

# COSMIC CRASH



## OPERATION ASTEROID

NASA tried to knock an asteroid off course. It succeeded beyond its wildest expectations.

**LEXILE:** 1080L (920L alternate reading level)

**SOCIAL STUDIES (NCSS) STANDARD:** Science, Technology, and Society

**COMMON CORE (CCSS) STANDARDS:** RI.6-8.1, RI.6-8.3, RI.6-8.9, W.6-8.2

### ENGAGE THE READER

Ask students: What do you know about asteroids? Where do they come from? Why would scientists be interested in them? Then have students examine the photo at the top of the article, and ask: What do you think is happening in this photo? What do you think it would take to knock an asteroid off course? As students read the article, have them note details that challenge or confirm their knowledge about asteroids.

### QUESTIONS FOR CLOSE READING AND DISCUSSION

- What is DART, and how does it work? Why did NASA want to speed up Dimorphos's orbit?
- According to the article, what are the limitations of DART?
- Why do scientists think asteroids might pose a danger to Earth? Do you agree with the author that we should feel safer because of DART technology? Why or why not?

### EXTEND LEARNING

Challenge students to create a visual account of the article, explaining DART's achievement. Students may create their project through drawings, photographs, or any other medium. Whichever they choose, their project should include a written component.

Students might do additional research on DART, to gain a fuller understanding of its technology and mission. They can find information on NASA's [site](#), which includes a video. But the key information is in the article. Their final projects should help a viewer understand why it is important to change an asteroid's orbit time and to monitor the ejecta created by the crash.

Display the completed projects, and invite students to present them to the class and answer questions.

### COVER STORY QUIZ + ANSWER KEY

The cover quiz can be found on page 3 of this guide.  
For the Google Forms quiz, click [here](#).

- 1. A** (RI.2) **2. A** (RI.5) **3. C** (RI.3) **4. A** (RI.4) **5. B** (RI.8)  
**6. A** (RI.5) **7. Answers will vary.** (W.8)



## MUSK BUYS TWITTER

Many are wondering how Twitter will change now that he's in charge.

**LEXILE:** 1070L (890L alternate reading level)

**SOCIAL STUDIES (NCSS) STANDARD:** Production, Distribution, Consumption

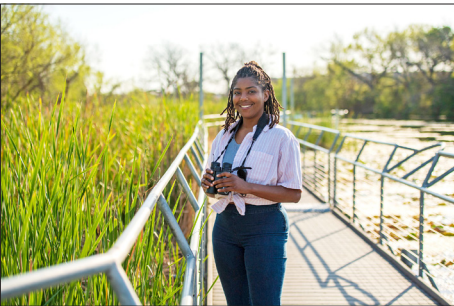
**COMMON CORE (CCSS) STANDARDS:** RI.6-8.1, RI.6-8.4, RI.6-8.5, RI.6-8.6

### BEFORE READING

Ask students: Who is Elon Musk? Why do you think he would be interested in buying Twitter? (*Musk runs the electric carmaker Tesla and the rocket company SpaceX; Twitter is a popular social-media platform.*) What do you think Twitter will be like with Musk in charge, and why? As students read the article, have them note details that challenge or confirm their initial ideas. For further research, students might also write down questions they have about Musk's takeover of Twitter.

### DISCUSSION QUESTIONS

- What is free speech? Do you think there should be rules about what people can post on social-media platforms like Twitter? Why?
- General Motors has suspended ads on Twitter in order to “evaluate the direction of the platform.” What does that mean?
- How might Twitter generate revenue without support from ads? Can you think of examples from other social media?



## IN THE FIELD

Danielle Belleny is a wildlife biologist. She studies birds and their habitats.

**LEXILE:** 1030L (880L alternate reading level)

**SOCIAL STUDIES (NCSS) STANDARD:** Culture

**COMMON CORE (CCSS) STANDARDS:** RI.6-8.3, RI.6-8.4, RI.6-8.8, W.6-8.2

### BEFORE READING

Ask students: What is a wildlife biologist? What interests might lead a person to the field of wildlife biology? What kind of education might prepare someone for this profession? Explain.

### DISCUSSION QUESTIONS

- Belleny says her job is “basically knowing how to read the landscape, based on what plants and different characteristics are there.” What does she mean by “[reading] the landscape”? Why do you think she uses these terms?
- Belleny says collaboration is a big part of her work. Why might collaboration be a natural extension of her work?

### WRITING ACTIVITY

Remind students of Belleny's words: “I always knew I wanted to work with animals, and as a kid, that was the only job I knew where you could do that.” Challenge students to write a short biography about themselves in their future professions. The bio should contain quotes and tell a short narrative about how the skills and interests of their youth put them on a path toward their jobs. It should be written in a way that entices young people with similar interests to follow a similar path.

Name \_\_\_\_\_ Date \_\_\_\_\_

Use this week's cover story, "Operation Asteroid," to answer the questions below. For questions 1–6, circle the letter next to the best answer. If you need more space to write your response to question 7, you may use the back of this page.

<p><b>1.</b> The article is titled "Operation Asteroid" because</p> <ul style="list-style-type: none"> <li><b>A.</b> DART's mission was to knock an asteroid off course.</li> <li><b>B.</b> DART's mission was to pulverize an asteroid before it reached Earth.</li> <li><b>C.</b> asteroids currently pose a danger to Earth.</li> <li><b>D.</b> the DART mission was extremely expensive.</li> </ul>	<p><b>4.</b> In the article, the term "velocity" is used to denote</p> <ul style="list-style-type: none"> <li><b>A.</b> the speed and direction of how an asteroid moves.</li> <li><b>B.</b> the straight line between an asteroid and Earth.</li> <li><b>C.</b> the orbit of an asteroid around the Earth.</li> <li><b>D.</b> the speed at which DART rammed into Dimorphos.</li> </ul>
<p><b>2.</b> The article's first section mostly describes</p> <ul style="list-style-type: none"> <li><b>A.</b> DART's mission.</li> <li><b>B.</b> the trail of dust caused by the collision.</li> <li><b>C.</b> the scientists who designed DART.</li> <li><b>D.</b> the composition of asteroids.</li> </ul>	<p><b>5.</b> NASA's Tom Statler says, "Breaking an asteroid is not really the best way to defend yourself from it." He says this because</p> <ul style="list-style-type: none"> <li><b>A.</b> he doesn't think the DART mission was a success.</li> <li><b>B.</b> flying space debris can be dangerous to Earth.</li> <li><b>C.</b> all asteroids are loosely packed and easily shattered.</li> <li><b>D.</b> NASA has plans for a craft that can knock brittle asteroids off course without breaking them.</li> </ul>
<p><b>3.</b> According to the article, what is the Hubble Space Telescope's role in asteroid detection?</p> <ul style="list-style-type: none"> <li><b>A.</b> to keep an eye on Didymos, in case it starts heading toward Earth</li> <li><b>B.</b> to measure changes in Dimorphos's orbit</li> <li><b>C.</b> to watch both asteroids and the ejecta that was blasted into space</li> <li><b>D.</b> to give an asteroid "that little nudge" to keep the asteroid from colliding with Earth</li> </ul>	<p><b>6.</b> The section "Space Rocks" is mostly about</p> <ul style="list-style-type: none"> <li><b>A.</b> the size of asteroids.</li> <li><b>B.</b> the number of asteroids in space.</li> <li><b>C.</b> the threat asteroids pose to Earth.</li> <li><b>D.</b> the need for an asteroid redirection program.</li> </ul>

**7.** Does DART's successful test make you feel safer? Why or why not?

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