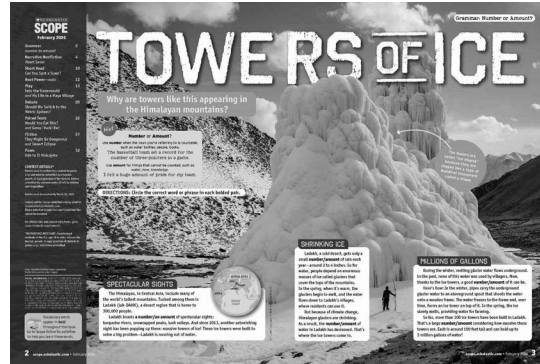


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## “Towers of Ice”



### ANSWERS TO ACTIVITIES AND PROMPTS IN THE MAGAZINE

#### Spectacular Sights

The Himalayas, in Central Asia, include many of the world's tallest mountains. Tucked among them is Ladakh (lah-DAHK), a desert region that is home to 300,000 people.

Ladakh boasts **a number** of spectacular sights: turquoise rivers, snowcapped peaks, lush valleys. And since 2013, another astonishing sight has been popping up there: massive towers of ice! These ice towers were built to solve a big problem—Ladakh is running out of water.

#### Shrinking Ice

Ladakh, a cold desert, gets only a small **amount** of rain each year—around 2 to 4 inches. So for water, people depend on enormous masses of ice called glaciers that cover the tops of the mountains. In the spring, when it's warm, the glaciers begin to melt, and the water flows down to Ladakh's villages, where residents can use it.

But because of climate change, Himalayan glaciers are shrinking. As a result, the **amount** of water in Ladakh has decreased. That's where the ice towers come in.

#### Millions of Gallons

During the winter, melting glacier water flows underground. In the past, none of this water was used by villagers. Now, thanks to the ice towers, a good **amount** of it can be.

Here's how: In the winter, pipes carry the underground glacier water to an above ground spout that shoots the water onto a wooden frame. The water freezes to the frame and, over time, forms an ice tower on top of it. In the spring, the ice slowly melts, providing water for farming.

So far, more than 100 ice towers have been built in Ladakh. That's a large **number** considering how massive these towers are. Each is around 100 feet tall and can hold up to 3 million gallons of water!

### ANSWERS TO ACTIVITY SHEET

#### NUMBER OR AMOUNT ?

1. number
2. number
3. amount
4. number
5. amount
6. amount, number
7. Answers will vary.

## “Heart Saver”



### ANSWERS TO ACTIVITIES AND PROMPTS IN THE MAGAZINE

#### WRITING PROMPT, PAGE 9

Responses will vary. Sample response:

Vivienne Thomas left behind a powerful and enduring legacy. His contributions to the field of medicine, which saved countless lives and inspired generations of Black medical professionals will not be forgotten.

Thomas revolutionized pediatric cardiology through the development of a procedure to treat “blue baby syndrome,” which is a heart condition that affected thousands of babies in the United States in the 1940s. In 1943 at Johns Hopkins, Dr. Helen Taussig asked Dr. Alfred Blalock and Thomas, who was working at the hospital as Blalock’s assistant, to develop a procedure to fix the hearts of blue babies. Thomas played an integral role in creating the procedure. He learned to create the condition in animals so that he could practice treating it. In 1944, Thomas helped guide Blalock throughout the procedure, which Thomas had practiced dozens of times on animals. The procedure worked. Following this first successful attempt to repair a blue baby’s heart, families from across the country rushed their babies to Johns Hopkins. Prior to the development of this procedure, there was nothing doctors could do to help blue babies. Thanks to Thomas’s work, countless lives were saved, and advancements in the fields of surgery and cardiology marched forward.

Thomas is also remembered for his determination. Despite facing racial discrimination throughout his life and not having a formal medical education, Thomas persisted in pursuing his passion for learning, medicine, and surgery. Nothing could stop him. When he began to work for Blalock, Thomas dedicated himself to learning and often studied in his free time.

Additionally, Thomas was a problem-solver with an innovative mind. In addition to creating blue baby syndrome in animals so that he could work on treating it, Thomas designed new medical instruments when he could find none delicate enough for his work on small hearts. Thomas’s determination and innovativeness allowed him to overcome every obstacle he faced and transcend the barriers of the society in which he lived.

Lastly, Thomas left behind a commitment to education and equality. Thomas blazed a trail for Black Americans in medicine, but he didn’t stop there. He mentored and trained numerous aspiring medical professionals over two generations, providing guidance and encouragement. His commitment to education and mentorship left a lasting impact on future generations of medical practitioners.

Thomas’s story continues to inspire and motivate individuals in the medical field and beyond, leaving an enduring impact on the quest for medical advancement and equality.



## ANSWERS TO ACTIVITY SHEETS

### FEATURED SKILL: KEY IDEAS AND DETAILS

Responses will vary. Sample responses:

1. Thomas developed the surgical equipment and the procedure to treat “blue baby syndrome,” a heart condition affecting thousands of babies a year in the 1940s. Following the first successful attempt to repair a blue baby’s heart, families from across the country rushed their babies to Johns Hopkins to undergo this procedure. Prior to the development of this procedure, there was nothing doctors could do to help blue babies. Thomas’s work saved countless lives.
2. **Determined:** Despite facing racial discrimination and not having a formal medical education, Thomas persisted in pursuing his passion for learning, medicine, and surgery.  
**Innovative:** Thomas was a creative problem-solver. He created blue baby syndrome in animals so that he could work on treating it. He designed new medical instruments when he could find none delicate enough for his work on small hearts.
3. Thomas blazed a trail for Black Americans in medicine: He mentored and trained numerous aspiring medical professionals over two generations, providing guidance and encouragement. His commitment to education and mentorship left a lasting impact on future generations of medical practitioners.
4. Answers will vary.

### “HEART SAVER”

#### CLOSE-READING QUESTIONS

1. Tarshis likely started her story this way to draw the reader in. The heartrending description of the baby shows the seriousness of blue baby syndrome and makes the reader want to keep reading to find out what happens.
2. Thomas’s plans were first shattered by the Great Depression. He lost the education savings he’d been working for since age 13, and there was no more carpentry work to be found. Taking a major pay cut, Thomas accepted a job in Alfred Blalock’s lab at Vanderbilt University and worked hard to learn everything he could. Tarshis writes that he often

went home with stacks of textbooks that he pored over late into the night. Thomas proved himself to Blalock, who soon came to consider Thomas a partner in his research. However, because Thomas was Black, he faced discrimination. After six years at Vanderbilt, he was still being paid a menial wage. What’s more, Vanderbilt listed him as a janitor in its official records. Thomas stood up for himself and spoke to Blalock; his salary soon increased. When Thomas moved to Maryland so that he could continue working with Blalock, he experienced even worse discrimination. He had trouble finding a landlord who would rent to him and his family, and his new employer, Johns Hopkins, was segregated. But Thomas refused to let the unfair and hateful way he was treated distract him from his work with Blalock.

3. Mount Everest is an incredibly difficult and dangerous mountain to climb—anyone who successfully scales Everest joins a small and elite group of the world’s best climbers. By comparing heart surgery and Everest, Tarshis helps readers understand that Thomas, Blalock, and Taussig were undertaking something incredibly difficult and full of risk, and that they were among the best in their field.
4. Out in the world, Thomas was treated unfairly and with great prejudice because he was Black. Throughout the U.S. at that time, Black people were forbidden to swim in most public pools, sit in the front of buses, or even go into most libraries. Inside the lab, Thomas was Blalock’s partner and a respected member of the team. Yet because he was Black, Thomas was not able to earn a medical degree from the very institution where he helped develop the procedure to treat blue babies. He did not receive the same level of recognition from the world that Blalock did, and he did not receive fair pay for his work.
5. This detail shows that after years of being overlooked, Thomas has finally been recognized for his contributions. Placing his portrait across from Blalock’s presents the two men as equals.

### “HEART SAVER”

#### CRITICAL-THINKING QUESTIONS

1. Thomas was a hero because he helped pioneer a lifesaving heart surgery and went on to train other heart surgeons who saved many more lives. He also



opened the door for other Black people to enter medicine, including his own nephew. Thomas was “unsung” because he was not recognized for his accomplishments for many decades. Unlike Blalock, Thomas never became rich or famous.

2. Answers will vary. Students may say that segregation prevented many Black people from getting an education. Thomas, for example, was barred from entering public libraries and attending most medical schools, including Johns Hopkins. Such discrimination is immoral and it discourages people from realizing their potential.
3. Answers will vary.

### VOCABULARY PRACTICE

1. D
2. D
3. Buzz it and dye it green.
4. An artery is more like a waterslide: It is tubelike and liquid flows through it.

Answers will vary for questions 5-8. Sample responses:

5. “Practice tomorrow will be especially rigorous,” said Coach Sims. “Be sure to bring a big water bottle.”
6. The brash singing-contest judge was not very kind in their criticism and often hurt contestants’ feelings.
7. I took the delicate vase off the table before my cousins came over yesterday because I was worried they might accidentally break it.
8. Lisa, who does not like crowds, expressed reluctance to attend the large concert.

