William note-catcher (RI.6.1, RI.6.3, RI.6.10) • Work Time B: Central Idea Visual (RI.6.1, RI.6.2) • Closing and Assessment A: QuickWrite: Connect Text to Self (W.6.10) • Homework A: Analyze Author Methods and Central Idea: *The Boy Who Harnessed the Wind*, Chapter 1. (RI.6.1, RI.6.2, RI.6.3)

Lesson 1: Discover Our Topic: Design Thinking

CCS Standards

Focus Standards

These are the standards the instruction addresses.

- RI.6.1

Supporting Standards

These are the standards that are incidental—no direct instruction in this lesson, but practice of these standards occurs as a result of addressing the focus standards.

- SL.6.1, L.6.4

Daily Learning Targets

- I can infer the topic of this module from the resources. (RI.6.1)

Ongoing Assessment

- Opening A: Entrance Ticket (L.6.4)
- Work Time A: Infer the Topic: I Notice/I Wonder note-catcher (RI.6.1)
- Closing and Assessment A: QuickWrite (W.6.10)

Agenda

1. **Opening**
   A. Engage the Learner – L.6.4 (5 minutes)
2. **Work Time**
   A. Infer the Topic – RI.6.1 (15 minutes)
   B. Introduce the Performance Task and Module Guiding Questions (10 minutes)
   C. Launch the Text: *The Boy Who Harnessed the Wind* (10 minutes)
3. **Closing and Assessment**
   A. QuickWrite: Design Thinking – W.6.10 (5 minutes)
4. **Homework**
   A. Read and Reflect: Students read and reflect on the guiding questions for the module and discuss them with their families. They should consider how the guiding questions make them feel. They can sketch or write about their ideas.
   B. Preread Anchor Text: Students preread the first half of chapter 1 (pages 4–17) of *The Boy Who Harnessed the Wind* in preparation for studying an excerpt from the chapter in the next lesson.

Teaching Notes

Alignment to Assessment Standards and Purpose of Lesson

- RI.6.1 – Work Time A: Students participate in the Infer the Topic protocol and engage with resources (e.g., images and text excerpts) related to the topic of the module.
- Students are introduced to the module anchor text, *The Boy Who Harnessed the Wind*, in Work Time C. Be aware that the descriptions of suffering presented in the book may be sensitive for students and that some students may connect with these issues personally and deeply. After exploring the text, students have time to reflect. Monitor students and determine if there are issues surfacing that need to be discussed in more detail as a whole group, in smaller groups, or independently. Be aware that reflections may be personal and students are not required to share them.
- Be aware that *The Boy Who Harnessed the Wind* describes life in a poor Malawian village. In describing his community to the reader, one of the authors, William Kamkwamba, occasionally positions his life in rural Malawi as representative of African life overall. Although William's intention is to present his experiences in Africa as he lived them, it is possible that his descriptions reinforce stereotypes of Africa as a homogeneous continent, comprised only of poor countries and communities. As students learn more about William's community, it may be necessary to remind them that Africa is a vast, heterogeneous continent, and that not all of its countries and communities have the same struggles.
- One of the module guiding questions asks, how can design thinking help solve a critical problem? During Work Time B, students will brainstorm critical and non-critical problems. Note that due to their age and varying levels of maturity, middle school students may have skewed ideas about what problems are critical to them. Use probing questions in a sensitive and open-minded manner to help students express what is critical in their lives.

Opportunities to Extend Learning

- There are many resources online to extend learning about engineering and the design thinking process. Note students whose interest is piqued during the Infer the Topic protocol. Allow students to explore resources such as http://eled.org/0162 or http://eled.org/0163.
- An optional Mini Language Dive, intended for use after the anchor text is launched in Work Time C, is available in the Teacher's Guide for English Language Learners. ▲

How It Builds on Previous Work

- If students have worked on EL Education modules in Grades K–5, this module will build on those foundations.

Support All Students

- Integrated ELL supports are marked throughout lessons with a ▲. These teaching suggestions support student comprehension without disrupting lesson flow or requiring extensive class time or additional materials. Deeper, high-leverage supports, designed to accelerate ELLs' language development, can be found in the Teacher's Guide for English Language Learners.

- Note that there is a differentiated version of the I Notice/I Wonder note-catcher used in Work Time A in the separate Teacher's Guide for English Language Learners. Differentiated versions of some materials are available in most lessons as a way to provide additional support to ELLs. ▲
- Students may need additional support reading the text excerpts in the Infer the Topic protocol. Invite students to help each other by reading the excerpts aloud to each other. ▲
- Consider pairing ELLs with a partner who has more advanced or native language proficiency. The partner with greater language proficiency can serve as a model in the pair, initiating discussions and providing implicit sentence frames, for example. ▲
- It may be challenging for ELLs to understand the prologue in the anchor text, which introduces the reader(s) to William and his windmill invention without any context. Before reading the prologue aloud, remind all students that they do not need to understand every word and that chapter 1 will give them a clearer sense of the story's subject(s). ▲
- The homework for most lessons suggests that students preread the next chapter ahead of time; make it clear to students why prereading is valuable (i.e., prereading acquaints students with the central ideas ahead of time, so they can focus on details as they read; prereading gives students a sense of what is to come in the story, so they can prepare; the more times a student reads a text, the faster he or she can decode every word). Prereading may be an especially supportive practice for ELLs, as it provides an opportunity for them to verify the meaning of unfamiliar vocabulary and acquaint themselves with the structure and/or key content of the chapter. ▲
- An audiobook of the young readers edition of *The Boy Who Harnessed the Wind* is available online, though it is not free. Provide students with the option of purchasing the audiobook or checking it out from their local library on their own to support their understanding, if needed. ▲

Assessment Guidance

- Monitor students' I Notice/I Wonder note-catchers to ensure they are on the right track for inferring what the module is about at the end of the Infer the Topic protocol.

Down the Road

- In the next lesson, students will spend some time discussing their reflections on the module guiding questions. As students move through Units 1, 2, and 3, they continue to build their understanding of the module questions, which they'll revisit at the close of the module.
- In the next lesson, students continue reading the text and building background by watching William Kamkwamba's first TED Talk. Note that it is not necessary to keep the resolution a surprise. Students will know from the beginning that William is successful in building the windmill and bringing electricity to his village. The emphasis throughout this module will remain on the iterative nature of the design process he followed as he tested, failed, redesigned, and retested.

In Advance

- Prepare
  - Academic and domain-specific word walls (created in Module 1): Keep blank word cards and markers located close by. This is an area of the classroom in which academic and domain-specific words will be added throughout the year.
  - Infer the Topic resources, and post them around the room.
  - Performance Task anchor chart (see Performance Task Overview and Supporting Materials).
  - Module Guiding Questions anchor chart (see Module Overview).
- Besides the resources displayed around the room for the Infer the Topic protocol, students should also consider the images in the text as well, specifically the map prior to the title page and the photographs of William and his windmill just after page 150. Determine whether you will distribute the anchor text before the protocol for students to view or if you will display a few copies of the text and the contained images around the room.
- Create strategic groupings for the Think-Triad-Share protocol in Work Time A.
- Consider posting a large map of Africa with Malawi highlighted.
- If a previous class of students has already completed this module, consider displaying a model performance task from a former student. This will allow students to make connections between the model and the performance task requirements.
- Read the prologue in advance to identify plot points and vocabulary that may require clarification or sensitivity.
- Review the student tasks and example answers to get familiar with what students will be required to do in the lesson (see Materials list).
- Prepare copies of handouts for students, including entrance ticket (see Materials list).
- Post the learning targets and applicable anchor charts (see Materials list).

Technology & Multimedia

- Opening A: Complete the modeling for the Infer the Topic: I Notice/I Wonder note-catcher with the class in an online word-processing document, such as http://eled.org/0158.
- Work Time A: Students complete their Infer the Topic: I Notice/I Wonder note-catchers in an online word-processing document, such as http://eled.org/0158.
- Work Time A: Students complete their note-catchers in a word-processing document using speech-to-text facilities activated on devices or using an app or software such as http://eled.org/0143.

Vocabulary

- critical, inference, prologue (A)
- symposium (DS)

Key

(A): Academic Vocabulary

(DS): Domain-Specific Vocabulary

Materials from Previous Lessons

Teacher

- ☑ Academic word wall (one for display; from Module 1, Unit 1, Lesson 1, Opening A)
- ☑ Equity sticks (one per student; from Module 1, Unit 1, Lesson 1, Work Time C)
- ☑ Domain-specific word wall (one for display; from Module 1, Unit 1, Lesson 1, Opening A)

Student

- ☑ Affix list (one per student; from Module 1, Unit 1, Lesson 5, Opening A)
- ☑ Vocabulary logs (one per student; from Module 1, Unit 1, Lesson 2, Work Time B)

New Materials

Teacher

- ☑ Entrance Ticket: Unit 1, Lesson 1 (example for teacher reference)
- ☑ Infer the Topic resources
- ☑ Directions for Infer the Topic (for teacher reference) (one for display)
- ☑ Performance Task anchor chart (example for teacher reference) (see Performance Task Overview and Supporting Materials)
- ☑ Module Guiding Questions anchor chart (see Teaching Notes)
- ☑ Online dictionary (see Teaching Notes)
- ☑ Text Guide: *The Boy Who Harnessed the Wind* (for teacher reference)
- ☑ Gist anchor chart: *The Boy Who Harnessed the Wind* (example for teacher reference)
- ☑ QuickWrite: Design Thinking Process (example for teacher reference)

Student

- ☑ Entrance Ticket: Unit 1, Lesson 1 (one per student)
- ☑ Online or paper translation dictionary (for ELLs in home language)
- ☑ Infer the Topic: I Notice/I Wonder note-catcher (one per student)
- ☑ Infer the Topic: I Notice/I Wonder note-catcher ▲ (optional; see Teacher's Guide for English Language Learners)
- ☑ *The Boy Who Harnessed the Wind* (text; one per student)
- ☑ Board and dry-erase marker (optional; one each per student)
- ☑ Sticky notes (two per student)
- ☑ Synopsis: *The Boy Who Harnessed the Wind*, Prologue (one per student)
- ☑ QuickWrite: Design Thinking Process (one per student)

Opening

A. Engage the Learner – L.6.4 (5 minutes)

- As students enter the classroom, distribute **Entrance Ticket: Unit 1, Lesson 1** and allow time for students to record their responses. Refer to the **Entrance Ticket: Unit 1, Lesson 1 (example for teacher reference)** for possible responses.
- Turn and Talk:

  "What does it mean to make an inference?" (To draw a conclusion from given evidence and one's background knowledge.)
- Explain that, similarly to Module 1, students will be participating in an activity during this lesson to infer the topic of the new module.
- Direct students' attention to the posted learning target and select a volunteer to read it aloud:

  "I can infer the topic of this module from the resources."
- Point to the word *infer* already recorded on the **academic word wall**. Using a total participation technique, such as **equity sticks**, ask:

  "What is the relationship between the words* infer *and* inference*?" (*Infer *is the verb form;* inference *is the noun form.)
- Remind students that they saw this learning target in the previous module.

Work Time

A. Infer the Topic – RI.6.1 (15 minutes)

- Focus students on the **Infer the Topic resources** posted around the room.
- Distribute the **Infer the Topic: I Notice/I Wonder note-catchers** or the optional **Infer the Topic: I Notice/I Wonder note-catchers** ▲. Focus students on the question at the top, and read it aloud:

  "What do you think you will be learning about in this module?"
- Tell students that the purpose of the note-catcher is to take notes to help them remember their thinking. It isn't something they will hand in for assessment, so they can record in pictures or words. They do not need to write in full sentences. ▲
- Be transparent about why students are noticing and wondering (because it is a helpful way to understand and explore a new topic or text).
- Remind students that they used the Infer the Topic protocol in the previous module, and review as necessary using the **Directions for Infer the Topic**.
- Distribute the text, ***The Boy Who Harnessed the Wind***. Besides the resources displayed around the room, students should also consider the images in the text as well, specifically the map prior to the title page and the photographs of William and his windmill just after page 150.

- Guide students through the protocol. Allow them to choose what resources to observe, so those who may not be able to read independently have the option to view an image. Mixed-proficiency pairs can choose the resources they want to observe and begin by discussing what the resources mean. ▲ Encourage students to agree or disagree with one another about what the resources mean using sentence frames. Examples: "I agree because ____." "I disagree because____."
- Refocus whole group. Think-Triad-Share:

  "Now that you have looked at some resources, what do you think this module might be about?" (Responses will vary, but could include windmills, experiments, a boy in Africa, and inventions that improve people's lives.)
- If productive, cue students to elaborate or expand upon their answers:

  "Can you say more about that? I'll give you some time to think and write or sketch." (Responses will vary.)
- Invite students to reflect on their progress toward the relevant learning target, using a checking for understanding technique—for example, using Thumb-O-Meter. Scan student responses and make a note of students who might need support. Check in with them moving forward.

Work Time

B. Introduce the Performance Task and Module Guiding Questions (10 minutes)

- Direct students' attention to the **Performance Task anchor chart**, and read the task aloud.
- As students may be overwhelmed by the performance task expectations, assure them that they will continue to explore the meaning of the chart in subsequent lessons and units.
- Turn and Talk:

  "What do you notice?" (Responses will vary, but may include the following: We will be researching problems and their solutions. Instead of a traditional presentation, we will be having several conversations with smaller audiences.)

  "What do you wonder?" (Responses will vary, but may include the following: What might a "flip-down" visual look like? How will I find an innovator to present?)

  "Now that you have analyzed the performance task, has your inference of what this module might be about changed? How?" (Responses will vary.)
- Clarify anything pertinent to this specific performance task. Consider displaying a model performance task from a former student. Ask students to make connections between the model and the performance task.
- Direct students' attention to the **Module Guiding Questions anchor chart**, and read the questions aloud.

  "How can design thinking help solve a critical problem?"

  "How do habits of character help people to solve critical problems and contribute to a better world?"

- Turn and Talk:

  "Why do we have guiding questions for each module?" (Responses will vary, but may include the following: to help focus our learning, to help us think about the performance task.)

- Underline the word *critical*. Turn and Talk:

  "What does this mean? What strategy can you use to find out?"

- Invite students to work in their triads to determine the meaning of the word, and use a total participation technique to select a student to share with the whole group (of the nature of a crisis; serious or dangerous).
- Using an **online dictionary**, display the multiple definitions of the word *critical*. Point out that there are multiple meanings of the word *critical*. Model swapping out the different definitions to find the one that makes the most sense in the context of the guiding question.
- Turn and Talk:

  "Give an example of a critical problem and a non-critical problem." (Responses will vary, but may include the following: A critical problem is not having access to clean water. A non-critical problem is spilling your water bottle in the cafeteria.)

- If needed, have students review or define the meaning of the prefix *non-* before responding to the question.
- Add *critical* to the academic word wall, including translations in home languages. ▲
- Redirect student attention to the Module Guiding Questions anchor chart. Tell students that these are the questions that will guide their thinking and learning throughout the module.
- Turn and Talk:

  "What do you notice?" (Responses will vary, but may include the following: we are going to be incorporating the habits of character into our learning on the topic.)

  "What do you wonder?" (Responses will vary, but may include the following: what does* design thinking *mean?)

  "Now that you have analyzed the guiding questions and performance task, has your inference of what this module might be about changed?" (Responses will vary.)

- If productive, cue students to repeat or paraphrase the ideas of others:

  "Who can repeat what your classmate said? Who can tell us what your classmate said in your own words?"

- Clarify that in this module they will explore how design thinking can be used to solve critical problems.
- Turn and Talk:

  "What does this topic mean to you at this point? Why might it be meaningful to study this topic?" (Responses will vary, but may include the following: coming up with creative solutions will be an important life skill, especially when tackling problems that affect a lot of people.)

