

MathStar Research Lesson Plan

Grade Level: Seventh Grade

Instructor: Christina Jacques

Class Time: Third period

Location:

Gadsden Middle School
1303 W. Washington
Anthony New Mexico 88021
(505) 882-2372
Room 13

Date: 2/8/2002

of Students: Approximately 25 (subject to change)

Class Type (check one):

Regular SPED Bilingual/ESL Other

Comments: (*Describe social/ cultural context of school*)

I. Description of Unit: (*1 to 2 sentences*)

This unit provides a rich set of experiences that focus on developing meaning for computations with rational numbers. We expect students to finish this unit knowing algorithms for computation that they understand and can use with facility.

A. How does this lesson fit into the unit?

▪ Previously learned concepts (*What concepts are needed to do this lesson?*)

- ⇒ Finding factors
- ⇒ Abundant multiples
- ⇒ Perfect number
- ⇒ Prime numbers
- ⇒ Composite Numbers
- ⇒ Even and odd numbers
- ⇒ Working on developing strategies to produce answers
- ⇒ Explaining how they arrived at their answer
- ⇒ Understanding of fractions, decimals, and percents and the relationships among these concepts and their representations
- ⇒ Estimation to understand a situation
- ⇒ Move flexibly between different forms of representations of rational numbers

▪ Concepts to be learned in this lesson

- ⇒ Thinking strategies
- ⇒ Group cooperation
- ⇒ Place value system
- ⇒ Organizational strategies

▪ Concepts to be used in future lessons

- ⇒ Thinking strategies
- ⇒ Group cooperation
- ⇒ Place value system
- ⇒ Organizational strategies
- ⇒ Percents, fractions, and decimals
- ⇒ Ratios and proportions

B. Instructional sequence for unit (*Where does this unit fit in the curriculum for the year?*)

1. Investigation I

- ⇒ Using percents
 - 1. 4 lessons
 - 2. Research Lesson**
- 2. Investigation II
 - ⇒ More About Percents
 - 1. 4 lessons
- 3. Investigation III
 - ⇒ Estimating with Fractions and Decimals
 - 1. 2 lessons
- 4. Investigation IV
 - ⇒ Adding and Subtracting Fractions
 - 1. 4 lessons
- 5. Investigation V
 - ⇒ Finding Areas and other Products
 - 1. 4 lessons
- 6. Investigation VI
 - ⇒ Computing with Decimals
 - I. 5 Lesson
- 7. Investigation VII
 - ⇒ Division of Fractions
 - 1. 3 Lessons

II. Plan of the research lesson

A. Goals of the research lesson: (*What do you want your students to learn in this research lesson?*)

Our main objective is to find out, after six months with the Connected Mathematics Project (CMP), if the students are willing to take risks. We want our students to be risk-takers, and we feel that if the students are risk takers in math then they can transfer this skill to real life.

CMP is a type of program that encourages risk taking, and we want to find out how much of the skill the students acquired. Another of our goals is to find out if the students are developing the necessary skills to be critical thinkers. We are interested into seeing if the students can and are able to find information and analyze the information to be use to solve a problem.

Another aspect that we are truly interested is to see the student's interactions, and how are the students using their peers to solve a problem. We want to see students using every resource possible including ideas from their peers. How are the students handling the group's work? Are the students analyzing everybody's ideas? We want to explore if the students have the necessary interaction skills to come up with a solution group wise.

B. How does the lesson fit into the overarching lesson study goal?

(Example of overarching lesson study goal: Students will be confident in their ability to learn.)

We believe if the students are risk takers, and critical thinkers then they will be successful with their learning. Whenever students are taking risks in their learning then they are developing a skill that will make them better students. At the same time, they will be thinking critically about what information is necessary into solving a problem.

C. Steps of the research lesson: (*See attached table*)

D. Things to prepare/materials:

- ⇒ Butcher paper
- ⇒ Paper with washed out number
- ⇒ Markers