### NONFICTION QUIZ

#### \*Higher Level (HL)

1. B (central ideas; R.2)
2. C (author’s craft; R.4)
3. A, C (text structure, key ideas and details; R.5, R.2)
4. D (figurative language; R.4)
5. C, D (inference, key ideas; R.1, R.2)
6. B (text structure; R.5)
7. Answers will vary. Students may describe Thomas as determined or hardworking because he worked very hard to learn and practice medicine despite the many challenges that he faced: not being able to afford college, being banned from most medical schools because of his race, and being constantly confronted by prejudice in all areas of his life. When Thomas got a position working in Blalock’s lab, Thomas worked 16-hour days, studied into the night, and eventually

helped to develop a groundbreaking surgery (7-8). Students may also describe Thomas as innovative. When Taussig challenged him and Blalock to develop a procedure to treat blue baby syndrome, Thomas created the syndrome in animals so that he could figure out how to treat it. Also, when he found that no medical instruments delicate enough to perform the procedure existed, Thomas invented his own instruments (8). (key ideas and details, character, inference, supporting claims; R.2, R.3, R.1, W.1)

8. To blaze a trail means to lead the way or clear a path toward progress. Thomas “blazed a trail for Black Americans in medicine” by helping to create a groundbreaking heart surgery during a time of tremendous racism and discrimination against Black Americans. When Thomas first began working at Johns Hopkins in the 1930s, he was not allowed to attend the medical school because of his race. However, Thomas’s accomplishments in the lab and later, as a professor, helped lead the way for other Black Americans in medicine, including Thomas’s own nephew who attended Johns Hopkins in 1983 (9). Thomas no doubt inspired other Black Americans to stand up to prejudice and become doctors, and also helped to shift some people’s racist ideas about Black people. (interpreting text, key ideas and details, writing an explanatory text; R.4, R.2, W.2)

### NONFICTION QUIZ

#### \*Lower Level (LL)

1. B (central ideas; R.2)
2. C (author’s craft; R.4)
3. A, C (text structure; R.5)
4. D (figurative language; R.4)
5. C, D (inference, key ideas; R.1, R.2)
6. B (summarizing; R.2)
7. Answers will vary. Students may describe Thomas as determined or hardworking because he worked very hard to learn and practice medicine despite the many challenges that he faced: not being able to afford college, being banned from most medical schools because of his race, and being constantly confronted by prejudice in all areas of his life. When Thomas got a position working in Blalock’s lab, Thomas worked 16-hour days, studied into the night, and eventually helped to develop a groundbreaking surgery (7-8). Students may also describe Thomas as innovative. When Taussig challenged him and Blalock to develop



a procedure to treat blue baby syndrome, Thomas created the syndrome in animals so that he could figure out how to treat it. Also, when he found that no medical instruments delicate enough to perform the procedure existed, Thomas invented his own instruments (8). (key ideas and details, character, inference, supporting claims; R.2, R.3, R.1, W.1)

8. To blaze a trail means to lead the way or clear a path toward progress. Thomas “blazed a trail for Black Americans in medicine” by helping to create a groundbreaking heart surgery during a time of tremendous racism and discrimination against Black Americans. When Thomas first began working at Johns Hopkins in the 1930s, he was not allowed to attend the medical school because of his race. However, Thomas’s accomplishments in the lab and later, as a professor, helped lead the way for other Black Americans in medicine, including Thomas’s own nephew who attended Johns Hopkins in 1983 (9). Thomas no doubt inspired other Black Americans to stand up to prejudice and become doctors, and also helped to shift some people’s racist ideas about Black people. (interpreting text, key ideas and details, writing an explanatory text; R.4, R.2, W.2)

### CORE SKILLS WORKOUT: SUMMARIZING

#### \*Higher Level (HL)

Answers will vary. Sample responses:

1. Vivien Thomas
2. On November 29, 1944, surgeons at Johns Hopkins Hospital attempted the first heart surgery to save a so-called blue baby. Before this, thousands of blue babies were born each year and most did not survive past infancy. Despite lacking a college or medical education, Vivien Thomas, a Black man, played a vital role in developing the surgery.
3. The Great Depression caused Thomas to lose his life savings he had been planning to use to go to college. Discrimination against Black people was legal in the U.S. and few schools would accept Thomas as a student.
4. Thomas took a job as a lab assistant for Dr. Alfred Blalock, he conducted research, designed experiments, and learned everything he could.
5. Blue babies were rushed there from across the U.S. While Blalock became famous, Thomas continued his work in the background. By the time Thomas retired in 1979, Thomas had trained many surgeons at Johns

Hopkins, and his contributions were eventually recognized, solidifying his legacy in the field of medicine and paving the way for future Black Americans in medicine.

6. Answers will vary.

#### Summary:

In the 1940s, thousands of babies were born each year with a heart condition that starved their bodies of oxygen. These babies were called “blue babies,” and doctors had no way to help them. But on November 29, 1944, a team of surgeons attempted the first heart surgery to save a blue baby’s life. Despite lacking a college or medical education, Vivien Thomas played a vital role in this surgery.

Thomas had faced many obstacles in life, such as losing his life’s savings for college and medical school during the Great Depression and experiencing racism. Hateful segregation policies meant few schools would accept Thomas as a student. But when he took a job as an assistant for Dr. Alfred Blalock, he conducted research, designed innovative experiments, and learned everything he could. The two became true partners and eventually developed the procedure that would successfully repair blue babies’ hearts and save countless lives. While Blalock became famous, Thomas continued his work in the background. By the time Thomas retired in 1979, Thomas had trained many surgeons at Johns Hopkins, and his contributions were eventually recognized, solidifying his legacy in the field of medicine and paving the way for future Black Americans in medicine.

### CORE SKILLS WORKOUT: SUMMARIZING

#### \*Lower Level (LL)

Answers will vary. Sample response:

In the 1940s, thousands of babies were born each year with a heart condition that starved their bodies of oxygen. These babies were called “blue babies” and doctors **had no way to help them**. But on November 29, 1944, a team of surgeons attempted **the first heart surgery to save a blue baby’s life**. Despite lacking a college or medical education, Vivien Thomas, played a vital role in this surgery.

Thomas had faced many obstacles in life, such as **losing his life’s savings for college and medical school during the Great Depression and experiencing racism**. Hateful segregation policies meant few schools would accept **Thomas as a student**. But when he took a job as an assistant for Dr. Alfred Blalock, he **conducted research, designed innovative experiments, and learned everything he could**.

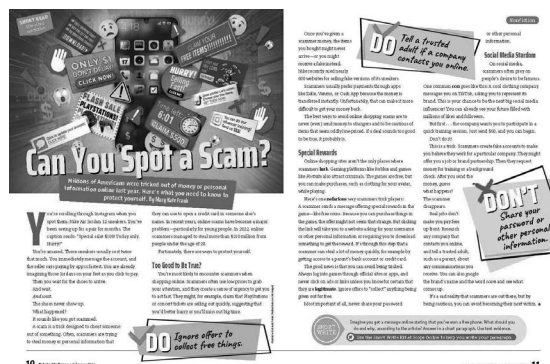


The two became true partners, and eventually developed the procedure that would **successfully repair blue babies' hearts and save countless lives**. While Blalock became famous, Thomas **continued his work in the background**. By the time Thomas retired in 1979, **Thomas had trained many surgeons at Johns Hopkins, and his contributions were eventually recognized, solidifying his legacy in the field of medicine and paving the way for future Black Americans in medicine**.

#### CORE SKILLS WORKOUT: TEXT FEATURES

1. **Problem:** Blue babies have a condition that leads to blood circulating throughout the body before passing through the lungs. This means the blood does not have enough oxygen in it.  
**Solution:** Three surgeons created a surgery that directly connects the heart and lungs of blue babies, allowing their blood to get the oxygen it needs.
2. **desegregate:** to end segregation, which is separating groups of people based on their race  
**mentor:** to advise or train someone
3. Panels, titles, and captions will vary.

## “Can You Spot a Scam?”



### ANSWERS TO ACTIVITIES AND PROMPTS IN THE MAGAZINE

#### WRITING PROMPT, PAGE 11:

Answers will vary. Sample response:

If I received a message online stating that I won a free phone, it would be essential for me to approach the message with caution. As author Mary Kate Frank explains in her article “Can You Spot a Scam?,” it’s important to be wary of anything oddly low-priced. “If a deal seems too good to be true,” she writes, “it probably is.” A free phone definitely seems too good to be true. After all, phones are incredibly expensive. Why would a stranger just give one to me? The person who sent the message is surely trying to get something from me, such as my personal information or money. Chances are, if I did respond to the message, I would never receive a phone anyway. So, as Frank advises, I should ignore the message and not click on any ads or links that are part of it. Though the offer of a free phone is tempting, the red flags here are clear.

### ANSWERS TO ACTIVITY SHEETS

#### SHORT WRITE KIT

Answers will vary. Sample responses:

**Your Claim:** If I received a message online stating that I won a free phone, it would be essential for me to approach the message with caution. As author Mary Kate Frank explains

#### Text Evidence 1:

“The best ways to avoid online shopping scams are to never (ever) send money to strangers and to be cautious of items that seem oddly low-priced. If a deal sounds too good to be true, it probably is.”

#### Commentary:

Phones are incredibly expensive. It’s not likely a stranger would just give me a phone. This person is not offering me something for free; they are likely trying to steal my personal information.

#### Text Evidence 2:

“A scam is a trick designed to cheat someone out of something. Often, scammers are trying to steal money or personal information that they can use to open a credit card in someone else’s name.”