  "From what you know so far, what are you looking forward to about this topic?" (Responses will vary, but may include the following: I enjoy tinkering, engineering, and building things; it sounds like that will be part of our learning in this module.)

- Acknowledge that some students may already know something about this topic. Explain that for homework they will reflect on the guiding questions and how they feel about them based on their own experiences, and that this will be discussed more at the beginning of the next lesson. And note that some students may know nothing about the topic—it will be fun to dig in together!
- Invite students to reflect on their progress toward the relevant learning target, using a checking for understanding technique. Scan student responses and make a note of students who might need support. Check in with them moving forward.

Work Time

C. Launch the Text: *The Boy Who Harnessed the Wind* (10 minutes)

- Point to the word *prologue*. Invite students to retrieve their **affix lists**. Draw a chart like the one below on the board. Guide students in a Think Aloud, breaking the word apart into its prefix and root word.

Word Parts	Meaning	Origin
pro-	before	Greek
-logue	word	Greek

- Think-Pair-Share:

  "In your own words, state a definition of the word* prologue.*" (Before the words.)

  "Where in the table of contents of a book would you expect to find a prologue?" (At the beginning.)

- Clarify that a *prologue* is a section of a text that comes before the first chapter, or the main body, of a book or text. Invite students to record *prologue* in their **vocabulary logs**, and add it to the academic word wall.
- Ask students to retrieve their text, *The Boy Who Harnessed the Wind*. Direct students to the table of contents, and invite them to find the prologue.
- Tell students they will now spend 2 minutes looking through the book with their partner and discussing what they notice and wonder. Partner B will share a notice or a wonder first, and then partner A, and then partner B again, and so on.
- Provide **boards and dry-erase markers** or **sticky notes** as an option for students to record (in drawing or writing) their ideas. This helps scaffold active listening for key details.
- Use equity sticks to select students to share out what they notice and wonder about the book. As students share out, draw an I Notice/I Wonder chart on the board and complete as students share out. Listen for suggestions such as the following:
  - Notice: The story takes place in Malawi, Africa.
  - Wonder: Why would a windmill change people's lives?

- Invite students to turn to page 1. Read aloud pages 1–3 of the prologue as student read along silently. Note that while students may read in small groups or individually in future lessons, students will benefit from this initial introduction to the text as a whole class.
- Read aloud the selected excerpt, using the **Text Guide: *The Boy Who Harnessed the Wind* (for teacher reference)** for comprehension and vocabulary questions as needed. Read aloud, and remind students to read along silently.
- Think-Pair-Share:

  "What happened?" (A crowd of locals gathers as William prepares to turn on his windmill for the first time. William speaks to the windmill as if it were a person, willing it to work properly. It does and the doubtful crowd gasps in astonishment. William has done the seemingly impossible.)

  "What were you feeling for the narrator as you read the prologue? Why? What habits of character were you practicing as you read?" (Student responses will vary, but may include practicing compassion for him as he described how he had been teased and as the people gathered called him "crazy," and feeling anxious that the machine might not work and he would be laughed at even more. At the end of the prologue students may have felt relief and pride for him.)

- Invite a student to paraphrase the key points in more comprehensible language for those who need heavier support. ▲
- Think-Pair-Share:

  "What is the gist? What is this part of the book mostly about?" (William premieres his invention in front of a doubting crowd and discovers that it works.)

- Model recording gist (key words, not full sentences) on a sticky note, and invite students to do the same, sticking them at the front of the prologue for quick reference. Students will also benefit from adding the page numbers and their initials on the sticky note for easier materials management. Refer to the **Gist anchor chart: *The Boy Who Harnessed the Wind* (example for teacher reference)**.
- Remind students that finding gist is not a new skill, since they practiced it during Module 1. Also remind them that their goal is to understand what the story is mostly about after a first read, and it is okay if there are parts they don't quite understand yet.
- Turn and Talk:

  "How does this first part of the text align with your inferences during the Infer the Topic protocol? Were your inferences correct?" (Answers will vary.)

- Use Synopsis: *The Boy Who Harnessed the Wind*, Prologue to review and note key details for this excerpt. This will help to complete students' understanding of the events, especially if they are not able to complete the reading of the full chapter.
- Invite students to record select words from the text in their vocabulary logs and add them to either the academic word wall or **domain-specific word wall**.

Closing and Assessment

A. QuickWrite: Design Thinking – W.6.10 (5 minutes)

- Distribute **QuickWrite: Design Thinking Process**. Display the Design Thinking Process graphic from the Infer the Topic Resources for students to reference as they write. Direct students to begin.
- Refocus whole group after 4 minutes.
- Invite students to reflect on how habits of character were demonstrated during this lesson, discussing what went well and what could be improved next time.

Homework

A. Read and Reflect

- Students read and reflect on the guiding questions for the module and discuss them with their families. They should consider how the guiding questions make them feel. They can sketch or write about their ideas.

B. Preread Anchor Text

- Students preread the first half of chapter 1 (pages 4–17) of *The Boy Who Harnessed the Wind* in preparation for studying an excerpt from the chapter in the next lesson.

Lesson 2: Establish Reading Routines: *The Boy Who Harnessed the Wind*, Chapter 1

CCS Standards

Focus Standards

These are the standards the instruction addresses.

- RI.6.1, RI.6.3

Supporting Standards

These are the standards that are incidental—no direct instruction in this lesson, but practice of these standards occurs as a result of addressing the focus standards.

- RI.6.7, RI.6.10, W.6.10, SL.6.2

Daily Learning Targets

- I can analyze how William is introduced and developed in *The Boy Who Harnessed the Wind*. (RI.6.3)
- I can analyze how William is introduced in the TED Talk. (RI.6.3)

Ongoing Assessment

- Opening A: Entrance Ticket (RI.6.3)
- Work Time B and C: Analyze Key Individual: William note-catcher (RI.6.1, RI.6.3, RI.6.7, SL.6.2)

Agenda

1. **Opening**
   A. Engage the Learner – RI.6.3 (5 minutes)
2. **Work Time**
   A. Read *The Boy Who Harnessed the Wind*, Chapter 1 Excerpt (15 minutes)
   B. Analyze Introduction of Key Individual: *The Boy Who Harnessed the Wind* – RI.6.3 (10 minutes)
   C. View TED Talk: "How I Built a Windmill" – RI.6.3 (10 minutes)
3. **Closing and Assessment**
   A. Reflect on the Module Guiding Questions (5 minutes)
4. **Homework**
   A. Preread Anchor Text: Students preread the second half of chapter 1 (pages 17–35) of *The Boy Who Harnessed the Wind* in preparation for studying an excerpt from chapter in the next lesson.

Teaching Notes

Alignment to Assessment Standards and Purpose of Lesson

- RI.6.3 – Opening A: Students complete an entrance ticket in which they reflect on how the narrator of *The Boy Who Harnessed the Wind*, William, is introduced in the prologue.
- RI.6.1 – Work Time B: Students fill in a note-catcher, using evidence from the text to support their ideas about William's character.
- RI.6.3 – Work Time B: Students use a note-catcher to analyze the methods used in chapter 1 to introduce and develop the readers' understanding of William.
- RI.6.3 – Work Time C: Students use a note-catcher to analyze the methods used in the TED Talk to introduce and develop the readers' understanding of William.
- In this lesson, the directions for routines that are repeated from previous lessons have been pared down and noted with "Repeated routine." For the detailed outline of how to facilitate this part of the lesson, please refer back to previous lessons.
- The lesson begins with students reflecting on the module guiding questions. This is not mandatory—students share their reflections only if they want to do so. The main point students should understand by the end of this module is that the design process thinking is a scientific and systematic practice of inquiry that allows for creativity and innovation; students can harness that creativity and innovation to contribute to a better world by helping their school, community, and the environment.
- In this lesson, students engage in a protocol. A protocol consists of agreed-upon, detailed guidelines for reading, recording, discussing, or reporting that ensure equal participation and accountability in learning. Protocols are an important feature of our curriculum because they are one of the best ways we know to engage students in discussion, inquiry, critical thinking, and sophisticated communication. Students engage in the following new protocol in this lesson (instructions for which appear at the first point of use in the lesson and in the Classroom Protocols document online; see the Tools page: http://eled.org/tools):
  - **Back-to-Back and Face-to-Face** provides a method for sharing information and gaining multiple perspectives on a topic through partner interaction. It can be used for reviewing and sharing academic material, as a personal ice breaker, or as a means of engaging in critical thinking about a topic of debate.
- In this lesson, students focus on working to become ethical people by showing respect and empathy as they share reflections on the guiding questions in Opening A.

Opportunities to Extend Learning

- Challenge students to create original sentences using their newly acquired vocabulary, while adding context clues to demonstrate their understanding of the definition. ▲
- While looking up definitions, draw students' attention to the etymology of the vocabulary, noting especially those words that include a Greek root.
- *The Boy Who Harnessed the Wind* describes life in a small African village in Malawi. As students learn more about William's community, it may be necessary to remind them that Africa is a vast, heterogeneous continent, and that not all of its countries and communities have the same struggles. Have students locate Malawi on a map of Africa. Then, pair students and assign each pair another African country or major city (e.g., Johannesburg,

South Africa; Cairo, Egypt; Addis Ababa, Ethiopia). Ask students to find images of their given locale on Google images and then compare and contrast their images with those of other pairs. This activity may be especially affirming for ELLs or international students who come from Africa. ▲

- To extend learning, consider inviting students to analyze how other individuals referenced in chapter 1 are introduced.

How It Builds on Previous Work

- In the previous lesson, students were introduced to the module topic by looking at resources in the Infer the Topic protocol and discussing the module guiding questions. Students will continue their discussion of the guiding questions during during Opening A of this lesson.
- They will continue to build background knowledge on the module topic by watching William Kamkwamba's first TED Talk. This will also reinforce their understanding of the prologue, which was read in the previous lesson. In this lesson, students continue in the anchor text, reading an excerpt from chapter 1 of *The Boy Who Harnessed the Wind*.

Support All Students

- Note that there are differentiated versions of the entrance ticket used in Opening A and the Analyze Key Individual: William note-catcher used in Work Time B in the separate Teacher's Guide for English Language Learners. ▲
- In Work Time A, students read an excerpt from the first chapter of the text. Note that although *The Boy Who Harnessed the Wind* is generally sensitive to and affirming of cultural difference, there are occasional descriptions or allusions that may be upsetting to some students. In the first excerpt of chapter 1, characters in the text are said to feel sorry for the protagonist William because he has only sisters and no brothers. Comments that reference boys' elevated status over girls are frequent throughout the text; this, when considered in conjunction with the fact that there are no main characters who are female, may feel exclusionary to female students. Be sensitive to this when teaching the novel and validate students' concerns. Refer back to ideas about point of view that surfaced in Module 1; by assigning perspectives to the narrator or characters in the text, students can better distance themselves from potentially offensive attitudes presented in the text. Additionally, consider ways to amplify the voices of female characters (e.g., through a writing exercise in which scenes are rewritten through the perspective of William's mother or sisters).
- Additionally in chapter 1, the local, non-Western medicine preferred by those in William's community is conflated with the concept of "witch doctors." Descriptions like these, present throughout the novel, may feel alienating to students from cultural environments where holistic or alternative medicinal approaches may be common. As a way to validate alternatives, consider facilitating a short discussion in which students brainstorm different kinds of medicinal or therapeutic options available when people get sick (e.g., a doctor's visit, acupuncture, counseling, change in diet).
- *The Boy Who Harnessed the Wind* includes dialogue spoken in other languages, namely Chichewa, the language of William's community. Recognizing and celebrating the inclusion of other languages in the text may be a good way to indirectly affirm the diverse linguistic identities of ELLs. ▲

- Extracting important ideas from information presented in various modes (e.g., a TED Talk, the first chapter of the anchor text) may pose a special challenge for ELLs, who might not have yet developed the language skills necessary to effectively shift attention across media. Encourage all students to simply enjoy the TED Talk without feeling compelled to understand every word or detail. Students' cognitive energy should be saved for comprehending the first half of chapter 1, which introduces many important characters, including the protagonist, William. ▲
- Note that William Kamkwamba is featured in two TED Talks. Ensure that, for this lesson, students are focused on the first talk in which he is interviewed. At a strategic point in the module, view the second TED Talk with students. Compare and contrast how William is depicted in each; connect this discussion to the work around illustration and development of a key individual.

Assessment Guidance

- Refer students back to the Author's Methods anchor chart to ensure that they are identifying a method listed there as a means of developing a key individual.

Down the Road

- In the next lesson, students will read the second half of chapter 1 and continue analyzing how a key individual, William, is elaborated on in the text.
- Students also practice determining the central idea of a text using a "What?" and "So what?" visual strategy.

In Advance

- Prepare the online video, TED Talk: "How I Built a Windmill." Preload it to avoid buffering which may interrupt the flow of the lesson. The transcript is provided in case the video is unable to be viewed.
- Read chapter 1 in advance to identify plot points and vocabulary that may require clarification or sensitivity.
- Review the Classroom Protocols document to clarify the process for the Back-to-Back and Face-to-Face protocol prior to the beginning of this lesson.
- Review the student tasks and example answers to get familiar with what students will be required to do in the lesson.
- Prepare copies of handouts for students (see Materials list).
- Post the learning targets and applicable anchor charts (see Materials list).

Technology & Multimedia

- Work Time A: Consider displaying the Synopsis: *The Boy Who Harnessed the Wind*, Chapter 1 before, during, or after reading the chapter to ensure students' full comprehension of the chapter's plot. ▲
- Work Time C: Preload the video, TED Talk: "How I Built a Windmill," prior to starting the lesson to ensure that buffering or other technology glitches do not interrupt the flow of the lesson. Turn on the Closed Captioning feature during the TED Talk to enhance listening comprehension. ▲
- Work Time C: The transcript of the TED Talk featured in this lesson is provided in case the video is unavailable or cannot be viewed. Students will still be able to successfully fill in the Analyze Key Individual: William note-catcher if they are only able to read the transcript. Consider choosing two students to read the parts of Chris Anderson and William Kamkwamba in the interview if the video cannot be viewed.

Vocabulary

- TED Talk (DS)

Key

(A): Academic Vocabulary

(DS): Domain-Specific Vocabulary

Materials from Previous Lessons

Teacher

- ☑ Classroom Protocols document (see Teaching Notes)
- ☑ Domain-specific word wall (one for display; from Module 1, Unit 1, Lesson 1, Opening A)
- ☑ Text Guide: *The Boy Who Harnessed the Wind* (for teacher reference) (from Module 2, Unit 1, Lesson 1, Work Time C)
- ☑ Academic word wall (one for display; from Module 1, Unit 1, Lesson 1, Opening A)
- ☑ Equity sticks (from Module 1, Unit 1, Lesson 1, Work Time C)
- ☑ Module Guiding Questions anchor chart (one for display; from Module 2, Unit 1, Lesson 1, Work Time B)
- ☑ Work to Become Ethical People anchor chart (one for display; from Module 1, Unit 1, Lesson 1, Work Time A)

Student

- ☑ *The Boy Who Harnessed the Wind* (text; one per student; from Module 1, Unit 1, Lesson 1, Work Time A)
- ☑ Vocabulary logs (one per student; from Module 1, Unit 1, Lesson 2, Work Time B)

New Materials

Teacher

- ☑ Entrance Ticket: Unit 1, Lesson 2 (example for teacher reference)
- ☑ Author's Methods anchor chart (example for teacher reference)
- ☑ Author's Methods anchor chart (one for display)
- ☑ Analyze Key Individual: William note-catcher (example for teacher reference)
- ☑ TED Talk: William Kamkwamba: "How I Built a Windmill" video (for display)

Student

- ☑ Entrance Ticket: Unit 1, Lesson 2 (one per student)
- ☑ Entrance Ticket: Unit 1, Lesson 2 ▲ (optional; see Teacher's Guide for English Language Learners)
- ☑ Synopsis: *The Boy Who Harnessed the Wind*, Chapter 1 (one per student)
- ☑ Analyze Key Individual: William note-catcher (one per student)
- ☑ Analyze Key Individual: William note-catcher ▲ (optional; see Teacher's Guide for English Language Learners)
- ☑ TED Talk Transcript: William Kamkwamba, "How I Built a Windmill" (one per student)

Opening

A. Engage the Learner – RI.6.3 (5 minutes)

- Repeated routine: Follow the same routine as previous lessons to distribute and review the **Entrance Ticket: Unit 1, Lesson 2** or the optional **Entrance Ticket: Unit 1, Lesson 2 ▲**. Refer to the **Entrance Ticket: Unit 1, Lesson 2 (example for teacher reference)** for possible responses.
- Direct students' attention to the posted learning targets and select a volunteer to read them aloud:

  ***"I can analyze how William is introduced and developed in* The Boy Who Harnessed the Wind."**

  "I can analyze how William is introduced in the TED Talk."

