

Investigation Planning Proforma

Name

Date

What Do I Want To Find Out?

What Variables Will I Change?

What Things Will I Keep The Same?

What Do I Think I Will See?

Or

What Will I Measure?

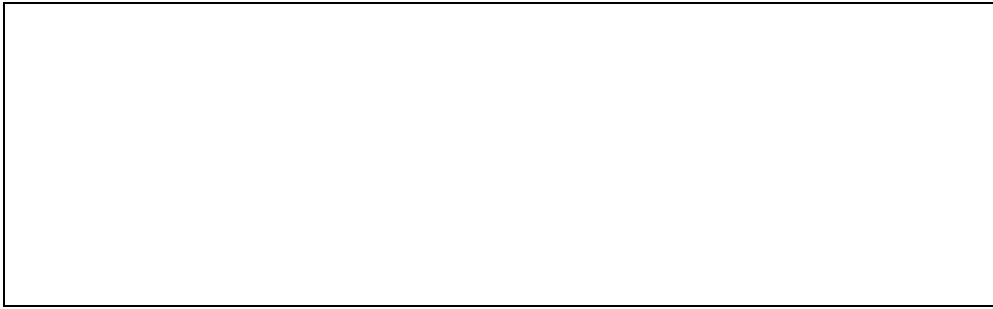
What Will I Need?

What Did I Find Out And Why Do I Think This Happened?

Name Date

Investigation sheet

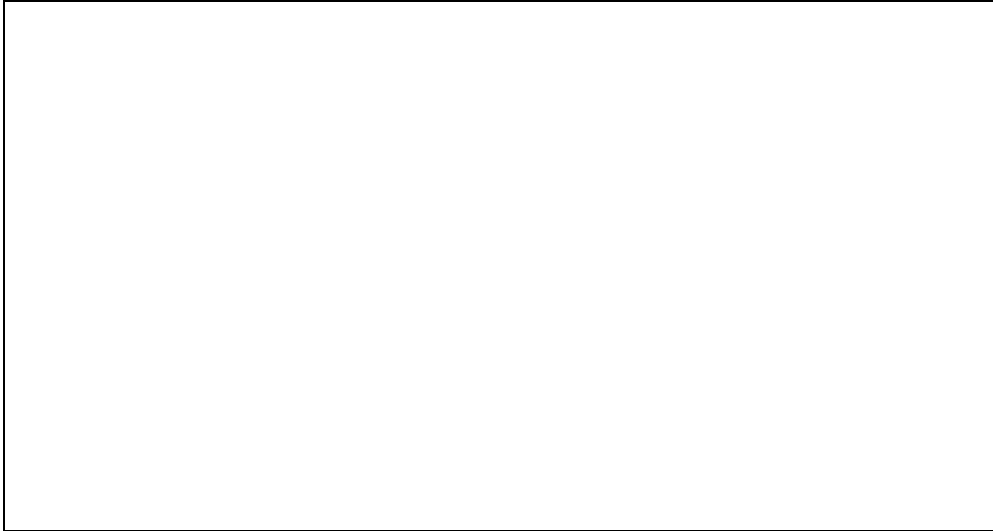
We are finding out about



This is what we will do



This is a picture of what we need



We found out that



Name

Date

Investigation sheet

We want to find out	
We will need	
First we will	
Next we will	
Then we will	
This is what we think will happen	
We found out that	
We think this happened because	

Name

Date

Investigation sheet

We want to find out

**To make our test fair
we are keeping these
things the same**

**We are only
changing**

**To carry out our test
we will need**

First we will

Then we will

Then we will

Then we will

**This is what we think
will happen**

**We can record our
results by using**

Select From: diagrams . bar charts . drawings . tables . tally sheets . writing . lists . pictograms . other

We found out that

**We think this is
because**

Name

Date

Investigation sheet

We want to find out	
So that our investigation is a fair test we are keeping these things the same	
We will only change	
We will need this equipment and these resources	
This is what we will do	
We predict that	
We can record our results by using	<p>. Diagrams . bar charts . drawings . tables . tally sheets . writing . lists . pictograms . word processing . frequency tables . line graphs . database . pie charts . other</p>
We found out that	
We think this is because	

Investigation Planning Sheet

Name : _____

The Title	What is it that you are going to do
Background Knowledge	What scientific knowledge can you use to help you? (include book references)
Predictions	Is this the sort of experiment where you might predict what is going to happen? If so, use scientific knowledge to help you
Method	Say what you are going to do ... what equipment you will use and what measurements you will take. Include any safety requirements too.
Fair Test	How will you make it a fair test? What will you change and what will you keep the same?
Results	What happened during the investigation? What measurements did you make and how have you recorded them?
Conclusion	Why do you think that you got these results? Are they what you had predicted in your prediction?

A Science Investigation Planning Prompt Sheet

(A reminder of the criteria to be covered)

Skill Area P : Planning Experimental Procedures

1. Write down the title
2. Write a plan of how you are going to do it
 - Explain how you will keep your method safe
 - Explain the science in your plan ... write down the references that you have used
 - Do some trial experiments
1. Write down a prediction ... if it is appropriate
 - What do you think the results will look like?
 - What scientific knowledge suggests this?
1. Write down what it is you will measure ... including what equipment will you use?
2. Explain how you will make it a fair test
3. Write down the range of readings that you are going to take

Skill Area O : Obtaining Evidence

1. Carry out your investigation
2. Record all your measurements and observations
 - What is the best way of recording your results?
 - Are all measurements included? ... including repeated measurements and those you think are "wrong"

Skill Area A : Analysing Evidence and Drawing Conclusions

1. Process the information collected
 - Do you need to re-group the results to show a pattern?
 - Do calculations ... if necessary
 - Do you need to draw a graph? ... if so what should it look like?
1. Write down what you have found out
 - What is the pattern in the results ... what do they show?
 - Is this what you predicted?
 - Do your results fit the scientific theory? ... explain

Skill Area E : Evaluating Evidence

1. Write down how successful you thought the investigation was
 - Was your prediction right or wrong? ... explain using scientific theory
 - Do all your results support your decision? ... explain the cause of anomalous results
 - Estimate how accurate your results are
1. Write down any changes you would make if you had to repeat the investigation
 - How would you make your investigation more reliable?
1. Write down anything you could do to get more information if you had the time
 - How could you get extra information about your investigation? ... i.e. new not more of the same
 - How can you be surer about your conclusions?

Hands-On Science Tips

These tips were written for science club volunteers, but they are appropriate for anyone working with children.

- Show enthusiasm! Enthusiasm about science is catching. Let students see your excitement about their projects, experiments, and discoveries.
- Assist children without taking control (i.e., don't do the science experiment for them).
- You're teaching a process, not facts. Give students time to explore, observe, handle materials, test ideas, and talk about what they are exploring and learning. Don't worry about the results so much.
- Ask questions that encourage children to think for themselves, such as, "Why do you think this liquid is bubbling?" Avoid probing for the "right answer."
- Science is about asking questions and searching for answers. Model that it is okay, in fact *necessary*, to not have all the answers.
- Recognize the range of children's abilities: some work more slowly than others.

<http://www.reachoutmichigan.org/funexperiments/tips.html>