**Commentary:** The person behind the message is surely trying to get something from me.

#### Text Evidence 3:

“... never click on ads or links unless you know for certain that they are legitimate. Ignore offers to ‘collect’ anything being given out for free.”

**Commentary:** A message telling me about a free phone would obviously require me to take some sort of action—to click a link and provide information about myself—and that’s where the scammer could get me.

#### Paragraph:

If I received a message online stating that I won a free phone, it would be essential for me to approach the message with caution. As author Mary Kate Frank explains





in her article “Can You Spot a Scam?,” it’s important to be wary of anything oddly low-priced. “If a deal seems too good to be true,” she writes, “it probably is.” A free phone definitely seems too good to be true. After all, phones are incredibly expensive. Why would a stranger just give one to me? The person who sent the message is surely trying to get something from me, such as my personal information or money. Chances are, if I did respond to the message, I would never receive a phone anyway. So, as Frank advises, I should ignore the message and not click on any ads or links that are part of it. Though the offer of a free phone is tempting, the red flags here are clear.

### VOCABULARY PRACTICE

1. a letter written by Abraham Lincoln
2. during a game of hide-and-seek
3. deal
4. a villain stealing a town’s entire town’s water supply
5. nefarious
6. con
7. legitimate
8. lurk

### “CAN YOU SPOT A SCAM?” QUIZ

#### \*Higher Level (HL)

1. C (key ideas and details; R.2)
2. D (key ideas and details; R.2)
3. B (vocabulary; R.4)
4. B (key ideas and details; R.2)
5. B, C, D (synthesis; R.9)
6. Online scams are a major problem. In her article “Can You Spot a Scam?,” author Mary Kate Frank writes that “In 2022, online scammers managed to steal more than \$210 million from people under the age of 20” (10). She also writes, “Nike recently sued nearly 600 websites for selling fake versions of its sneakers” (11). The fact that at least 600 websites are running scams selling fake Nikes shows that scams are a serious problem. Six hundred is already a high number but there are likely many, many more sites out there that are running scams. The fact that in just one year—2022—scammers stole hundreds of millions of dollars also shows that online scams are a very serious and costly problem. (key ideas and supporting details, supporting a claim; R.2, W.1)

### “CAN YOU SPOT A SCAM?” QUIZ

#### \*Lower Level (LL)

1. C (key ideas and details; R.2)
2. D (key ideas and details; R.2)
3. B (vocabulary; R.4)
4. B (key ideas and details; R.2)
5. B, C, D (synthesis; R.9)
6. Online scams are a major problem. In her article “Can You Spot a Scam?,” author Mary Kate Frank writes that “In 2022, online scammers managed to steal more than \$210 million from people under the age of 20” (10). The fact that in just one year—2022—scammers stole hundreds of millions of dollars shows that online scams are a very serious and costly problem. (key ideas and supporting details, supporting a claim; R.2, W.1)

### CORE SKILLS WORKOUT: CENTRAL IDEAS AND DETAILS

#### \*Higher Level (HL) and Lower Level (LL)

##### Section Title: “Too Good to Be True?”

**Central Idea:** Online scammers use various tactics to try to trick you into sending them money quickly.

##### Supporting Details:

- “Scammers often use low prices to grab your attention, and they create a sense of urgency to get you to act fast.”
- “Once you’ve given a scammer money, the items you bought might never arrive—or you might receive a fake instead.”
- “Scammers usually prefer payments through apps like Zelle, Venmo, or Cash App because the money is transferred instantly.”

##### Section Title: “Special Rewards”

**Central Idea:** Scammers can target gaming platforms, but there are ways to protect yourself.

##### Supporting Details:

- Scammers may send gamers links to fake websites to get them to hand over money or personal information. These links are designed to look like parts of the game, but they aren’t.
- Never accept an offer to collect anything being given away for free.
- Never share your password or other personal information with someone online. Also, never click on ads that you don’t know are legitimate.

##### Section Title: “Social Media Stardom”

**Central Idea:** Scammers sometimes take advantage of people’s desire to be famous, but there are ways to avoid falling for these types of scams.



**Supporting Details:**

- Scammers might try to trick you into sending them money for training sessions that they claim will prepare you to be an influencer.
- Scammers create fake accounts to make it appear like they work for certain companies, and then they offer fake jobs.
- Research companies that contact you online and let a trusted adult know what happened.
- Google the brand's name and the word *scam*.

**Central Idea of the Article:** Online scams are a serious problem, but there are ways we can protect ourselves.

## "A Star's Secret"



### ANSWERS TO ACTIVITIES AND PROMPTS IN THE MAGAZINE

#### ROOT CHALLENGE

Answers will vary. Sample responses:

**automobile:** An automobile is a car or vehicle with a motor and wheels that transports people from one place to another.

**autograph:** An autograph is a person's handwritten signature; people treasure autographs of celebrities or people they admire as keepsakes. As a verb, *autograph* means "to sign something."

**autobiography:** a book someone writes about their own life

**automatic:** something that works by itself without needing someone to control it

- Answers will vary. Words might include: *autopilot, autonomy, autofocus, autopsy, autoimmune, automaton*
- Sentences and drawings will vary.

### ANSWERS TO ACTIVITY SHEET

#### ROOT POWER

Answers will vary. Sample responses:

##### Part 1:

**automobile:** An automobile is a car or vehicle with a motor and wheels that transports people from one place to another.

**autograph:** An autograph is a person's handwritten signature; people treasure autographs of celebrities or people they admire as keepsakes. As a verb, *autograph* means "to sign something."

**autobiography:** a book someone writes about their own life

**automatic:** something that works by itself without needing someone to control it

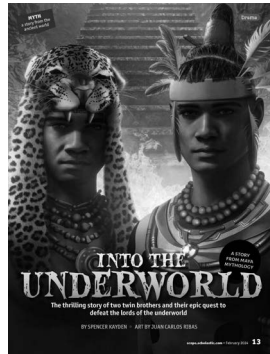
##### Part 2:

- automatic
- autograph
- automobile
- autobiographies

##### Part 3:

- Answers will vary. Words might include: *autopilot, autonomy, autofocus, autopsy, autoimmune, automaton*
- Sentences will vary.
- Drawings will vary.

## ***Into the Underworld***



### **ANSWERS TO ACTIVITIES AND PROMPTS IN THE MAGAZINE**

#### **WRITING PROMPT, PAGE 18**

Responses will vary. Sample essay:

In Spencer Kayden's Maya mythology play *Into the Underworld*, two demigod twins, Jaguar Moon and Hunter, must try to defeat the evil lords of the underworld. The twins ultimately outwit the lords through their creative magic, their knowledge of the cycle of death and rebirth, and their understanding of the lords' weaknesses.

At the start of the play, the twins creatively use their magical powers to begin their mission of outwitting the evil lords. The lords give them three tests: to survive the House of Darkness, the House of Knives, and the House of Jaguars. The twins pass these challenges by using magic in creative ways. For example, to pass the first test, the twins must keep a candle burning all night. The twins come up with the idea to summon fireflies, which appear flame-like. In Scene 4, after Hunter beckons the insects, "Dozens of fireflies swarm around them, then land on the tip of the candle." When the twins emerge from the House of Darkness, the candle looks like it is unburnt. This successfully tricks the lords into thinking that the twins kept the candle lit all night. The lords send the twins on to their next test.

After passing their tests, the twins use their knowledge of the cycle of death and rebirth to continue outwitting the lords. After passing the tests and playing ball with the lords, they realize that the lords' plan is to kill them no matter what cunning moves the brothers demonstrate. "Death

does seem inevitable. But that will not stop us," Jaguar Moon tells his brother in Scene 8. Fortunately, the twins have a deep knowledge of the cycle of death and rebirth that the lords do not have. They know that if they die, it is not truly the end; they will be reborn in another form. Thus, the twins develop an elaborate plan to outwit the lords. They will let the lords think they have died, but then will return to life, and in disguise they will take their revenge.

The twins then finally succeed in the plan to outwit the lords, largely due to their understanding of the lords' characters. They know that the lords are impressed by magic and spectacle. Wearing a disguise, the twins earn a reputation for performing incredible magic, which attracts the lords' attention. In a magic show for the lords, Hunter kills Jaguar Moon and then brings him back to life. In Scene 11, "Hunter reaches into his brother's chest and pulls out his beating heart. Jaguar Moon falls to the ground dead. . . . Hunter returns the heart to Jaguar Moon's chest. His brother revives and stands back up." Just as the twins calculated, the lords ask Jaguar Moon and Hunter to perform this magic on them. They outwit the lords one last time, destroying the lords and not bringing them back to life.

The twins outwit the lords of the underworld by performing creative magic, applying their knowledge of the cycle of death and rebirth, and using their insight into the lords' characters to their advantage. Thanks to their success in this quest, time as we know it begins.



