

## Steps to Inquiry

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Step 1: Initiating the Experiment



### What did I observe?

*(What do you notice about the object or event?  
Use your senses to describe the object or event.)*

### What am I wondering?

*(What questions or predictions do you have about  
the object or event?)*

Labeled diagram:

Step 2(a): What could I change or vary about the object or the event?



- Brainstorm (Place sticky notes of the same colour in the squares below.)

Variable

Variable

Variable

Variable

Variable

Variable

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Step 2(b): What could I measure or observe about the object, or event?

- Brainstorm (Place sticky notes of a new colour in the squares below.)

Measure /  
Observe

Measure /  
Observe

Step 3: What will I change and not change?



- Choosing Variables

One thing (variable) I will change:

I will measure or observe this result:

Changed  
Variable

*(Place a sticky note from Part B(i) here)*



Measure /  
Observe

*(Place a sticky note from Part B(ii) here)*

Things (variables) I will NOT change:

*(What conditions will be held constant so it is a fair test?)*

*Place remaining sticky notes from Part A here.*

Unchanged  
Variable

Unchanged  
Variable

Unchanged  
Variable

Unchanged  
Variable

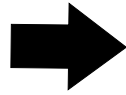
Unchanged  
Variable

Unchanged  
Variable

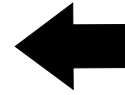
Step 4: What is the question I want to explore?



When I change this one variable....



Changed Variable



If I don't change this one variable....

Write your question here:



What will happen to:

Measure / Observe

Write your question here:

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Step 5: What is my prediction (what and why)?



Based upon my question, I predict that :

when I change \_\_\_\_\_  
(Changed Variable)

What?

then I predict this will happen to what I will measure or observe:

\_\_\_\_\_  
(Measure / Observe)

Why?

I think this will happen because \_\_\_\_\_

\_\_\_\_\_

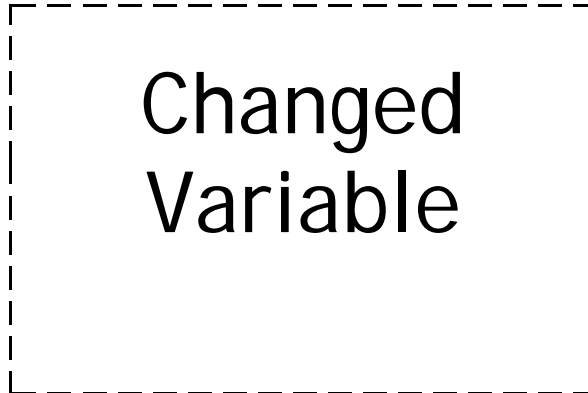
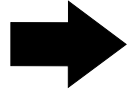
Step 6: How do I test my Prediction?



My Test Set-Up:

Here's how I will change the variable...

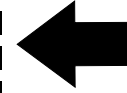
(What will I do?  
How will I change the variable?)



My Control Set-Up:

Here's how I won't change this variable...

(What will I do?  
How will I keep the variable the same?)



*My Test Steps:*

*My Control Steps:*

References:

Based on Goldsworthy, A. and Feasey, R. (1994) *Making Sense of Primary Science Investigations*, Hatfield: ASE  
Buttemer, H. "Inquiry on Board" *Science and Children*, October 2006