- Focus students on the phrase *TED Talk*. Explain that TED stands for *Technology, Entertainment, and Design*; the mission of TED is to spread knowledge about these topics and more through short, powerful talks by leaders in their fields. Add this phrase to the **domain-specific word wall**.
- Turn and Talk:

  "What do you think you will be doing in this lesson, based on these learning targets?" (Reading the first chapter of our anchor text and watching a TED Talk. Analyzing how William is introduced in two different sources.)

Work Time

A. Read *The Boy Who Harnessed the Wind*, Chapter 1 Excerpt (15 minutes)

- Invite students to retrieve their **text** and turn to page 4. Read aloud pages 4–17 of chapter 1 as students read along silently. Note that while students may read in small groups or individually in future lessons, students will benefit from this initial introduction to the text as a whole class.
- Read aloud the selected excerpt, using the **Text Guide: *The Boy Who Harnessed the Wind* (for teacher reference)** for comprehension and vocabulary questions as needed.
- Remind students they will finish chapter 1 in the next lesson. For this reason, they will hold off on determining gist.
- Think-Pair-Share:

  "What happened?" (William introduces himself and provides a bit of background about his country Malawi and his family.)

  "What habits of character did you practice as you read about the hardships people faced in the area William grew up in? Why?" (Student responses will vary, but may include empathy and compassion because William describes how seeing a doctor is difficult for farmers, and how many farmers cannot afford an education.)

- Invite a student to paraphrase the key points in more comprehensible language for those who need heavier support. ▲
- Use **Synopsis: *The Boy Who Harnessed the Wind*, Chapter 1** to review and note key details for this excerpt. This will help to complete students' understanding of the events, especially if they are not able to complete the reading of the full excerpt.
- Invite students to share any new words, adding any unfamiliar words to their **vocabulary logs**. Add any new words to the **academic word wall** and domain-specific word wall, and invite students to add translations in native languages. ▲
- Repeated routine: Invite students to reflect on their progress toward the relevant learning targets.

Work Time

B. Analyze Introduction of Key Individual: *The Boy Who Harnessed the Wind* – RI.6.3 (10 minutes)

- Review the appropriate learning target relevant to the work to be completed in this section of the lesson:

  ***"I can analyze how William is introduced and developed in* The Boy Who Harnessed the Wind."**

- Before students analyze how the authors have introduced William, synthesize what students already know about him.

- Turn and Talk:

  "What do we already know about William, the key individual of our anchor text?" (He lives in the village of Masitala, in the town of Wimbe, in Malawi, Africa; he lives with his six sisters and both parents; he speaks Chichewa; his family are farmers; he will build a windmill and generate electricity.)

- Display and introduce the **Author's Methods anchor chart**. Briefly, review the methods listed and their definitions. See **Author's Methods anchor chart (example for teacher reference)**. Explain that students will be learning more about each method of developing characters as they trace the way William is introduced and portrayed throughout this module.
- Explain that students are going to apply this beginning understanding about author's methods to chapter 1 and the TED Talk.
- Distribute the **Analyze Key Individual: William note-catcher** or the optional **Analyze Key Individual: William note-catcher ▲**. Chorally read each of the headings of the graphic organizer. Explain that individuals, events, and ideas develop and interact over the course of a text. Careful readers take note of how a writer introduces and develops a key individual and how that individual evolves. Studying an individual's experiences exposes the reader to new ideas, expands one's knowledge, and prompts us to consider other worldviews that may challenge or strengthen one's own convictions.
- Point out that there are two authors for this text, hence the reference to "writers" as plural. Note also that the word *character* as it is used in this context refers to one's moral qualities, not character as in a person in a story. Remind students not to refer to William as a character as this text is narrative nonfiction; while it reads like a novel, it is, in fact, an informational text.
- Ask:

  "What did we learn about William in the prologue?" (William is confident in himself and his machine. William demonstrates perseverance as he meticulously assembles the windmill even though others tease him and laugh at him.)

  "How do you know this about William? What is one method the writers used to convey those qualities?" (They let us know what he was thinking, his inner thoughts; although we hear dialogue from other people, William doesn't speak, but we get to know what he's thinking.)

  "How does this method help to introduce him and the events to come in the text?" (We are able meet him at the end of his process, the moment when he is successful, which tells us something about his character and makes us curious about how he got to this moment, so we are excited to read the book.)

- Think aloud to model filling in the first row of the graphic organizer in Part I. Note that the first row is focused on the prologue, which students read in Lesson 1. Refer to the **Analyze Key Individual: William note-catcher (example for teacher reference)** as necessary. Explain that the authors use multiple methods for introducing William in the prologue; students should be able to cite evidence for the method they have identified.
- Focus students on the second row—Chapter 1.

- Think-Pair-Share:

  "What is a method used by the writers to introduce or develop William as a key individual in the first half of chapter 1?" (Description.)

- Using a total participation technique, such as **equity sticks**, call on students to share their initial thoughts. Note that it is common during the exposition of a text for an author to use description to establish setting. Refer to the Analyze Key Individual: William note-catcher (example for teacher reference) as necessary.
- Think-Pair-Share:

  "Why is this detailed description of the setting important to have in chapter 1? What can the reader infer about William and his character in the first half of chapter 1?" (We learn that there is little technology, which provides more context than is evident in the prologue. We learn what is important to William and the people in his village, and the description also helps us understand some of William's thoughts, actions, and feelings that we were introduced to in the prologue.)

- Cue students to clarify their answers as needed:

  "So do you mean ____?"

- Using a total participation technique, call on students to share their initial thoughts.
- Explain that they will continue to analyze how the authors' methods develop our understanding of William and the ideas in the text during the rest of Unit 1.
- Repeated routine: Invite students to reflect on their progress toward the relevant learning targets.

Work Time

C. View TED Talk: "How I Built a Windmill" – RI.6.3 (10 minutes)

- Review the appropriate learning target relevant to the work to be completed in this section of the lesson:

  "I can analyze how William is introduced in the TED Talk."

- Explain that students will watch or read the transcript of William's first TED Talk (he later gave a second) in which he is interviewed by Chris Anderson, the Curator of TED. Remind them that they will, again, be looking for evidence of how William is introduced and developed in this resource as they did with the text.
- Briefly review the two questions at the top of the columns of the Analyze Key Individual: William note-catcher. Direct students to listen for information that will help them respond to these prompts, though they do not need to write anything yet while they watch or read the transcript.
- Distribute **TED Talk Transcript: William Kamkwamba, "How I Built a Windmill"** and display the **TED Talk: William Kamkwamba: "How I Built a Windmill" video**. Play the talk in its entirety.

- Tell students that they will reflect on the interview using the Back-to-Back and Face-to-Face protocol. Guide students through the protocol as follows:
  1. Students find a partner and label themselves Partner A and Partner B.
  2. Students stand back to back with their partner, being respectful of space.
  3. Students wait for the question that they will be asked to share with their partner.
  4. Students think about what they want to share and how they might best express themselves.
  5. Say, "Face-to-face." Students turn and face their partners. Partner A should answer the question first.
  6. Students listen carefully when their partner is speaking and make eye contact with him or her. Partner B should respond after Partner A is finished speaking.
  7. Say, "Back-to-back." Students return to their initial position (back to back) and wait for the next question.
- Follow this process for each of the two prompts under Part I of the Analyze Key Individual: William note-catcher. Remind students to answer based only on the information from the TED Talk they just experienced.
- Refocus whole group, and call on individual students to share their or their partner's response to one of the questions. Correct and clarify any misconceptions.
- Ensure that students notice that the TED Talk uses *dialogue* in an interview style to help the viewer understand what William was able to do, how he did it, and why his accomplishments are significant to be shared in this setting.
- Use a total participation technique to review and correct any misunderstandings before moving on and to update the Author's Methods anchor chart. Refer to the Author's Methods anchor chart (example for teacher reference).
- Repeated routine: Invite students to reflect on their progress toward the relevant learning targets.

Closing and Assessment

A. Reflect on the Module Guiding Questions (5 minutes)

- Remind students that they were introduced in the previous lesson to the guiding questions for the module. Invite students to reread the **Module Guiding Questions anchor chart**. Explain that not all students will be interested in design process thinking or William's quest to build a windmill. Ensure students understand that it is okay to have different opinions.
- Remind students that for homework they were asked to reflect on what those guiding questions mean to them and how they feel about them. Students may want to retrieve any notes or sketches they made as part of their reflection.
- Focus students on the **Work to Become Ethical People anchor chart**, specifically on respect and empathy and what this looks and sounds like.
- Invite any students who would like to do so to share their reflections with the whole group. This must be voluntary—if no one wants to share, that is okay.

- Think-Pair-Share:

  "Where do we see answers to the module guiding questions starting to emerge in the text and video?" (Responses will vary. Possible responses: William is going to apply his learning to help his community by building a windmill to solve a critical problem—lack of electricity.)

Homework

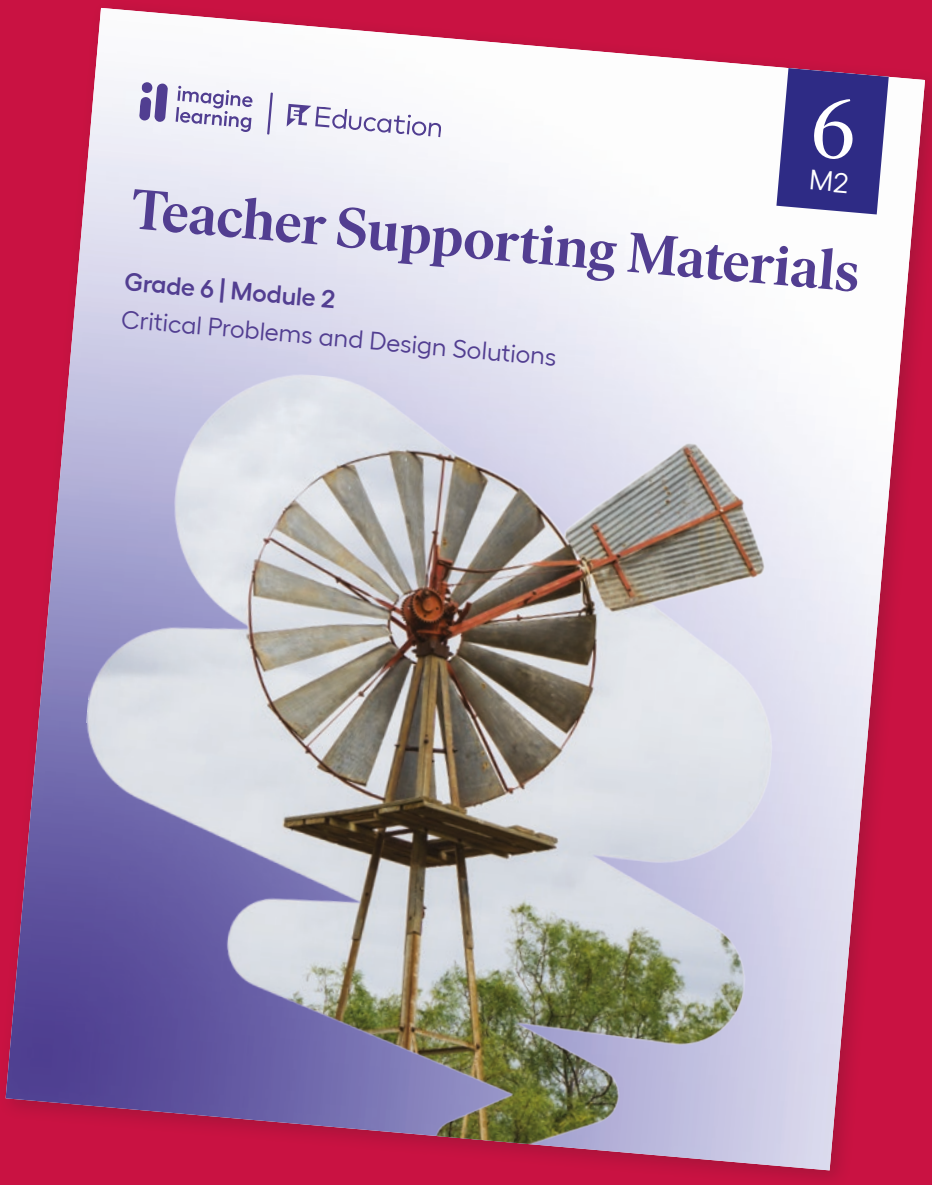
A. Preread Anchor Text

- Students preread the second half of chapter 1 (pages 17–35) of *The Boy Who Harnessed the Wind* in preparation for studying an excerpt from the chapter in the next lesson.

imagine learning | Education

Module Teacher Supporting Materials

Sample



Entrance Ticket: Unit 1, Lesson 1

L.6.4

(Example for Teacher Reference)

Directions: As you enter class, read the learning targets. Then, answer the prompts below.

1. What does it mean to make an inference?

   To draw a conclusion from given evidence and one's background knowledge.

2. Read the following scenario: Your best friend is opening the gift you gave her for her birthday. She looks inside the box and a smile spreads across her face. She looks up at you with a tear in her eye, and whispers, "Thank you."

   What inference might you draw from the scenario described? What evidence led to your inference?

   Answers will vary. Sample student response: I would infer that my best friend is very happy with the gift because she is smiling and thankful. I would also infer that it is a very meaningful or sentimental gift because her tears indicate that she is touched. Her whispered response indicates that she is almost speechless.

Entrance Ticket: Unit 1, Lesson 1

L.6.4

Name: _____ **Date:**_____

Directions: As you enter class, read the learning targets. Then, answer the prompts below.

1. What does it mean to make an inference?

2. Read the following scenario: Your best friend is opening the gift you gave her for her birthday. She looks inside the box and a smile spreads across her face. She looks up at you with a tear in her eye, and whispers, "Thank you."

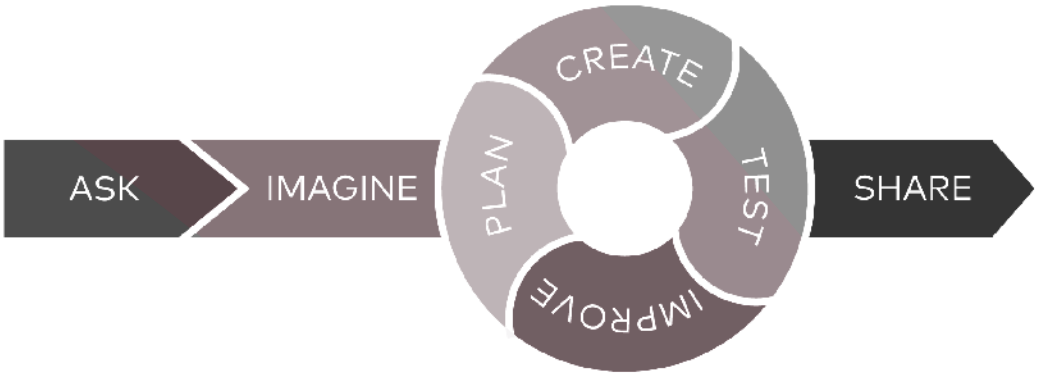
   What inference might you draw from the scenario described? What evidence led to your inference?