## ANSWERS TO ACTIVITY SHEETS

### FEATURED SKILL: CONFLICT

- Answers will vary.
- Answers will vary. Sample response:  
**Strategy 1:** Creatively using magical powers  
**Quotation(s):** “Dozens of fireflies swarm around them, then land on the tip of the candle.” (Scene 4)  
**Strategy 2:** Understanding the cycle of death and rebirth  
**Quotation(s):** “Death does seem inevitable. But that will not stop us,” Jaguar Moon tells his brother. (Scene 8)  
**Strategy 3:** Understanding the lords’ behavior and actions  
**Quotation(s):** “Hunter reaches into his brother’s chest and pulls out his beating heart. Jaguar Moon falls to the ground dead. . . Hunter returns the heart to Jaguar Moon’s chest. His brother revives and stands back up.”; “Try it on me! Try it on me!” (Scene 11)

### INTO THE UNDERWORLD

#### CLOSE-READING QUESTIONS

- The elders in the prologue provide the audience with background information about the Popol Vuh and the Maya people. They introduce the time (thousands of years ago) and place (Mesoamerica) where the events of the play take place. They also engage the audience and transition audience members from reality to a fictional world—a magical place with powerful beings that can communicate with all creatures.
- The twins’ cleverness along with their magical powers allow them to pass each of the three tests. In each case, animals also play an important role in the twins’ success: Fireflies keep the candle “lit” without burning it, an army of ants retrieves the flowers the lords demanded, and hungry jaguars obey the twins and eat the bones the twins conjure rather than eating the twins themselves (as the lords intended).
- After a mosquito reveals to the twins that their father and uncle’s ball playing equipment is hidden in their hut, the twins decide to play the game. The lords of the underworld become angry about the

noise and summon the twins to the underworld to kill them—just as the lords summoned the twins’ father and uncle before them. In other words, the game is the reason the twins end up traveling to the underworld in the first place. (The twins, unlike their father and uncle, survive their trip to the underworld.)

- A.** The lords of the underworld are evil. They trick, torture, and kill people, and they rule over a terrifying realm and have names like Flying Scab and Skull Scepter that reflect their awful natures. The twins—who live on the surface of the Earth, defeat the evil lords, and become the sun and moon—are good. The good characters and evil characters battle each other by playing the ball game—it is quite literally a contest between good and evil. The two groups also battle each other as the lords try to kill the twins, who then turn around and kill the lords.

**B.** The idea that life and death are a cycle is developed when the twins jump into a bonfire and die—and are then resurrected after their ground-up bones are sprinkled in the river. The idea that life and death are a cycle is also developed through the corn stalks in the grandmother’s hut, which flourish when the twins are safe, wither when they die, and then flourish again when they come back to life. In addition, when the twins return to the underworld in disguise, Skull Scepter asks, “But can you destroy a living thing and bring it back?,” and Hunter responds by pulling Jaguar Moon’s heart out and then replacing it, reviving him. The idea is further reinforced when Hunter and Jaguar Moon become the sun and moon, which are symbols of renewal, cycles, and rebirth.

#### INTO THE UNDERWORLD AND “MY LIFE IN A MAYA VILLAGE” CRITICAL-THINKING QUESTIONS

- Corn appears or is mentioned at many points in the play. The elders stand in a cornfield as they deliver the prologue. The twins are masterful corn farmers. The twins plant corn stalks in their grandmother’s hut that will flourish as long as the twins are safe but will wither if the twins die. When the twins seek Xulu’s help in resurrecting themselves, they ask him to tell the lords to grind their bones into dust “like the softest flour made from corn.” In addition, the



caption “The Corn” explains that corn was and still is a crucial crop with cultural and spiritual significance for the Maya. In the interview, Ezekiel shares that his family, his village, and Maya people in general are masterful corn farmers who eat corn daily, sell it for their livelihoods, and feed their livestock with it.

2. In the play, the elders tell the story of the Popol Vuh and how the sun and moon came to be; Ezekiel says that this story was passed down through his own family, from his grandfather to his father to him. Ezekiel also shares that pok-ta-pok is still played and that jaguars—which appear in the play in the House of Jaguars and after which Jaguar Moon is named—are a part of everyday life in his village. A photo shows Ezekiel dressed as a jaguar for a ceremonial dance.
3. Answers will vary.

### VOCABULARY PRACTICE

1. emerge
2. intact
3. outwitted
4. valiantly
5. smugly
6. wither
7. realm
8. marimba
9. summoned

### INTO THE UNDERWORLD QUIZ

#### \*Higher Level (HL)

1. A, B, C (text structure; R.5)
2. D (vocabulary; R.4)
3. C (inference, character; R.1, R.3)
4. A, B, D (text evidence; R.1)
5. B (inference; R.1)
6. A (theme; R.2)
7. In Spencer Kayden’s play *Into the Underworld*, the underworld is portrayed as a dark and fearsome place. It is inhabited by supernatural beings with truly terrifying names, such as Flying Scab and Skull Scepter. The play’s text features explain that in Maya mythology, on which Kayden’s play is based, the underworld is a place with multiple levels that souls must navigate after death (16). Kayden writes that “the souls of the dead struggle up tall mountains and

across swirling rivers of blood, dodge flying knives, and encounter fearsome creatures” (16). Indeed, in Kayden’s play, the characters of Hunter and Jaguar Moon encounter many flying daggers and fearsome creatures such as jaguars, as well as lords intent on killing them. Clearly, the underworld is a dreadful place. (setting, writing explanatory text; R.3, W.2)

8. In Scene 1, the twins decide to start using the ball-playing equipment that belonged to their father and uncle. This is a risky decision because their father and uncle were killed by the lords of the underworld for their ball playing. This is why the twins’ grandmother hid the equipment; she did not want the twins to suffer the same fate. When Mosquito reveals this information to the twins, Hunter says boastfully, “That won’t happen to us,” to which Jaguar Moon replies, “Let’s play ball!” This excessive pride coupled with the terrifying power of the lords of the underworld makes the possibility of danger, failure, and loss even higher. But the twins decide to take this risk because they are determined to avenge the death of their father and uncle by defeating the evil lords of the underworld. The twins clearly have great confidence in their ball-playing skills and their ability to outwit the lords, making this a risk worth taking for them. (character, writing explanatory text; R.3, W.2)

### INTO THE UNDERWORLD QUIZ

#### \*Lower Level (LL)

1. A, B, C (text structure; R.5)
2. D (vocabulary; R.4)
3. C (inference, character; R.1, R.3)
4. A, B, D (text evidence; R.1)
5. B (inference; R.1)
6. A (key ideas; R.2)
7. In Spencer Kayden’s play *Into the Underworld*, the underworld is a frightening and terrible place. It is inhabited by supernatural beings with truly terrifying names, such as Flying Scab and Skull Scepter. The play’s text features explain that in Maya mythology, on which Kayden’s play is based, the underworld is a place with multiple levels that souls must navigate after death (16). Kayden writes that “the souls of the dead struggle up tall mountains and across swirling rivers of blood, dodge flying knives, and encounter



fearsome creatures" (16). Indeed, in Kayden's play, the characters of Hunter and Jaguar Moon encounter many flying daggers and fearsome creatures such as jaguars and lords intent on killing them. Clearly, the underworld is a dreadful place. (setting, writing explanatory text; R.3, W.2)

8. In Scene 1, the twins decide to start using the ball-playing equipment that belonged to their father and uncle. This is a risky decision because their father and uncle were killed by the lords of the underworld for their ball playing. This is why the twins' grandmother hid the equipment; she did not want the twins to suffer the same fate. When Mosquito reveals this information to the twins, Hunter says boastfully, "That won't happen to us," to which Jaguar Moon replies, "Let's play ball!" This excessive pride coupled with the terrifying power of the lords of the underworld makes the possibility of danger, failure, and loss even higher. (character, writing explanatory text; R.3, W.2)

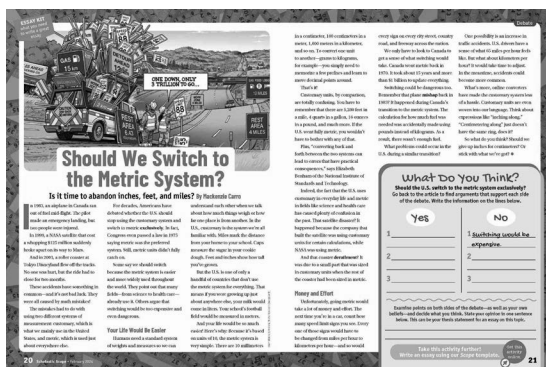
#### GENRE EXPLORATION

1. **Involves gods, goddesses, or supernatural beings:** includes twin demigods, Hunter and Jaguar Moon; a seer, Xulu; and lords of the underworld
2. **Was passed down orally before being recorded:** Prior to being written down in 1700, the Popol Vuh was passed down orally for centuries.
3. **Has heroic figures embarking on quests and facing challenges:** Hunter and Jaguar Moon face challenge after challenge in the underworld: the game of pok-ta-pok; surviving the Houses of Darkness, Knives, and Jaguars; escaping the lords through sacrifice and resurrection; and outwitting the lords to ultimately defeat them
4. **Teaches lessons about human emotions and behaviors:** The play highlights a respect for elders, a connection to nature, and the virtues of courage, determination, wisdom, and cleverness. It also shows that in the battle between good and evil, good will win.
5. **Explains the creation of the world:** In the prologue, Elder 2 states that this story is about "how time came to be" and took place "before humans walked the earth." In the epilogue, when Hunter and Jaguar

Moon ascend into the sky as the sun and moon, Elder 2 says that "time, as we know it, began."

