

**Title**

Using Original Allotments to Calculate Perimeter & Area

**Grade Level**

6th, Math

**Theme**

Applying Lakota history to math

**Duration**

3-4 days

**Goal**

Students will analyze original allotment maps to calculate perimeter and area.

**Objectives**

SWBAT

1. Calculate perimeter of squares given the length of one side and calculate perimeter of rectangles given the length of two sides.
2. Calculate area of squares and rectangles given the length of two sides.
3. Write perimeter and area equations for squares and rectangles given one side.

**South Dakota Standards**

OSEUS 5:

Explain how Manifest Destiny and Imperialism affected the Oceti Sakowin.

OSEUS 6:

Explain how treaties affected the Oceti Sakowin in current tribal and urban societies.

CCSS.7.EE.B.4.a

Solve word problems leading to equations of the form  $px + q = r$  and  $p(x + q) = r$ , where  $p$ ,  $q$ , and  $r$  are specific rational numbers. Solve equations of these forms fluently.

Compare an algebraic solution to an arithmetic solution, identifying the sequence of the operations used in each approach. *For example, the perimeter of a rectangle is 54 cm. Its length is 6 cm. What is its width*

**Cultural Concept**

How land on Pine Ridge was divided/allotted to Natives and non-Natives.

**Cultural Background**

In 1887, U.S. Congress passed the General Allotment Act, which divided reservation lands into 640 acre-sections. Each head of family was allotted 160 acres, women were allotted 80 acres and children under 18 were allotted 40 acres. Any land left unassigned was taken by the U.S. government. As a result, tribes lost 5.5% of their land.

**Student Activities**

1. Display allotment map on Promethean board. Students will look at allotment maps and write down what they think it is. Zoom in to show Porcupine School.
2. Teacher explains how land was allotted after the General Allotment Act.
3. Activate prior knowledge about length of sides of squares/rectangles.
4. Using given equation for area of square, knowing that squares have sides of same length, students work in pairs to discuss what length of one side is.
5. Using perimeter equations and given sides, calculate perimeter of square and rectangular allotments.

**Resources**

Allotment maps projects on Promethean

**Assessment**

New map - calculate area & perimeter

**Developer**

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