

September 2019 Answer Key

Student Edition

• Student Edition, p. 13

Hands-On: Blast Off!

1. The balloon that was inflated with four breaths traveled farther than the balloon inflated with two breaths. **2.** Answers could include small differences in the setup, including variations in the amount of air used to inflate the balloon or how the balloon was taped to the straw. **3.** Answers can vary but could include using string with less friction, such as fishing line, or tying the string to the chairs at different heights.

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Investigate It!

1. Can a river create its own waterfall? **2.** Waterfalls form over thousands of years, so it's impossible to observe how one forms in nature. **3.** to observe how the water was changing the foam "bedrock" over time **4.** Rivers can indeed form their own waterfalls over time, no earthquakes or glaciers needed.

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Explain This!:

Two owl butterflies sip juice from orange halves held by a girl at the Natural History Museum in London, England. Owl butterflies are native to the rainforests of Central America and South America. The large spots on their wings resemble owl eyes. In this image, the butterflies are positioned so that their eyespots make it look like the girl has two golden eyes. The eyespots on an owl butterfly are an example of mimicry, an adaptation that allows an organism to look like another organism. These butterflies' eyespots make them look like an owl—a top predator—helping to scare away creatures looking to eat the butterflies.

To view a slideshow explaining this phenomenon, visit scholastic.com/superscience.

Teacher's Guide

• Community Spaces (Reproducible, T5)

1 and 2. Answers will vary. **3.** Answers will vary but may include adding weights to the structure or shaking it to test whether it's stable.

• Super Speeds (Reproducible, T7)

1. b **2.** c **3.** False **4.** 450 miles **5.** The top three objects

in the graph are all vehicles powered by engines, while the bottom three are all animals. The engines allow the vehicles to move faster than the animals.

• Erosion in Action (Reproducible, T9)

Analyze Your Model:

1. Observations may include that water formed depressions in the model, and blowing on the model caused pieces of sugar to move around. Pouring the water from higher up and blowing harder on the model led to more erosion. **2.** Answers must include claims that are supported by evidence collected from testing the model.

• No-Sweat Bubble Test (Reproducible, T10)

1. c **2.** b **3.** b **4.** a **5.** d **6.** a **7.** d **8.** c **9.** d **10.** c

Online Skills Sheets

• Sloth Range Map

1. 3 **2.** b **3.** Colombia **4.** Sloths live in areas of South America on the equator and up to about 2,000 kilometers (1,200 miles) north and south of the equator. **5.** Answers could include that sloths are more likely to be struggling near the countries' capital cities. Because more people live in and around cities, there is more likely to be deforestation in those areas.

• What's the Gist?

Summaries should include that sloths have traits to help them live in the rainforests in Central and South America, but the animals are struggling to survive there as a result of deforestation. Rescuers in Costa Rica are working to rehabilitate injured and orphaned sloths, protect the animals in the wild, and raise awareness about sloth conservation with an athletic event that's streamed online.

• Write a Rap

Answers and rap songs will vary.

• Flying High

Narratives will vary but should incorporate details in the story about how the jet suit works.

• Water Supply

1. glaciers and ice caps **2.** groundwater **3.** True **4.** The graphs might show a lower percentage of fresh water in glaciers, ice caps, and frozen ground, and a larger percentage in other liquid water sources. **5.** Answers will vary.

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September 2019 Answer Key, cont'd.

- **Think It Through**

1. d 2. b 3. Stopping the flow of water at regular periods allowed Scheingross to observe how the model bedrock was changing over time. Recording observations is good scientific practice because it allows scientists to gather data that they can use to make inferences and form explanations. **4.** Answers may vary but could include that the water slowed down when it reached the pools. The slow-moving water wasn't strong enough to carry the large bits of gravel, so the gravel settled in the pools. **5.** Answers will vary.