

Name: Nancy Lines

Grade Level/Subject: 4<sup>th</sup> Grade Math

Topic: Place Value Tools

Objectives:

Students will identify the value to a digit in the first 6 places.

Students will write statements sharing what they have learned about place value.

Objectives (P.A.S.S.):

Standard 1: Problem Solving

1. Use cards to find the value of a digit.

2. Verify and interpret results with respect to the original number.

Standard 2: Number Sense

1. Place Value

a. Apply the concept of place value through 6 digits.

Materials: *One Grain of Rice* by Demi

10 Small blank cards for each student

Pencils or sharpies

Introduction:

Begin the lesson by a guided discussion asking them to name the digits that we use to write numbers and what determines the value of a digit.

Instructional process:

1. Before reading the book, *One Grain of Rice* by Demi, explain that the story you are about to read takes place in another country, India. The vocabulary word raja, used in the story, is another name for king. Read the story to the class.

2. Give each student 10 small cards. Instruct them to write one digit on each card until all the digits are written. They are then to turn over all the cards and

write a 0 on the back. Have them place the cards at the top of their desk with the digits showing.

3. Review the story stopping on the 9<sup>th</sup> day when Rani received 256 grains of rice. Ask the students to make that number using their digit cards. Ask the students what is the value of the 5 digit. After the answer is given, instruct the students to turn the 2 and 6 cards over to see if their answer is right.

4. Move on to the 12<sup>th</sup> day when 2,480 grains of rice were received. The students will form that number at their desks. You may then ask the value of any digit in the number. The students can check their answers by turning over all the cards in the number except the digit being used.

#### Closure:

The teacher will conclude the lesson by reviewing that place determines the value of a digit in a number. Give the class a 6-digit number to form and then ask them to tell a neighbor the value of 2 of the digits. They may check their own work.

Ask each student to write a statement about place value.

#### Assessment:

The students will be assessed on the accuracy of their oral answers when asked the value of a digit and if they could recall all 10 digits when completing their cards. Their statements could also be an indicator of their level of knowledge concerning place value.

#### Modifications:

Advanced Students: Go on in the story and discuss the numbers on the 21<sup>st</sup>, 24<sup>th</sup>, 27<sup>th</sup>, 29<sup>th</sup>, and 30<sup>th</sup> days identifying digits in 9 places.

Special Needs: You could have the cards already made out for them, or you could assist them in making their cards while the other students are completing theirs.

#### Reflection:

The students LOVED the book. They struggled with making the number 4096 because it has a 0 in it. This was good because I could see what area I needed to teach. They wanted to go on and form the bigger numbers so we moved to the 21<sup>st</sup> day when she received 1,048,576 grains. Again, some struggled with remembering where to put the zero. From that number, we then moved to just writing numbers I dictated to them on their math “boards”. I would do this lesson again.