Infer the Topic Resources

Note to Teacher: *Post the following resources around the room. Consider writing the text in large writing on chart paper to make it easy to see. Students will also need the anchor text,* The Boy Who Harnessed the Wind, *as several of the resources they will view for this protocol are located within the text.*

Resource 1

Design Thinking Process



Scribe Concepts for EL Education.

Resource 2

Urbain J. Kinet. "Cable crossing (Tuin) of the Trisuli River; between Pokhara and Kathmandu, Nepal." Photograph. n.d. *Urbain J. Kinet Collection,* Department of Geography at the University of California, Berkeley. Web. *Flickr*. No known copyright restrictions.

Rheins. "Suspension Bridge near Yuewang Pavilion - 2012.02." Photograph. *Wikimedia*. 9 Feb. 2012. Web. Used under CC BY 3.0.

Resource 3

"With a windmill, we'd finally release ourselves from the troubles of darkness and hunger. A windmill meant more than just power. It was freedom."

Kamkwamba, William. *The Boy Who Harnessed the Wind* (Young Readers Edition). Puffin Books, 2015.

Resource 4

"William headed to the library, a small room with three walls of books from America and electric lights. Although he knew little English, he figured out from diagrams how water wheels and electromagnets produce electricity; how batteries yield direct current; how magnets concocted from everyday objects make alternating current. A natural mechanic, William powered a radio by connecting one to the dynamo on a bicycle. While he pedaled, his cousin Geoffrey danced to African reggae music.

'Of course,' he thought. 'This is how spinning motion generates power!'"

Levinson, Cynthia. "William Kamkwamba's Electric Wind." *Faces Magazine*, vol. 28, no. 2, 2011, pp. 10–13.

Resource 5

"In my mind, I could picture the windmill I wanted to build. But before I attempted something so big, I wanted to experiment with a smaller model . . . I poked a hole through the center of the lid and nailed it to a bamboo pole, which I drove into the ground behind the kitchen. Right away, I realized the blades were too short to catch the wind. I needed to make them longer."

Kamkwamba, William. *The Boy Who Harnessed the Wind* (Young Readers Edition). Puffin Books, 2015.

Resource 6

The engineering design process is a series of steps that engineers follow to come up with a solution to a problem. Many times the solution involves designing a product (like a machine or computer code) that meets certain criteria and/or accomplishes a certain task.

From "Steps of the Scientific Method." *Science Buddies*. N.d. Web. <https://www.sciencebuddies.org/science-fair-projects/science-fair/steps-of-the-scientific-method>

Infer the Topic: I Notice/I Wonder Note-Catcher

RI.6.1

Name: _____ **Date:**_____

What do you think you will be learning in this module?

I Notice (things I see)	I Wonder (questions I have)

Directions for Infer the Topic

(For Teacher Reference)

1. Choose a starting resource. Take your I Notice/I Wonder note-catcher with you.
2. Look carefully at the resource. Be respectful of others who might be looking at the same thing. Record what you notice (what you see) and what you wonder (questions) on your note-catcher. (3 minutes)
3. When instructed, find a partner who looked at a different resource. Describe your resource and share your notices and wonders. Explain what you think you are going to be learning about in this module. (2 minutes)
4. When instructed, stay with your partner and together find another pair. Share your notices and wonders and what you think you are going to be learning about in this module. (3 minutes)
5. On your own, choose a new resource and repeat steps 2–5.

Text Guide: *The Boy Who Harnessed the Wind*

RI.6.1

(For Teacher Reference)

This guide is meant to support in-class reading of *The Boy Who Harnessed the Wind* (Young Readers Edition) by William Kamkwamba and Bryan Mealer by providing comprehension questions and examples of vocabulary with which students may struggle. Be sure students provide evidence from the text to support their responses to the questions.

Unit 1

Lesson 1, Prologue

- Read the prologue in its entirety, pausing to define the following vocabulary and ask the following questions as needed.

Vocabulary

- taut (1): tight; tense
- level (2): flat; even
- welded (2): joined metal by using heat and melting the materials together
- washers (2): flat rings used with a nut and bolt

Questions

- page 2, " . . . they whispered, even laughed."

  What does the crowd's reaction to the machine tell the reader about how they are feeling? Responses will vary, but may include the following: the crowd is fascinated enough by what is happening to close up their shops and come watch; however, they also think that the narrator is crazy and are expecting to see him fail.

- page 2, "steel bones" "plastic arms"

  What literary technique do the authors use in these descriptions of the machine? How do you know? Responses will vary, but may include the following: personification, because the authors give human characteristics to nonhuman objects.

- page 3, end of chapter

  Why does the crowd gasp at the end of the prologue? Responses will vary, but may include the following: The machine works. They doubted the narrator and he has proven them wrong.

Lesson 2, Chapter 1, "When Magic Ruled the World," Pages 4–17

- Read from chapter 1, starting on page 4 and ending on page 17 ("'You got me'"), pausing to define the following vocabulary and ask the following questions as needed.

Vocabulary

- hail (4): come from
- spewed (6): shot out; expelled; erupted
- ailment (7): sickness
- ghastly (13): causing great fear or terror
- abounded (14): found in large numbers

Questions

- page 7, " . . . magic ruled the world."

  What does this sentence suggest about the way William views magic and science? **Responses will vary, but may include the following: It shows that his beliefs are likely going to change. Where he used to believe in magic like the rest of his community, he may become a believer in science instead.**

- page 8, "' . . . three thousand kwacha.'"

  Describe the setting so far. How is it different from your home? **Responses will vary, but may include the following: The book takes place in Malawi in Africa. The narrator lives in a small, rural town. Most people are farmers and are uneducated. People die from preventable diseases. There are no TVs, computers, or video games.**

- page 17, end of excerpt

  Think about the setting again. How is it similar to your home? **Responses will vary, but may include the following: People watch movies that are also popular in the United States. Kids play outside, using their imaginations and getting dirty.**

Lesson 3, Chapter 1, "When Magic Ruled the World," Pages 17–35

- Read from chapter 1, starting on page 17 ("We were a solid gang of three . . . ") and ending on page 35, pausing to define the following vocabulary and ask the following questions as needed.

Vocabulary

- vat (23): a large barrel or tub
- ruthless (26): having no mercy; cruel
- mangled (31): badly damaged

Questions

- page 20, "Children everywhere have similar ways of playing with one another."

  What examples do the authors give to demonstrate that children around the world play similarly? Responses will vary, but may include the following: William has a group of a few close friends; they enjoy building things and playing with trucks. William also plays soccer with his friends.

- page 29, "'Ok,' I blurted. 'I'll take it.'"

  Why does William agree to take the *mangolomera* from Shabani? Responses will vary, but may include the following: William is tired of being small and weak. He wants to stop being picked on by Limbikani and to be a soccer star.

- page 35, end of chapter

  Why has William become skeptical of magic? Responses will vary, but may include the following: The "spell" Shabani gave him to become bigger and stronger didn't work. William realizes he has been cheated. Now he doubts such things as *sing'anga* and magic.

Lesson 4, Chapter 2, "Khamba," Pages 36–44

- Read chapter 2 in its entirety, pausing to define the following vocabulary and ask the following questions as needed.

Vocabulary

- lavish (38): to give or spend a large amount or without limit
- compound (39): an enclosed, residential area
- intervene (43): to interfere so as to change what is happening

Questions

- page 37, " . . . difficult times were on their way."

  Why are Geoffrey and William so concerned about the farm? Responses will vary, but may include the following: Geoffrey's father, who is also William's uncle and William's father's business partner, has died. It will be harder to keep the farm running and successful without the help of another grown man.

- page 40, " . . . hunting his whole life."

  Describe Khamba. Responses will vary, but may include: Khamba is a dog who took a liking to William. He is big, smelly, and insistent on following William. Although at first William is not interested, they eventually became friends who play and hunt together.

Lesson 5, Chapter 3, "Discovering a Thing Called Science," Pages 45–61

- Read chapter 3 in its entirety, pausing to define the following vocabulary and ask the following questions as needed.

Vocabulary

- originate (47): to come from
- soldering (47): using melted metals to connect two objects
- colleague (49): coworker; companion
- petrol (50): British word for gas
- deforestation (56): the process of cutting down the trees of a forest

Questions

- page 52, " . . . then I wanted to become one."

  Why does William want to become a scientist? Responses will vary, but may include the following: he is fascinated by finding the answers to questions, especially questions about how things work, like radios and cars.

- page 56, " . . . going to bed at seven."

  What are some of the drawbacks of not having electricity in Malawi? Responses will vary, but may include the following: People have to go to bed as soon as it is dark at 7 p.m.; they cannot read or study, watch TV, or enjoy other hobbies. They have to go to the bathroom in the dark where spiders and roaches swarm. They do not have air conditioning or microwave ovens. They rely on lanterns that smell bad and produce a thick black smoke that makes them cough.

- page 57, " . . . searching for a match?"

  What are some of the causes and consequences of deforestation in Malawi? Responses will vary, but may include the following: Without electricity, people have to use fire for light and cooking. Forests are cut down for firewood. The consequences are that forests are destroyed, firewood is scarce, people have to walk several miles to find more trees, and the trees aren't there to protect farms from heavy rains.

Lesson 6, Chapter 4, "The Uncertain Life of an African Farmer," Pages 62–68

- Read chapter 4 in its entirety, pausing to define the following vocabulary and ask the following questions as needed.

Vocabulary

- remnants (62): parts that are left over; remains
- drought (68): a long period of time with no rain
- scorched (68): dried out from heat

Questions

- page 67, " . . . a million dollars in the bank."

  What role does maize play in William's life? Responses will vary, but may include the following: Maize is a source of food and income. Malawians eat *nsima*, made from maize, at every meal. Growing maize is hard work; it takes all year to get one harvest.

- page 68, end of chapter

  What is the meaning of the chapter title "The Uncertain Life of an African Farmer"? Responses will vary, but may include the following: Uncertain means that something isn't known for sure. William's family, like all African farmers, can spend the entire year working hard in their fields and still suffer from bad weather and not being able to afford fertilizer. The success of their harvest, as well as their futures, is uncertain.

Lesson 8, Chapter 5, "Malawi Begins to Starve," Pages 69–78

- Read from chapter 5, starting on page 69 and ending on page 78 ("in search of their next bite"), pausing to define the following vocabulary and ask the following questions as needed.

Vocabulary

- commotion (74): noisy confusion; disorder
- outwitted (77): got the better of someone by being more clever
- famine (78): a great lack of food over a wide area

Questions

- page 73, " . . . even have fertilizer."

  What does William mean by "hunger math"? Responses will vary, but may include the following: figuring out how long the family can survive on the few bags of maize they have left for food.

- page 76, " . . . I pretended not to know."

  What does Geoffrey mean by "You know my deal"? Responses will vary, but may include the following: Geoffrey's father died, which means that Geoffrey has to maintain the farm by himself. Geoffrey's family does not have the help or the money they need to send him to school. His 'deal' refers to his living situation.

Lesson 9, Chapter 5, "Malawi Begins to Starve," Pages 78–93

- Read from chapter 5, starting on page 78 ("The famine arrived at our door . . . ") and ending on page 93 (" . . . with a happy heart"), pausing to define the following vocabulary and ask the following questions as needed.

Vocabulary

- woeful (81): unhappy, sorrowful
- surplus (83): an extra amount
- feeble (84): weak, without strength
- dismal (93): sad, full of gloom

Questions

- page 83, "' . . . we stay alive.'"

  Explain how Mama's *zingumu* cakes kept the family alive during the famine. **Responses will vary, but may include the following: William's family used their flour to make cakes that they sold in the market. They spent their profits on buying more flour; they kept some flour for themselves and used the rest to make more cakes. This way they had a little bit of both food and money coming into their home.**

- page 98, end of chapter

  What does William mean by the statement "Because that's what Christmas was all about anyway"? **Responses will vary, but may include the following: William and Charity used cleverness and resourcefulness to find a little bit of food. They shared a meal together on Christmas and felt some peace and contentment. William feels that Christmas is about sharing joy with loved ones as he did on this Christmas during the famine.)**

Lesson 10, Chapter 6, "My School Assignment," Pages 99–113

- Read chapter 6 in its entirety, pausing to define the following vocabulary and ask the following questions as needed.

Vocabulary

- portions (103): servings or helpings of food for one person
- threadbare (106): clothing so worn that the threads can be seen
- meager (109): low in amount, strength, or value

Questions

- page 101, " . . . long, muddy road together."

  Why is William disappointed in his school assignment? Responses will vary, but may include the following: William wants to go to the school with the best science programs; due to his poor grades, he is assigned to the worst school in the area instead.

- page 110, " . . . nearly all of us were slowly starving."

  Compare and contrast William's school experience with your own. Responses will vary, but may include the following: William's school experience is similar because they study history and math; he enjoys learning like I do. William's school experience is different because they have to pay a fee, wear a uniform, and share textbooks. The school does not have a roof or windows, desks or chairs.

- page 113, end of chapter

  What happened to the other 50 kids from school? Responses will vary, but may include the following: Like William, they had to drop out because the famine has left families without money to pay the school fees.

Chapter 7, "A Time of Dying," Pages 114–127

- Note that chapter 7 is not read in class or for homework due to limited class time and the sensitive nature of the chapter's content.

Lesson 12, Chapter 8, "Twenty Days," Pages 128–136

- Read chapter 8 in its entirety, pausing to define the following vocabulary and ask the following questions as needed.

Vocabulary

- contaminated (128): made dirty, polluted, or not usable
- plague (129): a disease that spreads quickly and kills many people
- parable (135): a short story told to teach a moral

Questions

- page 131, "Starving was a cruel kind of science."

  What does William mean by "starving was a cruel kind of science"? Responses will vary, but may include the following: William is fascinated by the wonderful things science can explain, like electricity. From the famine William is also learning about the science of biology and the painful way the body shuts down when robbed of nutrition.

- page 135, "He knew we would live."

  What adjectives describe how William and his family are feeling in this scene? How do you know? Responses will vary, but may include the following: William and his family feel relieved and grateful because they are finally getting a much-needed meal after being so hungry they could barely walk or see.

Lesson 13, Chapter 9, "The Library," Pages 137–150

- Read from chapter 9, starting on page 137 and ending on page 150 ("'We start today'"), pausing to define the following vocabulary and ask the following questions as needed.

Vocabulary

- stimulated (138): excited; activated
- devised (142): invented; thought out
- conductor (144): anything that carries or allows the passage of heat or electricity
- disarray (146): confusion; disorder
- converted (148): changed into another form or state

Questions

- page 139, " . . . before classes started again."

  Why does William enjoy the library so much? Responses will vary, but may include the following: William likes the library because he loves to learn. He wants to stimulate his brain and keep up with his studies even though he can't attend school. William enjoys looking at pictures of other countries and feeling like he is traveling without leaving home.

- page 150, end of excerpt

  What solutions does a windmill offer William and his community? Responses will vary, but may include the following: A windmill would create electricity to power lights and replace smoky lanterns. With light, Malawians could stay up to work or study. A windmill could pump water. This would help to irrigate the fields and allow farmers to harvest twice a year.