6. **Explains events in nature:** Hunter and Jaguar Moon become the sun and the moon.
7. **Comes from long ago:** This story is centuries old.
8. **Reflects a culture's traditions, beliefs, and values:** Together, the play and pairing highlight the importance of corn, jaguars, and pok-ta-pok in Maya culture.

# "Should We Switch to the Metric System?"



## ANSWERS TO ACTIVITIES AND PROMPTS IN THE MAGAZINE

Answers will vary, but an excellent response to the prompt on page 21 should include some of the following points:

### YES!

1. The metric system is more widely used throughout the world.
2. Many industries in the U.S. already use the metric system.
3. The metric system is very simple to learn and use because it's based on units of 10.
4. Converting back and forth between two systems of measurement can lead to errors and mistakes that can lead to dangerous or costly accidents.

### NO!

1. Switching would be expensive. (Answer provided)
2. Switching would take a lot of effort and could be time-consuming.
3. During the transition period, there could be dangerous mistakes made, or there could be more road accidents due to the switch from mph to kph.
4. Online converters have made converting less of a hassle, so there's not as much of a need to switch.

## ANSWERS TO ACTIVITY SHEETS

### VOCABULARY PRACTICE

1. *Dream Derailment*
2. *Exclusively Ours*
3. *Middle School Mishaps*
4. C
5. D
6. A

### DO NOW: MEASUREMENT IN EVERYDAY LANGUAGE

Answers will vary. Sample responses:

**the whole nine yards:** doing or having everything possible; not leaving anything out ("For his birthday party, Tim wanted the whole nine yards—cake, games, decorations, and all his friends to come over.")

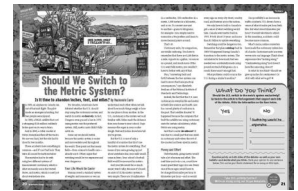
**a mile a minute:** doing something really fast ("When Sia got home from the concert, she was so excited and talking a mile a minute.")

**walk a mile in someone's shoes:** try to understand how someone else feels by imagining yourself in their situation, especially before judging them ("Before you make fun of Jack for being afraid of heights, try to walk a mile in his shoes.")

**a ton of bricks:** very heavy, physically or emotionally ("The news hit me like a ton of bricks" or "I can hardly lift your backpack; it feels like a ton of bricks!")

**a country mile:** longer than a regular mile; emphasizes that something is far away ("The nearest store is a country mile from our house; you'll want to bike instead of walk.")





**missed it by a mile:** way off the mark or very far from reaching a goal or target ("Tom shot the ball as quickly as he could before the buzzer, but missed the hoop by a mile.")

**an ounce of sense:** very little good judgment or common sense (If people had just an ounce of sense, they'd realize the importance of always wearing a helmet while riding a bike.)

**Give someone an inch and they'll take a mile:** if you allow someone a small amount of freedom or advantage, they'll take much more than you intended ("I let my brother borrow my bike today, and now he wants to borrow it all week. Give him an inch and he'll take a mile!")

**inching along:** moving very slowly, bit by bit ("The traffic was so bad; we were inching along for what felt like an hour.")

**all wool and a yard wide:** genuine and of very high quality ("The antiques gifted to me by my grandmother were all wool and a yard wide. They'd be worth a lot of money, but I'd rather cherish them myself.")

**within an inch of one's life:** in a very severe situation ("The ocean became so choppy we could barely steady the boat—we were within an inch of our lives until the storm passed.")

**won't budge an inch:** refusing to move or change one's opinion, even a little bit ("No matter what I said, my mom wouldn't budge an inch on my curfew.")

**wouldn't touch it with a 10-foot pole:** wanting to avoid something completely, having no interest in being associated with it ("After the terrifying movie ended, Jay said he wasn't going to touch another horror film with a 10-foot pole!")

**A journey of a thousand miles begins with a single step:** even the biggest tasks start with a small action; start something despite its magnitude ("Starting to learn a new language might feel difficult at first, but remember, a journey of a thousand miles begins with a single step, so don't give up.")

**pound for pound:** compares things equally in terms of weight or importance ("Pound for pound, the ant is one of the strongest creatures because it can carry objects much heavier than itself.")

**An ounce of prevention is worth a pound of cure:** it's better to prevent problems in advance because it's easier than fixing them later ("Remember to brush your teeth to keep cavities away; an ounce of prevention is worth a pound of cure—going to the dentist to get them filled is no fun!")

## “Would You Eat This?” and “Gross! Yuck! Ew!”



### ANSWERS TO ACTIVITIES AND PROMPTS IN THE MAGAZINE

#### WRITING PROMPT, PAGE 26

Responses will vary. Sample essay:

After reading Kristin Lewis’s articles “Would You Eat This?” about entomophagy and “Gross! Yuck! Ew!” about the science behind disgust, I am convinced that bugs could and must one day become a staple of the American diet. While there are certainly challenges to popularizing entomophagy, its benefits and necessity will prevail.

For starters, the environmental benefits of eating insects will be paramount for generations to come. As Lewis explains, farming insects puts less strain on the environment than farming animals for meat because it requires far fewer resources, like land, water, and energy (25). Not only that, insect farmers can produce large amounts of food very quickly. Indeed, time becomes a critical resource when one considers that, as Lewis explains, the global population is expected to reach 9.8 billion by 2050, and when that happens, a 70 percent increase in our food supply will be needed (25). In other words, insects could help us quickly increase our food supply when we need to. Because my generation shows a great concern for the environment, I believe we will rise to the occasion and regularly incorporate insects into our diets for these reasons alone.

What’s more, insects are incredibly nutritious. Lewis explains that many insect species are rich in protein, iron, fiber, and other nutrients (25), and that furthermore, insect-based flours are a great option for people with gluten allergies (25). In discussing protein, Lewis writes, “Cicadas contain the same amount of protein per pound as beef” (25).

It’s true that Americans have an aversion toward bugs. Lewis explains that though a quarter of the world’s population eats insects regularly, most Americans are disgusted by the idea of eating bugs (24). This is because many of us, Lewis explains, are taught from childhood that insects are dangerous and to be avoided as they can harm us and spread disease (24). The good news is, it is possible for Americans’ attitudes toward insect eating to change. The article “Gross! Yuck! Ew!” details the factors that influence what people find disgusting. Thankfully, Lewis suggests that feelings of disgust can change over time with exposure and familiarity (26). For those that would like to see bug eating take off in the U.S., this science is promising. It means that Americans’ tastes and attitudes toward things like bugs can change, and that one day people might find bug eating completely ordinary. Lewis provides the example of sushi to make this same point in her article “Would You Eat This?” She explains that many Americans were grossed out by sushi when it first arrived in the U.S. Now, however, sushi is a \$27 billion industry (25). I believe that the more Americans are exposed to and familiarized with bug eating, the more accepting we will become of it. This coupled with the fact that eating bugs can help the environment and



## ANSWERS TO ACTIVITY SHEETS

### FEATURED SKILL: SYNTHESIS

Answers will vary. Sample responses:

#### **“WOULD YOU EAT THIS?” CHART**

##### **WHAT THE TEXT SAYS**

**Nutritional benefits of insects:**

- Insects are rich in protein, iron, fiber, and other nutrients. (p. 25)
- Insect-based flour is an option for people with gluten allergies. (p. 25)

**Environmental impact of eating insects:**

- Farming insects puts less strain on the environment than farming animals for meat because producing insects requires far fewer resources. (p. 25)
- Insect farmers can produce large amounts of food very quickly, which will be critical as the global population is expected to reach 9.8 billion by 2050, and a 70 percent increase in our food supply will be needed. (p. 25)

**How people feel about eating insects:**

- Though a quarter of the world’s population eats insects regularly, most Americans are disgusted by bugs. Many Americans are taught from childhood that insects are dangerous and to be avoided because some can harm us and spread disease. (p. 24)

**Production and price of insects in the U.S.:**

- The U.S. doesn’t currently have a system to support insect farming. (p. 24)
- The supply of insects is small, so insect-based products are expensive. (p. 25)

##### **WHAT YOU THINK**

Answers will vary.

**Students should drag a star onto:**

“The article ‘Gross! Yuck! Ew!’ can help readers better understand what causes Americans to find the idea of eating insects gross and whether those feelings can change.”

### **“GROSS! YUCK! EW!” CHART**

##### **WHAT THE TEXT SAYS**

The factors that influence what people find disgusting include an innate sense of what might be dangerous, cultural background, and prior experiences. The article suggests that feelings of disgust can change over time with exposure and familiarity, the way that nurses become accustomed to blood and pus. (p. 26)

##### **WHAT YOU THINK**

Answers will vary.

### **“WOULD YOU EAT THIS?”**

##### **CLOSE-READING QUESTIONS**

1. People around the world have been eating insects for a very long time. In the past, some cultures considered insects to be special treats. Today many people still eat bugs. In fact, more than 2,000 types of insects are eaten around the world. About 2 billion people, which is a quarter of all the people on Earth, include insects in their meals. So while many Americans may view entomophagy as strange, it is obviously seen as quite normal in many places.
2. First, the article mentions that farming insects requires fewer resources (land, water, energy) than farming traditional livestock. For example, the article states that raising crickets for meat takes significantly less water and feed than raising cattle for beef. Second, the article explains that because insects grow and reproduce so quickly, farmers can produce large amounts of them efficiently.
3. The challenges mentioned in the article that may interfere with insect eating becoming popular in the United States include the “ick factor” (that is, the cultural aversion to eating bugs), the lack of infrastructure for insect farming, and the relatively high cost of insect-based foods.
4. The article mentions that many insect species are rich in protein, iron, fiber, and other essential nutrients. It specifically compares cicadas and beef, stating that cicadas contain the same amount of protein per pound as beef. However, it notes that you would have to eat a large quantity of cicadas (about 230) to obtain the same amount of protein found in a 12-ounce steak.



