



Calculating Crop Cost

Lesson Overview

This lesson uses multiplication to determine the value of crops. *Recommended for grade 5.*

Standards

Mathematics

5.NBT.5. Fluently multiply multi-digit whole numbers using the standard algorithm.

5.NBT.7. Add, subtract, multiply, and divide decimals to hundredths, using concrete models or drawings and strategies based on place value, properties of operations, and/or the relationship between addition and subtraction; relate the strategy to a written method and explain the reasoning used.

Time Required

45-60 minutes

Materials & Resources

- Cost of Crops Sheet
- Images of various crops/old plantations
- Images of plantation life
 - <http://www.loc.gov/pictures/item/96513748/>
 - <http://www.loc.gov/pictures/item/2012648381/>

Lesson Procedure

1. Explain that the value of crops is determined by the commodities market and was measured by a census.
2. Explain that Belmont Mansion was located on a large amount of land used to raise crops.
3. The chart on their sheet shows the count of crops at the Belmont Mansion during the agricultural census of 1860. The prices are based on the values of the crops in 2011. How much would the crops have been worth in 2011?

Extension

Have the students research and graph a crop or product on the current commodities market. This can be done as individuals or as a group project.

Resources:

- <http://www.cnbc.com/commodities/>
- <http://www.nasdaq.com/markets/commodities.aspx>
- <http://money.cnn.com/data/commodities/>
- <http://www.agweb.com/markets/futures/>

Evaluation

Evaluate the work performed on “Cost of Crops” worksheet using the answer sheet below

Cost of Crops Answer Key

Crop	How many units	Approx. Cost per unit (2011)	Value
Oats	300 bushels	\$3.40 per bushels	\$1,020.00
Indian Corn	500 bushels	\$6.20 per bushel	\$3,100.00
Wool	40 pounds	\$25.00 per pound	\$1,000.00
Potatoes	75 bushels	\$9.37 per bushel	\$702.75
Sweet potatoes	75 bushels	\$18.00 per bushel	\$1,350.00
Butter	350 pounds	\$3.00 per pound	\$1,050.00
Hay	40 tons	\$175.00 per ton	\$7,000.00
		Total Value	\$15,222.75

Name _____ Date _____

COST OF CROPS

When they did an agricultural census in Davidson County in 1860 the farm at Belmont Mansion grew the following crops/products: Oats, Indian Corn, Wool, Potatoes, Sweet Potatoes, Butter, and Hay

Today you will figure out the value of the following crops, as they would have cost in 2011:

Crop	How many units	Approx. Cost per unit (2011)	Value
Oats	300 bushels	\$3.40 per bushel	
Indian Corn	500 bushels	\$6.20 per bushel	
Wool	40 pounds	\$25.00 per pound	
Potatoes	75 bushels	\$9.37 per bushel	
Sweet potatoes	75 bushels	\$18.00 per bushel	
Butter	350 pounds	\$3.00 per pound	
Hay	40 tons	\$175.00 per ton	
		Total Value	

Explain in complete sentences how you determined the value of each crop. Circle the math vocabulary words that you use.

If you were a small farmer, which 2 crops would you choose to grow and why?

If you had limited space, why would a farmer choose to grow sweet potatoes instead of regular potatoes?