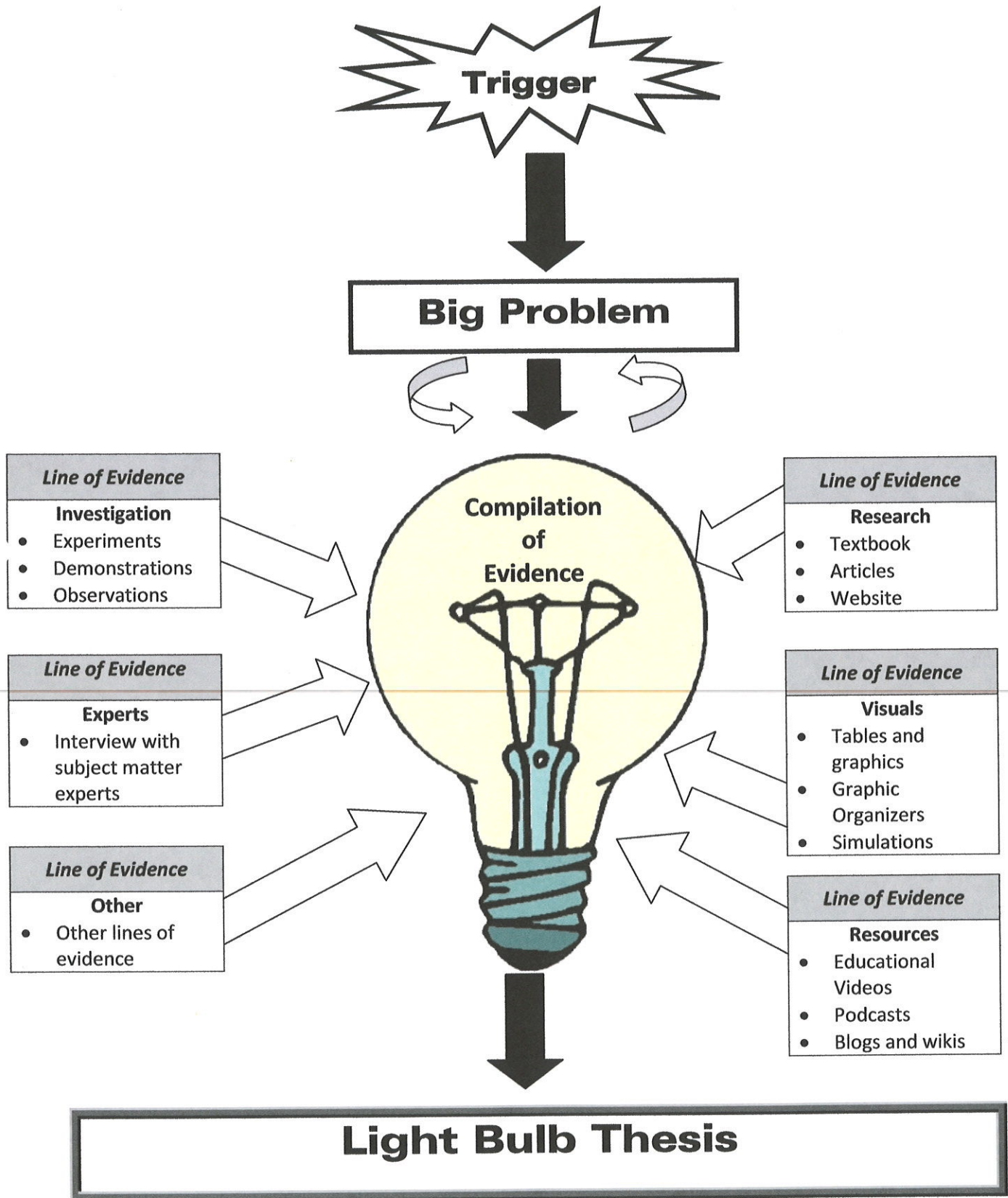


Interactive Notebook Rubric

10	<p>“Totally Awesome” (Almost Gross)</p> <ul style="list-style-type: none"> 🍏 The writing goes beyond the basic requirements and shows in-depth understanding of concepts. 🍏 The work shows in-depth reflection throughout the learning process. 🍏 Your notebook has all the components expected, including dates and labels on each page. 🍏 All pages are numbered properly with odd numbers on the right and even numbers on the left. 🍏 Right- and left-side work is correctly organized with all criteria. 🍏 The use of color and labeled diagrams enhance understanding. 🍏 The notebook is so tidy it’s almost “gross!”
9	<p>“Awesome”</p> <ul style="list-style-type: none"> 🍏 The writing follows the basic requirements, shows understanding of concepts, but does not go beyond. 🍏 The work shows in-depth reflection. 🍏 Your notebook has all the components expected, including dates and labels on each page. 🍏 All pages are numbered properly with odd numbers on the right and even numbers on the left. 🍏 Right- and left-side work is correctly organized with all criteria. 🍏 The notebook has color, and the student uses labeled diagrams. 🍏 A “9” looks much like a “10,” but it lacks the “totally” in “awesome.”
8	<p>“Pretty Darn Good”</p> <ul style="list-style-type: none"> 🍏 The written work shows a basic understanding of concepts. 🍏 An honest reflection, but limited. 🍏 Your notebook has about 90% of the components expected, with dates and labels. 🍏 All pages are numbered properly with odd numbers on the right and even numbers on the left. 🍏 Right- and left-side work is correctly organized. 🍏 The notebook has some color and diagrams, with a few labels. 🍏 Some requirements are met, but your notebook lacks criteria in all areas.
7	<p>“Kick It Up a Notch”</p> <ul style="list-style-type: none"> 🍏 The written work shows a limited understanding of concepts. 🍏 Limited reflection overall. 🍏 Your notebook has about 80% of the components expected, with dates and labels. 🍏 Most pages are numbered. 🍏 Right- and left-side work is fairly organized, “just so-so.” 🍏 The notebook has very little color and hardly any diagrams. 🍏 Notebook requirements are rarely met.
6	<p>“Better Get Movin”</p> <ul style="list-style-type: none"> 🍏 The written work shows misconceptions and a lack of understanding. 🍏 “Reflection, what reflection?” 🍏 The pages in your notebook are unfinished. 🍏 You tried, but the dates and labels did not make it to the page. 🍏 There are inconsistencies in your right- and left-side entries. 🍏 The notebook is unorganized, and “the dog ate your pages.”
