

Writing Up an Investigation Assignment - Teacher Edition

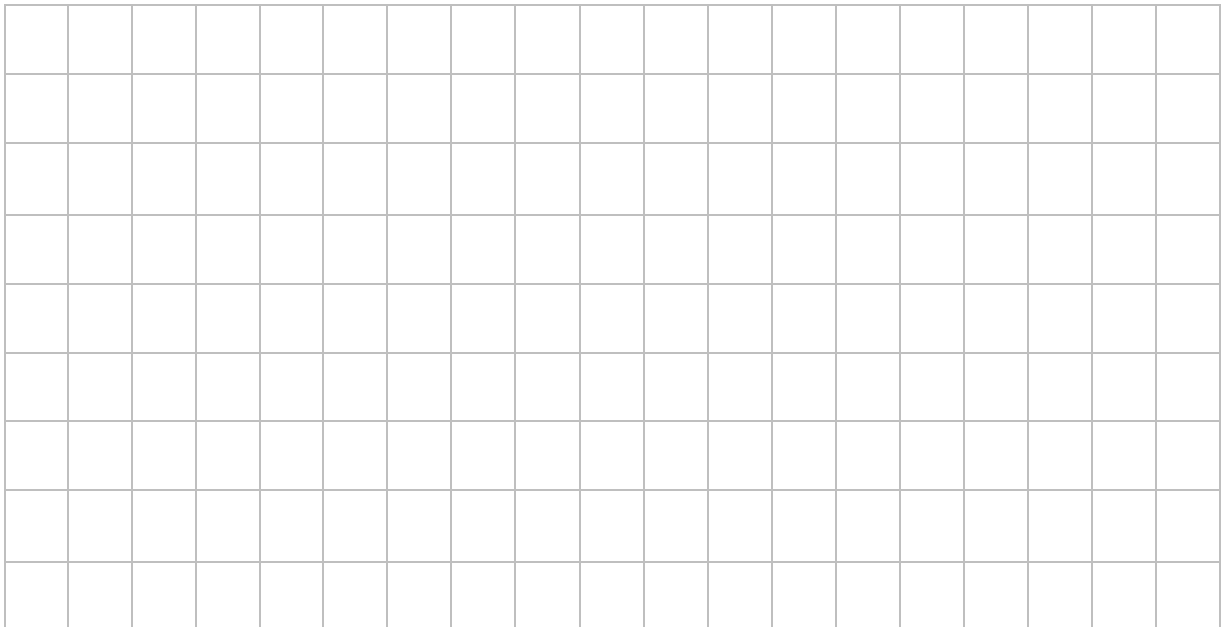
I. **Sorting Results**

The data below was recorded as part of lab investigating how the stopping distance of a toy truck changed when a different number of washers were added to its tray.

Washers added = 0, stopping distance = 0.6m, Washers added = 1, stopping distance = 0.9m, Washers added = 2, stopping distance = 1.1m, Washers added = 3, stopping distance = 1.3m, Washers added = 4, stopping distance = 1.4m, Washers added = 5, stopping distance = 1.6m,

