



Steps to In

# Initiate

Step 1: Observing & Questioning

**What did I observe?**

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

quiry (K-6)

**& Plan**

**What am I wondering?**

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

Labeled diagram:

(Adapted from: Buttemer, H. "Inquiry on Board." *Science and Children* Oct. 2006.; Fulwider, J., & Feasey. *Making Sense of Primary Science Investigations*. Hatfield: ASE, 1994.)





Steps to In

# Initiate

Step 2(a): What could I change or vary about  
- Brainstorm (Place sticky notes of t

Variable

Variable

quiry (K-6)

# & Plan

ut the object or the event?

the same colour in the squares below.)

Variable

Variable

# Variable

Step 2(b): What could I measure or observe  
- Brainstorm (Place sticky notes of a new

Measure /  
Observe

# Variable

... about the object, or event?  
(... colour in the squares below.)

Measure /  
Observe



Steps to In

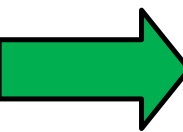
# Initiate

Step 3: What will I change and not change?  
- Choosing Variables

One thing (variable) I will change:

Changed  
Variable

(Place a sticky note from Step 2(a) here)



Things (variables) I will NOT change:

What conditions will be held constant so it is a fair test? Place

Unchanged

quiry (K-6)

# & Plan

ge?

I will measure or observe this result:

Measure /  
Observe

(Place a sticky note from Step 2(b) here)

Place remaining sticky notes from Step 2(a) here.

Unchanged

Variable

Unchanged  
Variable

Unchanged  
Variable

Variable

Unchanged  
Variable

Unchanged  
Variable

3 of 4

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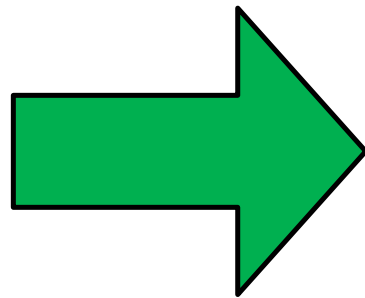


Steps to Inquiry

# Initiate

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

If I change  
this one  
variable...



Change  
Variable

Write your  
question here:

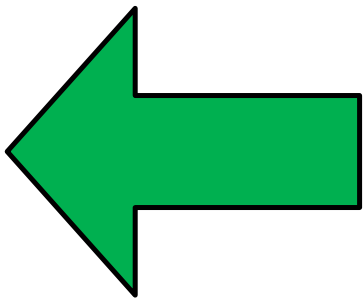
Measure  
Observe

quiry (K-6)

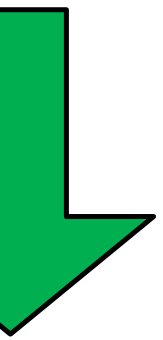
# & Plan

xplore?

nged  
able



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



What will  
happen to:

Write your  
question here:

ure /  
erve

Step 5: What is my prediction (what

Based upon my question, I predict that

What?

if I change \_\_\_\_\_

(Change

then I predict this will happen to what

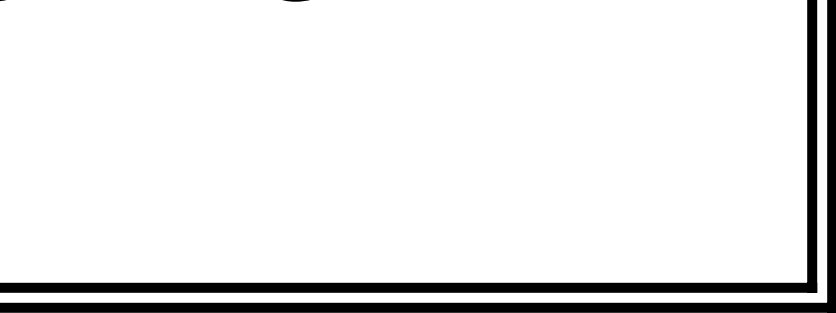
\_\_\_\_\_

(Measure

Why?

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

\_\_\_\_\_



and why)?

t :

---

ged Variable)

I will measure or observe:

---

ure / Observe)

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**4 of 4**

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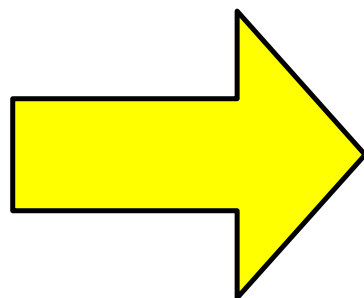
Steps to In

# Plan, Perform

Step 6: How do I test my prediction?

