

IT'S ALL TRUE!

Level 2



Teacher's Guide and Comprehension Questions

Contents

[About the Series](#)

[The Common Core Connection](#)

[Understanding the CCSS Coding Method](#)

[The Level 2 Books](#)

[Careers: Weird Jobs](#)

[Earth and Space: Earth Gets Weird](#)

[History: Final Resting Places](#)

[Living Things: Weird Science](#)

[Technology: Invented by Mistake](#)

About the Series

It's All True! is for students in grades 4–8 who are reading at our Reading Levels 1, 2, and 3.

These reading levels correlate roughly with first, second, and third grade reading levels.

However, the *content-area vocabulary and concepts* are tied to grades 4–8. So, for example, you will find grade 4 life-science vocabulary words and concepts such as *decomposition* in a Level 2 book. However, the reading level will still be Level 2. Additionally, the last page of each book contains **Key Words**. These are primarily key content-area words. Page references allow readers to easily find the pages where the key concepts are taught.

Each set of five *It's All True!* books (one set per level):

- contains engaging nonfiction books in the content areas of *Living Things* (life science); *Earth and Space* (physical science); *History*; *Technology*; *Careers*.
- has carefully leveled text based on the most common words in the English language, as well as content-area vocabulary.
- aligns with the requirements of the Common Core State Standards.
- includes a table of contents; chapter titles and subheadings; maps, photos, and illustrations; a glossary of key words; and other features that build nonfiction reading skills.

It's All True! is the first of our *Read Up!* series. In these Level 1, 2, and 3 books, students are encouraged to enjoy similar topics and themes as they “read up” through the series. For additional information and Teacher’s Guides for Levels 2 and 3, see www.highnoonbooks.com.

The Common Core Connection

The *It's All True!* series was developed in response to the call for more nonfiction materials that can be used to fulfill the Common Core State Standards (CCSS). Specifically:

- All fifteen of the *It's All True!* **Student Books** meet the College and Career Readiness Anchor Standard for Reading #10: Read and comprehend complex literary and informational texts independently and proficiently.
- The K–12 grade-specific Common Core State Standards are tied to grade-level text complexity bands. *It's All True!* **Student Books** are high interest/low reading-level chapter books. So the CCSS standard 10 that the books meet is tied to the *reading level* (grades 1, 2, or 3) rather than the higher *interest levels* of the students they are written for (grades 4–8).
- We have developed **Teacher’s Guide questions** for every chapter of every book and aligned them to the Common Core State Standards (Reading Standards for Informational Text).
- Many of our **Teacher’s Guide questions** can also be used to meet additional CCSS standards such as [CCSS.ELA-Literacy.RST.6-8.10](#) (read and comprehend

science/technical texts independently and proficiently) and [CCSS.ELA-Literacy.RH.6-8.10](#) (read and comprehend history/social studies texts independently and proficiently).

Although struggling readers may not be able to meet certain grade-level criteria, the CCSS emphasize promoting “a culture of high expectations for all students.” With this in mind, we have correlated our Teacher’s Guide questions to the standards that we feel are most appropriate to our readers. The full text of the CCSS can be found at <http://www.corestandards.org>

Understanding the CCSS Coding Method

Standards are coded as follows in our correlations:

RI=Reading–Informational Text

RST=Reading–Science and Technical Subjects

RH=Reading–History/Social Studies

4/5/6/7/8, etc.= grade level

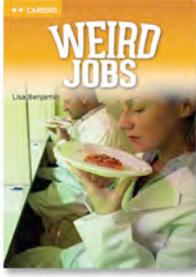
1/2/3/4/5, etc. = standard number

Example: RI6.7 = Reading–Informational Text, grade 6, standard 7

Example: RST6–8.2 = Reading–Science and Technical Subjects, grades 6–8, standard 2

The Level 2 Books

The five Level 2 Student Books focus on the weird and unusual in the areas of life science, physical science, history, technology, and careers. When your students have finished reading a chapter or the book, you can assess comprehension using the Teacher's Guide questions. Each guide starts with a list of Key Words (this list is also on the last page of the Student Book), followed by chapter-by-chapter questions. An Answer Key with CCSS correlations follows.



