

## **Math Activity 2**

### **Economics: Tobacco and Jamestown Landowners**

**Objective:** Using math problems, students will be able to demonstrate the importance of tobacco to Virginia's 17th century colonial economy.

#### **Virginia Standards of Learning (Math):**

- ° 4.7 The student will find the product of two whole numbers when one factor has two digits or fewer and the other factor has three digits or fewer, using estimation and paper and pencil. For larger products (a two-digit numeral times a three-digit numeral), estimation and calculators will be used.
- ° 5.3 The student will create and solve problems involving addition, subtraction, multiplication, and division of whole numbers, using paper and pencil, estimation, mental computation, and calculators.
- ° 5.7 The student will add and subtract with fractions and mixed numbers, with and without regrouping, and express answers in simplest form. Problems will include like and unlike denominators limited to 12 or less.
- ° 6.6 The student will:
  - a) solve problems that involve addition, subtraction, multiplication, and/or division with fractions and mixed numbers, with and without regrouping, that include like and unlike denominators of 12 or less, and express their answers in simplest form; and
  - b) find the quotient, given a dividend expressed as a decimal through thousandths and a divisor expressed as a decimal to thousandths with exactly one non-zero digit.
- ° 6.7 The student will use estimation strategies to solve multistep practical problems involving whole numbers, decimals, and fractions (rational numbers).
- ° CE.9 The student will demonstrate knowledge of how economic decisions are made in the marketplace by:
  - a) applying the concepts of scarcity, resources, choice, opportunity cost, price, incentives, supply and demand, production, and consumption;
  - b) comparing the differences among free market, command, and mixed economies;
  - c) describing the characteristics of the United States economy, including free markets, private property, profit, and competition.

#### **Directions for teachers:**

Using the historical information provided below, allow students to solve the associated math problems in order to demonstrate the importance of tobacco to the economic survival of colonial Virginia during the 17th century.

#### **Activity:**

In 1607 the Jamestown Colony was founded as a profit-making venture by the Virginia Company of London, with the approval of King James I. The colonists made repeated attempts to make money for themselves and their Virginia Company sponsors by trying to find gold or precious stones, or starting various industries such as glassmaking, iron production, and silk

production, but no economic venture proved profitable except the growing and harvesting of tobacco.

Virginia landowners learned to grow and harvest tobacco, shipping their tobacco to England trying to make a profit. One thousand (1,000) pounds of tobacco was a good yield for one acre of land. One worker could cultivate and harvest  $\frac{1}{2}$  acre of land that would yield 400 to 500 pounds of tobacco. Therefore, the more land a person owned the more workers or indentured servants he needed to work his fields and produce more tobacco.

Suppose a landowner had five acres of land. How many indentured servants would he need to produce the maximum amount of tobacco (5,000 pounds)? \_\_\_\_\_ (Anyone who paid for the ship's passage of a person from England to Virginia in the 17th century received 50 acres of free land, called a headright.) How many indentured servants would a landowner need to produce the maximum amount of tobacco (50,000 pounds) on 50 acres of land? \_\_\_\_\_ How many acres of additional land would the landowner receive for this number of indentured servants (50 acres per person)? \_\_\_\_\_



**The currency used to determine how much money tobacco was worth:**

12 p. (pence) = 1 s. (shilling)

20 s. (shilling) = £1 (pound)

The first 4 barrels of tobacco were shipped from Virginia to England in 1613 by John Rolfe. In 1615, 2,300 pounds of tobacco were shipped from the colony to England. Each pound of tobacco sold in England for 3 s.

**How much money was earned?** \_\_\_\_\_

In 1618, 41,000 lbs. of tobacco were shipped to England and each pound sold for 3 s.

**How much money was earned?** \_\_\_\_\_

In 1630, 1,500,000 lbs of tobacco were shipped to England and sold for 1 p. per lb.

**How much was earned?** \_\_\_\_\_

In 1697, 22,000,000 lbs were shipped to England and sold for only ½ p. per lb.

**How much was earned?** \_\_\_\_\_

Compare the value per pound of tobacco shipped in 1615 to that sent in 1697. If you were a Virginia farmer in 1697, how many more pounds of tobacco would you need to grow to earn the same amount of money a 1615 farmer earned for one pound of their tobacco? \_\_\_\_\_ For 400 pounds of 1615 tobacco? \_\_\_\_\_

\_\_\_\_\_ For 1000 pounds of 1615 tobacco?

The following are daily wages earned by different occupations in Virginia, as established by the Virginia Company of London in 1621 (Va. Co. Records, Vol. 3, p. 590)

- master carpenter..... 4 shillings per day
- shipwright..... 4 shillings per day
- sawyer..... 3 shillings per day
- tailor..... 3 shillings per day

How much money did each one of the occupations earn, if they worked 6 days a week for 52 weeks?

**Master Carpenter and Shipwright** \_\_\_\_\_

**Sawyer and Tailor** \_\_\_\_\_

If a Virginia farmer in 1621 grew 500 lbs. of tobacco, and got 3 s. per pound, **how much money did he earn?** \_\_\_\_\_

**Who made the most money, the farmer or the artisans listed above?**

\_\_\_\_\_

**Which would you have rather been: a tobacco farmer or an artisan? Why?**

\_\_\_\_\_



The first two English women arrived at Jamestown in 1608, followed by other women in the early years of the colony, but in very small numbers. Because there were very few women in the colony, the Virginia Company of London decided in 1619 to recruit young women to go to Virginia and become brides to some of the settlers. The first arrival in Virginia of about 90 young maids occurred in the spring of 1620. If you were a settler, and you wanted to marry one of these maids, you had to pay the Virginia Company of London 150 pounds of tobacco.

If tobacco sold for 3s. per pound, how much money did you pay the Virginia Company for your bride? \_\_\_\_\_

If all 90 women married settlers in the colony, how much tobacco did the Virginia Company receive? \_\_\_\_\_ How much was it worth at 3s. per pound? \_\_\_\_\_

The company paid £11 per maid to clothe and transport her to Virginia. What did it cost the Virginia Company to send all 90 maids to Virginia?

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If the company received all the tobacco for all 90 maids, how much profit did they make? \_\_\_\_\_