

# Investigation Planner

## Creativity in Science and Technology

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**Title of Investigation** What materials burn for the longest?

**Date** Semester 2 2016

1. In this investigation, **we are trying to find out** what cloth or paper burns for the longest? Tissue, copy paper, flannel, cotton bolls or brown paper bag.

2. **What we think** will happen is the tissue and the papers will not burn for long. The one that will burn the longest will be the flannel.

3. **Why we think** this will happen because everyone knows that paper does not burn for long because it has oxygen in it. The tissue is really thin and it will burn quickly because it has oxygen in it. The flannel will take a long time because it is thick.

4. In this experiment, what we will **change** is types of paper/cloth.

5. (a) We will **observe** and **record** is which material will stay alight the longest.

(b) We will make our **measurements** using a timer.

6. The things which will be **kept the same** throughout the experiment are: they all have the same chance because we are using the same lighter. We will do the tests in the same place, and at the same time of day, under the same conditions as much as possible.

7. We will **do the investigation** by holding the samples with tongs. We will light them using a lighter.

8. The **safety** precautions that we need to take are wearing goggles and having a water bucket nearby.

9. **What happened?** **Material and Length of Burn – seconds**

Cotton balls	paper	Paper Towel	Tissue	Paper Bag	Flannel	Mix
52 sec	37sec	55sec	8.5sec	6sec	57sec	96sec
31sec	28sec	13sec	7sec	8sec	61sec	285sec
67sec	32sec	8sec	6.5sec	10sec	52sec	32sec
35sec	55sec	5sec	17sec	12sec	12sec	178sec
<b>185sec</b>	<b>152sec</b>	<b>81sec</b>	<b>39sec</b>	<b>36sec</b>	<b>182sec</b>	<b>591sec</b>

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10. **Is this what you thought** would happen? We thought the flannel would burn for the longest and the tissue will burn for the least amount of time.

11. **Why do you think** this happened? Because cloth is often hard to burn. It is hard to burn because it is thick. The paper was really thin, thinner than my fingernail.

12. What did you find **difficult** when doing this experiment? Trying to get the fire to get started because the lighter often didn't work.

13. If you were to do this experiment again what would you change to **make it better**? Have more things to light on fire.

**Congratulations!**  
**You have now completed an investigation and a report  
on what happened and why.**

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