Level 2 CAREERS: *Weird Jobs*

Key Words

ancient	garbology	potential energy
archeologists	kinetic energy	recycle
energy	landfills	stand-in
engineers	middens	studio
explorers	odor	
garbologist	photographers	

Comprehension Questions

Chapter 1: Testers

1. Why do odor testers need to study science in college?
2. How is testing video games hard work?
3. What word is used in all of the headings in this chapter? Why do you think the author used this word?

Chapter 2: Weird Food Jobs

1. What things are in a food studio?
2. Why do TV and movies use fake food?
3. Name two weird food jobs. Tell one thing that makes each job weird.

Chapter 3: Stand-Ins

1. What does a *stand-in* do?
2. Look at the pictures on page 18 and 25. These are not stand-ins for people. What are they stand-ins for?
3. Which two stand-ins help people learn their jobs?

Chapter 4: Garbage Jobs

1. Why do people choose to be garbage collectors?
2. How are garbologists and archaeologists alike? How are they different?
3. Look at the picture on page 35. What's the answer to the question in the caption?

Chapter 5: Roller Coaster Designers

1. What do roller coaster designers need to study in college?
2. What kind of energy does a rollercoaster have as it sits at the top of a hill? What kind of energy does it use as it goes down the hill?
3. Think of all the weird jobs in this book. Which one do you think is the weirdest? Why?

Level 2 CAREERS: *Weird Jobs*

Answer Key and CCSS Correlations

Chapter 1: Testers

1. **Why do odor testers need to study science in college?** (They need to use science to fix smells that aren't right.)

RI4.1 Refer to details and examples in a text when explaining what the text says explicitly and when drawing inferences from the text.

2. **How is testing video games hard work?** (Testers have to keep playing even if they don't like the game. They have to play even if the game has problems. They have to list all the problems in the game.)

RI7.1 Cite several pieces of textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.

3. **What word is used in all of the headings in this chapter? Why do you think the author used this word?** (*Testers*. The author used it to show that every job in the chapter is a testing job, but there are different kinds of testers.)

RI4.5 Describe the overall structure (e.g., chronology, comparison, cause/effect, problem/solution) of events, ideas, concepts, or information in a text or part of a text.

Chapter 2: Weird Food Jobs

1. **What things are in a food *studio*?** (Everything a food photographer needs: lights and screens, a kitchen, tables and plates.)

RI6.4 Determine the meaning of words and phrases as they are used in a text, including figurative, connotative, and technical meanings.

2. **Why do TV and movies use fake food?** (They use fake food because the food has to stay out under hot lights for many hours. Real food would go bad or fall apart.)

RI6.1 Cite textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.

3. **Name two weird food jobs. Tell one thing that makes each job weird.** (The three jobs are food photographers, fake food makers, and food explorers. Answers to the question will vary, but should include one reason from the text for each job listed.)

RI7.2 Determine two or more central ideas in a text and analyze their development over the course of the text; provide an objective summary of the texts.

Chapter 3: Stand-Ins

1. **What does a *stand-in* do?** (A stand-in takes the place of someone or something.)

RH6–8.4 Determine the meaning of words and phrases as they are used in a text, including vocabulary specific to domains related to history/social studies.

2. **Look at the pictures on page 18 and 25. These are not stand-ins for people. What are they stand-ins for?** (The man on page 18 is a stand-in for an alien or a monster. The puppet on page 25 is a stand-in for a mother bird.)

RI6.7 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.

3. **Which two stand-ins help people learn their jobs?** (Stand-ins for patients and stand-ins who help train soldiers.)

RI5.3 Explain the relationships or interactions between two or more individuals, events, ideas, or concepts in a historical, scientific, or technical text based on specific information in the text.

Chapter 4: Garbage Jobs

1. **Why do people choose to be garbage collectors?** (There will always be work. The job pays well. Garbage collectors don't have to work with lots of other people.)

RI4.1 Refer to details and examples in a text when explaining what the text says explicitly and when drawing inferences from the text.

