

Forces ▪ *Reading/Notetaking Guide*

Rockets and Satellites (pp. 402–405)

This section explains how a rocket lifts off the ground and what keeps an object in orbit.

Use Target Reading Skills

As you read the section under the blue heading “Satellite Motion,” record the main idea in the graphic organizer. Then, find three details that support the main idea, and record them in the details section of the graphic organizer.

Main Idea		
Detail	Detail	Detail

How Do Rockets Lift Off? (p. 403)

1. Which of Newton’s laws explains the lifting of a rocket into space?

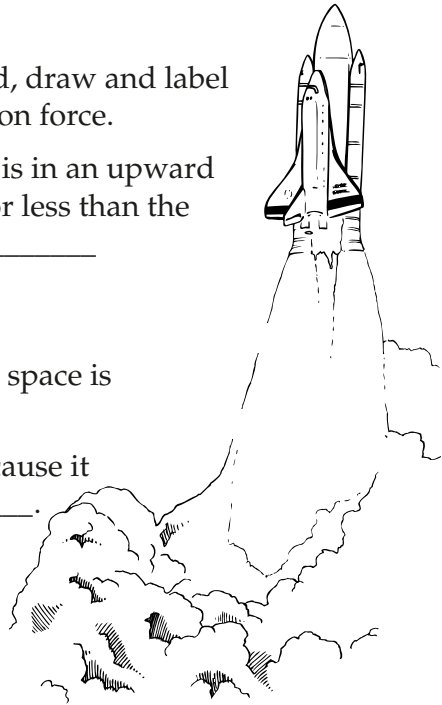
2. When a rocket rises, what causes the action force?

3. When a rocket rises, what causes the reaction force?

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Rockets and Satellites *(continued)*

4. On the diagram of a rocket lifting off the ground, draw and label arrows that show the action force and the reaction force.
5. When a rocket lifts off the ground, the net force is in an upward direction. Is the upward pushing force greater or less than the downward pull of gravity? _____



What Is a Satellite? (pp. 403–405)

6. Any object that travels around another object in space is a(n) _____.
7. An object traveling in a circle is accelerating because it is constantly changing _____.
8. What is a force called that causes an object to move in a circle? _____
9. For a satellite, what is the centripetal force that causes it to move in a circle?

10. Is the following sentence true or false?
Satellites in orbit around Earth continuously fall toward Earth. _____
11. Explain why a satellite in orbit around Earth does not fall into Earth.

12. A satellite is a projectile that falls _____ Earth rather than into Earth.
13. Why doesn't a satellite need fuel to keep moving?

14. What force continuously changes a satellite's direction?