5	<p>“What Were You Thinking?”</p> <ul style="list-style-type: none"> 🍏 Hey, you turned in a notebook, but the pages are blank, or they include the class template only. “Maybe you wrote with invisible ink?”

Reproducible 1

Light Bulb Connection Visual Outline



Words of Wisdom About the Light Bulb Connections Visual Outline

Scientists gather evidence from many sources, including investigations, research, experts, visuals, and other resources. This evidence often supports and or refutes other lines of evidence. The goal of this approach to immersion and interactive notebooks is to allow students to gather information from many sources in order to critically answer scientific problems.

Trigger

A trigger is a spark of interest that leads students to their question or big problem. In order to allow students an opportunity to find this spark, students need to be given time to do observations (Visual observations, asking questions, reading, watching educational videos, interviewing scientists, etc.) This provides an opportunity for buy in for all students.

Big Problem

Students think about their readings, visual observations, and so on, and start forming questions. These Questions are summarized into one big problem or question that students can now investigate.

Lines of Evidence

Students can gather evidence from many sources. The rectangular boxes list these sources of evidence. Often, students of science get their evidence primarily from lab experiments; however, there are other sources that can be used to support or refute evidence found during experimentation. Lines of evidence include but are not limited to investigations, research, consulting experts, visuals, simulations, and other resources.

Compilations of Evidence

Students gather all lines of evidence and find connections or conflicts among pieces of information. As students are compiling this information, they may find that there are holes in their evidence and they need to do more research.

The Light Bulb Thesis

The students take all the evidence that they have collected and compile it into a formal writing piece. The end result should be a multi-paragraph essay with an introductory paragraph, body paragraphs that summarize each line of evidence, and a closing paragraph. Students can use the lines of evidence as stems for their Light Bulb Thesis.

Why We Keep Interactive Notebooks in Science

To keep an interactive notebook you will need:

- An 8 ½" × 11" spiral notebook with at least 70 pages (college ruled is preferred, and *without* perforated pages is best)
- Colored pencils, crayons, and highlighters
- Tape
- A small pair of scissors
- A pen and pencil with an eraser