2. **How are garbologists and archaeologists alike? How are they different?** (Both garbologists and archaeologists study garbage. They use it to learn about people. But garbologists study garbage from today or not very long in the past. Archaeologists study garbage from long long ago. They also study things other than garbage.)

RI5.3 Explain the relationships or interactions between two or more individuals, events, ideas, or concepts in a historical, scientific, or technical text based on specific information in the text.

3. **Look at the picture on page 35. What's the answer to the question in the caption?** (The elephant is made out of recycled water bottles.)

RI6.7 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.

Chapter 5: Roller Coaster Designers

1. **What do roller coaster designers need to study in college?** (They need to study math and science. They need to learn about energy.)

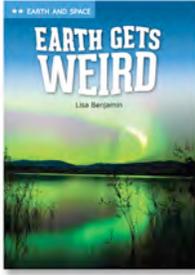
RI4.1 Refer to details and examples in a text when explaining what the text says explicitly and when drawing inferences from the text.

2. What kind of energy does a rollercoaster have as it sits at the top of a hill? What kind of energy does it use as it goes down the hill? (A rollercoaster sitting at the top of a hill has potential energy. It uses kinetic energy as it runs down the hill.)

RI6.4 Determine the meaning of words and phrases as they are used in a text, including figurative, connotative, and technical meanings.

3. Think of all the weird jobs in this book. Which one do you think is the weirdest? Why? (Answers will vary but should be supported by reasons from the text.)

RI6.1 Cite textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.



Level 2 EARTH AND SPACE: *Earth Gets Weird*

Key Words

aurora	galaxy	North Pole
black hole	gravity	northern lights
blue holes	ground water	pollution
density	karst	salt water
deserts	magnetic field	solar explosions
erosion	matter	South Pole
fresh water	mineral	

Comprehension Questions

Chapter 1: Lights in the Sky

1. What do you see when you see an *aurora*?
2. What causes the Northern Lights, and how?
3. How is lightning like the Northern Lights? How is it different?

Chapter 2: Black Holes in Space

1. Look at the picture on page 11. Why do you think the author used a picture that was made on a computer, instead of a photo of a real black hole?
2. How does a black hole form? Use *matter* and *gravity* in your answer.

3. Look at page 18. What does it say about how scientists learn about black holes?

Chapter 3: Made of Stone

1. What is *erosion*? What three things can cause the erosion of rock?
2. What kinds of karst landscapes are there? Have you ever been to one?
3. Why does the author say that knowing about karst is “good for your health”?

Chapter 4: Weird Waters

1. What are the two kinds of blue holes?
2. What is “weird” about ocean blue holes?
3. What causes the Tonle Sap River to change direction?

Chapter 5: A Sea of Salt

1. Where can you find *minerals*?
2. How is the salt flat in Bolivia like the two salt flats in the United States? How is it different?
3. How do you think the salt flats formed in Death Valley and in the Great Salt Lake Desert? Tell how you got your answer.

Level 2 EARTH AND SPACE: Earth Gets Weird

Answer Key and CCSS Correlations

Chapter 1: Lights in the Sky

1. **What do you see when you see an *aurora*?** (Possible answers: You see bright bands of colored light in the sky; you see a light show.)

RST6–8.4 Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to *grades 6–8 texts and topics*.

2. **What causes the Northern Lights, and how?** (The sun causes them by having solar explosions. This creates charged particles that go to the North Pole, hit gas, and let energy loose as lights.)

RST6–8.2 Determine the central ideas or conclusions of a text; provide an accurate summary of the text distinct from prior knowledge or opinions.

3. **How is lightning like the Northern Lights? How is it different?** (Lightening and the Northern Lights are both weird light shows that come from charged particles in the sky. Unlike the Northern Lights, the particles in lightening do not come from the sun.)

RI5.3 Explain the relationships or interactions between two or more individuals, events, ideas, or concepts in a historical, scientific, or technical text based on specific information in the text.

