Unit/Project Design Assignment

Teachers are curriculum planners! But how do you plan for instruction? This assignment will give you experience in unit planning and development.

You will develop a project/unit that spans 3 to 4 weeks (15 to 20 days) of instruction. The complete project/unit will include the following components:

- Driving Question/Theme and sub-questions for the unit
- Concept Map of the main concepts
- Student learning outcomes linked to national and state curriculum objectives. (Remember: you want your units to help students build integrated understandings, so your unit should focus on one or two major student learning outcomes.)
- A lesson sequence with a description of how each lesson builds on each other and which specify the teacher and student activities for each day. (You might think of this as an elaborated calendar).
- Detailed lesson plans for at least 3 lessons (Note: a lesson does not necessarily equal a day).
  - One lesson will make use of a technology tool (data collection, data analysis, modeling, etc). The tool needs to be at the appropriate cognitive level for the learner. You will need to receive an okay from one of the instructors in selecting the tool.
  - One lesson will focus on student inquiry. Your inquiry should focus on a majority of the inquire features (asking and refining questions, finding information, designing and planning experiments, collecting and analyzing data, drawing conclusions and reporting findings.

  (Note: the tool use and inquiry lesson could be blended together).
- Assessment program. You must included a complete assessment program, including embedded assessments, performance based assessments as well as more summative assessments.
- A rationale that provides a justification for the structure of the unit. Your rational should focus on the following questions: How did you contextualize student learning? How did you make use of inquiry? What are the ways in which you assessed student learning? How did you take account of students' prior experiences and knowledge? How will you sequence lessons so that they support the understanding of the learning outcomes? Please make use of class readings and discussion in making writing your rationale.

You are encouraged to work in pairs. If you do, then we have a slight modification to the assignment. First, we will require 6 complete lessons rather than 3. Second, we will require that each member specify which lessons they took special care to develop. Finally, each partner will need to write their own rationale for the unit.

Plan to use materials from a variety of sources including those available at your school, other textbooks and science resources. IRIS and the World Wide Web are good sources of materials. These materials will be helpful in finding investigations, activities, and assessments. Remember, as teachers you plan and modify curriculum and not create curriculum, so use as many resources as possible. Your only obligation is to give credit to the source of the material. Also, it is okay if you piggy-back other assignments you developed in this course (i.e. previous lesson plans, assessments, etc.)

You should make use the rubrics that has focused course work in developing your unit. As an instructional team, we will also make use of the rubrics in providing you feedback. The following rubrics have focused our work in the course:

- Student Learning Outcomes
- Instructional Sequence
- Laboratory lesson

- Representation of Content
- Science Content
- Assessment Program

Because this assignment is so critical to your development as a teacher, we will expect at least one draft of your work. We will provide commentary to help shape your work.

Overview of Project Design Due Dates

Project/Unit Development (First Draft)	November 29th[th]

- Driving question and sub-questions
- Concept Map
- Student outcomes
- Outline of sequence with some teacher and student activities specified
- Drafts of your lesson plans
- Some aspects of your assessment program

Draft 1 conferences	December 4 - 6th
Project/Unit Development (Final Draft)	December 13th