## My Test Set-Up

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



Chan  
Varia

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

My Test Steps:

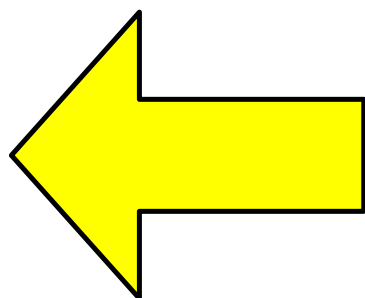
quiry (K-6)

# m & Record

nged  
able

## 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 Control Steps:

(Adapted from: Buttemer, H. "Inquiry on Board." *Science and Children* Oct. 2006.; Fulwider, J. & Feasey. *Making Sense of Primary Science Investigations*. Hatfield: ASE, 1994.)





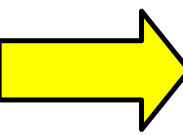
Steps to In

# Plan, Perform

Step 7a): Preparing for Data Collection

When I changed:

Changed Variable



Sample Chart for Recording Measurement

- Modify this chart to suit your investigation or design

What I changed: <hr/> <p>(Changed Variable)</p>	What I
--	--------

quiry (K-6)

# m & Record

What measurements resulted?

Measure /  
Observe

ts / Observations

ign your own. (Specify units if appropriate.)

measured/observed:

(Specify units if appropriate.)

(changed variable)

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(Adapted from: Buttemer, H. "Inquiry on Board." Science and Children Oct. 2006.; Fulw  
Feasey. Making Sense of Primary Science Investigations. Hatfield: ASE, 1994.)

(specify units if appropriate.)

**2 of 3**

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Steps to In

# Plan, Perform

Step 7b): Equipment Set-Up & C

Have I ....

collected all of the materials?

organized and/or set-up my equip

reviewed my procedure and reco

quiry (K-6)

# m & Record

Check

oment properly?

ording chart?

made changes where necessary?

Step 7c): Perform Experiment

Follow the procedure to complete the  
Record the data in your chart. (See S

## and Collect the Data

the experiment.  
(Step 7a).

