

The Christmas Farm

*A lesson from the New Jersey Agricultural Society
Learning Through Gardening program*

OVERVIEW: In Mary Lyn Ray's delightful book *Christmas Farm*, Wilma and her young helper Parker order 62 dozen evergreen seedlings to start a Christmas tree farm. Year after year, the pair nurture their trees, keeping careful count of how many perish and how many grow into fine, full Christmas trees. The book is full of math problems for fourth and fifth graders and has the added benefit of teaching students the process involved in growing Christmas trees.

GRADES: 3-5

OBJECTIVES:

- The students will be able to create and solve equations throughout the book to determine how many Christmas trees are left on the farm.
- The students will be able to describe the process of growing Christmas trees.



MATERIALS:

The book *Christmas Farm* by Mary Lyn Ray

PROCEDURE:

Divide students into small groups to problem solve.

Teacher reads *Christmas Farm*, stopping the story at the first potential math problem – Wilma buys 62 dozen trees. Ask small groups to devise a way to determine how many trees is 62 dozen trees. Small groups report back on both their method of solution and their answer.

Teacher continues reading the story until the next potential math problem – Wilma and Parker measure 24 straight rows and plant 744 trees. What information is missing? (How many trees are planted in each row?) how can you find the answer? Again, students work in small groups and report back to the whole class.

Teacher continues reading the story until the next potential math problem – If at the end of the winter 719 trees remain on the farm, what information is missing? (How many trees were lost.) How can you find the answer?

The teacher continues to read the story, stopping at each potential word problem. There are eight more potential math problems throughout the book.

When finished reading the book, teacher asks the students to outline the process of growing the trees. What did Wilma and Parker have to do for the trees while they grew? (Planted, weeded, mowed, shaped, tagged, planted again.)

EVALUATION:

Math: In small groups, students correctly write and solve word problems to answer questions about the number of trees on the Christmas tree farm.

Social Studies: In small groups, students correctly outline the steps required to grow Christmas trees.

– *The author's note in the back of the book contains a short history of Christmas tree growing and a growth rate chart for evergreens.*

New Jersey Learning Standards

Math: 3.OA 4.OA.AB 5.OA

Science: 3.LS1.B 4.LS1.A 5:LS1.C

Language Arts: 3:RL.3.1-7 4:RL.4.1-7 5:RL.5.1,2,4,5

Social Studies: 3-5:6.1.2.EconEM.1,2