

Steps to Inquiry

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

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.)

Dependent
Variable

Dependent
Variable

Step 3: What will I change and not change?



- Choosing Variables

One variable I will change:

**Independent
Variable**

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



I will measure or observe this result:

**Dependent
Variable**

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

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.

**Controlled
Variable**

**Controlled
Variable**

**Controlled
Variable**

**Controlled
Variable**

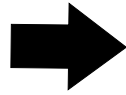
**Controlled
Variable**

**Controlled
Variable**

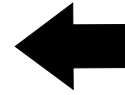
Step 4: What is the question I want to explore?



When I change this one variable....



Independent Variable



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

Write your question here:



What will happen to:

Dependent Variable

Write your question here:

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



Based upon my question, I predict that :

when I change _____
(Independent Variable)

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

(Dependent Variable)

I think this will happen because _____

What?

Why?

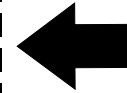
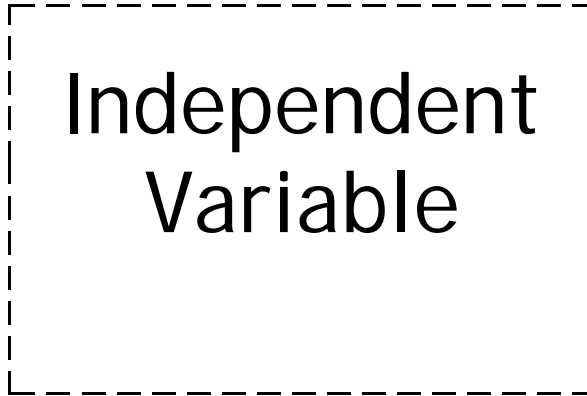
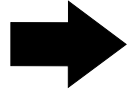
Step 6: How do I test my Prediction?



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