1. Draw a data table in the space below to correctly display this data.

2. Draw a graph to show the relationship between stopping distance and mass (number of washers added)



3. Write a conclusion based on the data you have been given.

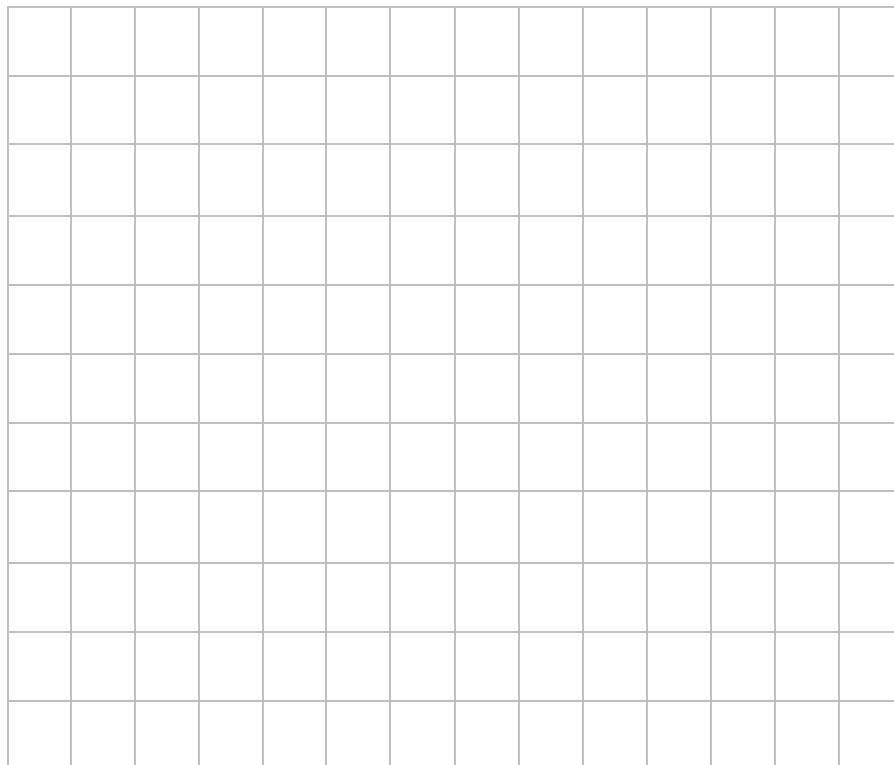
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II. Interpreting Results

The data below shows the change in temperature of two metal cans which have been wrapped in aluminum foil. The cans were filled with hot water and monitored every two minutes for 10 minutes. Can A was wrapped in four layers while Can B was wrapped in one layer.

Time (min)	Temperature (°C)	
	Can A	Can B
0	90	90
2	87	87
4	85	84
6	84	82
8	84	80
10	83	78

1. Draw a graph to display these results.



2. Which wrapping was the most effective at preventing heat loss from the can?

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3. Use the graph to find out what the temperature each can would be after 3 minutes.

4. What variables would need to be controlled to make this test as fair as possible.

5. Write a conclusion for these findings.

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ANSWERS

I. Sorting Results

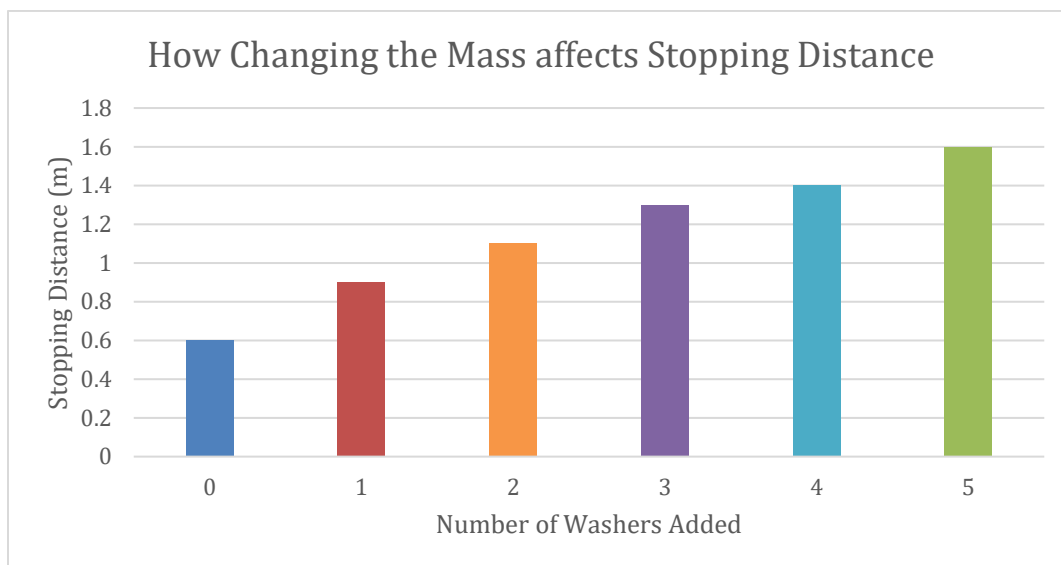
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1. Draw a data table in the space below to correctly display this data.

