MINISTRY OF EDUCATION, YOUTH & INFORMATION
Every Child Can Learn, Every Child Must Learn

MATH COUNTS

Subject: Mathematics	**Grade**: Four (4)		**Strand**: Measurement	**Duration:** 60 Minutes
Topic: Area		**Focus Question**: What is the difference between length and area and how are they measured?		
Standard:		Use the correct units, tools and attributes to estimate, compare and carry out the processes of measurement to given degree of accuracy.		
Attainment Targets:		Explain and carry out the processes of estimation and measurement, including the selection of appropriately precise units.		
Benchmarks:		Estimate and measure distance and area using standard metric units.		
Materials:		various grids, square tiles		

Specific Objectives

o *By the end of the lesson, students will be able to:*

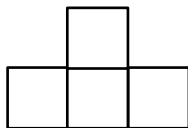- measure area using unit squares

Prior Learning:

o *Students should already be able to:*

- Explain and use the term perimeter.

- Measure perimeter of polygons and various objects.

Content Summary

o Area refers to the number of square units that a figure covers.

Engage

- Draw a "boat" (shown below) on the board.

- To each group of 2 students, distribute two or three 6 × 6 grids. Persons in each group play against each other by taking turns to colour tiles to create "boats" on the same grid. "Boats" can be turned in any direction but must retain their original design.

- The person who is able to shade the greater number of "boats" is the winner (use different designs/colours to differentiate between the two players).

- Allow children to play a few times and count up the number of squares that they shaded in order to determine the winner each time.

Explore

- Give each group of children about 40 square tiles – each tile should fit exactly over a square on the 6 × 6 grid that students were working with from starter activity. Ask students to say how many square tiles would completely cover the 6 × 6 grid.

- Discuss students' responses, having them take note that the answer (36 square tiles) represents the area of the 6 × 6 grid.

- Show students a picture of a "car"

- Give each pair of students a few copies of the grid below
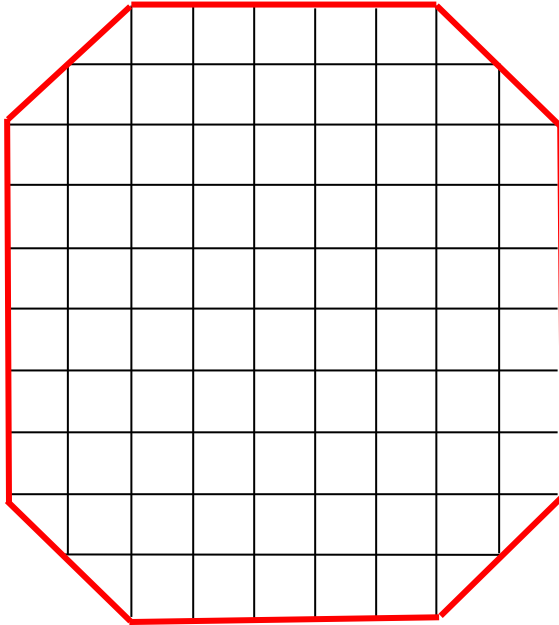
- Inform students that they are to take turns to colour "cars" in an effort to determine who could shade the greater number of cars before running out of space on the grid.

Explain

- Discuss the following questions:
    - What is the area of the octagonal shape?
    - What is the area of the shaded region of the octagon?
    - What is the area of the unshaded region of the octagon?
   - What is the area of each region shaded in different colours?

Extension

After discovering the area of an object is the number of square units that covers it, demonstrate how to find the area of one face of a drink box, cereal box, etc.

Evaluation

Students' Evaluation

- Place students in groups of 5 – 6. Provide each group with a large copy of the grid shown below.

MINISTRY
OF
EDUCATION, YOUTH & INFORMATION
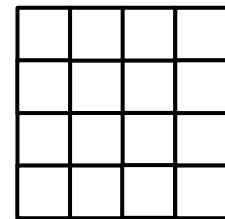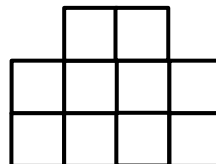*Every Child Can Learn, Every Child Must Learn*
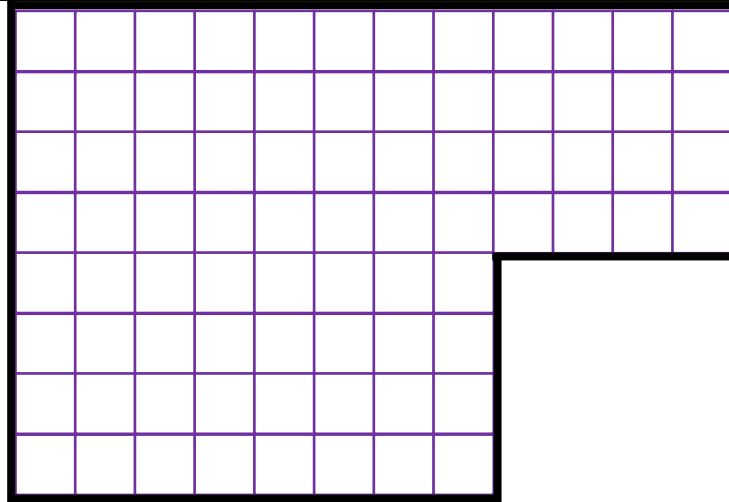
- Inform students that the grid represents the floor of a living room and that the squares represent floor tiles. Have students colour the tiles on the living room to indicate where they will place the following pieces of furniture:
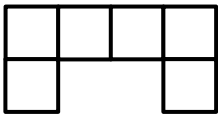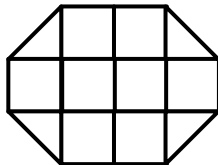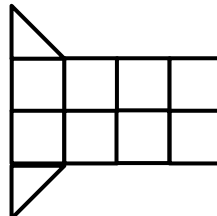
2 chairs
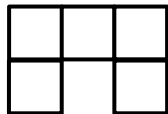
TV stand

A rug

A centre table

A computer desk

- At the bottom of the grid, write the following questions for students to answer:

a) What is the area of the floor of the living room?

b) What is the area taken up by the pieces of furniture?

c) What area is left unoccupied by furniture?

**MINISTRY
OF
EDUCATION, YOUTH & INFORMATION**
Every Child Can Learn, Every Child Must Learn

Teacher Evaluation

What percentage of students able to:	0% - 50%	51% - 80%	81% - 100%
Use unit squares or a centimetre grid to cover regions so as to determine their area.			
Use a square grid (1 cm^2 squares) to find the area of any shape.			

Comments:
Areas of strengths

Areas of weaknesses

Actions to be taken