

INVESTIGATION QUESTION

How does biological gas production demonstrate the way cyanobacteria changed Earth's ancient atmosphere?

HYPOTHESIS

Hint: try writing it as "If ____, then ____, because ____."

MATERIALS

active dry yeast, sugary cereal (crushed), warm water, sealable plastic bag

PROCEDURE

Summarize what you did in your own words.

Observation Log

Time	Bag Appearance	Estimated Size Change	Notes
Start			
10 minutes			
20 minutes			
30 minutes			

ANALYSIS

What gas inflated the bag? Write the fermentation equation in words:

_____ + _____ + _____ --> _____ +

CONCLUSION

How does this model what cyanobacteria did to Earth's early atmosphere? What is similar and what is different?

CONNECT IT

Look up banded iron formations. What are they, and what do they tell geologists about when oxygen first appeared in Earth's atmosphere?

THINK FURTHER

Oxygen was initially toxic to most early life on Earth. How did what could have been a mass extinction event eventually lead to more complex life?

ADDITIONAL NOTES