

Sinkholes: Chemistry Goes Deep

Directions: *Before reading*, in the first column, write “TF” or “,” indicating if you believe the statement is true or false. As you read, compare your opinions with information from the article. In the space under each statement, correct any false statements.

Me	Text	Statement
		1. Most sinkholes in the United States occur in the Midwest.
		2. Sinkholes occur all over the world.
		3. Sinkholes are often caused by human activity.
		4. Sinkholes may form if the pressure above the soil is lowered.
		5. Areas with limestone bedrock are more susceptible to sinkholes.
		6. Acid rain can contribute to sinkhole formation.
		7. Carbonic acid is made from water and carbon dioxide.
		8. Decaying organic material can produce carbon dioxide, which dissolves in groundwater to make it basic.
		9. There is no way to predict where a sinkhole might form.
		10. Carbonated soft drinks contain carbonic acid.

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Directions: As you read the article, use your own words to complete the graphic organizer regarding sinkholes.

Where they are often found	1. 2.
Unusual sinkholes	1. 2. 3.
Chemistry of sinkhole formation	
How to detect sinkholes	1. 2. 3.

Summary: Write a summary to explain how acids can have cause sink holes.

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1. What percent of the land area in the U.S. is susceptible to sinkhole formation?
2. What are the major features of karst topography where sinkholes often form?
3. What is the chemical name and formula for limestone?
4. What is the source of most calcium carbonate in limestone deposits?
5. Name three things that are made of calcium carbonate, in addition to limestone.
6. What would you observe if you place an egg shell in a container of vinegar?
7. What is the pH of rain, and is that acidic or basic?
8. Name the acid that forms when water and carbon dioxide react. Is it a strong or weak acid?
9. What are the warning signs that a sinkhole may be forming?
10. What gas is used to carbonate sodas?
11. Explain how sodas get their sour taste.