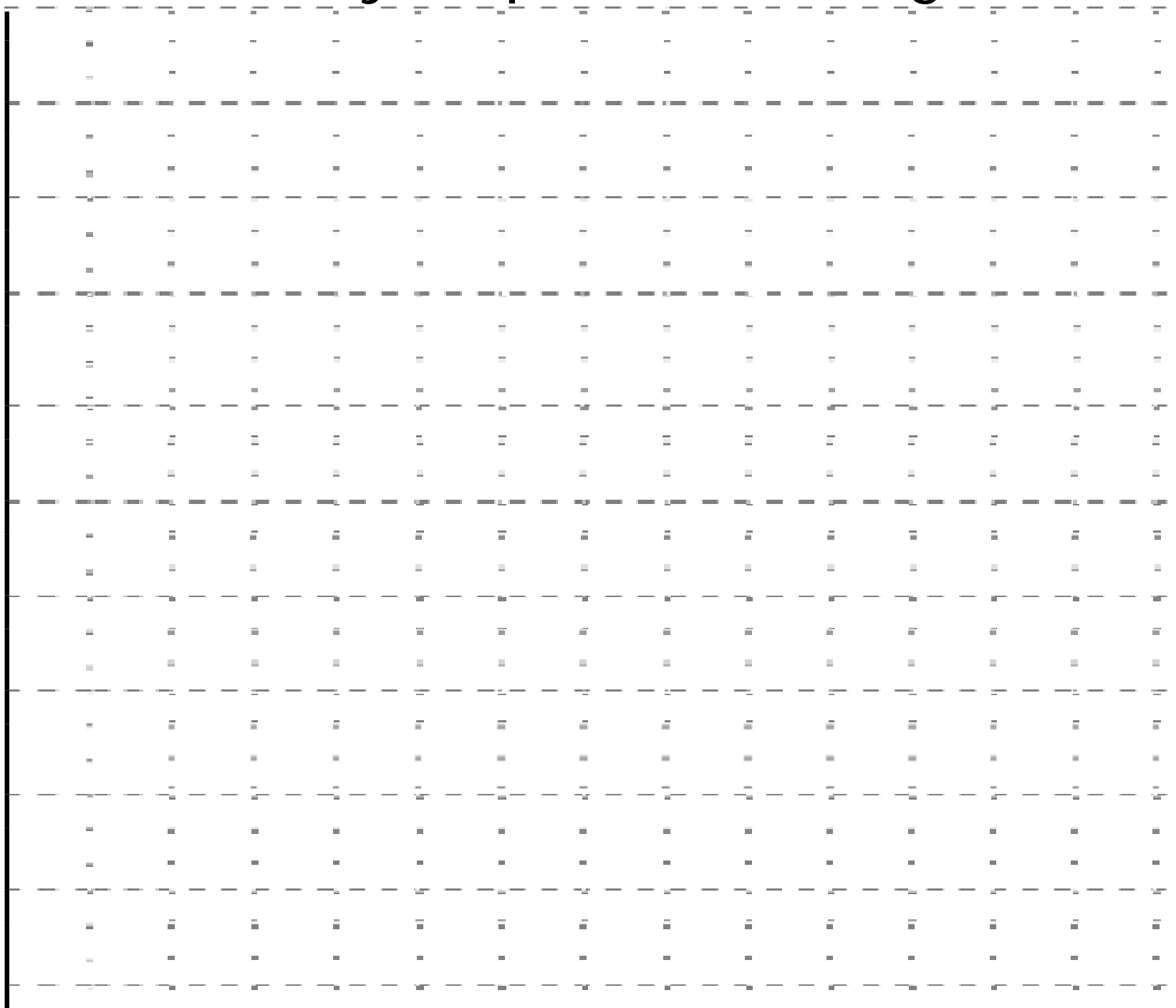
# Analyze &

## Step 8: Graphing Results

What type of graph best suits my data?

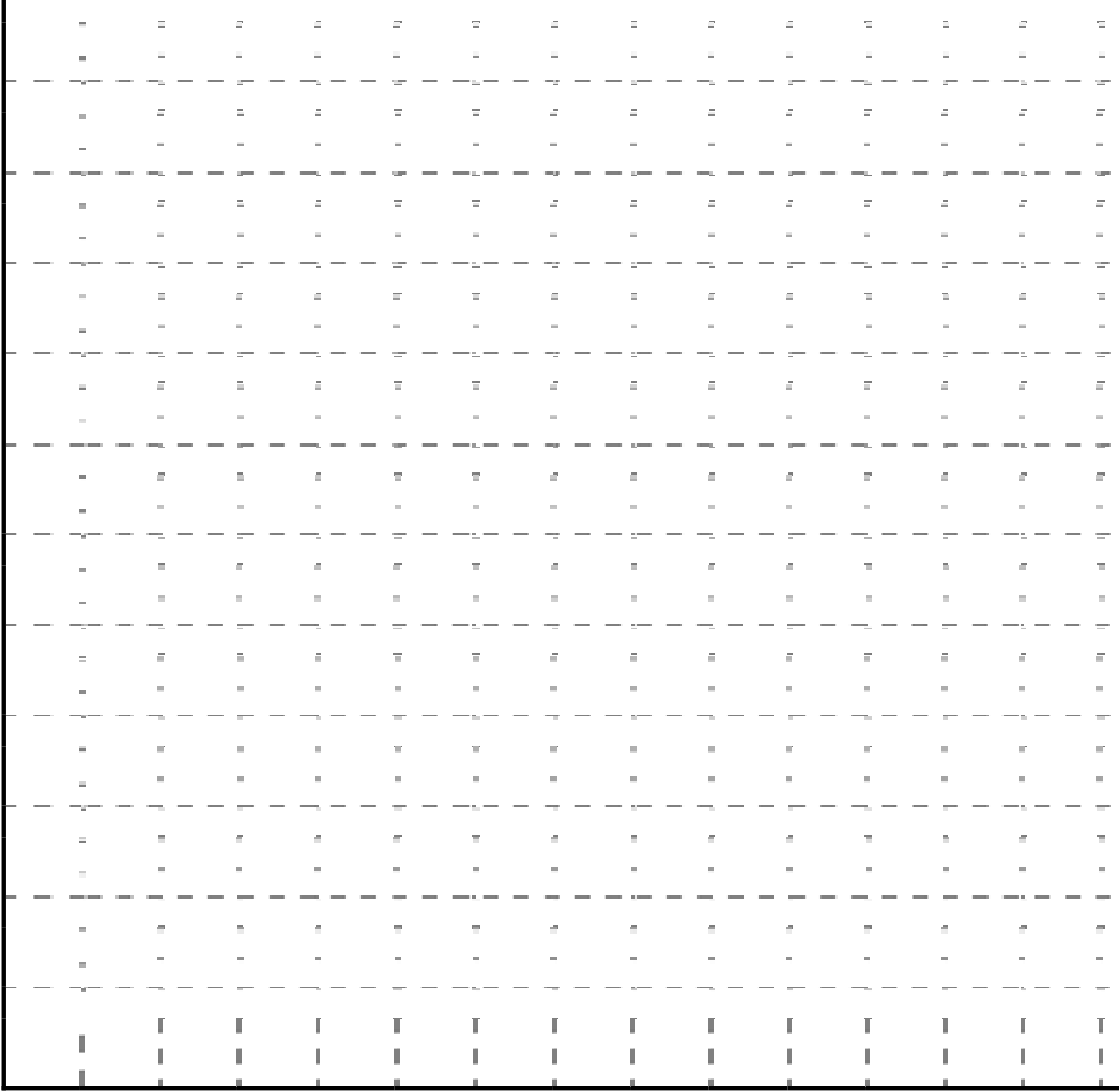
My graph showing \_\_\_\_\_

erved...





What I Obse



What I Ch  
Remember to label axes

(Adapted from: Buttemer, H. "Inquiry on Board." Science and Children Oct. 2006.; Full  
Feasey. Making Sense of Primary Science Investigations. Hatfield: ASE, 1994.)

changed...  
and add scales appropriately.

**1 of 2**

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# Steps to In

# Analyze &

Step 9: Finding Patterns and Relationships

from the graph/table :

The highest value/number	The lowest value/number

The graph/table shows that when change \_\_\_\_\_

(Describe what happens to \_\_\_\_\_)

I know this because:  
(What is my evidence?)

quiry (K-6)

# Interpret

hips in Results

value/number	values/numbers that are equal or constant

\_\_\_\_\_, the  
(Changed variable)

what you measure/observe.)

Data from my  
Senses

When I observed \_\_\_\_\_

I saw/heard/felt/smelled, \_\_\_\_\_

Data from my  
Measurements

When I measured \_\_\_\_\_

with \_\_\_\_\_

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\_\_\_\_\_, I found \_\_\_\_\_

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# Steps to Increase **Communication**

## Step 10: Communicating My Results

Answer the question in a general way.

When I \_\_\_\_\_  
increased / decreased

\_\_\_\_\_ what I measured/observed

quiry (K-6)

**communicate**

s

the \_\_\_\_\_ the  
changed variable

\_\_\_\_\_ .  
increased / decreased

Make a concluding statement based on the

Therefore, changing \_\_\_\_\_  
the ch

---

the change in what I measured/observed

e evidence.

\_\_\_\_\_ makes  
changed variable

\_\_\_\_\_.

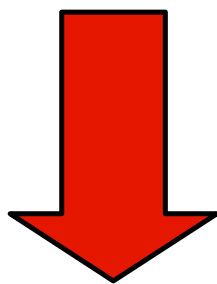
**1 of 3**

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# Steps to In Communi

Refer to your prediction.

The data does support my prediction.



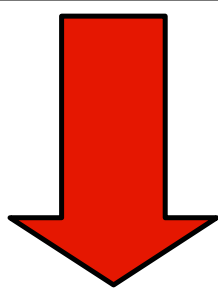
The data does support my prediction because I predicted that \_\_\_\_\_ change in the changed variable

would make \_\_\_\_\_ the change in what I measured/observed .

I thought \_\_\_\_\_ would cause the changed variable

# quiry (K-6) Communicate

The data does NOT support my prediction.



The data does NOT support my prediction

because I predicted that \_\_\_\_\_  
change in the changed variable

would make \_\_\_\_\_.  
the change in what I measured/observed

I thought \_\_\_\_\_ would  
the changed variable

the changed variable

this change because \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_.

Make an inference:

I think this happened because \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

the changed variable

cause this change because \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_.

Now I know that \_\_\_\_\_ doesn't  
the changed variable

have that effect.

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_.



Steps to Inc

# Communi

Step 10 b): Other Considerations

1. If you had data that was different (different, inconclusive or inconsistent), wh

2. How might have you improve

quiry (K-6)

# Communicate

nt from other groups (or was  
hat might have caused these results?

ed your investigation?

3. What new/additional questions  
investigate?

ons do you now want to

3 of 3

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