**![C:\Users\maureen horn\AppData\Local\Microsoft\Windows\Temporary Internet Files\Content.IE5\0JDX0WVC\MC900349011[1].wmf]()Using the Scientific Method**

Tonight you will follow the steps below to conduct a simple experiment at home. Tomorrow we will record your finding in your interactive notebook. When we use the scientific method we start with a question. Our **question** today is:

**Why do they put salt on roads in winter before or during a snow or ice storm?**

**Research** this question on the internet and tell me something about what you discovered below (you may use the website: science.howstuffworks.com/.../atmospheric/road-salt1.htm or another of your choosing):

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

We will now create a **hypothesis** from what you have learned (predict what you think will occur):

**If I put salt on ice, then \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.**

**Design an experiment:** To test your hypothesis we will now design an experiment. First you will need to gather these items to conduct this experiment:

![C:\Users\maureen horn\AppData\Local\Microsoft\Windows\Temporary Internet Files\Content.IE5\JGWJCM5H\MC900012913[1].wmf]()2 identical plates

2 identical ice cubes

A clock, timer, or stopwatch

Measuring spoons

Salt

After you have gathered your materials you are ready to begin. Follow these directions exactly to **test your hypothesis**:

1. Place 1 ice cube on each of the plates. The ice cubes must be of the same size and the plates must also be matching.
2. You will place 1 teaspoon of salt on the first ice cube. The second ice cube will not have anything added to it.
3. Set your timer for 5 minutes. When the timer goes off record your observation in the chart below. You will keep making observations at 5 minute intervals for 25 minutes.

|  |  |  |  |
| --- | --- | --- | --- |
| Intervals | Time of observation | Salted ice cube appearance(size and texture) | Regular ice cube appearance(size and texture) |
| 5 minutes |  |  |  |
| 10 minutes |  |  |  |
| 15 minutes |  |  |  |
| 20 minutes  |  |  |  |
| 25 minutes |  |  |  |

**Collect and Analyze the data**: After 25 minutes drain whatever water is on the plate into the tablespoon. Which plate had more water drained from it (the one with the salted ice cube, or the unsalted one)? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

After looking at the information recorded in your data table, seeing how much water was drained from each plate, and feeling the density of each cube you should be able to **draw a conclusion**. Was our original hypothesis correct? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Finally you should **communicate your results** with other scientists. You will do that by sharing your results in class tomorrow.

**Thought Question**: Can you think of another experiment we could use to get an answer to this question?

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