3-5 Nature of Science
Southern Nevada Regional Professional Development Program

Science Notebooks
Getting Started

INTRODUCTION

Why would you want your students to use science notebooks? The reasons are many. They are learning tools that provide a history of the science investigations that your students are doing. It is a place for students to record, organize, and interpret the data that they collect; record observations that they make; jot down questions that they have; and make drawings/diagrams. They are also a valuable tool teachers can use to formatively assess what their students know and can do in science.

WHERE'S THE SCIENCE?

As stated in Chapter 4 Discussions with Two Scientists *(Science Notebooks Writing about Inquiry, Campbell & Fulton),Journaling is fine, there is a place for it, but it will get in the way of the data collection, which is why scientists use notebooks – to record data. If scientists don't record the data, they can't replicate their work; they can't build a picture; they can't use the data if it is not complete.* When we expect our students to use science notebooks we are giving them a tool to show their thinking and understanding. As students review their data they can begin to see relationships and patterns that they can use in forming conclusions and understandings about science content.

MATERIALS

For each student

- Individual notebook (This can be a spiral, hardcover, binder, folder, or whatever format you choose)
- Chart paper
- Jumbo-sized notebook **(For Teacher modeling purpose)**
- rpdp.net - view *Science Notebooks Getting Started* video clip

PROCEDURES

1. Pose the question to students, "Why do scientists use notebooks?. Give students the opportunity to discuss within their groups, then have them share whole group. Chart their responses. You can keep this up all year and add to it.
2. Then ask what they think scientists keep in their notebooks. Again chart their responses. This too can be kept up all year.
3. Explain to students that they will be keeping their own science notebooks. Distribute a science notebook to each student. Present the jumbo-sized science notebook that you will use to model the notebook set-up. Have students begin by writing the words **Science Notebook** as well as their names on the covers of their notebooks. Teacher will do the same on the jumbo-sized notebook. **NOTE:** If notebook covers are plain, students can decorate them with scientific tools or things to do with science.
4. Open the jumbo notebook to the first page and write the words **Table of Contents** on the top. Ask students where they have seen a table of contents before and what is its purpose. After students respond, have them write the same thing in their notebooks. Have students leave two pages for the table of contents (this allows for handwriting size differences).
5. Next have students make a "sail" (divider) by taking the upper right hand corner of the page and folding it toward the

middle of the notebook. Students can write the title of what they are studying (For example – Plants) or the science strand (Life Science) on it.

6. Students need to have an understanding of the science vocabulary they will be using. The page after the divider can be titled **Word Bank.** The Word Bank serves as a place for students to record the vocabulary that they are learning in that particular section. They can add to the bank as new vocabulary words are introduced during the investigations. Have students set aside a few pages for the word bank.
7. The remaining pages in the jumbo-sized notebook will be used as a model for students depending on the needs of the students.

Extensions

- Invite scientists from your community to speak to your students about science and how they use science notebooks in their fields. Be sure to ask them if they would bring their notebooks with them (if possible).
- Keep a science notebook yourself. This serves as a model for your students that you value the use of them too.
- Gallery Walk – After a month or so give students the opportunity to see other students' notebooks. Explain the following procedures for the Gallery Walk.
    1. Have students choose a page in their notebook that they would like to showcase. **NOTE:** Suggest that they could choose a very detailed diagram, a detailed observation, or the way they organized some data they collected. Have students open their notebooks to the page and leave on their desktop.
    2. Students will silently walk around the room and look at the displayed notebook pages. Emphasize that they are not to touch or write in the notebooks, just look.
    3. Once everyone has finished viewing the notebooks, gather the students back together to share ("Give

Kudos") some things they really liked about the notebooks (for example – *Mary's drawing was very detailed and she used color. I never thought to add color to my drawing. Next time I will have to try that.*)

Nevada State Science Standards

N5A1 Students know scientific progress is made by conducting careful investigations, recording data, and communicating the results in an accurate method. E/S

N5A3 Students know how to draw conclusions from scientific evidence. E/S

N5A4 Students know graphic representations of recorded data can be used to make predictions. E/S

N5A7 Students know observable patterns can be used to organize items and ideas. E/S

Safety Reminder

N/A

Vocabulary

N/A

Resources

rpdp.net – Video clip – Science Notebooks Getting Started

Science Notebooks Writing about Inquiry, Brian Campbell & Lori Fulton, Heinemann, ISBN – 0-325-00568-0

Using Science Notebooks in Elementary Classrooms, Michael Klentschy, ISBN – 978-1-93353-103-8

Desert Seasons A Year in the Mojave, Ruth Devlin & Frank Serafini, ISBN – 1-932173-18-8