5. The article suggests that insect consumption might be important to the future of food production because of the growing global population. The world's population is expected to reach 9.8 billion by 2050, which is a huge number of people to feed. The article suggests that insects could be an efficient and sustainable source of food to meet the growing demand.

**"GROSS! YUCK! EW!"**

**CLOSE-READING QUESTIONS**

1. Disgust is a survival tool because it helps us avoid things that might make us sick, such as vomit, feces, and rotting meat, which often contain germs, such as parasites.
2. The factors that influence what people find disgusting include an innate sense of what might be dangerous, cultural background, and prior experiences. The article suggests that feelings of disgust can change over time with exposure and familiarity, the way that nurses become accustomed to blood and pus.
3. Lewis encourages an open-minded approach to food and people's food preferences. She encourages readers to respect diverse food preferences and to be willing to explore new culinary experiences.

**"WOULD YOU EAT THIS?" AND "GROSS! YUCK! EW!"**

**CRITICAL-THINKING QUESTIONS**

1. Answers will vary.
2. Answers will vary.

**VOCABULARY PRACTICE**

1. revulsion
2. delectable or scrumptious
3. vital
4. defect
5. cultural
6. delectable, scrumptious (or vice versa)
7. delicacy
8. Answers will vary.

**PAIRED TEXTS QUIZ**

**\*Higher Level (HL)**

1. D (author's purpose; R.6)

2. A (figurative language; R.4)
3. B, D (key ideas and details; R.2)
4. A, B (text structure, key ideas and details; R.5, R.2)
5. D (vocabulary; R.4)
6. B, D (key ideas, synthesis, text evidence; R.2, R.9, R.1)
7. Answers will vary. Sample response: Americans should eat more insects. For one thing, insects are a perfectly ordinary food source in many countries. As Kristin Lewis writes in "Would You Eat This?," insect dishes, from fried ant eggs in Mexico to steamed termites in Uganda, are common in many parts of the world (22, 24), and "The United Nations (U.N.) estimates that at least 2 billion people—about a quarter of the world's population—eat insects regularly" (24). Another reason Americans should eat more insects is that insects are a healthy food. Lewis states that "many species are rich in protein, iron, fiber, and other essential nutrients" (25). A third reason Americans should eat more insects is that they are tasty! Mealworms, for example, have a "pleasant buttery scent" and a "distinctly nutty" taste, according to Lewis (22), while fried grasshoppers, according to the text feature on page 24, taste like shrimp. (text evidence, argument writing; R.1, W.1)
8. According to the article "Gross! Yuck! Ew!," disgust helps keep us safe by preventing us from touching or consuming things that could make us sick. As Lewis explains in the article, many of the things we are disgusted by, such as vomit or feces, contain harmful germs and parasites (26). The disgust we feel toward these things is our body's way of warning us to stay away from them, and thus, to stay away from the harmful germs and parasites they likely contain. This helps us to stay healthy. (key ideas and details, writing explanatory text; R.2, W.2)

**PAIRED TEXTS QUIZ**

**\*Lower Level (LL)**

1. D (author's purpose; R.6)
2. A (figurative language; R.4)
3. B, D (key ideas and details; R.2)
4. A, B (text structure, key ideas and details; R.5, R.2)
5. D (vocabulary; R.4)
6. B, D (key ideas, synthesis, text evidence; R.2, R.9, R.1)



7. Answers will vary. Sample response: Americans should eat more insects because insects are a healthy food. As author Kristin Lewis states in her article “Would You Eat This?,” many species of insects “are rich in protein, iron, fiber, and other essential nutrients” (25). Eating insects could help us make sure we’re getting enough of the nutrients we need. (text evidence, argument writing; R.1, W.1)
8. According to the article “Gross! Yuck! Ew!,” disgust helps keep us safe by preventing us from touching or consuming things that could make us sick. As Lewis explains in the article, many of the things we are disgusted by, such as vomit or feces, contain harmful germs and parasites (26). The disgust we feel toward these things is our body’s way of warning us to stay away from them, and thus, to stay away from the harmful germs and parasites they likely contain. This helps us to stay healthy. (key ideas and details, writing explanatory text; R.2, W.2)

#### CORE SKILLS WORKOUT: EXPLORING TEXT STRUCTURE

##### \*Higher Level (HL) and Lower Level (LL)

Answers will vary slightly. Sample responses:

##### Page 1:

##### Benefits of incorporating insects into the American diet:

- **Nutritional benefits:** “Many species are rich in protein, iron, fiber, and other essential nutrients. Cicadas contain the same amount of protein per pound as beef.”
- **Environmental impact:** “For starters, farming insects puts less strain on the environment than farming animals for meat. Raising chickens, cows, and pigs requires a tremendous amount of water, land, and energy—largely because raising animals also means growing food for them to eat. Farming insects requires far fewer resources.”
- **The future of food production:** “That means insect farmers can produce large amounts of food very quickly, something experts predict will prove essential in the future as the global population continues to climb.”

##### Page 2:

##### Obstacles to insect eating becoming popular in America

- **Cultural acceptance:** “One reason is that from a young age, many of us are taught to stay away from insects like bees, scorpions, and ticks, which can sting and bite us and sometimes spread diseases. We have come to see bugs as little monsters.”
- **Production:** “For one, our country doesn’t have much of a system to support farming bugs. Few people know how to do it, and there aren’t many places to buy the necessary equipment.”
- **Price:** “For the most part, however, the supply of edible insects in the U.S. remains small. As a result, insect-based products are expensive.”

#### CORE SKILLS WORKOUT:

##### FINDING AND USING TEXT EVIDENCE

##### \*Higher Level (HL)

Answers will vary slightly. Sample responses:

1. C
2. A
3. B
4. A; I chose A because it shows that far fewer natural resources are needed to produce insects than other sources of food, like cattle for beef. Using fewer resources puts less strain on the environment.
5. B; Answer A does not cite where the paraphrased information is from. Answer C does not cite where the paraphrased information is from. It also does not introduce the information or explain how the information supports the claim.
6. Insect eating is not currently popular in the U.S. for several reasons. One reason is that Americans have a cultural aversion to bugs. Author Kristin Lewis writes that Americans have “come to see bugs as little monsters” because “from a young age, many of us are taught to stay away from insects like bees, scorpions, and ticks, which can sting and bite us and sometimes spread diseases” (24). In other words, we are scared of bugs and grossed out by them, and because of this, we don’t want to eat them. Another reason bug



eating is not popular in America is because the U.S. lacks the infrastructure for insect farming. Lewis explains that few people know how to farm insects and that it can be difficult to find the necessary equipment (24). This means edible insects are just less available in the U.S. What's more, edible insects and insect-based products are expensive in the U.S. Lewis explains that because the supply of insects in the U.S. is low, costs are generally higher (25). Americans' aversion to bugs, the lack of infrastructure for insect farming, and the high prices of insect-based products all make people in the U.S. stay away from eating insects.

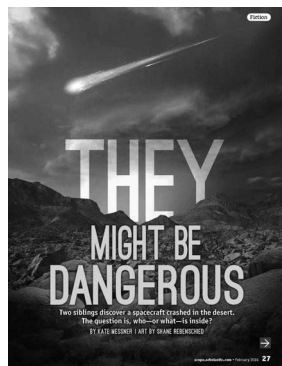
### CORE SKILLS WORKOUT: FINDING TEXT EVIDENCE

#### Lower Level (LL)

Answers will vary slightly. Sample responses:

1. A, B
2. C; I chose C because it shows that far fewer natural resources are needed to produce insects than other sources of food, like cattle for beef. Using fewer resources puts less strain on the environment.
3. Answers may include: "The United Nations (U.N.) estimates that at least 2 billion people—about a quarter of the world's population—eat insects regularly."; "Travel to Mexico City and ask to sample escamoles—ant eggs—fried in butter and spices and served with tortillas."
4. Answers may include: "One reason is that from a young age, many of us are taught to stay away from insects like bees, scorpions, and ticks, which can sting and bite us and sometimes spread diseases."; "For one, our country doesn't have much of a system to support farming bugs. Few people know how to do it, and there aren't many places to buy the necessary equipment."; "For the most part, however, the supply of edible insects in the U.S. remains small. As a result, insect-based products are expensive." Answers to the second part of the question will vary depending on which line from the article students provide.

## “They Might Be Dangerous”



### ANSWERS TO ACTIVITIES AND PROMPTS IN THE MAGAZINE

#### WRITING PROMPT, PAGE 31

Sequels will vary. Here's a sample sequel:

*Zak, I have to help them. I'm sorry. It's probably not the smartest decision, but it's what I need to do.*

*The watchers will help them! That's their job!*

*But will they help them, or will they kill them?*

*Well, we don't know that. I'm sorry, but you're on your own.*

*This is too much for me. I'm sorry.*

*Don't worry, Zak. I understand.*

*Zak gave her antenna an affectionate pat. Stay safe, little sis. I love you.* He scuttled along the rocks toward home.