Lesson 14, Chapter 9, "The Library," Pages 150–162

- Read from chapter 9, starting on page 150 ("In my mind . . . ") and ending on page 162, pausing to define the following vocabulary and ask the following questions as needed.

Vocabulary

- improvise (152): to make from whatever materials are around
- friction (156): the resistance of a surface to motion
- hoist (159): to lift or elevate

Questions

- page 152, " . . . two bicycle spokes."

  Summarize the steps William took in this scene. Responses will vary, but may include the following: William sawed a PVC pipe in half lengthwise, heated it over a fire and flattened it. He stuck a nail through a corn cob, heated the nail, and used the cob as the handle as he burned a hole through the PVC pipe. He attached the blades with wire to a bamboo pole.

- page 159, " . . . making a list of materials."

  Why does William build a smaller version of the windmill first? Responses will vary, but may include the following: William builds a smaller version, or a prototype, of the windmill first for practice. He needs to figure out first if he can make the windmill work and what materials he will need before attempting a larger version.

- page 162, end of chapter

  What benefits does the scrapyard provide William? Responses will vary, but may include the following: William cannot afford to buy materials for his windmill, so he scavenges for them instead in the scrapyard. He is able to find many "treasures" for free there.

Lesson 15, Chapter 10, "Harvest Time," Pages 163–186

- Read chapter 10 in its entirety, pausing to define the following vocabulary and ask the following questions as needed.

Vocabulary

- fetch (163): to get or bring back
- fate (166): one's destiny or fortune
- laden (169): filled with a great weight
- forbade (170): past tense of forbid; to prevent
- discarded (173): thrown out; cast off

Questions

- page 171, " . . . lock behind me."

  Reread the sentence "Now that I wasn't going to school, the maize rows appeared like the bars of my own prison." What literary technique do the authors use in this sentence? Why does William refer to the field as a prison? Responses will vary, but may include the following: It is a simile, comparing two things using *like*. Without schooling, William won't be able to fulfill his dream of becoming

a scientist. He will have to be a farmer like his father; farmers are at the mercy of the weather and fertilizer prices to determine their income. William feels that life as a farmer is disappointing and limiting, like being stuck in prison.

- page 177, " . . . constantly at work."

  How are the scrapyard and school similar for William? **Responses will vary, but may include the following: In both places, William learns something new every day. In both places he has a chance to investigate and use his imagination.**

- page 182, "'Soon all of you will see.'"

  Why are William's mother and other villagers concerned about William's behavior? **Responses will vary, but may include the following: They are concerned because William is spending a lot of time collecting junk from the scrapyard and requesting that the welder fuse strange bits of things together for him. They call him a "lunatic," a "madman," and "lazy." His behavior is not typical; they don't understand what he is building.**

Unit 2

Lesson 1, Chapter 11, "The Windmill Comes to Life," Pages 187–195

- Read from chapter 11, starting on page 187 and ending on page 195 ("'Tomorrow we raise the machine'"), pausing to define the following vocabulary and ask the following questions as needed.

Vocabulary

- bored (188): made a hole with a drill
- cumbersome (189): difficult to hold or carry because of size, shape, or weight

Questions

- page 194, "Our test was complete."

  What did William learn by testing the windmill before erecting it? **Responses will vary, but may include the following: By testing the windmill first, William and his friends learned that they had to make adjustments before the windmill was ready to actually produce electricity. They discovered that it was producing a surge of power; they needed to create a reverse transformer to manage the power.**

Lesson 2, Chapter 11, "The Windmill Comes to Life," Pages 196–201

- Note that this excerpt of chapter 11 is read during a close read of Lesson 2.

Lesson 3, Chapter 12, "Bigger and Brighter," Pages 208–225

- Read chapter 12 in its entirety, pausing to define the following vocabulary and ask the following questions as needed.

Vocabulary

- mutual (210): equal; having the same relationship toward one another
- fused (212): melted together
- conquering (225): mastering or overcoming by strength of mind or character

Questions

- page 213, " . . . new wall jack."

  What role does research and reading play in William's design process? Responses will vary, but may include the following: William is constantly referring back to the textbooks to learn more and find new solutions. He relies a lot on the help of others, but he could not have had any success building the windmill without the information provided in books.

- page 217, "' . . . burned up my home.'"

  How does William demonstrate optimism in this scenario? Responses will vary, but may include the following: William looks on the bright side of a bad situation. Even though the roof of his home collapsed, he is thankful that he was too poor to afford proper wires because they would have caused a fire.

- page 223, "This was great news."

  We learned that the design engineering process is cyclical. Where do you see evidence of that in this chapter? Responses will vary, but may include the following: Even after creating a solution, the windmill, William comes up against new problems, like needing to power a cell phone or the bike chain on the windmill breaking. He continually needs to try new solutions to meet the new problems as they come up.

Lessons 5–6, Chapter 13, "The Restless Inventor," Pages 226–241

- Note that students read short excerpts of chapter 13 as part of the entrance tickets for Lessons 5 and 6.

Lesson 9, Chapter 14, "The World Discovers Wimbe," Pages 242–252

- Read from chapter 14, starting on page 242 and ending on page 252 ("'William, you're going back to school'"), pausing to define the following vocabulary and ask the following questions as needed.

Vocabulary

- command (244): with control and authority
- eloquent (245): using words well, in a way that others enjoy hearing
- gawk (247): to stare at someone or something in awe

Questions

- page 244, " . . . a madman's dream."

  Why does William believe that he could turn his dream into a reality? Responses will vary, but may include the following: With the science club, William is able to inspire other kids to get interested in science and engineering. He realizes that if they all work together, they could actually bring electricity to the country.

- page 252, end of excerpt

  William is taking a plane and staying at a hotel to participate in a TED conference. Make predictions about the types of experiences that will likely be new and surprising for him. Responses will vary, but may include the following: William will likely feel amazed by the feeling of flight, the comfort of the hotel room, the conveniences provided by electricity, the people from all over the world, the different types of food, and the huge audience listening to his TED Talk.

Lesson 10, Chapter 14, "The World Discovers Wimbe," Pages 252–259

- Read from chapter 14, starting on page 252 ("After visiting my house . . . ") and ending on page 259, pausing to define the following vocabulary and ask the following questions as needed.

Vocabulary

- rigorous (254): strict and demanding
- unblemished (254): without damage or flaws
- prestigious (255): important; highly esteemed

Questions

- page 257, " . . . under the mango tree."

  How does William comfort himself while at a new school? Responses will vary, but may include that he reads books that allow him to escape in his mind.

- page 259, end of chapter

  What coincidence occurred on the plane ride to Tanzania? Responses will vary, but may include the following: William was seated next to the very man responsible for William's fame. Soyapi Mumba was the one who told William's story to a blogger and got William such widespread attention.

Lesson 12, Chapter 15, "Meeting Ted and Tim," Pages 260–274

- Note that pages 264-267 of chapter 15 are read as part of the entrance ticket for Lesson 12.

Gist Anchor Chart: *The Boy Who Harnessed the Wind*

(Example for Teacher Reference)

Chapter	Sample Gist Statement
Prologue Pages 1–3	• The prologue highlights a key moment when William premieres his invention in front of a doubting crowd and discovers that it works!
Chapter 1 "When Magic Ruled the World" Pages 4–35	• William describes the small rural town in Malawi where his family has a farm. He explains the role magic plays in his culture and why he is skeptical of magic.
Chapter 2 "Khamba" Pages 36–44	• William's uncle John dies, leaving Geoffrey without a father but with a farm to maintain. William's uncle Socrates gives William a dog, Khamba, and they become close friends.
Chapter 3 "Discovering a Thing Called Science" Pages 45–61	• William becomes curious about how things work and decides that he wants to be a scientist. He and Geoffrey spend a lot of time taking things apart and putting them back together, like radios.
Chapter 4 "The Uncertain Life of an African Farmer" Pages 62–68	• A drought and a lack of fertilizer creates a very small harvest. William worries that they will not have enough food to last the year.
Chapter 5 "Malawi Begins to Starve" Pages 69–98	• Famine creates starvation and desperation in Malawi. William's family attempts to survive off one tiny meal per day. • William fights desperate crowds to get a small bag of maize from the government. He resorts to eating boiled goat skin for his Christmas dinner.
Chapter 6 "My School Assignment" Pages 99–113	• William is excited to start school but is assigned to the worst school in the area. It doesn't matter though because he can't afford the school fees and has to drop out.

Chapter	Sample Gist Statement
Chapter 7 "A Time of Dying" Pages 114–127	*Note that this chapter is not read in class or for homework due to time constraints and the sensitive nature of its content.* • Many people are dying from starvation. To end his dog Khamba's suffering, William ties him to a tree and lets him die.
Chapter 8 "Twenty Days" Pages 128–136	• Cholera and starvation continue to cause widespread death. As soon as the first corn ripens, William's family is finally able to eat again. They have survived the worst.
Chapter 9 "The Library" Pages 137–162	• William discovers textbooks on energy at the small local library. He decides to build a windmill to generate electricity for his family. • William, Gilbert, and Geoffrey use their research and salvaged items to start building a prototype of a windmill.
Chapter 10 "Harvest Time" Pages 163–186	• Malawi is finally recovering from the famine with a good harvest. William still does not have enough money to pay the school fees. He spends his time tinkering in the scrapyard instead, working on his windmill.
Chapter 11 "The Windmill Comes to Life" Pages 187–207	• With the help of Geoffrey and Gilbert, William is finally able to complete the construction of his windmill. It works, and William is able to light his bedroom!
Chapter 12 "Bigger and Brighter" Pages 208–225	• William uses information from the textbooks to improve on his original windmill design. He figures out how to use step up transformers and pulley systems to make his machines safer.
Chapter 13 "The Restless Inventor" Pages 226–241	• William challenges himself to try building new machines. He has several failures. Famine returns to Malawi and his community blames the windmill.

Chapter	Sample Gist Statement
Chapter 14 "The World Discovers Wimbe" Pages 242–259	• William's windmill gets international attention from journalists. William is rewarded with enrollment at a special school and an invitation to speak at a TED conference in Tanzania.
Chapter 15 "Meeting Ted and Tim" Pages 260–278	• Donations from TED allow William to attend a better school, bring electricity to his entire village, and improve his family's living conditions.
Epilogue Pages 279–290	*Note that students are encouraged to read the epilogue for homework, but it is not discussed in class.* • William earns scholarships to a prestigious high school in Africa and to Dartmouth College in New Hampshire. After graduation he starts the Moving Windmills project to use his science and engineering skills to help other villages in Africa.

Synopsis: *The Boy Who Harnessed the Wind*, Prologue

Name: _____ **Date:**_____

- A crowd gathers at the base of William's windmill.
- People in the crowd make comments doubting William's sanity.
- The wind blows, the windmill turns, and the light bulb glows in William's hand.
- The crowd is shocked at William's success with his invention.

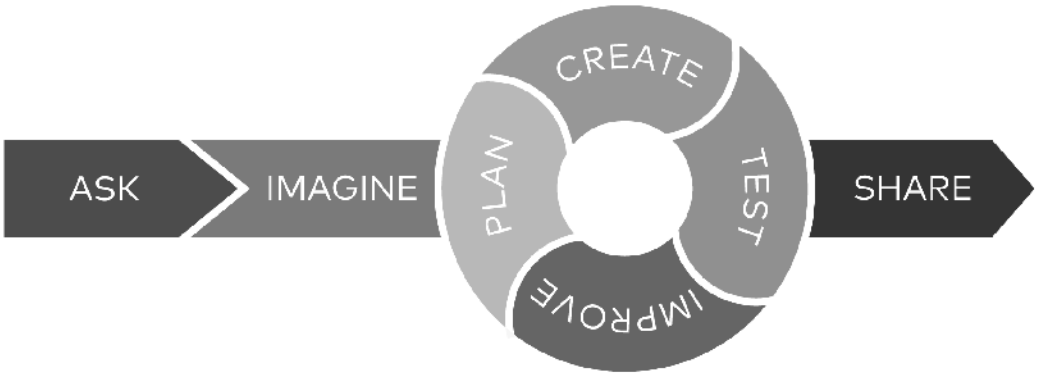
QuickWrite: Design Thinking Process

W.6.10

(Example for Teacher Reference)

Directions: Examine the graphic below depicting the design thinking process, and answer the question.

Design Thinking Process



Scribe Concepts for EL Education.

1. Based on the information in the graphic, what do you think the design thinking process is or is used for?

Answers will vary. Sample student response: The design thinking process consists of the steps that a person or group takes to solve a problem by testing an idea several times until they get it right.

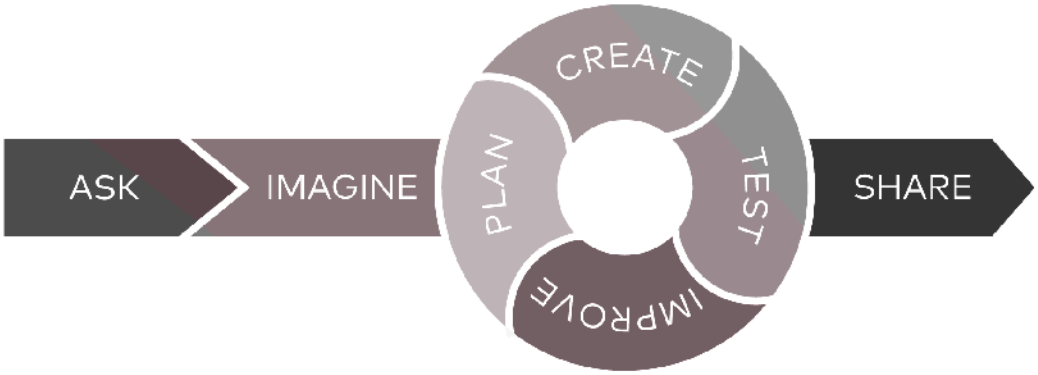
QuickWrite: Design Thinking Process

W.6.10

Name: _____ **Date:**_____

Directions: Examine the graphic below depicting the design thinking process, and answer the question.

Design Thinking Process



Scribe Concepts for EL Education.

1. Based on the information in the graphic, what do you think the design thinking process is or is used for?

_____

_____

_____

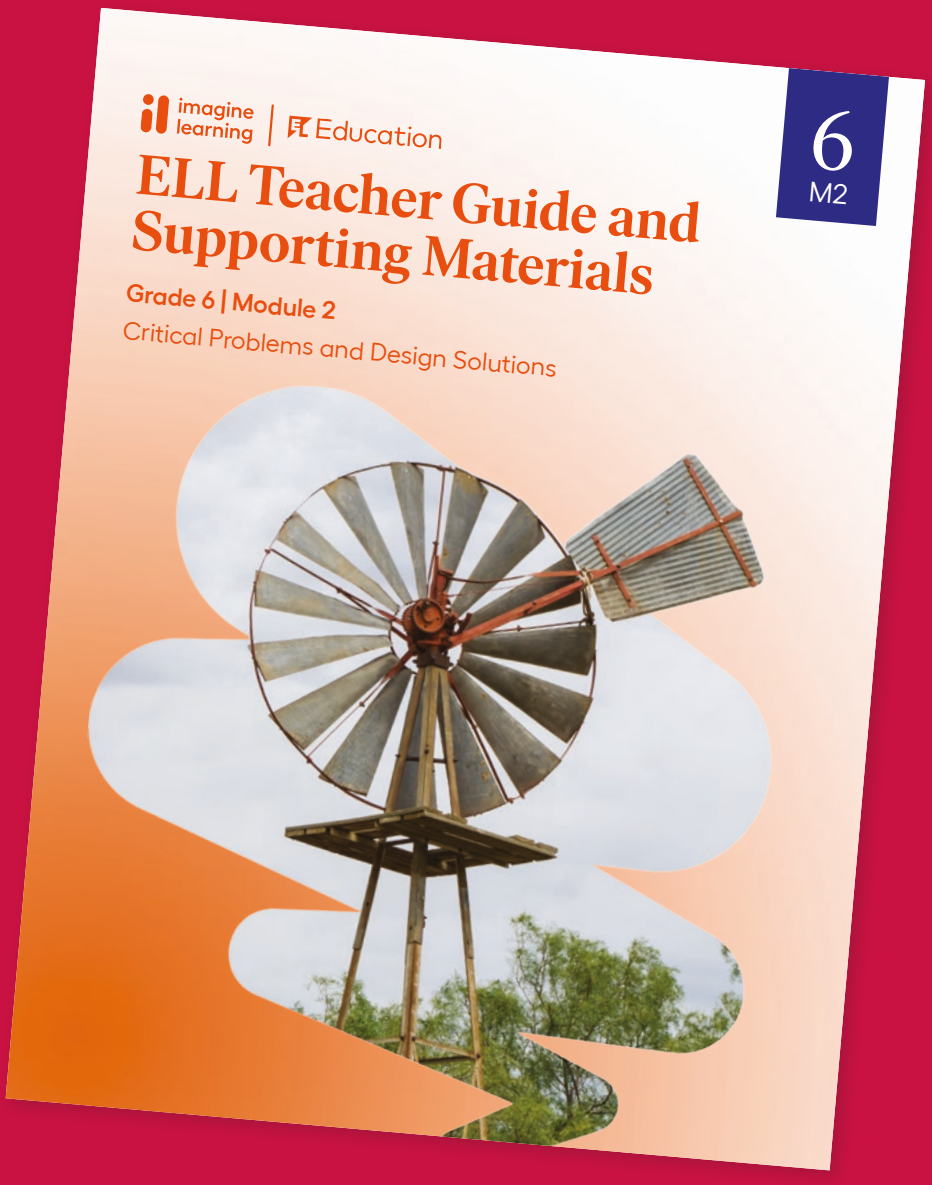
_____

_____

imagine learning | Education

Module ELL Teacher Guide

Sample



Design thinking makes clear the systematic process that allows innovators to learn and apply techniques to solve critical problems in a creative way. In Module 2, students read the true story of William Kamkwamba in *The Boy Who Harnessed the Wind* (Young Readers edition) and how he used design thinking to confront the devastating effects of famine in his country, Malawi. In response to this seemingly insurmountable problem, William spent countless hours in the local library, reading science textbooks and searching for a possible solution. Through careful research, and after many rounds of trial and error, William used available materials and scraps from the local junkyard to construct a windmill that brought electricity to his community, allowing kids to study into the evening, adults to recharge their mobile phones, and water pumps to irrigate the fields and produce more abundant harvests. Propelled by unshakable perseverance, a keen awareness of his community's needs, and compassion for those suffering around him, William models how innovative thinkers can leverage design thinking to address critical problems in their own communities. Inspired by this concept, students work towards a performance task in which they research and present another innovative solution designed to address a critical issue. For this Solution Symposium, students interact with their audience to explain how design thinking and habits of character led to the development of a successful solution.

In Unit 1, students read the first nine chapters of the anchor text, building background on William Kamkwamba and the problems William's community faced in rural Malawi, in a village with limited resources and access to education. Through two Language Dives using key sentences in the anchor text and a close read of a supplemental text, students practice identifying the central idea, citing textual evidence, analyzing how individual sentences contribute to the development of a text's central ideas, and determining the meaning of words and phrases in a text.

In Unit 2, students finish reading the text, and demonstrate their continued reading-skill development in the Mid-Unit 2 Assessment, which uses an excerpt from the text to assess students' abilities to interpret the figurative and connotative meanings of unfamiliar words, analyze information portrayed in various media formats, and explain how a small portion of a text contributes to the central idea. By clearly delineating the many problems William faced, students see how each was addressed through science, research, and habits of character, like perseverance. With the support of explicit mini lessons on research skills, students then begin independent research on an innovator who, like William, designed a product to solve a critical problem. These research skills are assessed in the End of Unit 2 Assessment.

Through writing a collaborative informational essay about William in the first half of Unit 3, students deepen their understanding of the design thinking process and explore how William Kamkwamba used this process to solve a problem. The unit builds towards the performance task, a Solution Symposium, at which students present and share interactive displays of their research on an innovative solution to a critical problem. The Solution Symposium engages audience members in a conversation in which the student shares his or her answers to the following questions: (1) how was design thinking used to solve this problem and (2) how were habits of character used to solve this problem? Following the symposium, as the End of Unit 3 Assessment, students will collaborate to discuss how habits of character help people like those featured in their research solve critical problems.

Notes from the Designer

The anchor text, *The Boy Who Harnessed the Wind*, offers impactful and engaging examples of critical problems and their design solutions. William's perseverance, compassion, and willingness to try (and fail) highlight the role of character in solving critical community problems. However, in emphasizing the impact of the famine faced by William and his Malawian community, this text features occasional passages that may be difficult for students to read, as they detail the suffering felt by William and others in his village. Other elements of the text may also require heightened attention and sensitivity; for instance, told through the eyes of William as he grows up in an impoverished village, *The Boy Who Harnessed the Wind* presents a somewhat singular picture of Africa as poor, rather than as the diverse, heterogeneous continent that it is. The design of this module supports students as they process challenging passages, sensitive content, and/or textual information in need of additional context. Across lessons, notes emphasize specific passages that may require special attention and offer suggestions to help students interpret and process the text's content with strength, empathy, and a questioning spirit. Instructional decisions throughout the module also equip students with the literacy skills necessary to interpret the writers' choices, situate content with a larger problem-solution text structure, and responsibly challenge content with which they may disagree.

Guiding Questions and Big Ideas

How can design thinking help solve a critical problem?

- *Design thinking is a scientific and systematic practice of inquiry that allows for creativity and innovation.*
- *Design thinking requires scientists to identify and research problems, build prototypes, test and evaluate solutions, and redesign as needed.*

What habits of character can help solve a critical problem to contribute to a better community?

- *Effective learners demonstrate perseverance when they research, build prototypes, reflect, and revise.*
- *Ethical people contribute to a better world by applying their learning to help one's school, community, and the environment.*

Content Connections

This module is designed to address English Language Arts standards and to be taught during the literacy block. But the module intentionally incorporates science content that may align to additional teaching during other parts of the day. These intentional connections are described below.

Next Generation Science Standards

Engineering, Technology, and Applications of Science Performance Expectation

- ETS1.A: Defining and Delimiting Engineering Problems
  - MS-ETS1-1: The more precisely a design task's criteria and constraints can be defined, the more likely it is that the designed solution will be successful.
- ETS1.B: Developing Possible Solutions
  - MS-ETS1-4, MS-ETS1-3: A solution needs to be tested, and then modified on the basis of the test results, in order to improve it.
- ETS1.C: Optimizing the Design Solution
  - MS-ETS1-4: The iterative process of testing the most promising solutions and modifying what is proposed on the basis of the test results leads to greater refinement and ultimately to an optimal solution.

Earth and Space Science Performance Expectation

- MS-ESS3: Earth and Human Activity
- ESS3.A: Natural Resources
  - Humans depend on Earth's land, ocean, atmosphere, and biosphere for many different resources. Minerals, fresh water, and biosphere resources are limited, and many are not renewable or replaceable over human lifetimes. These resources are distributed unevenly around the planet as a result of past geologic processes. (MS-ESS3-1)

Physical Sciences Performance Expectation

- MS-PS3: Energy
- PS3.A: Definitions of Energy
  - Motion energy is properly called kinetic energy; it is proportional to the mass of the moving object and grows with the square of its speed. (MS-PS3-1)
  - A system of objects may also contain stored (potential) energy, depending on their relative positions. (MS-PS3-2)
- PS3.C: Relationship Between Energy and Forces
  - When two objects interact, each one exerts a force on the other that can cause energy to be transferred to or from the object. (MS-PS3-2)

Texts and Resources

Required Trade Books and Resources[1]	Unit 1	Unit 2	Unit 3
1. Kamkwamba, William, and Bryan Mealer. *The Boy Who Harnessed the Wind* (Young Readers Edition). Puffin Books, 2015. (one per student)	✓	✓	✓
Additional Texts (provided in curriculum materials)	**Unit 1**	**Unit 2**	**Unit 3**
2. Levinson, Cynthia. "William Kamwamba's Electric Wind." *Faces Magazine*, vol. 28, no. 2, pp. 10-13.	✓		
3. Kamkwamba, William. "How I Built a Windmill." *TED,* June 2007, www.ted.com/talks/william_kamkwamba_on_building_a_windmill.		✓	
4. "The Hippo Roller." Written by EL Education for instructional purposes.		✓	
Recommended Texts (for volume of reading on the module topic)			
See the 6–8 Recommended Texts list for suggestions of books, article, and videos on the module topic.			

[1] See stand-alone Required Trade Books and Resources Procurement List for procurement details, including the number of copies of each text.

Module-at-a-Glance

Unit 1

Unit 1: Build Background: William Kamkwamba and Design Thinking

Weeks 1–2 (Lessons 1–6)

Students begin reading the anchor text, *The Boy Who Harnessed the Wind*, focusing on strategies to determine the central idea of a text and writing an effective summary.

Mid-Unit 1 Assessment: Analyze Central Idea and Development of an Individual: *The Boy Who Harnessed the Wind,* Chapter 4.

Weeks 2–3 (Lessons 7–15)

Students read several more chapters in their anchor text, paying close attention to how the authors use figurative language to enhance meaning. Students also prepare for and practice a text-based discussion to answer the following prompt: What critical problems does William face? What makes them critical?

End of Unit 1 Assessment: Analyze Figurative Language, Central Idea, and Structure: *The Boy Who Harnessed the Wind,* Chapter 8.

Unit 2

Unit 2: Research to Discover Innovative Designers

Week 1 (Lessons 1–4)

Students continue to read *The Boy Who Harnessed the Wind* while practicing analyzing figurative language and identifying central ideas and key details. Students are also introduced to the design thinking process and begin compiling notes on how William Kamkwamba applies this process to his own design work.

- Mid-Unit 2 Assessment: Analyze Figurative Language and Central Idea: "The Hippo Roller"

Weeks 2–3 (Lessons 5–12)

Students are guided through the steps of the research process to find another intriguing innovator who followed the design thinking process to address a critical problem. Students learn how to gather evidence from multiple sources, determine the credibility and relevance of those sources, and paraphrase and quote accurately.

- End of Unit 2 Assessment: Research Process

Unit 3

Unit 3: Write to Inform: Problem-Solution Essay

Weeks 1–2 (Lessons 1–9)

Students analyze a model problem-solution essay while practicing writing their own with a partner based on William Kamkwamba's experience. These steps scaffold students to independently write a problem-solution essay based on the innovator they researched in Unit 2.

- Mid-Unit 3 Assessment: Write a Problem-Solution Essay

Week 3 (Lessons 10–15)

Students work towards the performance task by preparing their problem-solution visual and responses to the presentation prompts for the Solution Symposium. Using their learning from the anchor text, their research, and their peers' presentations, students conclude the module with a fishbowl discussion to answer the following prompt: how do habits of character help people solve critical problems?

- End of Unit 3 Assessment: Fishbowl Discussion: Habits of Character to Solve Critical Problems

Teaching Notes for Unit 1

Prioritize Lessons for Classrooms with Many English Language Learners

To prepare for the mid-unit assessment, prioritize and expand instruction in Lesson 2, which provides multiple examples of how a key individual is introduced in a text or video, and in Lesson 4, during which students practice identifying central idea(s) of a text and supporting their answers with textual evidence. The Language Dives of Lessons 7 and 9 support reading abilities for students at all proficiency levels, though are particularly critical for ELLs, as these approaches accelerate language development through a close look at structure and vocabulary. Finally, Lesson 15 acquaints students, through a low-stakes text-based discussion, with a Fishbowl protocol that will be used again in the End of Unit 3 Assessment; practicing an interactive protocol outside of an assessment context equips ELLs with added confidence and preparedness.

Language Dives

In Lessons 7 and 9, students participate in Language Dives that use sentences from their anchor text, *The Boy Who Harnessed the Wind*. In Lesson 7, students analyze figurative language used by the authors to describe the drought in Malawi. In Lesson 9, students practice applying context clues to unknown words and identifying the relationship between an individual sentence and its surrounding chapter. A Language Dive empowers students to analyze, understand, and use the language of academic sentences, which often seems opaque to students. During a Language Dive, students slow down for 10–20 minutes to have a conversation about the meaning, purpose, and structure of a compelling sentence from a complex text, or from a learning target, checklist, or rubric included in the curriculum. Following the engaging deconstruct-reconstruct-practice routine of the Language Dive, students play with the smallest "chunks" of the sentence, interpreting them, rearranging them, or using them to talk about their own lives. As a result of paying close attention to how language works, all students begin to acquire the necessary facility with academic English, and ELLs foster their overall language ability. A consistent Language Dive routine is critical in helping all students learn how to decipher complex sentences and write their own.

Most Language Dives implicitly address a wide range of Reading, Writing, Speaking and Listening, and Language standards. Once comfortable with Language Dives, supplement the focus standards in a particular Language Dive with additional standards to meet students' needs. Note that the Rationale section of each Language Dive also identifies supporting standards that are explicitly addressed but are not the main focus of the Language Dive.

Note that the Language Dive Guides have been condensed in Module 2, as a way to reduce the amount of reading needed. Refer to the general best practices laid out in the Module 1 Language Dive guides.

Language Chunk Wall

Beginning in Module 2 and going forward, create a "Language Chunk Wall" to extend student capacity to use Language Dive structures. The Language Chunk Wall is an area in the classroom where students can display and categorize the academic phrases discussed in each Language Dive. At the end of each Language Dive, students are invited to place the Language Dive sentence chunk strips on the Language Chunk Wall into corresponding categories, such as "Nouns and noun phrases" or "Linking language." See each Language Dive for suggested categories. Color-code each category for additional support. Examples: blue for nouns and subjects; purple for pronouns; red for predicates and verbs; yellow for adjectives; and green for adverbs, prepositions, and conjunctions. Students can then refer to the wall during subsequent speaking and writing tasks.

Mini Language Dives

Students have an opportunity to participate in Mini Language Dives beginning in Module 2, Unit 1. Mini Language Dives have the same overall purpose and follow the same general process as full Language Dives, but are condensed to 5 minutes, narrowing students' attention on deconstructing the focus structure, reconstructing the sentence, and practicing the focus structure. Mini Language Dives give ELLs additional support in building language and literacy skills, as well as habits of mind. Mini Language Dives are most often optional and can be found in the corresponding lessons within this guide. When required for all students, Mini Language Dives are built into the body of the lesson in the Teacher Guide. In this unit, optional Mini Language Dives appear in Lessons 1, 3, and 5.

Diversity and Inclusion

Investigate the routines, practices, rituals, beliefs, norms, and experiences that are important to ELLs and their families. Integrate this background into the classroom as students engage with texts. Consider the values and narratives embedded in class texts and try to anticipate their relevance to ELLs. The Module 2 anchor text, *The Boy Who Harnessed the Wind*, describes the incredible scientific achievements of a Malawian boy named William. While the text celebrates and uplifts William's empathy, perseverance, and his successes, it also features detailed descriptions of the hardships surrounding William and community, namely a devastating drought and subsequent famine. Some chapters may be particularly upsetting for students; note warnings for these chapters in the Support All Students sections of each lesson. Foster inclusive action by creating space for students to express their feelings about sensitive issues or content embedded in the text(s), knowing that these discussions may help create equity, amplify student voices, or unearth trauma.