Chapter 2: Black Holes in Space

1. **Look at the picture on page 11. Why do you think the author used a picture that was made on a computer, instead of a photo of a real black hole?** (A photo of a black hole wouldn't show anything, since a black hole is too dark to see in real life. So the computer picture gives a better idea of what is happening in space.)

RI6.6 Determine the author's point of view or purpose in a text and explain how it is conveyed in the text.

2. **How does a black hole form? Use *matter* and *gravity* in your answer.** (A black hole forms when a huge star dies and caves in on itself. *Matter* gets sucked in. All the matter makes the dead star very dense. The density gives the star more *gravity*. The gravity is so strong that even light can't escape.)

RST9–10.2 Determine the central ideas or conclusions of a text; trace the text’s explanation or depiction of a complex process, phenomenon, or concept; provide an accurate summary of the text.

3. **Look at page 18. What does it say about how scientists learn about black holes?** (It says they study what is *around* the black holes, including what happens to the stars near them.)

RST6–8.1 Cite specific textual evidence to support analysis of science and technical texts.

Chapter 3: Made of Stone

1. **What is erosion? What three things can cause the erosion of rock?** (Erosion is the wearing away of rock. Wind, water, and ice can cause the erosion of rock.)

RST6–8.4 Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to *grades 6–8 texts and topics*.

2. **What kinds of karst landscapes are there? Have you ever been to one?** (Karst landscapes include caves, towers, hills, and valleys. Answers to the second question will vary.)

RI7.1 Cite several pieces of textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.

3. **Why does the author say that knowing about karst is “good for your health”?** (Possible answers: Karst can cause sinkholes and ground water pollution. People can fall into sinkholes. Ground water pollution can make people sick.)

RI6.6 Determine an author’s point of view or purpose in a text and explain how it is conveyed in the text.

Chapter 4: Weird Waters

1. **What are the two kinds of blue holes?** (There are ocean blue holes and inland blue holes.)

RI4.1 Refer to details and examples in a text when explaining what the text says explicitly and when drawing inferences from the text.

2. **What is “weird” about ocean blue holes?** (There’s a circle of fresh water in the middle of the salt water.)

RI6.4 Determine the meaning of words and phrases as they are used in a text, including figurative, connotative, and technical meanings.

3. **What causes the Tonle Sap River to change direction?** (During the dry season, the river runs into the Mekong River. During the wet season, it rains so much that water spills from the Mekong into the Tonle Sap. That pushes the Tonle Sap back the way it came.)

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.

Chapter 5: A Sea of Salt

1. **Where can you find *minerals*?** (You can find minerals in rocks, sand, soil, and water.)

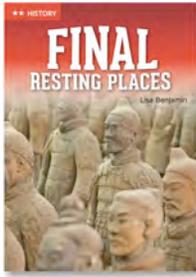
RST6–8.4 Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to *grades 6–8 texts and topics*.

2. **How is the salt flat in Bolivia like the two salt flats in the United States? How is it different?** (The salt flats are all in deserts. They all have the mineral salt. The salt flat in Bolivia is the largest in the world and also has most of the lithium.)

RI5.3 Explain the relationships or interactions between two or more individuals, events, ideas, or concepts in a historical, scientific, or technical text based on specific information in the text.

3. **How do you think the salt flats formed in Death Valley and in the Great Salt Lake Desert? Tell how you got your answer.** (On page 39 it says that salt flats form in places where there used to be a body of water. So there must have been bodies of water in Death Valley and the Great Salt Lake Desert long ago. Then the water evaporated and created salt flats.)

RI6.1 Cite textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.



Level 2 HISTORY: *Final Resting Places*

Key Words

afterlife	mosque	Qin Shihuang
archeologist	mounds	Raedwald
armor	mummies	Shah Jahan
coffin	Mumtaz Mahal	Sipán
looters	Nefertari	Taj Mahal
Moche	pyramids	tomb

Comprehension Questions

Chapter 1: Tombs of Egypt

1. What do *tombs* tell us about people who lived long ago?
2. Why were food, drinks, clothes, and riches put in tombs?
3. What are the steps people used to make mummies?

