

Authentic Intellectual Work

Teacher – Maassen

Subject – Math

Grade – 8th grade

Lesson – A Fence for Gretchie and Ashby

IC Essential Skills/Concepts –Apply and adapt a variety of appropriate strategies to solve problems

Two H.O.T. questions to structure conversations in your classroom – (following completion of activity) In your work, which did you determine to be the most appropriate type of fence and why?

(prior to activity) Compare the way the house sits on the property and determine the best location for the fence with the budget allowed.

(Upon completion) What are some disadvantages/advantages of putting your fence up against your house? (smell, dead grass, dog toys/easy, less grass to mow,

Introduction/Background – Students have the knowledge of how to determine perimeter, but this activity allows them to apply it, along with choosing an appropriate location for a dog pen, organizing a shopping list, and putting all necessary information in letter form.

Assign various groups to design a fence for a housedog and others for an outside dog.

Discuss building permits and use of 1-800-one call. (permission to dig)

Task – (Can attach)

See attached.

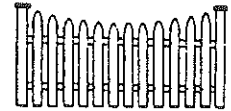
Bring any supporting documents that will assist students in completing this task such as; rubrics, additional handouts, graphic organizers, Viking Pride in writing, etc.

A Fence for Gretchie and Ashby!

My husband and I want to build a fence around our yard so that our dogs won't be able to run into the road. Below are some different types of fences that we can choose from. We have about \$1600 budgeted to spend. All sections below are 8 feet long.

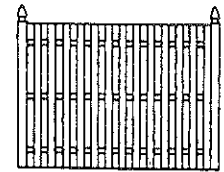
Scallop Gothic Fence

Pieces needed to build each section of the Scallop Gothic Fence:
2 end posts, 2 back rails, and 12 pickets



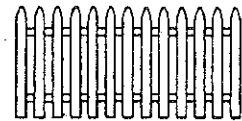
Shadow Board

Pieces needed to build each section of the Shadow Board Fence:
2 end posts, 3 thick back rails, 2 thin back rails, and 13 pickets



Gothic Picket

Pieces needed to build each section of the Gothic Picket Fence:
2 end posts, 2 back rails, and 13 pickets



Your task has 3 parts:

Part 1: Given that each section costs approximately \$50.00, determine the number of fence sections we would need to buy in order to create a large area in which our dogs can play.

Part 2: Choose the fence design you think would look best.

Part 3: Create a shopping list for the materials we would need in order to build each fence with the dimensions you determined in part 1 of the problem.

Other things you may need to know:

The dimensions of our house are 35' x 30'.

Our house sits on our land in the following way:

Your final product should contain a letter to me and Mr. McNair that tells us where to build the fence, how many sections we will need, how many of each type of building materials we will need, and the approximate cost. You should also explain how you made your determinations, so we can check your work before going to purchase the materials.

