



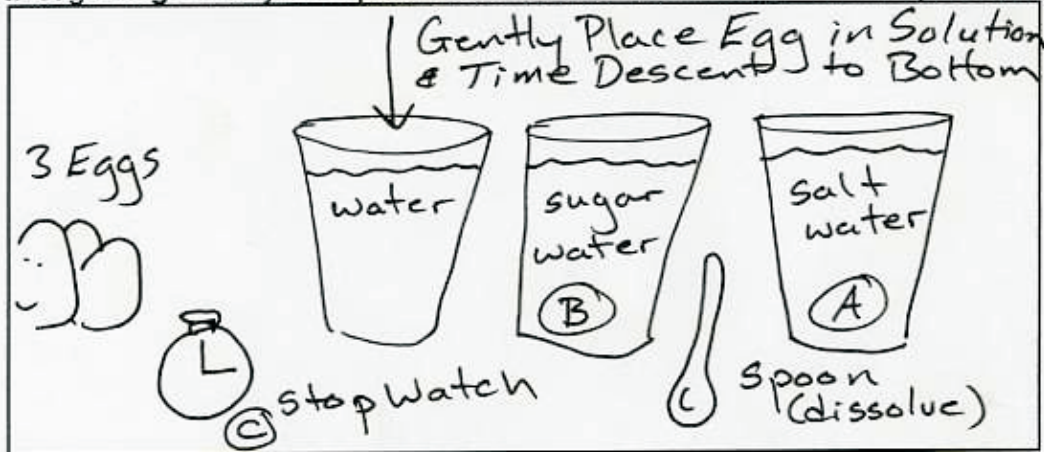
Template #2 Planning Ahead

Date: _____

The purpose of this template is to help you plan what you will be doing **prior** to actually performing the experiment.

Remember that you should consider four major aspects prior to beginning an experiment - the **variables**, **observations**, **materials**, and the **procedure**.

Use a rough **diagram** of your experiment to illustrate the **materials** and the procedure.



It is important to define your **variables** as it allows you to ask good questions, make predictions, and design a meaningful experiment. You need to indicate both the **independent** and **dependent** variables. An independent variable is anything that the experimenter may change. A dependent variable is the effect that the independent variable has (what you measure: time, weight, speed, volume, temperature, etc).

Our Variable List:

independent (A) amount of salt
(B) amount of sugar

dependent - (C) seconds it takes egg to hit bottom of glass

Our Materials List:

<u>3 large glasses</u>	<u>1 stop watch</u>
<u>1 measuring cup</u>	<u>1 spoon (stirring)</u>
<u>1 table spoon</u>	<u>water</u>
<u>salt (bag)</u>	<u>3 eggs</u>
<u>sugar (bag)</u>	_____
_____	_____
_____	_____

Write the **step-by-step instructions** that explain how you will conduct your experiment. Imagine you are telling someone else how they could do the experiment on their own without you there to tell them how. You must use **numbered steps**, **passive voice**, and **past tense** when describing the process.

Remember that scientists will only change **one independent variable** in order to be able to identify what causes change in the dependent variable.

Our Procedure:

1. Pour equal amounts of water (400 mL) into each cup.
2. Mix 1 tbsp of salt into cup (A) and 1 tbsp of sugar into (B), stir until dissolved.
3. Gently release an egg from surface of water in each glass and record time it takes to reach bottom.
4. Add another tbsp of sugar + salt to corresponding glass. Repeat step #3.
5. Repeat step #4 until 10 instances have been recorded.

Prior to making **observations** you need to think carefully about what you are going to measure and how you are going to record your data.

Remember which variables you are **controlling** (independent) and which ones you are **measuring** (dependent).

How are you going to **measure** the dependent variables? Are you going to take notes, use video, use photos, and/or use a table to **record** your data?

Indicate what you are going to record and how you will capture the data.

Our Observation Plan:

- use table to record time for egg to sink for each test
- make visual observations
 - how salt + sugar dissolved
 - colour of water in cups
 - eggs descent (sink/bounce/float/fast/slow)

table sample

	TIME (sec)			
	Test 1	Test 2	Test 3	...
water				
salt water				
sugar water				