Chapter 2: An Army in a Tomb

1. Why was Qin Shihuang important in Chinese history?
2. Why did Qin Shihuang want a palace and an army in his tomb?
3. Describe the clay soldiers and how they have changed over time.

Chapter 3: Buried in Riches

1. What do archeologists do?
2. How did looters help Dr. Walter Alva find the tomb of Sipán?
3. How were the Moche people like the people in Egypt?

Chapter 4: Buried in a Ship

1. What does the photo on page 28 show? How did the ship get there?
2. What were the mounds on Edith Pretty's land used for?
3. Do *you* think the spirits Edith Pretty's friend saw near the mounds were real? Use the information in the text to support your answer.

Chapter 5: A Tomb for Two

1. Some of the stone for the Taj Mahal came from China. Look at the map on page 12 to find China. Now find China on the map on page 38. In what direction would you go to get from most places in India to China?
2. Why did Shah Jahan build the Taj Mahal for his wife?
3. How are cars changing the color of the Taj Mahal? Use words from page 42 in your answer.

Level 2 HISTORY: Final Resting Places Answer Key and CCSS Correlations

Chapter 1: Tombs of Egypt

1. **What do *tombs* tell us about people who lived long ago?** (They tell us what people believed about life after death, what was important to them, and how they lived and died.)

RI4.2 Determine the main idea of a text and explain how it is supported by key details; summarize the text.

2. **Why were food, drinks, clothes, and riches put in tombs?** (People thought they were needed in the afterlife.)

RI6.2 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.

3. **What are the steps people used to make mummies?** (They took out the brain and insides. They poured salt and oil on the body. Then they covered the body tightly with cloth.)

RH6–8.3 Identify key steps in a text’s description of a process related to history/social studies (e.g., how a bill becomes law, how interest rates are raised or lowered.)

Chapter 2: An Army in a Tomb

1. **Why was Qin Shihuang important in Chinese history?** (He was the first emperor of China; he united areas that were at war, made people use the same kind of money and writing, and had them build part of the Great Wall of China.)

RI4.1 Refer to details and examples in a text when explaining what the text says explicitly and when drawing inferences from the text.

2. **Why did Qin Shihuang want a palace and an army in his tomb?** (He believed in the afterlife. He wanted the palace to live in and the soldiers to keep him safe.)

RI5.3 Explain the relationships or interactions between two or more individuals, events, ideas, or concepts in a historical, scientific, or technical text based on specific information in the text.

3. **Describe the clay soldiers and how they have changed over time.** (The soldiers stand more than 6 feet tall. Each one is about 600 pounds. Each one has a different face and clothes. The soldiers were painted bright colors, but today they are clay-colored.)

RI6.7 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.

Chapter 3: Buried in Riches

1. **What do archeologists do?** (They study things left by people who lived a very long time ago.)

RH6-8.4 Determine the meaning of words and phrases as they are used in a text, including vocabulary specific to domains related to history/social studies.

2. **How did looters help Dr. Walter Alva find the tomb of Sipán?** (They went into the tomb to find riches. They took the riches. Then other looters found out. All the looters were shooting each other over the riches. The police learned about the riches and called Dr. Alva.)

RI7.2 Determine two or more central ideas in a text and analyze their development over the course of the text; provide an objective summary of the text.

3. **How were the Moche people like the people in Egypt?** (Both people believed in the afterlife. They both built pyramids for the dead. They both made mummies.)

RI5.3 Explain the relationships or interactions between two or more individuals, events, ideas, or concepts in a historical, scientific, or technical text based on specific information in the text.

Chapter 4: Buried in a Ship

1. **What does the photo on page 28 show?** (It shows the outline of a ship.) **How did the ship get there?** (It must have been pulled from the nearby river and then buried on land.)

RH6-8.7 Integrate visual information (e.g., in charts, graphs, photographs, videos, or maps) with other information in print and digital texts.

2. **What were the mounds on Edith Pretty's land used for?** (They were used to bury people and things from very long ago.)

RI4.1 Refer to details and examples in a text when explaining what the text says explicitly and when drawing inferences from the text.

