SCIENCE EXPERIMENT

Testing the Flammability of Different Natural Materials

Name: _____ **Date:** _____

QUESTION

How flammable are different natural materials?

HYPOTHESIS

I think _____ will be the most flammable because _____.

MATERIALS

- Small samples of natural materials (dry)
  - Examples: pine needle, dry leaf, grass, bark, cotton boll, twigs, pine cone scale, seed pod, paper (from trees)
- Metal tray or fireproof surface
- Long-handled lighter or matches
- Tongs or tweezers
- Timer or stopwatch
- Safety glass or jar (to cover flame if needed)
- Notebook and pencil

SAFETY FIRST!

- Always have an adult present.
- Do the experiment in a well-ventilated area away from anything that can catch fire.
- Use small samples only.
- Use tongs to hold materials near the flame.
- Do not leave the experiment unattended.
- Have water or a lid/jar ready to put out flames.

PROCEDURE

1. Place all materials within easy reach on your workspace.
2. Use tongs to hold a small sample of the first material.
3. Hold the sample just above the flame for 5 seconds.
4. Observe what happens after you remove it from the flame.
5. Record how easily it ignites, how long it burns, and any other observations.
6. Allow the ashes to cool on the metal tray.
7. Repeat steps 2–6 for each material.
8. Make sure all flames are fully out when finished.

RESULTS

Material	Ignited Easily? (Yes / No)	How Long Did It Burn? (Seconds)	Flame Height (Low / Medium / High)	Notes / Observations

CONCLUSION

1. Which material was the most flammable? _____
2. Which material was the least flammable? _____
3. What pattern or trend did you notice? _____

_____

WHAT DID YOU LEARN?

Write one or two things you learned from this experiment.

_____

_____

_____

TIP: Different natural materials have different amounts of oils, moisture, and structure, which affect how easily they burn.