Algebra/Geometry Institute Summer 2006
Lesson Plan 1: Comparing fractions
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School: Ruleville Central Elementary, Ruleville, Mississippi
Grade Level: 4th - 5th

1. Teaching Objective (s)
    The student will compare and order fractions.

2. Instructional Activities:
    Teacher will divide students into small groups. Students will use fraction bars so that they will have a concrete model for comparison. Students will then use them to find out which is larger:

$$\frac{2}{3} \, or \, \frac{3}{4}$$

$$\frac{3}{4} \, or \, \frac{4}{5}$$

$$\frac{5}{6} \, or \, \frac{7}{8}$$

$$\frac{2}{6} \, or \, \frac{2}{5}$$

The teacher will ask questions on comparing and ordering fractions. Questions that may be asked:
What is the same about the two fractions?
What is different about the two fractions?

Students will use activity sheet 1 as a pictorial model to identify fractions and order them.

3. Materials and Resources

1. Reys, Robert E., & Suydam, Marilyn N., & Lindquist, Mary Montgomery (1995). <u>Helping Children Learn Mathematics</u> (4th Ed.). Needham Heights: Simon & Schuster.
2. The National Council of Teachers of Mathematics (2005) Mathematics Assessment a Practical Handbook.
3. Mississippi Department of Education, Mathematics Instructional Intervention Supplement
4. Fraction Bar Sheet
5. Activity Sheet 1
6. Activity Sheet 2
7. Activity Sheet 3
8. Colors
9. Ruler

4. Assessment

Students will work on activity sheet 3, comparing fractions. Students may use fraction bar sheet to assist them.

$\frac{1}{3}$ is _____ parts of the whole.

$\frac{2}{7}$ is _____ parts of the whole.

Which is larger, $\frac{1}{3}$ or $\frac{2}{7}$?

$\frac{2}{3}$ is _____ parts of the whole.

$\frac{5}{7}$ is _____ parts of the whole.

Which is larger, $\frac{2}{3}$ or $\frac{5}{7}$?

$\frac{1}{3}$ is _____ parts of the whole.
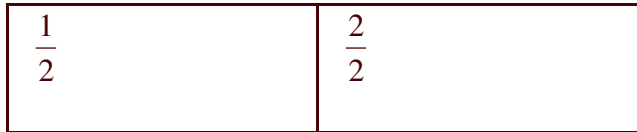
$\frac{3}{7}$ is _____ parts of the whole.

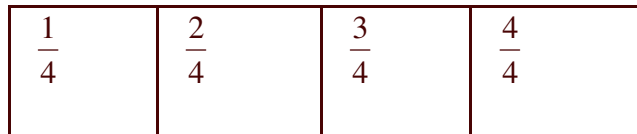Which is larger, $\frac{1}{3}$ or $\frac{3}{7}$?

Fraction Bars

One

1

Halves

$\dfrac{1}{2}$	$\dfrac{2}{2}$

Thirds

$\dfrac{1}{3}$	$\dfrac{2}{3}$	$\dfrac{3}{3}$

Fourths

$\dfrac{1}{4}$	$\dfrac{2}{4}$	$\dfrac{3}{4}$	$\dfrac{4}{4}$

Fifths

$\dfrac{1}{5}$	$\dfrac{2}{5}$	$\dfrac{3}{5}$	$\dfrac{4}{5}$	$\dfrac{5}{5}$

Sixths

$\dfrac{1}{6}$	$\dfrac{2}{6}$	$\dfrac{3}{6}$	$\dfrac{4}{6}$	$\dfrac{5}{6}$	$\dfrac{6}{6}$

Eighths

$\dfrac{1}{8}$	$\dfrac{2}{8}$	$\dfrac{3}{8}$	$\dfrac{4}{8}$	$\dfrac{5}{8}$	$\dfrac{6}{8}$	$\dfrac{7}{8}$	$\dfrac{8}{8}$

Students will use a symbolic representative to order fractions using activity sheet 2.

Students will use the rectangle that is partitioned on activity sheet 2 into twenty-first so that $\dfrac{2}{3}$ is 14 of 21 parts or $\dfrac{14}{21}$ and $\dfrac{5}{7}$ is 15 of the 21 parts or $\dfrac{15}{21}$. So 21 is the common denominator for comparing the fractions $\dfrac{2}{3}$ and $\dfrac{5}{7}$. Students may use different colors for problems.

Activity Sheet 2

$$\frac{2}{3} = \frac{14}{21}$$

$$\frac{5}{7} = \frac{15}{21}$$
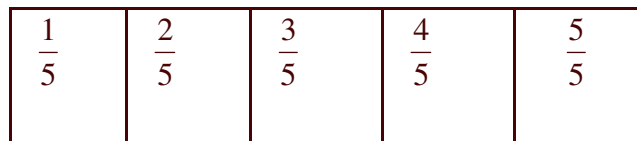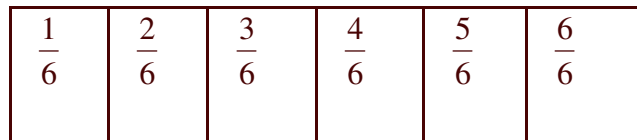
Activity Sheet 3

Comparing Fractions
Compare the fractions using the Fraction Bar, then write in between the fractions <, >, or = for each pair of fractions.

1. $\dfrac{1}{2}$ _____ $\dfrac{1}{3}$

2. $\dfrac{2}{3}$ _____ $\dfrac{3}{4}$

3. $\dfrac{3}{5}$ _____ $\dfrac{3}{4}$

4. $\dfrac{4}{8}$ _____ $\dfrac{1}{2}$