3. **Do you think the spirits Edith Pretty's friend saw near the mounds were real? Use the information in the text to support your answer.** (Answers will vary but should include analysis of information from the text. For example students who think the spirits were real might say that the spirits were riding horses near places that turned out to hold

bodies of people and a horse; and that at the time Edith Pretty and her friend didn't know the mounds were burial mounds.)

RH6–8.1 Cite specific textual evidence to support analysis of primary and secondary sources.

Chapter 5: A Tomb for Two

1. **Some of the stone for the Taj Mahal came from China. Look at the map on page 12 to find China. Now find China on the map on page 38. In what direction would you go to get from most places in India to China?** (northeast)

RH6–8.7 Integrate visual information (e.g., in charts, graphs, photographs, videos, or maps) with other information in print and digital texts).

2. **Why did Shah Jahan build the Taj Mahal for his wife?** (He built it after she died to show his love for her.)

RI4.3 Explain events, procedures, ideas, or concepts in a historical, scientific, or technical text, including what happened and why, based on specific information in the text.

3. **How are cars changing the color of the Taj Mahal? Use words from page 42 in your answer.** (“Dirty air from cars is making the white stone turn yellow.”)

RI5.1 Quote accurately from a text when explaining what the text says explicitly and when drawing inferences from the text.



Level 2 LIVING THINGS: Weird Science

Key Words

adaptation	decomposition	mites	reptile
bacteria	flatworms	mold	scavengers
decompose	fungi	regenerate	
decomposers	microscope	regeneration	

Comprehension Questions

Chapter 1: Growing New Parts

1. What is regeneration?
2. Which parts are the animals in the pictures regenerating?
3. How does regeneration help animals?

Chapter 2: Funny Feet

1. What is an adaptation?
2. How does a gecko's adaptation help it?
3. Why are "funny feet" useful to all three animals?

Chapter 3: Living and Dying

1. Name three scavengers and three decomposers you read about in this chapter.
2. How do scavengers start decomposition? How do decomposers finish it?
3. Look at the four headings in Chapter 4. Use the headings to tell what the chapter is about.

Chapter 4: Deep-Sea Monsters

1. What adaptation helps the giant squid live in the dark?
2. Why does the author call the four animals in Chapter 4 “Deep-Sea Monsters”?
3. Look at the photo on page 33. Is the anglerfish in the photo a male or a female? How do you know?

Chapter 5: Tiny Mites

1. Why do we need a microscope to look at mites?
2. What do both dust mites and eyelash mites like to eat?
3. Look at the text on page 40 and the photo on page 42. How can dust mites make a person sneeze?

Level 2 LIVING THINGS: *Weird Science* Answer Key and CCSS Correlations

Chapter 1: Growing New Parts

1. **What is *regeneration*?** (Regeneration is a process in which an animal grows a new body part.)

RST6–8.4 Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to *grades 6–8 texts and topics*.

2. **Which parts are the animals in the pictures regenerating?** (Sharks are regenerating teeth; sea stars are growing new arms; flatworms are growing new bodies.)

RI6.7 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.

3. **How does regeneration help animals?** (Answers will vary but should show an understanding that regeneration helps animals survive.)

RST6–8.2 Determine the central ideas or conclusions of a text; provide an accurate summary of the text distinct from prior knowledge or opinions.

Chapter 2: Funny Feet

1. **What is an *adaptation*?** (An adaptation is a change that happened over time in a plant or animal and helped it live better.)

RI5.4 determine the meaning of general academic and domain-specific words and phrases in a text relevant to a grade 5 topic or subject area

2. **How does a gecko’s adaptation help it?** (Geckos have sticky feet, which help them get up and down trees, find food, and avoid large animals.)

RST6–8.1 Cite specific textual evidence to support analysis of science and technical texts.

3. **Why are “funny feet” useful to *all three animals*?** (Geckos, water skaters, and spiders all need this adaptation to catch their food and move around the places they live.)

RI4.2 Determine the main idea of a text and explain how it is supported by key details; summarize the text.

Chapter 3: Living and Dying

1. **Name three scavengers and three decomposers you read about in this chapter.** (Scavengers: some birds, sharks, and earthworms. Decomposers: maggots, bacteria, mold, and fungi.)