*I love you too,* she thought, but he was already out of range.

Mip let out a squeal, unsure of whether she should follow Zak.

*Mip, I need you. Please. I can't do this alone.* Mip nodded, staying obediently by Alia's side.

*Alright, Mip. We need to get inside the pods. Can you do it?*

With a tilt of her head, Mip extended her crown horn by several feet and pressed it gently against each pod. The pods opened instantly. One was full of food packets and some sort of equipment. The other one had... creatures! Two mushy-looking beings timidly walked out, looking around in awe. One had very short hair and the other had long flowing locks. They smiled nervously at her, each extending a limb. Some sort of greeting perhaps? After a few awkward seconds, they took their limbs away.

"Hi there! We're from planet Earth!" said the long-haired creature. "My name's Olivia and this is my colleague, Peter."

"Listen—there's no time for introductions. The watchers will be here any second now. The watchers... they're no good. They'll run a million tests on you, and afterward... well, they'll probably kill you. You've got to return to your planet, now!"

The Earthlings looked at each other, unsure of what to do. Probably wondering if Alia could be trusted.

"But we've come all this way. Billions of miles through space. It took YEARS."

"You've just got to trust me on this," Alia pleaded. "I'm risking my life to be here right now. If the watchers find me, I'll be in big trouble."

"I think it may be too late," Olivia said, pointing at the 50 or so watchers who were floating along the rocks on the far side of the park. Alia gulped. They weren't dressed in their normal watcher uniforms. They were dressed for battle. Alia heard their distinctive siren grow louder; a high-pitched wail that had always given her goosebumps. It reminded her of the sound Mip made when she was bitten by a Zipporoo.

Alia estimated they had one minute, maybe less.

"Please, you've got to go back to your planet!"

"Listen—you don't understand how long it took to get here!" Peter said. "Do you even know what years are, or..." he stopped mid-sentence. The watchers had begun to circle them, floating toward them faster and faster. Until now, Alia hadn't given much thought about herself. What would she do if the watchers caught her? Would they kill her too?

Olivia and Peter seemed terrified. They looked at each other. Alia guessed they were sending telepathic thoughts. Finally, Peter spoke.

"Thank you for your warning. I hope you don't get in trouble. You seem like a good... uh... kid."

Olivia tugged urgently at Peter's arm, and they ran into their pod.

Mip gave another squeal, darting into the pod after the Earthlings.



*Mip, come back!*

Alia ran into the pod after her, the siren now a deafening roar. The watchers must be closing in. The pod was small—the size of her living room at home. So where could Mip possibly be?

Suddenly, she realized that Olivia was asking her a question.

“You wouldn’t want to come with us, would you? Back to Earth?”

Ah. There was Mip! She had already settled into a comfy-looking seat with a little cushion. She gave a yawn and closed her eyes.

It seemed that Mip had decided for them.

Alia and Mip were going to Earth!

## ANSWERS TO ACTIVITY SHEETS

### FEATURED SKILL: CHARACTER

Answers will vary. Sample responses:

1. I think Alia would help the creatures. We learn at the beginning of the story that she is excited about the idea that intelligent life might visit their planet. Throughout the story, she is intrigued by the pods, walking increasingly closer to them.
2. *“We have no idea who they are! Well, I want to find out.”*
3. I don’t think Zak would help Alia. While Alia is curious about the pods, Zak wants nothing more than to return home. He believes the creatures may be dangerous. Furthermore, he is concerned that if the watchers find them by the pods, they will get in trouble.
4. *“You’re being reckless. We’ve lingered too long. We need to get out of here.”*
5. I think the watchers would hurt the creatures in the pod, treating them as scientific objects, rather than intelligent life. Zak’s deep fear of the watchers comes up repeatedly, reinforcing the idea that they are dangerous. Additionally, we know that they have weapons.
6. “They’d have the equipment—the weapons and tools and research supplies—to deal with this.”

Sample outline:

- Alia tells Zak she wants to help the creatures in the pod. Zak decides to go home.

- Mip breaks into the pods and two Earthlings step out.
- As the watchers approach them, Alia convinces the Earthlings that the watchers will hurt them, and that they must return to their planet. The Earthlings return to the pod, presumably to go back to Earth.
- Mip runs in after them and Alia follows after Mip.
- The Earthlings invite Alia to Earth, and she decides to go!

### “THEY MIGHT BE DANGEROUS” CLOSE-READING QUESTIONS

1. Based on the way Zak commands Alia not to touch the wreckage, his urgency to leave the park, and his fear that he and Alia will get in trouble if they don’t leave, readers can infer that the watchers control the search for intelligent life in their galaxy and don’t take kindly to interference. Later, it is revealed that the watchers’ goal is to take control of other planets, no matter who already lives there. The watchers are clearly an intimidating force in Zak’s and Alia’s eyes.
2. It’s clear that Alia is full of curiosity, longs for adventure, and wants to push the boundaries that have been set for her. She has difficulty sitting still at school, she always wants to explore further into the desert (against her parents’ rules), and she is excited and fearless at the prospect of meeting life from other planets. Zak seems to be the opposite of Alia. He is fearful of the unknown and the authorities.
3. Later in the story, it is revealed that Zak and Alia communicate telepathically; they do not speak to each other aloud. This is likely the reason the author put the dialogue in italics instead of quotation marks; quotation marks are traditionally used for spoken language. Perhaps the author used the italics as a subtle hint that Alia and Zak are not human.
4. Fog is a weather phenomenon where moisture in the air creates a dense, hazy, and disorienting atmosphere. Instead of saying that Zak was afraid, the author describes Zak’s fear as though it were physically present and hanging in the atmosphere as fog does. This simile conveys the idea that Zak’s fear is thick, enveloping, and obscuring. This line contributes to the mood of unease and uncertainty in the story around who or what is in the pod and what the right thing to do is.





5. When Alia asks, “What if they’re just like us?” she is suggesting that the beings in the pod might have a lot in common with her and Zak; that they might have similar emotions, thoughts, or behaviors, and that because of this, Alia and Zak should treat them with the same kindness and compassion that they would treat members of their own species. When Zak says, “Exactly. What if those awful-looking things are just like us?” he means that the creatures may share the dark side of Zak and Alia’s kind—the side that wants to destroy others’ homes and colonize their planets. He sees the aliens as a threat—just as those on his planet are a threat to other intelligent life—and therefore doesn’t want to interact with them, let alone help them.
6. The story takes place on a planet that is not Earth. The details that reveal the setting include: Mip, which readers are likely to have assumed is a dog, turns out to have antennas and a horn; Alia has wings and an antenna; Alia and Zak communicate telepathically; and most revealing of all, the pod from another planet has the word *Earth* written on it.
7. The creatures in the pod are human beings from Earth. These humans would likely answer that they do indeed dream of holding star scraps in their hands, like Alia, and that they do dream of meeting someone like Alia. Like Alia, humans are naturally curious beings. For as long as we have walked the earth, we have gazed up at the sky and wondered what might be out there.

**“THEY MIGHT BE DANGEROUS” AND “DESERT ECLIPSE”  
CRITICAL-THINKING QUESTIONS**

1. Answers will vary.
2. Zak and Alia go to school, have parents who set rules, and have a brother-sister relationship that is like that of many human siblings. Mip has a damp nose and a furry head that Zak scratches, she pants, and she sniffs things she is curious about; these details could all be used in the description of a dog. The author likely leads readers to believe Alia and Zak are human to help readers relate to Alia and Zak—and to think of the creatures in the pod as grotesque, possibly dangerous aliens. Up until almost the very end of the story, readers think of Zak and Alia as “us” and the creatures in the pod as “them.” When it’s

revealed that the creatures in the pod are actually humans, readers are surprised and have to rethink who is “us” and who is “them.” This gives the story an interesting twist and makes readers consider how people treat those who are different or who they see as outsiders.

3. The title reflects Zak’s fear of creatures he doesn’t know. It refers to an assumption that what is unknown is scary or dangerous.
4. Students may offer that choosing courage over fear means making a conscious decision to act despite feeling afraid or apprehensive. People who choose courage over fear face challenges or potentially dangerous situations with bravery in hopes that their actions can lead to positive change—for themselves as individuals, for a community, for the world. Students might offer examples of characters from literature such as Katniss Everdeen from the Hunger Games series, Harry Potter and Hogwarts students from the Harry Potter series, August Pullman from *Wonder*, Liesel Meminger from *The Book Thief*, and Starr Carter from *The Hate U Give*. They might mention people from history such as Rosa Parks, Harriet Tubman, Martin Luther King Jr., Malala Yousafzai, Ruby Bridges, and Anne Frank.
5. The author camped out to view a lunar eclipse in the Anza-Borrego Desert, and Alia and Zak live on a desert planet; the author describes an experience involving a stink bug, and like stink bugs, Alia and Zak have wings and antennas; the author relates observing a celestial event with wonder, just as Alia is fascinated by the stars and the secrets of the galaxy; the author explains that the stink bug in the desert appeared gross to a young boy, just as the aliens appear grotesque to Alia and Zak; Joe, the desert guide, protected the stink bug and its home, just as Alia wants to protect and help the Earthlings.
6. Answers will vary, but students may offer ideas along the lines of “We should not assume that what is unfamiliar is harmful.”