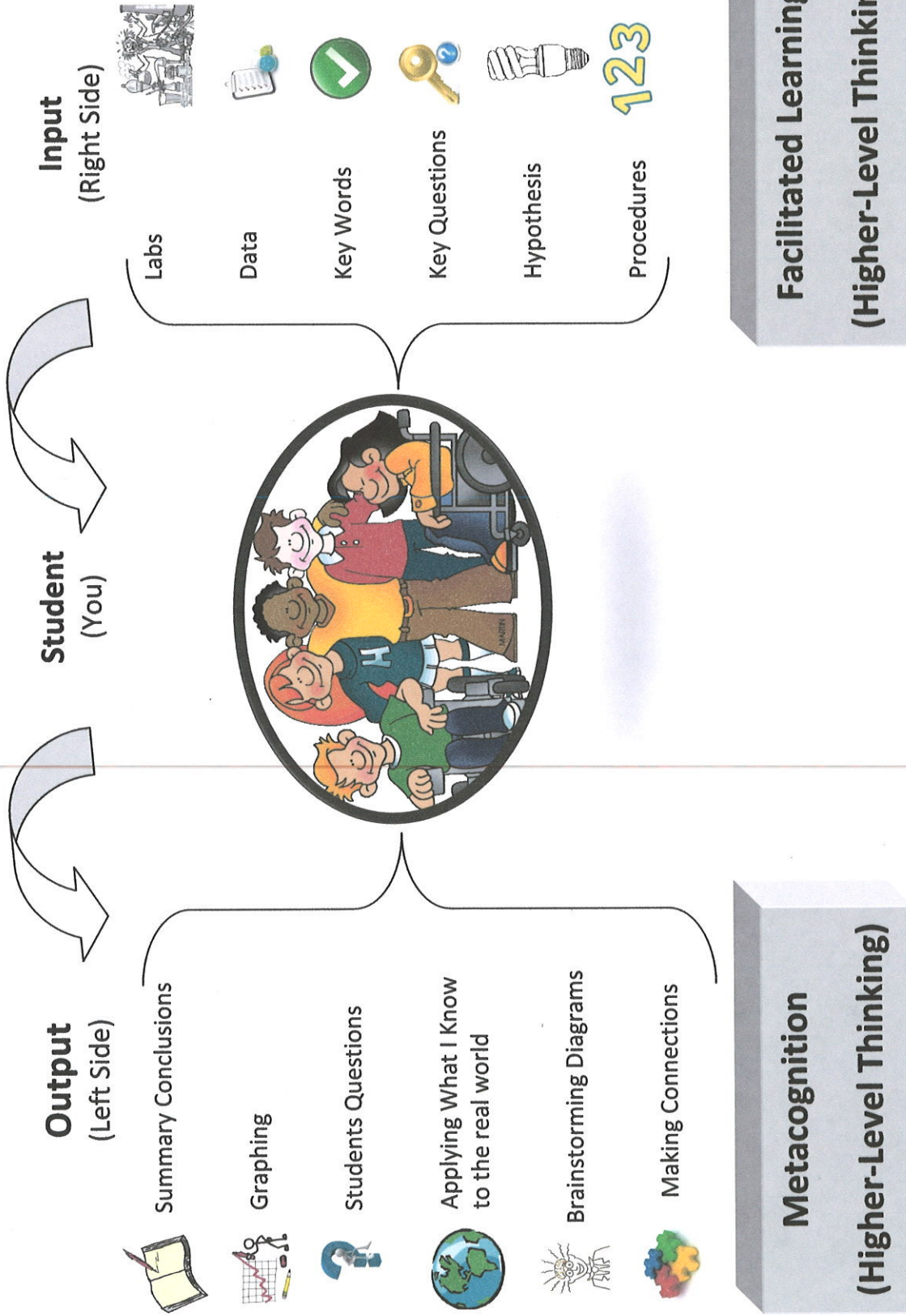
You will be using your interactive notebook in class every day to help you learn new science concepts and to help you make connections to those concepts. Your interactive notebook will also help you organize your thoughts in a fun and creative way.

Left Side—Output <i>*Even numbered pages</i>	Right Side—Input <i>*Odd numbered pages</i>
The left side of the notebook is used to show your understanding of the new concepts that you are learning in class. We call this the metacognition, or higher-level thinking, side of your notebook. You will be working with the information from the right, input, side and presenting it in your own way on this left side. We use the left side for . . .	The right side of the notebook is for your facilitated learning. This side is mostly used for the work that you do in class with your teacher and with other classmates. We have a lot of conversations and questions that we try to answer. You will be recording that work on this, right, side of your notebook. We use the right side for . . .
✧ Your questions	✧ Key questions
✧ Brainstorming diagrams	✧ Hypotheses
✧ Making connections	✧ Procedures
✧ Graphing	✧ Labs/Observations
✧ Summary/Conclusions	✧ Data
✧ Applying what you know to the real world/Big Idea	✧ Key words/Notes/Class consensus ideas

Reproducible 4

Interactive Notebook Thinking Process

[The Thinking Process Students Go Through While Using Their Interactive Notebooks]

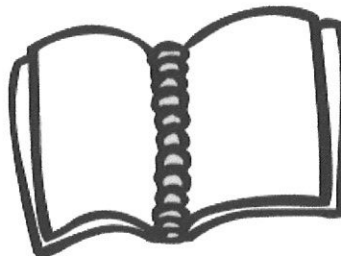


Constructing the Light Bulb Connection Pages

The Light Bulb Connections pages are located at the beginning of each new unit in your Interactive Notebook.