RI4.1 Refer to details and examples in a text when explaining what the text says explicitly and when drawing inferences from the text.

2. **How do scavengers start decomposition? How do decomposers finish it?** (Scavengers tear apart dead plants and animals to eat. Decomposers eat the pieces scavengers leave behind.)

RI5.2 Determine two or more main ideas of a text and explain how they are supported by key details; summarize the text.

3. **Look at the four headings in Chapter 4. Use the headings to tell what the chapter is about.** (The chapter is about decomposition. It explains the work that scavengers and decomposers do. Then it tells how decomposition helps living things.)

RST6–8.5 Analyze the structure an author uses to organize a text, including how the major sections contribute to the whole and to an understanding of the topic.

Chapter 4: Deep-Sea Monsters

1. **What adaptation helps the giant squid live in the dark?** (The squid has large eyes as big as dinner plates. They help the squid see in the dark.)

RI4.1 Refer to details and examples in a text when explaining what the text says explicitly and when drawing inferences from the text.

2. Why does the author call the four animals in Chapter 4 “Deep-Sea Monsters”? (They look scary and strange like monsters. They all have sharp teeth.)

RI6.6 Determine the author’s point of view or purpose in a text and explain how it is conveyed in the text.

3. **Look at the photo on page 33. Is the anglerfish in the photo a male or a female? How do you know?** (The anglerfish is a female. The photo shows a light on its head. The text says only the female has a light on its head.)

RI6.7 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.

Chapter 5: Tiny Mites

1. **Why do we need a microscope to look at mites?** (The mites are too small to see with our eyes alone.)

RST6–8.4 Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to *grades 6–8 texts and topics*.

2. **What do both dust mites and eyelash mites like to eat?** (They both eat pieces of our dead skin.)

RI5.3 Explain the relationships or interactions between two or more individuals, events, ideas, or concepts in a historical, scientific, or technical text based on specific information in the text.

3. **Look at the text on page 40 and the photo on page 42. How can dust mites make a person sneeze?** (Some people are allergic to the waste of dust mites. It makes them sick.)

RI6.7 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.



Level 2 TECHNOLOGY: *Invented by Mistake*

Key Words

adhesive	mauve	Post-its
chemicals	microscope	rubber
dye	microwave ovens	Super Glue
invention	mold	synthetic
inventor	pacemaker	Velcro
magnetron	penicillin	X-ray

Comprehension Questions

Chapter 1: I Didn't Expect That!

1. What does an *inventor* do?
2. Tell how all three of the inventions in Chapter 1 were mistakes.
3. People find ways to make inventions cheaper and better. Which invention shows this? Explain.

Chapter 2: Sticky Mistakes

1. What problem led George de Mestral to invent Velcro?
2. What did Spencer Silver invent by mistake? How did Arthur Fry turn that mistake into a new invention?

3. How was Harry Coover's sticky mistake like Spencer Silver's? How was it different?

Chapter 3: Mistakes You Can Eat

1. How are ice cream cones and popsicles alike? Use the pictures and stories about them to answer.
2. How did George Crum invent potato chips?
3. People don't always agree about how things were invented. Which two sentences on page 17 tell you that?

Chapter 4: Healthy Mistakes

1. Why do you think Anna said, "I have seen my own death?" when she saw her X-ray?
2. How did a mold lead to the invention of penicillin?
3. Which of the inventions in this chapter do you think is most important? Explain why you think so.

Chapter 5: Fun Mistakes

1. What serious event led to the inventions of Silly Putty and the Slinky?
2. You read about synthetic dye on page 8. What do you think synthetic rubber is?
3. What is the main point that the author makes about inventions? How does she make this point?

Level 2 TECHNOLOGY: Invented by Mistake

Answer Key and CCSS Correlations

Chapter 1: I Didn't Expect That!

1. **What does an *inventor* do?** (An inventor makes something for the first time.)

RST6–8.4 Determine the meaning of symbols, key terms, and other domain-specific words and phrases as they are used in a specific scientific or technical context relevant to grades 6–8 texts and topics.

