

**Lesson Plan Title:** Measuring Area in Square Centimetres

**Subject/Class:** Math – 3/4 S

**Topic:** Measuring in square centimetres

**Lesson Objectives/Curriculum Outcomes:**

- Students should understand that the square centimeter is a standard unit of area
- A 1 cm grid can be used to measure area in square cm's

**Duration:**

60 minutes

**Materials:**

- Grid paper for each student
- Dice
- String
- Ruler for each student
- Textbook (Math Makes Sense 4) page 155 for game
- Copies of Master 4.19 (Teachers Guide – Math Makes Sense 4)

**Steps:**

**Introduction:**

- Give students grid paper and ask them to measure one single square using their ruler
- Ask them how this helps us to measure and find area and perimeter
- Ask students to define area and perimeter
- Write both on board and ask what math equations can help us save time and quickly calculate the area and perimeter of a shape

Today students are going to do 3 things:

1. Work individually doing the *hand measurement activity*. For this activity, students trace their hand, open or closed or both, on a piece of graph paper. To find the area, they would need to count the squares inside the outline. There will be many whole squares they can count, but there will also be halves and fourths they will need to put together to make a "whole". Ask students to calculate both the area and the perimeter of their hand tracing. Then can use a piece of string or yarn to measure the outline of their hand. Using a ruler, they measure the amount of string that was needed to go around the perimeter. (Students need to trace hand and calculate the area and perimeter)
  - a. Talk about strategies used and compare results after completed as reflection.
2. Once complete, students can work on questions 2 (a,b) on p. 55 and questions 5 (a.b.c.d) and 6 (a.b.c.d) OR MASTER 4.19
3. Then students can work in pairs on question 7 (the game) where their goal is to use the dice and a 10 by 10 portion of their grid paper to fill in the area of the shape. Students work in pairs, roll the dice and color in the area shown on the dice. Pairs play back and forth until the area is completely filled or the allotted time is up.

***Differentiation/Extensions:***

- ***Get students to use elastics and geoboards for practice or as an extra manipulative.***
- ***Use the grade 3 Math Makes Sense Textbook and do the Practice and Connect Sections for area.***