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Activities

Superconductors

Name: _____ Date: _____

Imagine a train that floats on its track and zips along at speeds of 500 kilometers per hour. Thanks to superconductors, such trains already exist in Japan and in Europe. You may be riding on one soon, too. You'll learn what's super about superconductors in this Planet Diary activity.

Directions

- At first glance, superconductors seems like a magic trick. Watch this superconductor demo to see for yourself. Answer Workspace question 1.
- How does the magnet float? Go to How Superconducting Levitation Works. Answer questions 2 through 5 as you advance through the video. Use the controls to pause or rewind as needed.
- Find out more about How Maglev Trains Work. You may be riding on one sooner than you think! Answer the last question.

Workspace

1. Describe what happens in the demonstration.

2. What is a superconductor?

3. What is the Meissner effect?

4. What is the flux trapper effect?

5. How are superconductors used in transportation?

6. Describe how a maglev train is propelled.

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