

Implementation of the Science IDEAS Model

The Science IDEAS project is a research-based instructional intervention that serves as the basis for a 5-year project funded by the National Science Foundation and is being implemented in Broward and Palm Beach County Schools, initially in grades 3-5 with follow-up in grades 6-8. The project goals are threefold: (1) to accelerate student achievement in science, reading comprehension and writing; (2) to better prepare students for future success in high school; and (3) to gain increased understanding of how school systems are able to develop the capacity to sustain and expand a research-validated instructional model (e.g., Science IDEAS).

Each teacher will be provided with a content-based instructional framework that emphasizes teaching for understanding. This framework provides a daily two-hour instructional block for Science IDEAS that includes a variety of activities focusing on science understanding (e.g., reading comprehension, writing, journaling, propositional concept mapping, hands-on activities, group/individual projects).

The binders have been specifically designed to help teachers implement the Science IDEAS Model. Each binder is composed of the same general content:

- Science IDEAS Model
- Curriculum and Resources
- Teacher Background Information*
- Science Labs and Activities*
- Propositional Concept Maps*
- Blank Noun Concept Maps*
- Blank Verb Concept Maps*
- Writing Prompts*
- Sunshine State Standards/Benchmarks

(*Included in each section)

The two-hour block should be planned from the propositional concept map and teacher research on the unit, keeping in mind the state benchmarks. The lesson might include:

- A Prior Knowledge Activity
- Reading Comprehension Routine
- Language Arts Activities

- Hands-on Activity/Demonstration
- Journal Writing
- Teacher-guided Concept Mapping
- Concept Map-based Writing
- Relating New Knowledge to Prior Knowledge
- Additional Reading/Homework Activity

The background information provided is meant for teachers but may be used as student reading material if appropriate; however, additional reading should come from a variety of sources (e.g., textbooks, science magazines, trade books, internet sources, etc.). The blank noun and blank verb concept maps may be used as a tool to enhance comprehension, a review, a language arts lesson, or an assessment. Teachers are encouraged to build their own maps with their classes, as it is the construction of the maps that demonstrates and enhances comprehension of the subject matter. Lessons should include activities and labs whenever possible. These hands-on activities should be followed by journal writing. Writing prompts are included and are written in the FCAT format for those preparing for *Florida Writes!* The units are organized in a recommended order.

As you begin to take ownership, develop the resource binder to meet your needs by adding activities, labs, and readings that will enhance your lessons. Remember, sharing ideas with team members and other Science IDEAS teachers will benefit everyone. If you have questions, or need more direction, ask your school leadership cadre members for assistance. They are there to help!