Number of masses (washers) added	Stopping Distance (m)
0	0.6
1	0.9
2	1.1
3	1.3
4	1.4
5	1.6

2. Draw a graph to show the relationship between stopping distance and mass (number of washers added)



3. Write a conclusion based on the data you have been given.

The greater the mass of the truck (the more washers added), the longer it takes to stop.

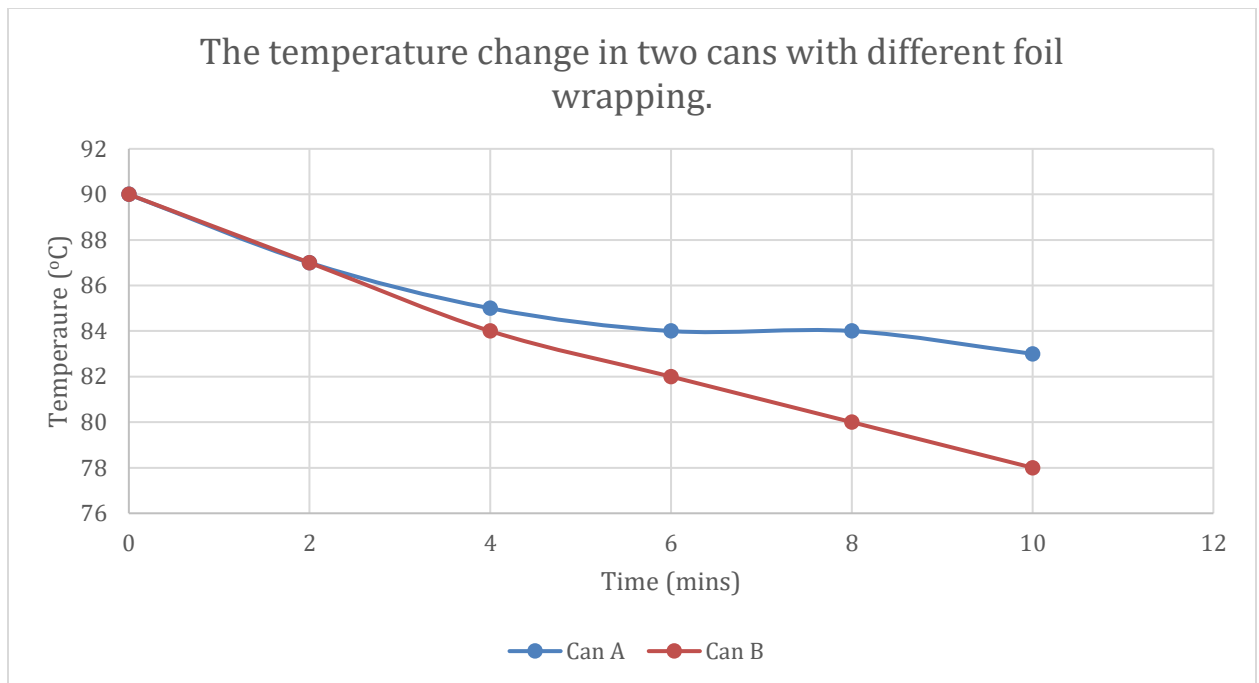
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Can A

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3. Use the graph to find out what the temperature each can would be after 3 minutes.

Students should use interpolation to find approximate results:

Can A = 86°C

Can B = 85.5°C

4. What variables would need to be controlled to make this test as fair as possible.

Same size can

Same volume of water

Same thickness of aluminum foil.

Position of reading thermometer

Same material for can.

Lid – either used for both or neither.

5. Write a conclusion for these findings.

The can with the 4 layers of foil (Can A) keep the contents warmer for longer.