

Integrated Lesson Plan

Time: 1 hour

Grade: 2nd grade

Materials: Grid paper, pencils, student foot.

What will the students understand by completing this activity (Objective): Upon completion of this lesson, I expect that students will understand Area by finding the area of their own footprint using grid paper.

Description of the tasks the student must complete to demonstrate that they have achieved understanding:

- Students will trace footprints on centimeter grid paper to determine the area of their footprint. They will find area by counting whole square units. They will each work with a partner. Each student will trace their partners' foot on the centimeter grid paper. They will then count to find the area of the footprint. They will record the area on paper. They will count all of the "whole squares" first. If more than $\frac{1}{2}$ of the square is inside, it is counted as 1 sq. cm. The result of their efforts will be a completed traced footprint, including the Area. The students will then trade papers and check each others' count.

To Extend the Lesson or provide more of a challenge (differentiation), some students will predict which areas are about the same and which are larger or smaller. Students who finish early can go ahead and measure the area of their handprints. They can also go ahead and find the median values of all of the areas of feet in the class (median has already been taught in a previous lesson)

What the teacher will do:

The steps the teacher will take to ensure that the students complete the task begin by briefly reviewing what the students already know about perimeter and area. The teacher will refer to the class charts about what we know about perimeter and area. The teacher will then explain the lesson and that each student will work with a partner. The teacher will also explain that partners will trace each others footprint and find the area of the whole print. The teacher will also remind students that we are measuring in square centimeters and that if more than $\frac{1}{2}$ of the square is inside the print, it is counted as 1 sq. cm. The teacher will explain that the students who finish early can complete the activities listed above to provide more of a challenge for more advanced students.

Share: After about 45 minutes, or when it seems that most students are complete, the class will gather in a circle and share their findings with the class. They will discuss what was easy for them and what they found to be challenging.

Assessment: Teacher observes students throughout entire activity. Teacher also examines completed work.