**“THEY MIGHT BE DANGEROUS” QUIZ**

**\*Higher Level (HL)**

1. B (vocabulary; R.4)
2. D (inference, character; R.1, R.3)
3. A, B, C (inference; R.1)



4. A, C (inference, text evidence; R.1)
5. C, D (inference; R.1)
6. C, D (synthesis; R.9)
7. For Alia, one pro of leaving and letting the watchers do their work is that the watchers are professionals who know what they are doing. On page 30, the author writes of the watchers, "They'd have the equipment—the weapons and tools and research supplies—to deal with this." Zak and Alia, on the other hand, have no experience dealing with unknown spacecraft. Another pro of leaving is that if the watchers find Alia and Zak helping the creatures in the pod, Alia and Zak will be punished. Zak's persistent fear of the watchers and his warning to Alia, "We'll get in trouble!," make this clear. That said, there are also cons to leaving and letting the watchers take over. The watchers do not seem to respect those who are not from their own planet, as revealed when Alia thinks about how the flight capsules being developed on her planet would "launch with strict orders to colonize any discovered planet, no matter who already lived there." While Alia would treat the creatures in the pod with courtesy and respect, the watchers likely would not give them the same consideration, so leaving the creatures in the pod to the watchers may put them in danger. (inference, evidence, writing arguments to support claims; R.1, R.8, W.1)
8. This quote sums up how the two siblings are opposite in every way. While Zak is a homebody who is deeply afraid of the unknown, Alia craves adventure and excitement and embraces new experiences. Because the siblings have such different personalities, they have entirely different attitudes toward the creatures in the pods. Answers to the second part of the question may vary. To start, students may say that the author decided to make the characters different to create tension and help present the pros and cons of leaving the crashed spacecraft and letting the watchers take over, as Zak would like to do, versus staying and helping the creatures in the pod, as Alia is inclined to do. The author may also have used Zak as a way to show that Alia's excitement and openness toward the creatures in the pod are not necessarily shared by others from her planet. Students may also say that Zak's fear of

the watchers and deep desire to leave the pods and return home help create suspense. Like Zak, the reader begins to fear what will happen if the watchers find the siblings at the pods. (point of view, writing arguments to support claims; R.6, W.1)

### **"THEY MIGHT BE DANGEROUS" QUIZ**

#### **\*Lower Level (LL)**

1. B (vocabulary; R.4)
2. D (inference, character; R.1, R.3)
3. A, B, C (inference, text evidence; R.1)
4. A, C (inference; R.1)
5. C, D (inference; R.1)
6. C, D (synthesis; R.9)
7. For Alia, one pro of leaving and letting the watchers do their work is that the watchers are professionals who know what they are doing. On page 30, the author writes of the watchers, "They'd have the equipment—the weapons and tools and research supplies—to deal with this." Zak and Alia, on the other hand, have no experience dealing with unknown spacecraft. Another pro of leaving is that if the watchers find Alia and Zak helping the creatures in the pod, Alia and Zak will be punished. Zak's persistent fear of the watchers and his warning to Alia, "We'll get in trouble!," make this clear. That said, there are also cons to leaving and letting the watchers take over. The watchers do not seem to respect those who are not from their own planet, as revealed when Alia thinks about how the flight capsules being developed on her planet would "launch with strict orders to colonize any discovered planet, no matter who already lived there." While Alia would treat the creatures in the pod with courtesy and respect, the watchers likely would not give them the same consideration, so leaving the creatures in the pod to the watchers may put them in danger. (inference, evidence, writing arguments to support claims; R.1, R.8, W.1)
8. Zak and Alia are opposite in every way. While Zak is a homebody who is deeply afraid of the unknown, Alia craves adventure and excitement and embraces new experiences. Because the siblings have such different personalities, they have entirely different attitudes toward the creatures in the pods. Alia is curious about the creatures and wants to help them if she



can, while Zak wants to get away from them as fast as he can. He is nervous about the creatures and scared of being caught by the watchers. (point of view, writing arguments to support claims; R.6, W.1)

### CORE SKILLS WORKOUT: MAKING INFERENCES

1. Answers will vary. Sample response:

- *"Put that down! Zak ordered. We have to go. Someone must have seen this; the watchers are probably on their way. We'll get in trouble! Alia knew he was right. But she wasn't ready to go." (p. 28)*
- *"Alia thought hard about that. The flight capsules being developed on their own planet would launch with strict orders to colonize any discovered planet, no matter who already lived there. And yet, if that were her inside the pod, she'd hope someone would choose courage over fear." (p. 30)*

2. Answers will vary. Sample response:

- *"She struggled to be still and attentive for lessons each day, but she loved racing through the desert on the way home, kicking up sand, skittering over rugged rocks on the far side of the park. She always wanted to push further into the desert, beyond where their parents permitted them to explore." (p. 28)*
- *"Well, I want to find out." (p. 29)*
- *"Was it the name of a faraway planet? Did the creatures inside dream of holding star scraps in their hands too? Did they dream of meeting her?" (p. 30)*

3. Answers will vary. Sample response:

- *"Zak never liked to wander far." (p. 28)*
- *"They could carry diseases. We have no idea who they are!" (p. 29)*
- *"They're not from here, Alia! They might be dangerous." (p. 30)*

4. When Alia asks, "But what if they're just like us?" she is suggesting that the beings in the pod might have a lot in common with her and Zak; that they might have similar emotions, thoughts, or behaviors, and that because of this, Alia and Zak should treat them with the same kindness and compassion that they

would treat members of their own species. When Zak says, "Exactly. . . What if those awful-looking things are just like us?" he means that the creatures may share the dark side of Zak and Alia's kind—the side that wants to destroy others' homes and colonize their planets. He sees the aliens as a threat—just as those on his planet are a threat to other intelligent life—and therefore doesn't want to interact with them, let alone help them.

5. Answers will vary. Sample response:

- *"Even Mip, tipping her antennas toward home, seemed to be waiting for Alia, but Alia scratched Mip behind her crown-horn and turned back to the pod." (p. 30)*
- *"Alia folded her wings tight at her sides, bent low, and ran her antenna over the strange symbols scratched into the pod's dark surface. She traced the straight lines and curves:  
E  
A  
R  
T  
H  
Earth.  
Was it the name of a faraway planet?" (p. 30)*

6. Answers will vary. Sample response:

- *"She traced the straight lines and curves:  
E  
A  
R  
T  
H  
Earth.  
Was it the name of a faraway planet?" (p. 30)*
- *"Alia turned back to the first pod, where something glossy was snagged on a sharp edge of metal. She tugged it from the capsule and stared.  
It was a page of images . . . Their faces were raw, their bodies soft and mushy looking." (p. 29)*

## “Ode to El Molcajete”



### ANSWERS TO ACTIVITY SHEET

#### POETRY ANALYSIS:

1. He is writing about his childhood.
2. The memories Soto describes in this poem involve not only the molcajete but also members of his family. He begins by describing his grandmother using her molcajete, her eyes watering from the onion she is smashing. When Soto describes a time he licked a spoon that was resting in the molcajete, he doesn't mention his grandmother, but in a way, she is part of this memory too, as she is likely the one who made the spicy food that he licked off the spoon. Soto then describes a time he took the molcajete outside and filled it with dirt—and how his mother reacted when she caught him. And finally, Soto writes about his grandfather eating spicy chiles from the molcajete.
3. We learn that she had a son who went away (we don't learn the reason) and that she watched TV novelas.
4. Soto writes that his tongue was “like a red flag.” This simile helps you picture him with his tongue hanging out of his mouth in reaction to the spicy food he just licked off the spoon. Soto then uses a second simile to help us picture the way his tongue was hanging out of his mouth, writing that it was “Like the tongue/Of a dog on a hot day.” Next, Soto describes drinking from a hose as “a gas station/Of water” that filled up his “one-gallon stomach.” This metaphor helps the reader understand that Soto gulped an enormous amount of water—that the water was flowing from the hose into his stomach the way gas flows from a gas pump into a car's gas tank.
5. These lines echo lines from the first stanza of the poem: “The half moon of onion/Cries sad tears/Into the stone,/And my abuela/Leaks two or three tears,/Not from the sadness/Of a son going away,/Not for the starstruck/Young couples/In TV novelas./It's the onion/That makes her cry.” Answers to the second question will vary. Perhaps the poet included this echo to draw a connection between his grandmother and himself (using the molcajete led both of them to cry) while also emphasizing the difference between the two of them (she's an adult who makes spicy food for her family; he's a kid who messes around in the backyard). Or perhaps the poet included this echo simply because there is something enjoyable about it for the reader—there's something fun or satisfying in recognizing the similarity between the two groups of lines. Some students may also find humor in the echo and how it expresses the idea that it was onions that made Soto's grandmother cry and an angry look from his mom that made Soto cry.
6. When Soto describes the molcajete as running with the blood of tomatoes, he is comparing the tomatoes being crushed in the molcajete to an animal being



killed. In the third stanza, Soto continues this metaphor when he describes the molcajete as a “slaughterhouse” for chiles, tomatoes, and onions.

7. “Ode to El Molcajete” is an ode because it expresses the writer’s thoughts and feelings about an object: his grandmother’s molcajete. The writer describes his memories of the molcajete and how it was connected to members of his family. He seems to be recounting these memories fondly, celebrating the molcajete and the role it played in his childhood.