Additionally, when describing his childhood in a rural Malawi village, William occasionally positions his life as representative of African life overall. Although William's intention is to present his experiences in Africa as he lived them, his descriptions of Africa may unintentionally reinforce stereotypes of the continent as homogeneous, comprised only of poor countries and communities. Refer to teacher notes throughout the lessons for ideas on how to help students construct a truer and more dynamic understanding of Africa in their minds. Be particularly sensitive to international students and ELLs from African regions, whose lived experiences may reflect or diverge from William's in complicated or conflicting ways. Consult with a guidance counselor, school social worker, or ESL teacher for further investigation of diversity and inclusion.

Conversation Cues

Encourage productive and equitable conversation with Conversation Cues, which are questions to ask students that help achieve four goals:

- (Goal 1) encourage all students to talk and be understood;
- (Goal 2) listen carefully to one another and seek to understand;
- (Goal 3) deepen thinking; and
- (Goal 4) think with others to expand the conversation (adapted from Michaels, Sarah, and Cathy O'Connor. *Talk Science Primer*. TERC, 2012. http://inquiryproject.terc.edu/shared/pd/TalkScience_Primer.pdf. Based on Chapin, S., O'Connor, C., and N. Anderson. [2009]. *Classroom Discussions: Using Math Talk to Help Students Learn*, Grades K–6. Second Edition. Math Solutions Publications).

Refer to the Tools Page (http://eled.org/tools) for the complete set of cues. For ELLs, Conversation Cues are especially critical because they improve language processing abilities and increase engagement and participation.

Strategic Grouping

Students work in pairs and small groups to analyze texts and prepare for text-based discussions. While reading the anchor text in class, students can read independently, in pairs or small groups, or as a full class. In earlier lessons, as students begin the anchor text, match ELLs with a partner who has greater language proficiency. The conversations and reading support that occur as a result of such strategic pairing will greatly serve the language development of both partners. In later lessons, cultivate ELLs' autonomy and flexibility by encouraging them to vary their reading habits.

Text-Based Discussions

In Lesson 15, students will participate in a text-based discussion, during which they will have the opportunity to explore what makes a problem critical, using William's problems in the text as examples. In preparation for the discussion, students, in Lesson 13, watch a video that models the Fishbowl protocol that they will use during the end of unit assessment and identify ways in which this protocol differs from the Socratic Seminar of Module 1. Also in Lesson 13, students are introduced to a problem-solution note-catcher, which they complete collaboratively and which they will use during the text-based discussion. This preparatory lesson supports ELLs by introducing a visual model, drawing from students' knowledge of a similar protocol, and providing time to consolidate and organize ideas. Then, in Lesson 14, students review discussion norms for the following lesson's discussion, supporting ELLs by clearly delineating expectations. After the text-based discussion in Lesson 15, students are given time to reflect on the ways in which they demonstrated the discussion norms in their own comments during the discussion, increasing students' awareness of their own abilities and facilitating opportunities for celebration. Although this text-based discussion is formally assessed, the Fishbowl protocol introduced in the discussion is used again in the End of Unit 3 Assessment; familiarity with the protocol's formatting and expectations may help relieve nerves for ELLs, for whom class-wide speaking activities may feel particularly intimidating.

Differentiated Materials

Differentiated materials are available for ELLs and other students who would benefit from an increased level of support. These resources have been modified for the purposes of creating accessibility to content and concepts and supporting language development. Depending upon the task being carried out with a material's images, selected response options, answer banks, sentence frames, or model responses have been embedded to guide students' thinking without compromising a focus on standards and the skills that students are developing and applying to meet them.

Celebration

Celebrate the courage, enthusiasm, diversity, and bilingual assets that ELLs bring to the classroom. Additionally, students can celebrate their successful attempts at communication and their ability to extend and enhance the discussions.

Lesson 1

Supports guided in part by CA ELD Standards 6.I.A.1, 6.I.B.5, 6.I.B.6, and 6.II.A.1.

Important Points in the Lesson Itself

- To support ELLs, this lesson uses both short passages and engaging images to introduce a new module topic, which students infer through an interactive protocol. The diversity of media used in this protocol supports ELLs who have lower reading abilities and may benefit from visual supports. Also in this lesson, a new anchor text is launched. ***The Boy Who Harnessed the Wind*** tells the remarkable story of an adolescent's initiative and perseverance in the face of critical community problems. To spark student interest in the text and to reduce the amount of reading expected on the first day of a new module, students listen only to the short prologue read aloud before beginning chapter 1 in the following lesson. Lesson 1 also features the first optional Mini Language Dive: Mini Language Dives are 5-minute tasks that support student understanding of the text and improve students' abilities to understand and independently replicate the useful linguistic structures they encounter.
- ELLs may find it challenging to begin a new text, especially if they do not have the vocabulary knowledge or decoding abilities to read with ease or if they struggled to complete the anchor text in Module 1. Also, ***The Boy Who Harnessed the Wind*** may be a more challenging text than ***The Lightning Thief***, as it tackles scientific concepts and contains vocabulary that may be unfamiliar to students. Note, however, that many of these unfamiliar words are science-related or regionally specific (e.g., *maize*, *famine*, or *circuit board*) and are likely to be unfamiliar to all students, not just ELLs. ELLs may be heartened to recall that even native speakers of English encounter words that are unfamiliar or challenging. Furthermore, the text carefully introduces many of its challenging words, offering clear definitions in the text (e.g., "My family grew maize, which is another word for white corn," p. 6). Throughout the module, be sensitive to differences in students' reading abilities and remind them that reading the text will be a class effort, completed one excerpt at a time. Continue to encourage students to use provided chapter summaries to reinforce or verify their understanding of the text's key events. Locate opportunities throughout the module to celebrate reading milestones and generate motivation to continue through the text.

Levels of Support

Work Time

For Lighter Support	For Heavier Support
• If it is feasible to do so, host individual reading check-ins with ELLs before they begin the Module 2 anchor text. During these meetings, work with students to identify their reading strengths, as well as pinpoint areas of possible growth. Help students develop action plans for working toward their goals. Plan to meet with students again at the end of the module to track their progress and adjust goals as needed. This process supports a growth mindset for developing readers and facilitates opportunities for students to take charge of their own learning. • In Work Time C, after launching the text and reading the prologue, invite students to participate in a Mini Language Dive in small groups to more carefully examine the way William is introduced in the text (RI.6.3). This Mini Language Dive also gives students the opportunity to clarify the meaning of an unfamiliar word (L.6.4) and interpret the authors' use of figurative language (L.6.5).	• If it is feasible to do so, host individual reading check-ins with ELLs before they begin the Module 2 anchor text. Before these meetings, create a list of clear and specific statements that students can use to help them pinpoint their strengths and areas of growth. Students can use a 1–5 scale, or a more visually appealing alternative, to express the extent to which they believe the statements apply to them. These statements might include the following: – I can read quickly in English and still understand what I read. – I enjoy reading in English. – I enjoy reading in other languages. – I understand most words I read in class. – I know how to determine the meaning of words I don't know. – I feel comfortable using a dictionary. – I can usually determine the central idea of what I read. • During Work Time A, invite students who need heavier support to use the **Infer the Topic: I Notice/I Wonder note-catcher** ▲. This resource features more specific questions, honing student attention and reducing cognitive overload. • To support ELLs' independent Notices and Wonderings when launching the text in Work Time C, provide students with scaffolded instructions for locating important information (e.g., names of the main characters, details about the setting) within the text. These instructions could include the following: – "Scan the text for character names that you see repeated many times. Who do you think are the main characters of this book?" – "Read the chapter titles on the contents page. What words do you recognize in the chapter titles? What questions do you have about the words?" – "Go to page 4 and find the paragraph that begins 'My name is William Kamkwamba.' Where does William live?"

Homework

For Lighter Support	For Heavier Support
• This is the first lesson in Module 2 that asks students to preread chapters from the anchor text as homework before reading the chapters together in class. Develop a list of prereading strategies that students who need lighter support can use when prereading on their own. These may include the following: – Use an English dictionary to clarify the meaning of unfamiliar words. – Ask and answer simple questions about the chapter using *who, what, where, when, why,* or *how* questions. – Create a "mind-map" to connect important details, characters, or events to one another.	• This is the first lesson in Module 2 that asks students to preread chapters from the anchor text as homework before reading the chapters together in class. Develop a list of prereading strategies that students who need heavier support can use when prereading on their own. These may include the following: – Use a translation dictionary to verify the meaning of unfamiliar words. – Skim and scan for the names of key characters, places, or events. – Isolate and read the first sentences of each paragraph in the chapter, noting important plot details.

Infer the Topic: I Notice/I Wonder Note-Catcher

RI.6.1

Name: _____ **Date:**_____

What do you think you will be learning in this module?

I Notice (things I see)	I Wonder (questions I have)
	
Write the letter for each item by the resource in which you notice it. A. A graphic that shows a process. B. A windmill with four blades that turn in the wind. C. A man standing next to a windmill D. A map of a country. E. Text that says: "A windmill meant more than just power." F. Text that says: " . . . I wanted to experiment with a smaller model." G. Text that says: "The engineering design process is a series of steps . . . " H. Text that says: "'This is how spinning motion generates power!'" Resource 1 _____ Resource 2 _____ Resource 3 _____ Resource 4 _____ Resource 5 _____ Resource 6 _____ Resource 7 _____ Resource 8 _____	I wonder if I wonder how I wonder what I wonder who

I Notice (things I see)	I Wonder (questions I have)
	
	I wonder when I wonder where I wonder why
I notice these words I already know in resources 5–8:	I wonder what these words in resources 5–8 mean:

5-Minute Mini Language Dive

RI.6.3, L.6.4, L.6.5

(For Teacher Reference)

Sentence

Down below, **the crowd cackled like hens.** (from page 2 of *The Boy Who Harnessed the Wind* by William Kamkwamba and Bryan Mealer)

Lesson 1 Placement

Lead this Mini Language Dive after launching the anchor text, *The Boy Who Harnessed the Wind*, and reading the prologue aloud to students in Work Time C.

Rationale

- Daily Learning Target and Focus Standards: The sentence helps students to address RI.6.3, L.6.4, and L.6.5 by presenting clues about the community's attitudes toward William, by using a word that may be new for some students (**cackled**), and by including a simile (**cackled like hens**).
- Language Structure: This sentence is compelling because it features challenging vocabulary and an example of a simile.
- Transfer: Subject + verb + **like** + noun phrase = to generate and understand similes in preparation for related activities in the second half of Unit 1 and on the End of Unit 1 Assessment.

Deconstruct

- Display and read aloud the sentence: **Down below, the crowd cackled like hens**.
- Say:

  "What is this sentence about?" (Responses may vary. Encourage and acknowledge all responses.)
- Read aloud the focus structure: **the crowd cackled like hens**.
- Draw students' attention to the word **hens**.

  "What is a* hen*?" (A female chicken.)
- Show students a picture of a hen to verify their understanding of the word's meaning.
- Draw student attention to the word **cackled**.

- Say:

  "Does anyone know what this word means?" (To laugh noisily; to make loud unpleasant sounds.)

  "What part of speech do you think it is? How do you know?" (Verb; ends in* -ed*, describes something that a noun,* crowd*, is doing.)

- If students do not know what **cackled** means, say:

  "What do you think* cackled *might mean? What is something that both a crowd of people and hens could do?" (Responses will vary.)

- Invite students to use dictionaries to verify their understanding of the word's meaning. Note that some dictionaries, such as http://eled.org/0174, may provide multiple example sentences with the word **cackle**, illustrating its potential to describe both people and chickens or geese. If time allows, encourage student reflection on these examples. Help them recognize that the most effective similes use comparisons that are not only creative, but also sensible and familiar.

- Say:

  "Can you show me what it sounds like for a crowd of people to* cackle like hens*? Let's hear it!"

Reconstruct

- Read aloud the entire sentence on display: **Down below, <u>the crowd cackled like hens</u>**.

- Say:

  "Can you figure out why the writers chose to compare people in the crowd to hens?" (Responses may vary. Encourage and acknowledge all responses.)

  "What kind of figurative language is this an example of? We talked about this in Module 1." (Simile; if helpful, before providing the answer, draw student attention to the word* like *as a clue.)

  "What if we remove the simile? How is the sentence different if it says, 'Down below, the crowd cackled'?" (This sentence no longer uses figurative language; it is less interesting; it evokes less of an image in the readers' minds.)

- Say:

  "Now what do you think is the meaning of this sentence?" (Responses will vary.)

  "What does this sentence tell us about William's character?" (Responses to this question may include that it tells us that people in William's community do not believe in him and his abilities.)

Practice

- Display the sentence frame:

  On the other side of the classroom, the students whispered like

  _____.

  noun phrase

  (subject + verb + **like** + noun phrase)

- Say:

  "Use this frame to create a simile that compares something in the classroom to something else. Be creative."

- Possible student answers:
  On the other side of the classroom, **the students whispered** like **little mice**.

  (subject + verb + **like** + noun phrase)

5-Minute Mini Language Dive Note-Catcher

Name: _____ **Date:**_____

Lesson 1

RI.6.3, L.6.4, L.6.5

Sentence

Down below, **the crowd cackled like hens**. (from page 2 of *The Boy Who Harnessed the Wind* by William Kamkwamba and Bryan Mealer)

Practice

On the other side of the classroom, the students whispered like

_____.
noun phrase

(subject + verb + **like** + noun phrase)

Lesson 3

RI.6.3, L.6.3

Sentence

Even though we lived in a small village in Africa, we did many of the same things kids do all over the world; we just used different materials. (from page 20 of *The Boy Who Harnessed the Wind* by William Kamkwamba and Bryan Mealer)

Practice

Even though I live in _____ and not Malawi,
independent clause

I _____.

(**Even though** + independent clause, independent clause)

Lesson 5

L.6.2a

Sentence

For instance, we discovered that white noise**—that *shhhhhhhh* sound that you hear between stations—**and most other functions originate from a circuit board. (from page 47 of *The Boy Who Harnessed the Wind* by William Kamkwamba and Bryan Mealer)

Practice

In chapter 3, William and Geoffrey ask questions about the function of

dynamos—_____

parenthetical

—and end up learning a lot about how electricity works.

(prepositional phrase, start of independent clause—parenthetical—**and** + rest of independent clause)

Lesson 2

Supports guided in part by CA ELD Standards 6.I.A.2, 6.I.B.6, 6.II.A.1, and 6.II.A.2.

Important Points in the Lesson Itself

- To support ELLs, this lesson guides through a new note-catcher that students will use to collect textual information about William. Note-catchers help students organize and inform their ideas about the text and its characters. Additionally, students participate in a Think-Pair-Share protocol several times throughout the lesson, allowing ELLs time to individually process their ideas before discussing them with classmates.
- ELLs may find it challenging to participate in the Back-to-Back and Face-to-Face protocol of Work Time C, especially if they struggled to comprehend either the chapter 1 excerpt or the TED Talk. As an alternative, invite students to use this time to pose clarifying questions to their classmates about what they read or watched; as students do so, it may be useful for them to refer to the **Discussion Norms anchor chart** from Module 1. Note any recurring questions and address them in a future lesson. The mid-unit assessment in Lesson 6 will gauge students' ability to analyze how a character is introduced and developed in a text, so it is critical that students get extra support if they need it as they practice this skill for the first time.

Levels of Support

Opening

For Lighter Support	For Heavier Support
• N/A	• During Opening A, invite students who need heavier support to use the **Entrance Ticket: Unit 1, Lesson 2** ▲. This resource allows students to select an answer from a list of options and defend it, rather than generating an answer independently.

