

UNIT PLAN

This assignment will give you an opportunity to outline a “chunk” of mathematical content, decide what the important ideas are, develop ways to help students explore those ideas and describe how you will assess student understanding. Although your unit should cover 8 to 10 lessons, you will not be writing all the lesson plans right now. WHY? That is because one day’s lesson should grow out of your assessment of what happened the previous day or days. The unit plan you turn in will include:

1. An overview of the unit that summarizes your goals, rationale, a list of the lessons in order for the unit, and 1 assessment tool for the unit;
2. A content inventory that outlines the mathematical components of your topic and lists the lessons in the order they will occur;
3. An opening lesson plan in detail;
4. Less detailed lesson plans for 2 more key lessons;
5. A library of lesson ideas that you will draw on for the follow-up lessons.

Following is a detailed description of each of the five pieces of the unit plan.

UNIT OVERVIEW

In the overview, describe your topic and the grade level of the students. Be realistic and do not feel that you need to cover everything related to your topic in eight to ten lessons. State your goals for the unit. What do you want students to experience and understand through the unit?

Include rationale. Why are these goals important for students? Use NCTM standards, the Utah core and other class readings to help you make a case for why you will be teaching this material and the way in which you will be teaching it. Include a list of the exact order of lessons in this unit.

Last, include how you will assess students during the unit. What on-going and cumulative methods will you use? What aspects of student learning will you be assessing with those methods? Again use readings to support your intentions. You will include one well developed assessment tool which you will use at some point in the unit. This may be but does not have to be a test. There are many other options.

CONTENT INVENTORY

This should outline the mathematical components specific to your topic and show how they fit together. Ask yourself: What are the important things about this topic that my students should know and should learn? Describe the concepts and skills involved with your topic in these ways:

1. What background knowledge do you expect students to have?
2. What mathematical processes will students be working on?
3. What mathematical skills will they be developing?
4. What conceptual ideas will they be building?
5. What applications of mathematics will be part of your unit?

As you are writing about and organizing the important concepts, topics and skills that are part of your unit be sure to consider how they are related to one another, to what the students already know and to the real world.

OPENING LESSON PLAN

Write a detailed lesson plan for the opening lesson. How will you introduce students to this topic? The opening lesson plan should probably be exploratory in nature. It should invite students into the topic and should give you an opportunity to assess what knowledge, experiences, skills and ideas they bring into this unit. Even though you have framed a rationale and goals for the unit, this lesson will have its own goal and measurable objective(s). This lesson will also have its own assessment method(s) associated with it. Make an annotated list of several tasks from your library that could be used as follow-up or to extend the opening lesson in different ways. Annotate the list by briefly describing why you would choose to use a given activity.

PLANS FOR KEY LESSONS

There will be at least three key ideas in your content inventory that you will want to outline a specific lesson to address (including the opening lesson). Make an annotated list of tasks from your library that could be used as follow-up or to extend the key lesson in different ways.

LIBRARY OF TASKS

Collect at least ten tasks or activities around which you might create lessons to help students explore specific ideas you have listed in your content inventory. “Worthwhile mathematical tasks are based on sound and significant mathematics, and students’ understandings, interests and experiences. They should engage students’ intellect, develop students’ mathematical understandings and skills, stimulate students to make connections, require reasoning and problem solving, promote mathematical communication, and display sensitivity to and draw on students diverse background experience and dispositions.” (NCTM STANDARDS)

With each task include a brief statement of what mathematical ideas, skills and concepts this task would help students learn about. Be sure the activity is described in enough detail to inform the reader what it might look like.

The tasks can be invented by you and/or a colleague, or drawn from another source (which should be cited). Be sure to get ideas from a **variety** of sources including but not limited to NCTM journals, NCTM Addenda series, NCTM Student Notes, the internet, the curriculum library, etc. The important thing is to make sure you have selected tasks which have the potential to engage students in thinking mathematically and those which fit within your content inventory and goals.

GRADING RUBRIC

SPECIFIC CRITERIA

Unit overview

Describe topic including sequence of the lessons.

Goals and objectives

Rationale

Cite Standards, core, readings

Assessment tool

Content Inventory:

Opening Lesson Plan:

Two other key lessons:

Library of tasks (at least ten):

OVERALL CRITERIA

Thoroughness of work

Connections between different pieces.

Originality of presentations

Clarity, organization, mechanics, grammar

GRADE: