

Thinking more...

Now I wonder why... Now I wonder if... Now I wonder what...

Now I wonder how... Now I wonder what would happen if...

Now I wonder _____

Testable?

Now I wonder _____

Testable?

Now I wonder _____

Testable?

Now I wonder _____

Testable?

Now I wonder _____

Testable?

Phenomenon

Questions

Research investigation

Science story

Thinking more

Phenomenon

Scientist's Name

Basic Sciencing Journal

V4 – Average Bars with Data Points



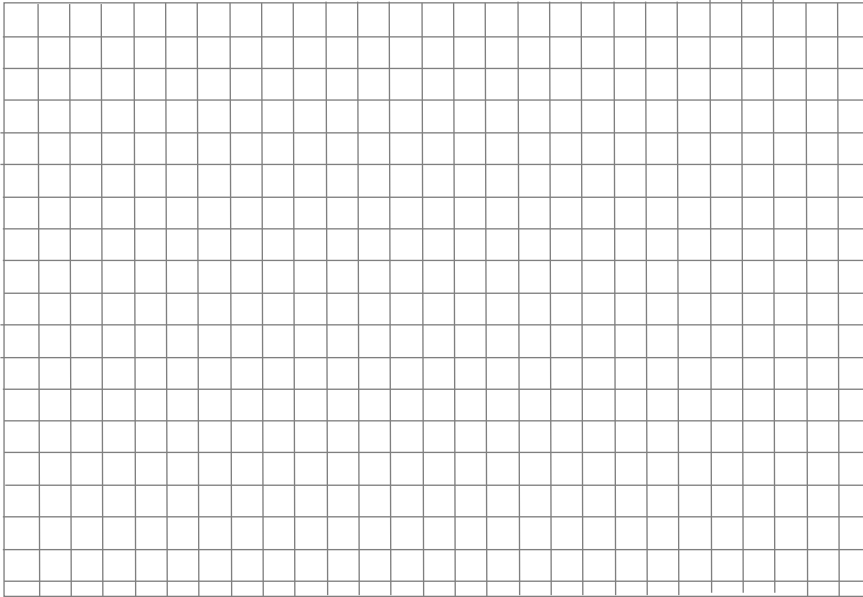
DaNel Hogan – STEMAZing.org

Brooke Meyer – SARSEF.org

Sherrie Dennis – STEMAZing.org

Kristin Hunter-Thomson – dataspire.org

Draw and label **P**henomenon



I notice _____

_____.

I notice _____

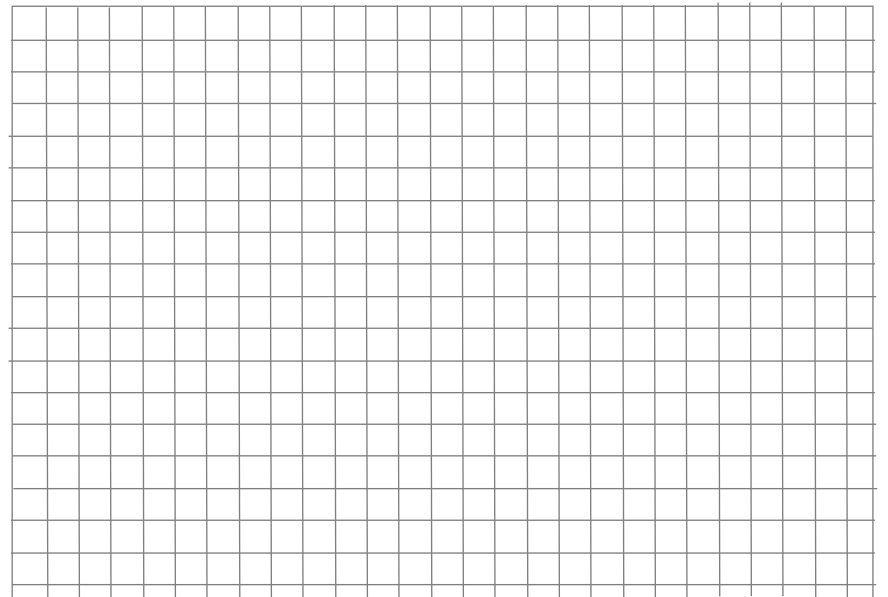
_____.

I notice _____

_____.

3. Reasoning (connect evidence to claim using scientific principles and rules) _____

Drawing to Explain Reasoning (Draw a model with labels to show what happens and why.)



Science Story (Using **Claim**, **Evidence**, and **Reasoning**, share the story the data tells and the science explains.)

2. Claim (answer to testable question, should either be one of your hypotheses or a new claim you had not considered) _____

1. Evidence (cite data from the experiment to support the claim) _____

Questions (or rather declarative wonders)

I wonder why... I wonder if... I wonder what...
I wonder how... I wonder what would happen if...

I wonder _____
Testable?

_____.

I wonder _____
Testable?

_____.

I wonder _____
Testable?

_____.

I wonder _____
Testable?

_____.

I wonder _____
Testable?

_____.

All Materials and Equipment Available

_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

Play to learn more – tinker and experiment with materials and equipment you have available to explore how everything works. Continue observing the phenomenon, noticing, and wondering.

I notice _____

_____.

I notice _____

_____.

I notice _____

_____.

Data Talk (Notes from peer discussion about data observations, claim, evidence, and reasoning.)

Data Observations (What do you notice as you look at the raw data collected in the data table and at the graphical representation of the data?)

Even More Wonderings

Now I wonder why... Now I wonder if... Now I wonder what...
Now I wonder how... Now I wonder what would happen if...

Now I wonder _____

Testable?

Now I wonder _____

Testable?

Now I wonder _____

Testable?

Brainstorm Break

What can I change that might impact how the phenomenon works? (cause)

What can I measure about the phenomenon that might be different when I setup the experiment differently using one of my ideas above? (effect)
