

Anticipation Guide

Directions: *Before reading the article, “Flatus, Chemistry in the Wind”* in the first column, write “A” or “D,” indicating your Agreement or Disagreement with each statement. Complete the activity in the box.

As you read, compare your opinions with information from the article. In the space under each statement, cite information from the article that supports or refutes your original ideas.

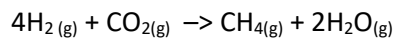
Me	Text	Statement
		1. Flatus is a subject of serious scientific study.
		2. Pilots flying at high altitudes in World War II were not allowed to have dried beans, vegetables in the cabbage family, or carbonated drinks prior to flying.
		3. Most people pass less than 5 milliliters of gas each day.
		4. Vegetarians produce less gas than meat eaters.
		5. People who are lactose intolerant produce less gas than others.
		6. Almost all gases in flatus are odorless.
		7. Some people produce methane gas, and their stools float in water.
		8. Methane has more global warming capacity than carbon dioxide.
		9. Sulfur-containing compounds give flatus an odor.
		10. All chemical products that relieve gas symptoms contain enzymes.

Student Reading Comprehension Questions

Name: _____

Directions: Use the article to answer the questions below.

1. Define Boyle's Law (You can use your textbook for assistance). What two variables are measured? What one variable is kept constant?
2. On average, approximately how many times does a person have flatulence per day? Is this number different for males and females?
3. What are the most common gases found in the human body digestive system?
4. What gases commonly cause the bad odor of flatulence?
5. What is the enzyme needed to digest dairy products? For people who do not have this enzyme, how do they deal with this issue?
6. Explain why vegetarians produce more flatulence.
7. Explain how Beano and Lactaid work differently than Gas-X.
8. What are farmers trying to do to help limit the amount of methane emitted into the atmosphere?
9. The scientist Amedeo Avogadro stated that the volume of a gas (or a mixture of gases) decreases when the number of moles decrease (and vice-versa). For the following reaction that produces methane, use Avogadro's principle to explain what happens to the volume of the gases.



10. Patients are instructed to not eat or drink before a surgery (typically 12 hours before). Why is this important?
11. According to scientists, methane is approximately 25 times worse for global warming than carbon dioxide. However, carbon dioxide (CO₂) seems to be discussed more in discussions on greenhouse gases. Why do you think this is the case?