

CBA1 Extended Experimental Investigation

C B A

Safety Procedures I should have

USED: I should have worn safety goggles while boiling the hot water. I should have worn gloves while handling the hot beaker of water.

Things I should've improved on:

Since my experiment I've discovered that salt dissolves faster in hot water, I would like to improve on this by figuring out if there is a correlation between the intensity of the heat and speed of which the salt dissolves.

Hypothesis: I thought that the salt would dissolve in the hot water the fastest and the salt in the cold water would dissolve the slowest because the heat of the water would melt the salt as well as dissolve it!

Question: Between hot water, cold water, and water at room temperature, which one would salt dissolve the fastest in??

Method:

- Fill each beaker with 200ml of water
- Put ice into one and take it out once it's at 9 degrees (Make sure you still have 200ml of water in the beaker once the ice melts)
- Place the second beaker on a hotplate until it's at 32 degrees
- Leave the third beaker alone, i.e. at room temperature (measured at 19 degrees)

Hot: 32 degrees
Cold: 9 degrees
Room temp: 19 degrees

- Spoon in 5g of table salt (using the balance to measure) into each beaker of water and set a timer to each individual one
- Stir each one for a minute or until salt is fully dissolved
- Record your results

Results: The hot 32 degree one took 100 seconds, the cold 9 degree one took 380 seconds and the one that was 19 degrees/ the room temperature one took 150 seconds for the salt to dissolve.

Conclusion: In conclusion the salt dissolved in the 32 degree water the fastest just like I hypothesised. Thank you for taking the time to read my project I hope you enjoyed!!

Research: I discovered that heat affects the speed of which the salt dissolved from a well-known website called www.middlesexhighchemistry.com/lessons/ncpapter5/lessons/ I also watched a video on YouTube called "How Much Salt?" It showed the amount of salt in three different temperatures of water and how quickly it dissolved

List of Equipment:

- 4 beakers
- 1 thermometer
- 1 hot plate
- Ice
- 5g of table salt
- 1 balance
- 3 timers
- water at three temperatures

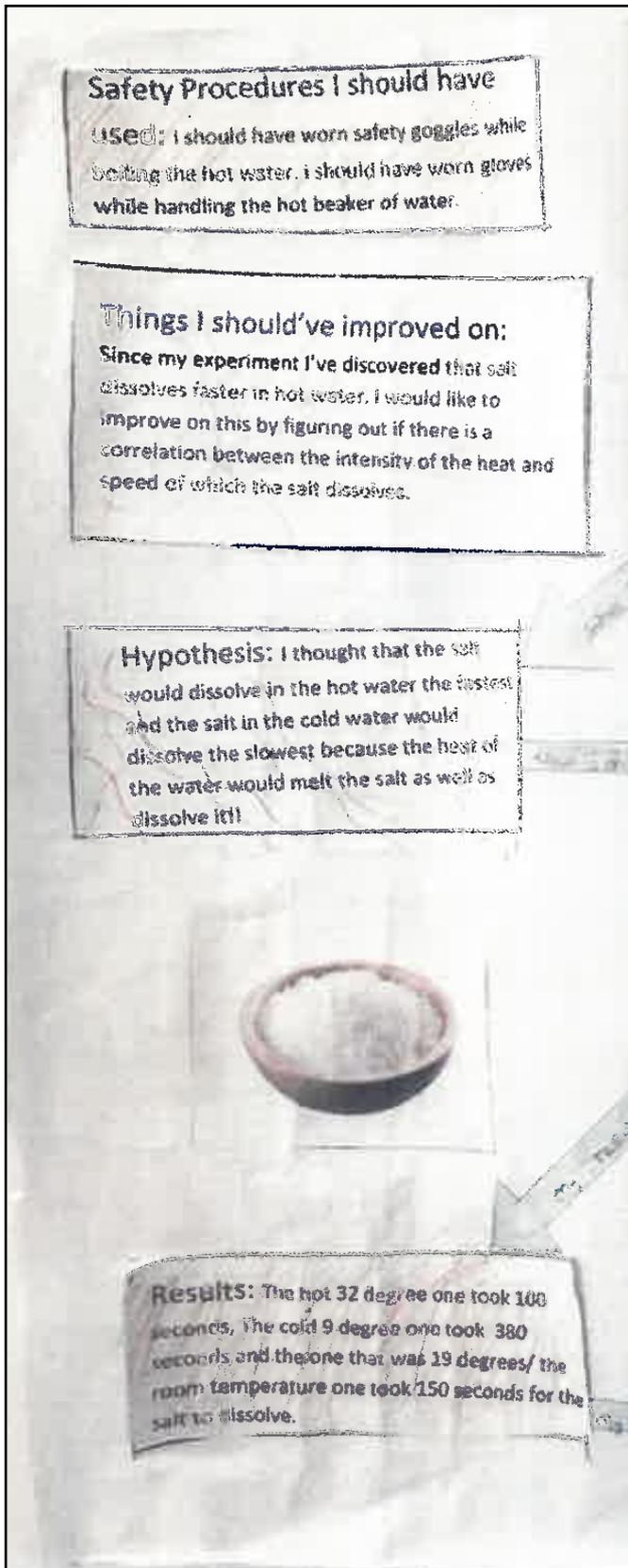
Graph 1:

Temperature	Time (Seconds)
32	100
19	150
9	380

Diagram 1:

Science at work

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1. Suggests improvements

2. Forms testable hypothesis

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Question: Between hot water, cold water, and water at room temperature, which one would salt dissolve the fastest in??

Method:

- Fill each beaker with 200ml of water
- Put ice into one and take it out once it's at 8 degrees (Make sure you still have 200ml of water in the beaker once the ice melts)
- Place the second beaker on a hotplate until it's at 32 degrees
- Leave the third beaker alone, i.e. at room temperature (measured at 19 degrees)

Hot: 32 degrees
Cold: 8 degrees
Room temp: 19 degrees

- Spoon in 5g of table salt (using the balance to measure) into each beaker of water and set a timer to each individual one
- Stir each one for a minute or until salt is fully dissolved
- Record your results

Conclusion: In conclusion the salt dissolved in the 32 degree water the fastest just like I hypothesised. Thank you for taking the time to read my project I hope you enjoyed it

3. Outlines the method used to collect data.

4. Forms a conclusion based on the data.

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Graph 1

Temperature	Time (Seconds)
10°C	100
20°C	150
30°C	280

Science at work

Research: I discovered that heat effects the speed of which the salt dissolved from a well-known website called www.middle-school-chemistry.com/lessons/chapter5/lesson6 I also watched a video on YouTube called "How Much Salt"? It showed the amount of salt in three different temperatures of water and how quickly it dissolved

List of Equipment:

- 4 beakers
- 1 thermometer
- 1 hot plate
- ice
- 15g of table salt
- 1 balance
- 3 timers
- water at three temperatures

Diagram 1

5. Displays data in simple graph.

6. Describes the equipment used to gather data.

