

Check for Understanding

Science News

Page 2

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

Life on Mars

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Part 1

1. Pascal Lee choose Devon Island as the place to conduct his research because the island's remote location, terrain, and extreme conditions make it useful for testing technology that could someday help astronauts living on Mars.
2. Visitors to Mars will need to wear spacesuits to protect them from the harsh conditions on Mars. The spacesuit provides oxygen and air pressure to regulate a person's bodily functions. The spacesuit also must protect the wearer from extreme cold and radiation.
3. High-energy radiation waves can damage or kill living cells.
4. Robots are used to scout out Mars because they can go places that humans can't.
5. The *K10* robot that Matthew Deans's team is testing uses artificial intelligence. It's programmed to solve problems on its own without any outside instructions.
6. Anna-Lisa Paul has been able to grow lettuce in Marslike soils.
7. Mars's atmosphere is only 0.7 percent that of Earth's and is 95 percent carbon dioxide with trace amounts of oxygen. Earth's atmosphere is 70 percent nitrogen and 21 percent oxygen.

Part 2

1. Dispute. Mars is millions of miles away from Earth. It takes about two years to reach the Red Planet. That means that any mission to colonize Mars needs to be self-supporting and colonists must grow their own food during the trip and upon arrival on Mars.
2. Dispute. The spacesuits used on the International Space Station are very stiff. They are fine for floating in space and doing repairs. But Martian spacesuits will need to be more flexible so that astronauts can bend down and pick up rock samples. They also need to be easy to get on and off so that astronauts can board their rovers easily.
3. Defend. In 2008, a robot named *Phoenix* landed on Mars and found water ice near the Martian pole.

Space: The Ultimate Vacation Destination

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1. *SpaceShipTwo*
2. lift
3. four
4. atmosphere; inertia
5. weightless
6. glider
7. Spaceport America
8. \$200,000
9. Yuri Gagarin
10. *SpaceShipOne*

It Came From Space

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1. j 2. d 3. g 4. b 5. h 6. a 7. f 8. e 9. c 10. i

Bonus Reproducible

Space Glove Challenge

Answers will vary.