Encoding Strategies

Encoding is the process of transferring information from the short-term/working memory to the long-term memory. Encoding is critical to the learning process, because information in long-term memory is permanent and can be considered learned.

As a teacher, I want my students to become independent learners. I will teach them how to develop encoding strategies so that they know how to process and store information independent of a teacher. To do this, I will model my thought processes when using a strategy, tell students why a strategy works and when to use it, stress the connection between using a strategy and better performance, and reward students for using strategies.

I will incorporate the mnemonic, **O**rnery **E**leanor **H**ides **N**ine **P**lump **S**piders, into my classroom routine, i.e. organization, elaboration, highlighting, note-taking, practice (review), and summarizing.

Organization

During my lessons, I will show students how to organize information into steps, flowcharts, tables, concept maps, and outlines. I will lead students in a discussion to help them "discover" this information on their own. I will demonstrate how to use the information by working through example problems. I will encourage students to reference this information when doing their homework and preparing for tests.

Elaboration

Students will write in a math journal. I will provide prompts that may include a math problem to solve, a math concept or process to describe in words and/or pictures, free-writing exercises about math, a story or comic idea to involve characters in a math problem/solution, a joke or riddle idea, etc. I will encourage students to work on their journal outside of class. Journal entries will earn bonus points. I will collect journals and award bonus points every two to three weeks.

Highlighting

I will encourage students to highlight important examples, proofs, definitions, formulas, and procedures that I will require them to have in their notes. I will also instruct them to highlight homework problems that they have trouble answering and to inquire about those problems during the homework discussion.

Note-taking

Students will take notes and file them in a loose-leaf notebook that I will collect and grade every two to three weeks. A significant portion of the grade will be for having a complete, well-organized notebook.

Practice (Review)

Practice is critical to doing well in math. Practice problems reinforce and enhance what I teach. Therefore, I will assign homework on a regular basis and discuss the homework along with other examples in class. Students will file their homework with their notes in their loose-leaf notebook. I will collect and grade homework every two to three weeks with the notebooks. Students will have the opportunity to correct their homework as we discuss it in class.

Summarizing

I plan to leave a few minutes at the end of each class to summarize the material. I may ask students to write and turn in "three points they learned today," to take a non-graded quiz to assess where they are, or to participate in a discussion around the main points. My focus will be to foster higher-order thinking skills by having students analyze, interpret, or evaluate the material.