

## LESSON PLAN

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Teacher 1-8  
Math  
1<sup>st</sup> and 2<sup>nd</sup>

### MATCHING WITH CUISENAIRE RODS

#### DESCRIPTION:

For this lesson pair up students in cooperative groups of two. Two students will use the cuisenaire rods. Two other students will be at each computer in the Kid Pix program, making the various rods, at the various lengths, with the corresponding colors, using art tools. At the end of each activity students will save page to their folder. Students will alternate after each two activities, so that all students will have turns on Kid Pix, and with the cuisenaire rods.).

#### FAITH INTEGRATION:

Discuss with students that God loves variety. There are all different sizes of people—even in our own families—and there are all sorts of colors in people. Some are short. Some are tall. Some are in-between. But, God loves and values each person, no matter what size they are, no matter what color they are equally the same. Even if the person says that he does not believe in God. God still loves that person the same.

#### CURRICULUM BENCHMARK

##### NETS Standard III. TEACHING, LEARNING, AND THE CURRICULUM

This lesson includes knowledge of subject matter, critical thinking, and diversity. It illustrates the property in math called “transitivity.”

#### MATERIALS HARDWARE/SOFTWARE

Windows 95/98/XE or similar system with sufficient hard drive capacity, and memory.  
Kid Pix Studio Deluxe by Broderbund  
Kid Pix Deluxe 3 by Broderbund    The Learning Company  
500 Redwood Blvd.  
Novato, CA 94947  
[www.kidpix.com](http://www.kidpix.com)

Cuisenaire Rods                      Cuisenaire Co. of America, INC.  
10 Bank Street, Box 5026  
White Plains, N.Y. 10602-5026

## TEACHER PREPERATION

Review Kid Pix software art tools with students. In particular show the open rectangle in the tools and how to shape a narrow rectangle. Also show how to change color, and fill each rectangle. Review how to save. Explain rotation procedure.

## STUDENT PREPERATION

Students must be familiar with the Kid Pix software: the various art tools, color picker, tool selection, and tool options tray in particular. Students also need to know how to save their work in a folder.

## ACTIVITIES/PROCEDURES: TEACHER INSTRUCTIONS IN PARENTHESES

- 1) (Put rods of one color in a set—e.g. 5 reds at first). Place near these rods another set of green rods so that there is one green rod for each red rod in my set. (Change # of rods in your set and let your child change his set to match. Don't use number words. It is important that the child recognize that he can match rod for rod, and not that the number name be known).
- 2) Choose one rod to represent each member of your family who lives in your house. Use a different color for each member of your family.
- 3) Now choose one red and one green for each member of your family. (Should end up with twice as many rods as people).
- 4) Choose one rod for each of your classmates. Use one color for girls and another for boys. (After, ask:) Are there more girls, or are there more girls?
- 5) Now pick a red rod for each of your fingers and a green rod for each of your toes.. Are there more fingers or more toes? (Students can prove by pairing up one red and one green).
- 6) (Start by taking a pile of five or six dark green rods). Make a pile of red rods. Now I will make a pile of yellow rods with one yellow rod for each of your red rods. Now see if your pile of red rods will match my pile of yellow rods. (repeat with different colors and quantities. Students should understand that all piles should match each time, no matter what colors or lengths are involved

## ASSESSMENT/EVALUATION:

See attached rubric: Math-Problem solving: Cuisenaire rods

## FOLLOW-UP ACTIVITIES

During the day's activities, ask students other questions about matching. e.g. Can he/she show by matching that there is one student per desk, one student per locker, or cubby hole

## Math - Problem Solving : Matching with Cuisenaire Rods

Teacher Name: **Mr. McHenry**

Student Name: \_\_\_\_\_

CATEGORY	4	3	2	1
<b>Use of Manipulatives</b>	Student always listens and follows directions and only uses manipulatives as instructed.	Student typically listens and follows directions and uses manipulatives as instructed most of the time.	Student sometimes listens and follows directions and uses manipulatives appropriately when reminded.	Student rarely listens and often "plays" with the manipulatives instead of using them as instructed.
<b>Working with Others</b>	Student was an engaged partner, listening to suggestions of others and working cooperatively throughout lesson.	Student was an engaged partner but had trouble listening to others and/or working cooperatively.	Student cooperated with others, but needed prompting to stay on-task.	Student did not work effectively with others.
<b>Mathematical Errors</b>	90-100% of the steps and solutions have no mathematical errors.	Almost all (85-89%) of the steps and solutions have no mathematical errors.	Most (75-84%) of the steps and solutions have no mathematical errors.	More than 75% of the steps and solutions have mathematical errors.
<b>Neatness and Organization</b>	The work is presented in a neat, clear, organized fashion that is easy to read.	The work is presented in a neat and organized fashion that is usually easy to read.	The work is presented in an organized fashion but may be hard to read at times.	The work appears sloppy and unorganized. It is hard to know what information goes together.
<b>KidPix Projects</b>	Kid Pix projects are clear and greatly add to the reader's understanding of the procedure(s).	Kid Pix projects are clear and easy to understand.	Kid Pix projects are somewhat difficult to understand.	Kid Pix projects are difficult to understand or are not used.
<b>Completion</b>	All problems are completed.	All but 1 of the problems are completed.	All but 2 of the problems are completed.	Several of the problems are not completed.

Date Created: **Feb 22, 2004 08:21 pm (CST)**