Work Time

For Lighter Support	For Heavier Support
• Before reading the chapter 1 excerpt, invite students to collaborate and produce a list of "best practices" for finding the gist of a text based on their experiences in Module 1. Offer examples to get students started (e.g., highlight phrases that discuss important events; pay special attention to the way new characters are introduced). • A transcript for the TED Talk of Work Time C is available online. Distribute the transcript (in English) to students ahead of time. For an added listening challenge, white-out some of the transcript's words or phrases and invite students to fill in the blanks based on what they hear as they watch the TED Talk. If possible, choose words and phrases that students have already studied and/or that are closely related to the module topic. These words may include *windmill, design, electricity,* and/or *energy.*	• During Work Time A, invite students who need heavier support to use the **Analyze Key Individual: William note-catcher** ▲. This resource contains model answers to guide students' understanding of expectations. • Transcripts for the TED Talk of Work Time C are available in multiple languages. Create home language groups and inviting students to read the transcript first in their home language. Students can begin by discussing the material in their home languages before watching the video in English as a class.

Entrance Ticket: Unit 1, Lesson 2

RI.6.3

Name: _____ **Date:**_____

Directions: As you enter class, read the learning targets. Then, answer the following prompt.

Skim through the prologue of *The Boy Who Harnessed the Wind* again. Notice that although it is written in first person, the narrator's name is not given. Why might the authors have chosen not to include the narrator's name in the prologue?

Choose one of the answers (A–C) below. Then, explain why you chose that answer.

A. Because the authors want to make the readers interested in the story.

B. Because the authors think the narrator's name is not important.

C. Because the authors want to focus on other characters first.

I chose answer _____ because _____

Analyze Key Individual: William Note-Catcher

RI.6.1, RI.6.3, RI.6.7, RI.6.9, RI.6.10, SL.6.2

Name: _____ **Date:**_____

Part I

Directions: Complete the chart below to track your analysis of William as we read the first eight chapters of *The Boy Who Harnessed the Wind*; watch William's TED Talk, "How I Built a Windmill"; and read an article about William. Cite evidence from the resources to support your answers.

Text	What methods do the writers use to introduce or develop William as a key individual? Provide evidence (e.g., allusion, anecdotes, description, dialogue, examples, inner thoughts).	What can the reader infer about William and his character?
Prologue	Inner thoughts (What a Character in the Story Thinks About) • When the men tease William, he thinks, *Let them.* •	
Chapter 1	Description (Information about How Something Looks, Sounds, Feels, etc.) • The writers describe William's village: "You might be wondering what an African village looks like. Well . . ." (5). •	

Text	What methods do the writers use to introduce or develop William as a key individual? Provide evidence (e.g., allusion, anecdotes, description, dialogue, examples, inner thoughts).	What can the reader infer about William and his character?
"How I Built a Windmill" (TED Talk)	Dialogue (Things People Say)	
Chapter 2	Examples	
Chapter 3	Anecdote (A Short Story about Something Interesting)	

Text	What methods do the writers use to introduce or develop William as a key individual? Provide evidence (e.g., allusion, anecdotes, description, dialogue, examples, inner thoughts).	What can the reader infer about William and his character?
Chapter 4		
"William Kamkwamba's Electric Wind"		
Chapter 5		

Text	What methods do the writers use to introduce or develop William as a key individual? Provide evidence (e.g., allusion, anecdotes, description, dialogue, examples, inner thoughts).	What can the reader infer about William and his character?
Chapter 6		
Chapter 8		

Part B

Directions: Compare and contrast the information the reader learns from each of the resources. Cite evidence from the resource to support your answer.

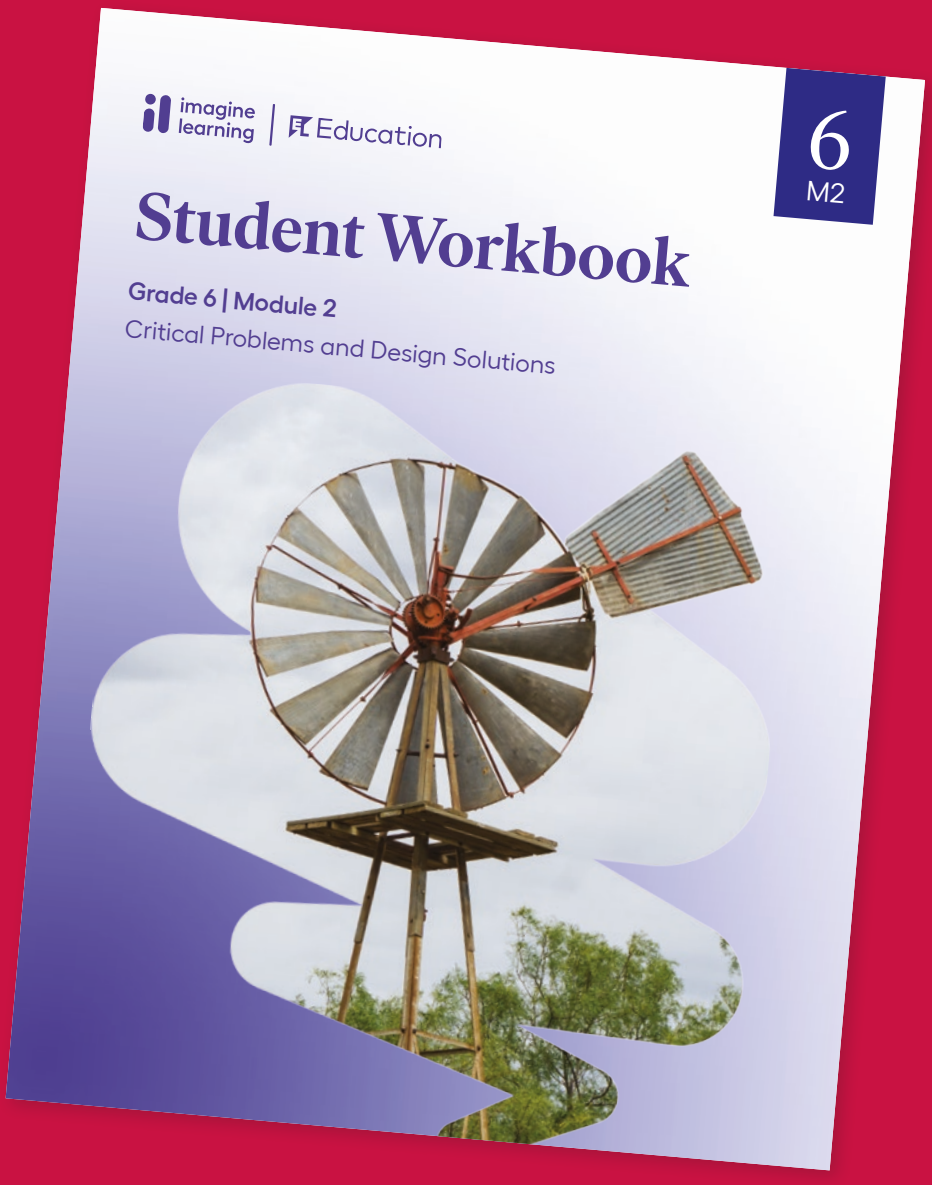
Text	Compare and contrast how this source presents the events versus how they are presented in *The Boy Who Harnessed the Wind*.		How does the information in this source impact our understanding of the events presented in *The Boy Who Harnessed the Wind*
	Similar	Different	
"How I Built a Windmill" (TED Talk)			
"William Kamkwamba's Electric Wind"			

Reflect: Based on our reading, what can we infer about William's strengths and weaknesses? Cite evidence from the texts to support your answer.

imagine learning | Education

Module Student Workbook

Sample



Entrance Ticket: Unit 1, Lesson 1

Name: _____ **Date:**_____

Directions: As you enter class, read the learning targets. Then, answer the prompts below.

1. What does it mean to make an inference?

2. Read the following scenario: Your best friend is opening the gift you gave her for her birthday. She looks inside the box and a smile spreads across her face. She looks up at you with a tear in her eye, and whispers, "Thank you."

   What inference might you draw from the scenario described? What evidence led to your inference?

Infer the Topic: I Notice/I Wonder Note-Catcher

Name: _____ Date:_____

What do you think you will be learning in this module?

I Notice (things I see)	I Wonder (questions I have)

Synopsis: *The Boy Who Harnessed the Wind*, Prologue

Name: _____ **Date:**_____

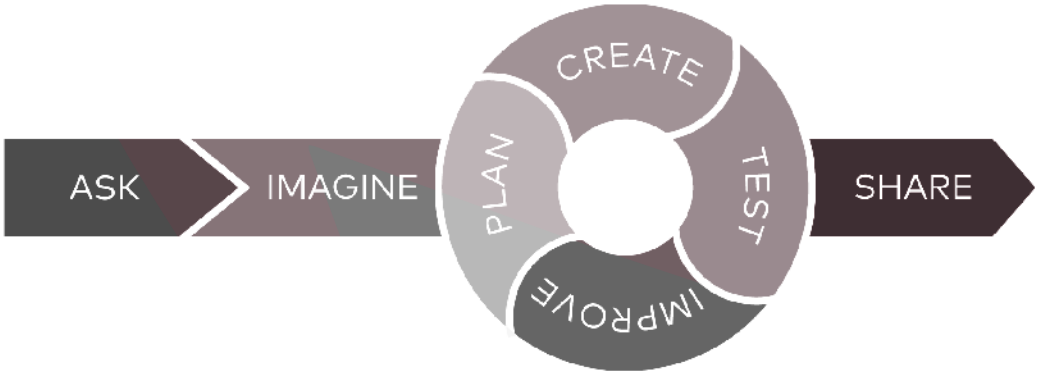
- A crowd gathers at the base of William's windmill.
- People in the crowd make comments doubting William's sanity.
- The wind blows, the windmill turns, and the light bulb glows in William's hand.
- The crowd is shocked at William's success with his invention.

QuickWrite: Design Thinking Process

Name: _____ **Date:**_____

Directions: Examine the graphic below depicting the design thinking process, and answer the question.

Design Thinking Process



Scribe Concepts for EL Education.

1. Based on the information in the graphic, what do you think the design thinking process is or is used for?

_____

_____

_____

_____

_____

Entrance Ticket: Unit 1, Lesson 2

Name: _____ **Date:**_____

Directions: As you enter class, read the learning targets. Then, answer the following prompt.

Skim through the prologue of *The Boy Who Harnessed the Wind* again. Notice that although it is written in first person, the narrator's name is not given. Why might the authors have chosen not to include the narrator's name in the prologue?

Synopsis: *The Boy Who Harnessed the Wind*, Chapter 1

- William Kamkwamba lives in the village of Masitala, which is on the outskirts of Wimbe in the country of Malawi. Malawi is located in southeastern Africa.
- William has six sisters, a mother and a father. His extended family (aunts, uncles, and cousins) also live in the village.
- William's family is a farming family. The family grows maize (white corn).
- William and his community believe that magic rules the world. A *sing'anga*, or witch doctor, can be consulted for cures or curses.
- William accepts gumballs from a group of boys. The gumballs belong to a local trader. The trader speaks with the *sing'anga* and puts a curse on whoever stole the gumballs.
- William is terrified of the magic that will be unleashed upon him by the *sing'anga*, so William confesses to his father that he ate the gumballs.
- Tales of the magical forces of the Gule Wamkulu frighten William.
- William's father is a devout Presbyterian and tells William to "respect the wizards . . . but with God on your side, they have no power against you."
- William introduces his cousin Geoffrey and friend Gilbert, the chief's son.
- During planting and harvesting time, William's father hires a man named Mister Phiri to work the land with them. Mr. Phiri's secret to his strength is magic called *mangolomera*.
- William is very small and gets picked on, so he begins to become more interested in *mangolomera*. Shabani, who brags about being a real *sing'anga*, offers to provide William with *mangolomera*. William accepts.
- William picks a fight with a boy much larger than him in order to test his new strength. William is beaten badly in the fight. He has a conversation with Shabani. William recognizes that he has been cheated.
- William's perception of magic changes.

Analyze Key Individual: William Note-Catcher

Name: _____ **Date:**_____

Part I

Directions: Complete the chart below to track your analysis of William as we read the first eight chapters of *The Boy Who Harnessed the Wind*; watch William's TED Talk, "How I Built a Windmill"; and read an article about William. Cite evidence from the resources to support your answers.

Text	What methods do the writers use to introduce or develop William as a key individual? Provide evidence (e.g., allusion, anecdotes, description, dialogue, examples, inner thoughts).	What can the reader infer about William and his character?
Prologue		
Chapter 1		

Text	What methods do the writers use to introduce or develop William as a key individual? Provide evidence (e.g., allusion, anecdotes, description, dialogue, examples, inner thoughts).	What can the reader infer about William and his character?
"How I Built a Windmill" (TED Talk)		
Chapter 2		
Chapter 3		

TED Talk Transcript: William Kamkwamba, "How I Built a Windmill"

Name: _____ **Date:**_____

TED Talk: William Kamkwamba: How I Built a Windmill

https://www.ted.com/talks/william_kamkwamba_on_building_a_windmill

Chris Anderson: William, hi. Good to see you.

William Kamkwamba: Thanks.

CA: So, we've got a picture, I think? Where is this?

WK: This is my home. This is where I live.

CA: Where? What country?

WK: In Malawi, Kasungu. In Kasungu. Yeah, Mala.

CA: OK. Now, you're 19 now?

WK: Yeah. I'm 19 years now.

CA: Five years ago you had an idea. What was that?

WK: I wanted to make a windmill.

CA: A windmill?

WK: Yeah.

CA: What, to power—for lighting and stuff?

WK: Yeah.

CA: So what did you do? How did you realize that?

WK: After I dropped out of school, I went to library, and I read a book that would—*Using Energy*, and I get information about doing the mill. And I tried, and I made it.

CA: So you copied—you exactly copied the design in the book.

WK: Ah, no. I just—

CA: What happened?

WK: In fact, a design of the windmill that was in the book, it has got four—ah—three blades, and mine has got four blades.

CA: The book had three, yours had four.

WK: Yeah.

CA: And you made it out of what?

WK: I made four blades, just because I want to increase power.

CA: OK.

WK: Yeah.

CA: You tested three, and found that four worked better?

WK: Yeah. I test.

CA: And what did you make the windmill out of? What materials did you use?

WK: I use a bicycle frame, and a pulley, and plastic pipe, what then pulls—

CA: Do we have a picture of that? Can we have the next slide?

WK: Yeah. The windmill.

CA: And so, and that windmill, what—it worked?

WK: When the wind blows, it rotates and generates.

CA: How much electricity?

WK: 12 watts.

CA: And so, that lit a light for the house? How many lights?

WK: Four bulbs and two radios.

CA: Wow.

WK: Yeah.

CA: Next slide—so who's that?

WK: This is my parents, holding the radio.

CA: So what did they make of—that you were 14, 15 at the time—what did they make of this? They were impressed?

WK: Yeah.

CA: And so what's your—what are you going to do with this?

WK: Um—

CA: What do you—I mean—do you want to build another one?

WK: Yeah, I want to build another one—to pump water and irrigation for crops.

CA: So this one would have to be bigger?

WK: Yeah.

CA: How big?

WK: I think it will produce more than 20 watts.

CA: So that would produce irrigation for the entire village?

WK: Yeah.

CA: Wow. And so you're talking to people here at TED to get people who might be able to help in some way to realize this dream?

WK: Yeah, if they can help me with materials, yeah.

CA: And as you think of your life going forward, you're 19 now, do you picture continuing with this dream of working in energy?

WK: Yeah. I'm still thinking to work on energy.

CA: Wow. William, it's a real honor to have you at the TED conference. Thank you so much for coming.

WK: Thank you.

imagine learning | EL Education

Print Components Sampler

Grade 6 | Module 2

imagine learning

imaginelearning.com/EL-education
877-725-4257 • solutions@imaginelearning.com

890817357
Produced for Imagine Learning by Twig Education Ltd