



COOL TECH

Reusable Rockets and Other Space Tech

Space technology is an exciting part of modern living, but it is still expensive and risky to get something—or someone—into space. We are on the brink of a new space race, with companies striving to make space travel cheaper and safer than ever before. Soon, many people may fly to space for business, pleasure, or even to live! Read all about it in *Reusable Rockets and Other Space Tech!*

What did you learn?

QUESTIONS

1. SSTO stands for ...
 - a. Single-stem-to-orbit
 - b. Single-section-to-orbit
 - c. Single-stage-to-orbit
 - d. Single-spacecraft-to-orbit
2. The spaceplane being used to conduct mysterious missions in Earth's orbit is the ...
 - a. Dream Chaser
 - b. X-37b
 - c. Phantom Express
 - d. Canadarm2
3. Latency is ...
 - a. The time it takes information to travel across a network
 - b. A gaseous chemical element that makes up a portion of the air
 - c. The path of an artificial satellite
 - d. Energy given off in the form of waves or tiny particles of matter
4. The space company founded by Amazon CEO Jeff Bezos is called ...
 - a. Bigelow Aerospace
 - b. SpaceX
 - c. Blue Origin
 - d. Tardis Travel
5. SpaceX named its line of reusable rockets after which fictitious spacecraft?
6. Who founded Virgin Galactic?

TRUE OR FALSE?

- | | |
|--|---|
| _____ 1. The SABRE engine can switch to using oxygen mid-flight. | _____ 4. Seven people have gone to space for fun. |
| _____ 2. Satellite internet networks are slow. | _____ 5. Mir was the first space station where people spent significant time away from Earth. |
| _____ 3. Low latency is bad, and high latency is good. | _____ 6. The ISS is the single most expensive object ever built. |

ANSWERS

- 1. c. Single-stage-to-orbit.** According to the section "Spaceplanes" on page 14, we know that "Such a craft would be a single-stage-to-orbit, or SSTO, spaceplane, widely considered the holy grail of reusable rocket technology." So, the correct answer is C.
- 2. b. X-37b.** According to the section "Spaceplanes" on page 18, we know that "The X-37b is a small, uncrewed spaceplane that is launched atop a conventional rocket. It has orbited Earth in several secret missions, each longer than the last." So, the correct answer is B.
- 3. a. The time it takes information to travel across a network.** According to the section "Satellite Internet" on page 28, we know that "Latency is the time it takes information to travel across a network." So, the correct answer is A.
- 4. c. Blue Origin.** According to the section "Space Tourism" on page 34, we know that "Blue Origin is a space company founded by Amazon CEO Jeff Bezos." So, the correct answer is C.
- 5.** According to page 11, SpaceX named its line of reusable rockets after the Millennium Falcon from the "Star Wars" movie franchise.
- 6.** According to page 32, Virgin Galactic was founded by Sir Richard Branson.

TRUE OR FALSE? ANSWERS

- 1. True.** According to the section "Spaceplanes" on page 15, we know that "But at the edge of space, the engine can switch to using stored oxygen." So, the correct answer is True.
- 2. True.** According to the section "Satellite Internet" on page 28, we know that "Current satellite networks are slow." So, the correct answer is True.
- 3. False.** According to the section "Satellite Internet" on page 28, we know that "So low latency is good, and high latency is bad." So, the correct answer is False.
- 4. True.** According to the section "Space Tourism" on page 31, we know that "Seven people have gone to space for fun." So, the correct answer is True.
- 5. True.** According to the section "Colonizing The Solar System" on page 38, we know that "The space station Mir was the first space station where people spent significant time away from Earth." So, the correct answer is True.
- 6. True.** According to the section "Colonizing The Solar System" on page 41, we know that "The ISS is the single most expensive object ever built, costing more than \$100 billion." So, the correct answer is True.