1 Introduction

Scientists keep notebooks to document their discoveries and record their learning before, during, and after each research or investigative experience. So, too, when students enter a science classroom, they are scientists and as such should keep a notebook adding new ideas, thoughts, and reflections into their notebooks throughout the learning process.

Interactive notebooks combine research-based instructional strategies such as note-taking and concept mapping with other processing strategies into one instructional method to promote student learning and success. This is why interactive science notebooks are widely used in the classroom; some standards explicitly state students are to use scientific notebooks.

Interactive notebooks are valuable tools when all stakeholders in the learning process (students, parents, teachers, and administrators) understand and support their application, organization, expectations for, and use. By having all stakeholders vested in utilizing interactive notebooks, there will be fidelity in the implementation and management of interactive notebooks.

Teachers should include time in their lesson plans for students to process their learning and add new entries in their notebooks in the same way scientists do. When information is written, it becomes real and more permanent to the student.

Learner Variability

Learner variability means people think differently and process information they discover in a variety of ways. Students need opportunities to tap into their own way of interpreting the world in order to fully understand new content. Learner variability is the core of schooling and education of any kind. Interactive notebooks provide teachers with an organizational tool that encourages the use of different instructional strategies and can be helpful when planning for the learning styles of students.

When considering the use of interactive notebooks, teachers must be cognizant of the different learning preferences, interests, and abilities of each student and accommodate these diverse needs "in order to properly plan and conduct assignments and assess what students have learned" (Manner, 2001).

Educators must think about the way their students learn; no one strategy can fit all learners. There are many approaches to learning, which may include visual/verbal, tactile/kinesthetic, visual/nonverbal, and auditory/verbal. Awareness of these learning preferences is helpful in planning for students in the classroom because they are what make learners and teachers different.

The most insightful purpose of planning this way is that it makes a teacher consider various ways to present and receive information. One way for them to do that is to allow students the freedom to think. When students are given the opportunity to think about how they naturally process information, they are more apt to connect to what they are being taught. This is the ultimate goal in the classroom—for students to retain new information.