## ScienceNews for Students

#### **CLASSROOM QUESTIONS**

# **Questions for Mining Metals amidst Seafloor Animals**

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### **SCIENCE**Before reading:

- 1. What is mining and what do miners typically look for?
- 2. Where does most mining take place?

#### **During reading:**

- 1. What is Earth's least-studied ecosystem?
- 2. How many volcanoes hide under the sea?
- 3. Name three types of undersea places people might find big quantities of minerals.
- 4. Explain how much copper has been mined in the last quarter century, and how much more will likely be needed by 2040.
- 5. How would Nautilus Minerals bring up metals from the seafloor?
- 6. What kinds of undersea mining activities are and are not regulated by law.
- 7. Why is knowing what types of damage mining might cause such a challenge to scientists and others?
- 8. What does Cindy Van Dover call the "least known wilderness" on Earth?

#### After reading:

- 1. If scientists can't be sure that mining operations can protect undersea life, should they go ahead and mine anyway? Why or why not?
- 2. Some of the world's nations cannot afford to police the waters off of their shores. If they can't, should other nations pay for that policing?
- 3. Why should people care about sea animals living a mile or more below the surface of the ocean waves?

#### **SOCIAL STUDIES**

- 1. Read about copper and identify at least six of its many uses by people today. If copper supplies ran out, and mining undersea sources was not yet legal or affordable, how would you recommend that people cope? Come up with three suggestions and describe how cities might put your suggestions into practice.
- 2. Mining companies are talking about retrieving metals from deposits off of Namibia and off of Papua New Guinea. Identify both places on a world map and calculate the distance between each place and your home town. Most metals would be moved by ship. Find out how fast cargo vessels travel and calculate how long it would take for a ship of raw minerals from each site to reach the port nearest to you. Now calculate the distance from that port to a manufacturer in your home town (if there was one). Use that number to figure out how long it would take a truck or train to get the minerals to a manufacturer in your neighborhood if they could travel at normal speeds (note: they cannot exceed local speed limits).

### **Further Reading**

S. Perkins. Mining metals amidst seafloor animals
(https://student.societyforscience.org/article/mining-metals-amidst-seafloor-animals).

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