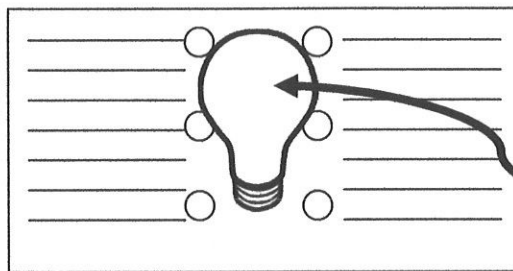
First

Two side-by-side pages



Second

In the center, or close to it, write your problem statement or big idea.



e.g., "What is an interaction?"

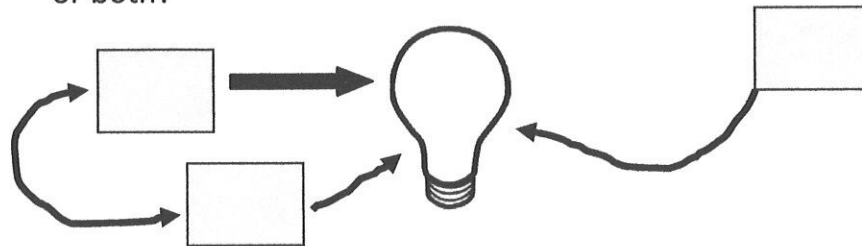
Third

After Each class activity, you will be asked to write a statement that conveys the concept learned.

For example: "Today we learned that you can never obtain an exact value, but you can get very close. Scientists call this 'best value.'"

Fourth

- Take time to share out with a partner!
- Notice trends or connections!
- Use arrows or color to show those trends or connections visually!
"Did this lab connect to the Light Bulb problem, or to another lab, or both?"



Last

Use these last statements as evidence and stems to later write your Light Bulb Thesis.

How to Write a Light Bulb Thesis

What is a Light Bulb Thesis?

It is a thesis paper, generated by you, that addresses the Big Problem of the unit, using evidence gathered along the way.

1. Let's get started by gathering what you need.

- Go back to the Light Bulb Connections pages in your interactive notebook.
- Look for the key ideas or concepts you identified from the unit.
- Which lines of evidence best support these key ideas?
- You are now going to use these lines of evidence in your thesis to support your key points.

2. Now, begin by writing your introductory paragraph.

Introductory paragraph:

State the purpose of the unit and the key ideas and concepts learned.

(Hint: That's what you just identified in the four bullets above.)

3. Now you are ready to write the body of your thesis.

Body paragraphs of the thesis (usually three to five paragraphs):

In each of the following paragraphs, give details on one of the key ideas chosen from above.

Use your lines of evidence from you Light Bulb Connections pages to support your thinking.

(Hint: There is no need to reinvent the wheel; use your own words from the Light Bulb Connections pages in your interactive notebook.)

4. You are almost there – time to wrap it up.

Final Paragraph – conclusion:

- Restate your purpose from the thesis statement.
- Give your thesis the “Hollywood” wrap-up.
- Leave a final impression on the reader.

How to Write a Self-Reflection

You will be expected to write a reflective essay at the end of each unit that shows your in-depth understanding about the work you are doing. Be honest and open in sharing your thoughts and opinions.

Step One: Count the number of the assignments we have completed for this unit, and record it at the top of you reflection.

Step Two: Choose four (4) pages from this unit that best supported the Light Bulb in your unit thesis, two from the left side and two from the right side, and list them on your reflection below the assignment count.

Step Three: You will now be writing three paragraphs.

Paragraph 1: Write specific reasons for why you chose the four assignments that you listed.

Paragraph 2: Explain why these pages best support your unit thesis. Give specific examples.

Paragraph 3: What do these assignments reflect about your skills as a student? For example, you may write that they show that I am very organized, I am good at analyzing, I was very thorough, creative, my information was very accurate, I made connections from one assignment to another, and so on. Make sure that you cite specific examples from the pages you listed.

Step Four: This will be the Paragraph 4. In this paragraph, you will rate your own notebook. Use the rubric to rate your work as a 10, 9, 8, 7, 6, or 5. How do you think your notebook measures up and why? Use specifics from the rubric, and relate it directly to the pages that you listed above (use examples).

Step Five: This will be paragraph 5, the last paragraph of you reflection. (YAHOO!) Answer the following questions [in paragraph format]:

- What information did you learn that was new to you? Give specific examples.
- How did your notebook help you in this unit? Again, be specific.
- How could you improve your notebook? Please explain.

Please type your final draft, and tape it as a flip page in your interactive notebook as specified by your teacher.

