

# Student Guide to Use of Science Notebooks

---

**WHEN COPYING AND PASTING:** After you have followed the directions and have added your OWN information, KEEP THE HEADINGS. Then delete the directions from that step. (Remember, not every investigation will go in this order or have every step.)

**WHEN WRITING FROM “SCRATCH”:** Label each section similar to what is shown below. Then follow the directions. (Remember, not every investigation will go in this order or have every step.)

## TITLE

1. Record here and in document heading:
  - a. activity number
  - b. lesson title
  - c. date

## STANDARDS/SKILLS

2. List the standards and/or skills practiced in this investigation.

## MATERIALS/KIT INVENTORY

3. List materials in details and amounts. - OR – Record page number in text where this is found.

## VOCABULARY

4. Record and define any new vocabulary words needed for this investigation. (You might add definitions and/or examples throughout the investigation.)

## FOCUS QUESTION(S)

5. Record the focus question(s) here.
  - What do you have to investigate or figure out in this lesson that is related to the “big idea” of the unit?
  - What is (are) the main question(s) be that will guide your learning? (You may want to start with “how,” “what,” or “does.”)
  - Make sure you can actually investigate the question!

## PREDICTION

6. What do you think will happen? Record it.  
Use any knowledge you may already have about the topic.  
(Use one or more of the following sentence stems.)

- a. I think \_\_\_\_\_ (will happen) because \_\_\_\_\_.
- b. If (this is done) \_\_\_\_\_ then \_\_\_\_\_ will happen because\_\_\_\_\_.
- c. If \_\_\_\_\_ then \_\_\_\_\_ because\_\_\_\_\_.

## PROCEDURE /PLANNING

7. What will you do to answer the focus question(s)?
- Some investigations will require you to create your own procedure.
  - Plan out and record the steps that will help you find the answers.
    - ✓ Number each step.
    - ✓ Be detailed and specific! Include variables to be tested. Illustrations are helpful, too!
  - Other investigations will give you the steps, so all you have to do is record the page number where you find the procedure.

## DATA COLLECTION

8. Record the data in a way that will make sense to you AND other classmates later.

✓ **Data should be organized!**

Some ways you could organize data are:

- data tables or charts
- diagrams and/or pictures - describe what is happening AND always label important parts!
- a graph
- a bulleted list of observations about a specific part/topic – observations are exactly what you see, not what you think you see

## CLAIMS AND EVIDENCE

9. What happened? How do you know?
- What do you claim to be true? Base this on data from investigation!
    - ✓ A claim is can be a pattern you notice or an inference based on data.
  - How can you prove what you are stating? Back it up!
  - Use sentences such as:
    - a. I claim this to be true because I observed \_\_\_\_\_
    - b. I claim that when \_\_\_\_\_ happens, then \_\_\_\_\_ also happens.

Organize and record claims and evidence in a chart like the one below. Use complete sentences!

|                                  | <b>Claims</b> | <b>Evidence</b>         |
|----------------------------------|---------------|-------------------------|
| <b>Small group or individual</b> | I claim....   | I claim this because... |
| <b>Switch groups or partners</b> | I claim....   | I claim this because... |

\*You may need more room and/or boxes than what is shown in the above example.

## **MAKING MEANING CONFERENCE**

10. This is a class discussion about the investigation. How do we make sense of our results? What have we learned?
- Make your thinking public in a class discussion.
  - Review the claims and evidence and make sense of the data.
  - Listen to what each other has to say and take turns talking.
  - Record information learned.

## **CONCLUSION**

11. a. Restate the focus question as a topic sentence. (Use one or more of the following sentence stems.)
- In this investigation ....
  - I/ we learned that ...
- b. Use data from your claims and evidence chart to **answer the focus question**. EVERY CLAIM MUST BE SUPPORTED BY EVIDENCE (QUALITATIVE AND/OR QUANTITATIVE).
- c. Refer back to your prediction.
- My/our prediction was correct/incorrect because \_\_\_\_\_.
  - My/our prediction that \_\_\_\_\_ was \_\_\_\_\_ because \_\_\_\_\_.

## **REFLECTION**

12. What were YOUR OWN thoughts after the investigation? Was there anything you understood better? Can you relate what you learned to “real life?” What does this mean in the real world? What connections did you make?
- I/we liked/did not like \_\_\_\_\_ because \_\_\_\_\_.
  - This reminds me/us of \_\_\_\_\_ because \_\_\_\_\_.
  - Now I/we think that \_\_\_\_\_ because \_\_\_\_\_.
  - A problem I had during this investigation was \_\_\_\_\_. I think/know this happened because \_\_\_\_\_.
  - I/we discovered that \_\_\_\_\_.

## **NEXT QUESTIONS**

13. What questions do you have to extend your learning? Can you predict what the next lesson will be about?
- What would happen if \_\_\_\_\_.
  - I think what we will do next is \_\_\_\_\_.
  - I want to know more about \_\_\_\_\_ because \_\_\_\_\_.