Examples of Some Lesson Plan Elements

Theme - Choose from the following, or suggest another (check this out with me first)

- Plate Tectonics
- Minnesota's Geology
- The Ice Age
- Earth Resources

Other Themes: Dinosaurs, Natural Disasters, Rocks and Minerals, Water and the Environment

Enduring Understandings - overarching concepts or core processes that are at the heart of the theme you have chosen. This should not be the details of what you want to teach your student, but rather the big ideas that you want them to discover and retain.

Plate Tectonics: The earth is dynamic, ever changing. The origin of all natural features and phenomenon on earth can be explained by the Theory of Plate Tectonics.

Geology of Minnesota: Minnesota's rocks tell the story of the formation of North America.

Daily Topical Questions - what you want your students to be able to answer at the end of this lesson plan. Questions should be provocative and designed to engage student interest and to be a guide for developing each of your daily lesson plans. Ask questions that provoke other questions or that students can speculate about. Avoid questions that have a singular simple answer.

Theme: Geology of Minnesota:

"How do we know there were volcanoes in Minnesota" - leads in to lesson on igneous rocks, recognizing features and textures of volcanic rocks; activity - growing crystals; story – greenstone belts and island arcs.

"How do we know how old rocks are?" lead in to lesson on relative age dating and absolute age dating; exercise – geologic diagrams that portray a geologic sequence of event.

"Why do we find shell fossils in St. Paul?" lead in to lesson on sedimentary rocks, Paleozoic geology, and activity on fossil imprints.

Prior Knowledge - fundamental concepts, facts, and skills related to your theme that your students should already be familiar with to be successful in this unit. Be sure that your expectations are appropriate for the level you are teaching. For example

Middle school: Heard of the 3 basic rock types and maybe handful of rock names
Know how to make simple graphs
Know multiplication and division, how to deal with decimals and percents.
Understand the difference between facts, observations, and interpretations

High School: Familiar with names and origins of common rock types
Basic understanding of Plate Tectonic, Rock Cycle, Water Cycle
Familiar with the general geography of the world
Higher order math skills (algebra, basic statistics)
Experience with debating ideas, with essay exams, with researching topics by web browsing or with books

Assessment - Different types of assessment include:

- Homework assignments
- Quizzes
- Poster presentation
- Construct a model (playdoh)
- In-class exercise with follow-up questions.
- Drama Presentation
- Jeopardy game (group assessment)