INVESTIGATION QUESTION
How does available oxygen affect combustion, and what does this tell us about why Carboniferous insects were so large?

HYPOTHESIS

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

MATERIALS

candle, matches, small jar, large jar, stopwatch (adult supervision required)

PROCEDURE

Summarize what you did in your own words.

Results Table

Container	Estimated Oxygen Available (relative)	Time Until Candle Went Out
Small jar		
Large jar		
No jar (open air)		

ANALYSIS

What happened to combustion time as the available oxygen increased? Why?

CONCLUSION

Carboniferous oxygen levels reached about 35%. Explain in your own words how this could allow insects to grow to enormous sizes. (Hint: research how insects breathe.)

CONNECT IT

Look up Meganeura and Arthropleura -- two giant Carboniferous invertebrates. Describe each one and explain what body feature limited how large they could grow.

THINK FURTHER

If oxygen levels dropped back to 35% today, which living animals might be most affected in terms of potential body size? Which would be least affected, and why?

ADDITIONAL NOTES