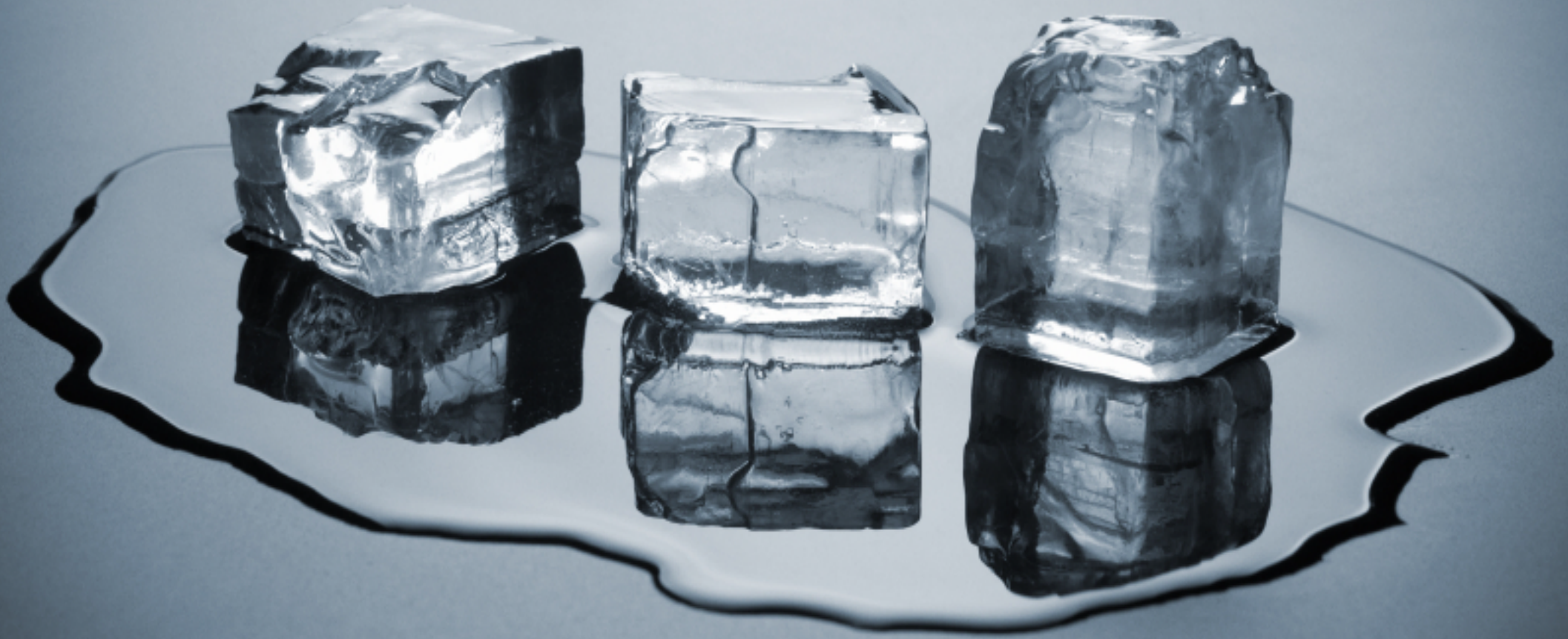


Devising Your Own Experiment Using Scientific Method



Question:

What effect does the addition of salt have on the freezing and melting points of water?

Possible Equipment:



Note:

Your thermometer must have an appropriate scale that can read very low temperatures



Scientific Procedure:

Ask a question.

Find out some background information.

Construct a hypothesis (What you think)

Test your hypothesis by conducting an experiment.

Collect data during the experiment.

Analyse data and draw conclusions.

Communicate your results.





Create an Experiment to Test Your Hypothesis:

- 1) Predict what you think will happen.
- 2) Describe what you did to test this.
- 3) Record your measurements over time.
- 4) Write an explanation of what happened and present your conclusions.

Techniques To Consider...

Testing Against A Control:



Set up two identical experiments. Label one as the 'control' experiment.

Change one variable in the second experiment and compare the results to the control experiment.

Techniques To Consider...

Repeating For A Fair Test:

Time Elapsed	Temperature
1 minute	3 °C
2 minutes	2 °C
3 minutes	2 °C
4 minutes	5 °C
5 minutes	1 °C
6 minutes	0 °C
7 minutes	0 °C
8 minutes	0 °C
9 minutes	0 °C
10 minutes	0 °C

Time Elapsed	Temperature
1 minute	0 °C
2 minutes	0 °C
3 minutes	0 °C
4 minutes	-1 °C
5 minutes	-1 °C
6 minutes	-1 °C

Time Elapsed	Temperature
8 minutes	3 °C
9 minutes	-2 °C
10 minutes	-2 °C

Repeating a test a number of times lets you see if your results are accurate.

If you get one result that is very different from all the rest it usually indicates that an error has been made.