2. **Tell how all three of the inventions in Chapter 1 were mistakes.** (Matches were invented when chemicals on a stick caught fire by mistake. Microwave ovens were invented because a chocolate bar melted when it was near a magnetron. Mauve was invented when William Perkin was trying to make a new medicine.)

RST6–8.2 Determine the central ideas or conclusions of a text; provide an accurate summary of the text distinct from prior knowledge or opinions.

3. **People find ways to make inventions cheaper and better. Which invention shows this? Explain.** (The microwave oven. The first microwave ovens were huge and they cost a lot of money--about \$5,000.)

RI6.1 Cite textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.

Chapter 2: Sticky Mistakes

1. **What problem led George de Mestral to invent Velcro?** (When he and his dog took a long walk they came back covered in sticky burrs.)

RI4.1 Refer to details and examples in a text when explaining what the text says explicitly and when drawing inferences from the text.

2. **What did Spencer Silver invent by mistake? (a weak adhesive) How did Arthur Fry turn that mistake into a new invention?** (He put the sticky adhesive onto the back of papers and invented Post-its.)

RI5.3 Explain the relationships or interactions between two or more individuals, events, ideas, or concepts in a historical, scientific, or technical text based on specific information in the text.

3. **How was Harry Coover’s sticky mistake like Spencer Silver’s? How was it different?** (Harry Coover’s invention was also an adhesive. But Cooper’s adhesive was very, very strong, and Silver’s adhesive was very weak.)

RI3.9 Compare and contrast the most important points and key details presented in two texts on the same topic.

Chapter 3: Mistakes You Can Eat

1. **How are ice cream cones and popsicles alike? Use the pictures and stories about them to answer.** (They were both invented by mistake, in the early 1900s. They are both eaten on hot days. Neither requires a spoon or fork; you just hold them and eat them.)

RI6.7 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.

2. **How did George Crum invent potato chips?** (He cut potatoes into thin pieces, fried them in hot oil until they were crispy, and covered them with salt.)

RI4.2 Determine the main idea of a text and explain how it is supported by key details; summarize the text.

3. **People don’t always agree about how things were invented. Which two sentences on page 17 tell you that?** (“There are different stories about how it happened. Here’s one story that a lot of people think its true.”)

RI8.1 Cite the textual evidence that most strongly supports an analysis of what the text says explicitly as well as inferences drawn from the text.

Chapter 4: Healthy Mistakes

1. **Why do you think Anna said, “I have seen my own death?” when she saw her X-ray?** (Seeing a picture of her bones scared her. Before X-rays, people had only seen skeletons of dead people, not skeletons inside living bodies.)

RI4.1 Refer to details and examples in a text when explaining what the text says explicitly and when drawing inferences from the text.

2. **How did a mold lead to the invention of penicillin?** (Andrew Fleming left dirty lab dishes when he went on a trip. He returned and saw a mold growing in a dish. The mold had killed germs in the dish. Fleming named the mold penicillin and turned it into a drug that kills germs in people.)

RI6.2 Determine the 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.

3. **Which of the inventions in this chapter do you think is most important? Explain why you think so.** (Answers will vary, but students should use information in the text to explain the reason for their opinions.)

RI6.1 Cite textual evidence to support analysis of what the text says explicitly as well as inferences drawn from the text.

Chapter 5: Fun Mistakes

1. What serious event led to the inventions of Silly Putty and the Slinky?
(World War II.)

RI4.1 Refer to details and examples in a text when explaining what the text says explicitly and when drawing inferences from the text.

2. You read about synthetic dye on page 8. What do you think synthetic rubber is?
(It is rubber made by people. It doesn't come from trees.)

RI5.4 Determine the meaning of general academic and domain-specific words and phrases in a text relevant to a *grade 5 topic or subject area*.

3. **What is the main point that the author makes about inventions? How does she make this point?** (The main point is that mistakes can lead to great inventions. She makes this point by giving many examples of inventions made by mistake.)

RI6.6 Determine an author's point of view or purpose in a text and explain how it is conveyed in the text.