



Build Wilbur A Farm

Introduction

Objective:

Student will measure and calculate area and perimeter using rulers.

Student will make a map of a farm for Wilbur using specific directions and requirement criteria.

Academic Content Standards:

- ❖ National Council of Teachers of Mathematics Standards: Measurement
 - *Apply appropriate techniques, tools, and formulas to determine measurements*
- ❖ National Council of Teachers of Mathematics Standards: Problem Solving
 - *Build new mathematical knowledge through problem solving; solve problems that arise in mathematics and in other contexts.*
 - *Apply and adapt a variety of appropriate strategies to solve problems*
 - *Monitor and reflect on the process of mathematical problem solving.*
- ❖ Ohio Academic Content Standards for Social Studies #2 Measurement
 - *Students estimate and measure to a required degree of accuracy and precision by selecting and using appropriate units, tools and technologies.*
 - *Benchmarks: A, B and D (4th Grade)*
 - *Benchmarks: A, B, C, E, F and G (5th & 6th Grades)*
- ❖ Ohio Academic Content Standards for Social Studies #6 Mathematical Processes Standard
 - *Embedded within the grade level indicators.*

Getting Started

Materials:

- Ruler
- Pencil
- Paper with perimeter of farm
- Directions and Requirements for *Build Wilbur A Farm* (Directions and requirements may be changed to meet the needs of your classroom.)

Vocabulary:

- Length
- Ruler
- Inch / centimeter
- Perimeter
- Area
- Square
- Rectangle

Lesson

Orientation Activity:

Students start with an outline of the perimeter and measurement of Wilbur's farm. Every student will need to have rulers and pencils.

Learning Activity:

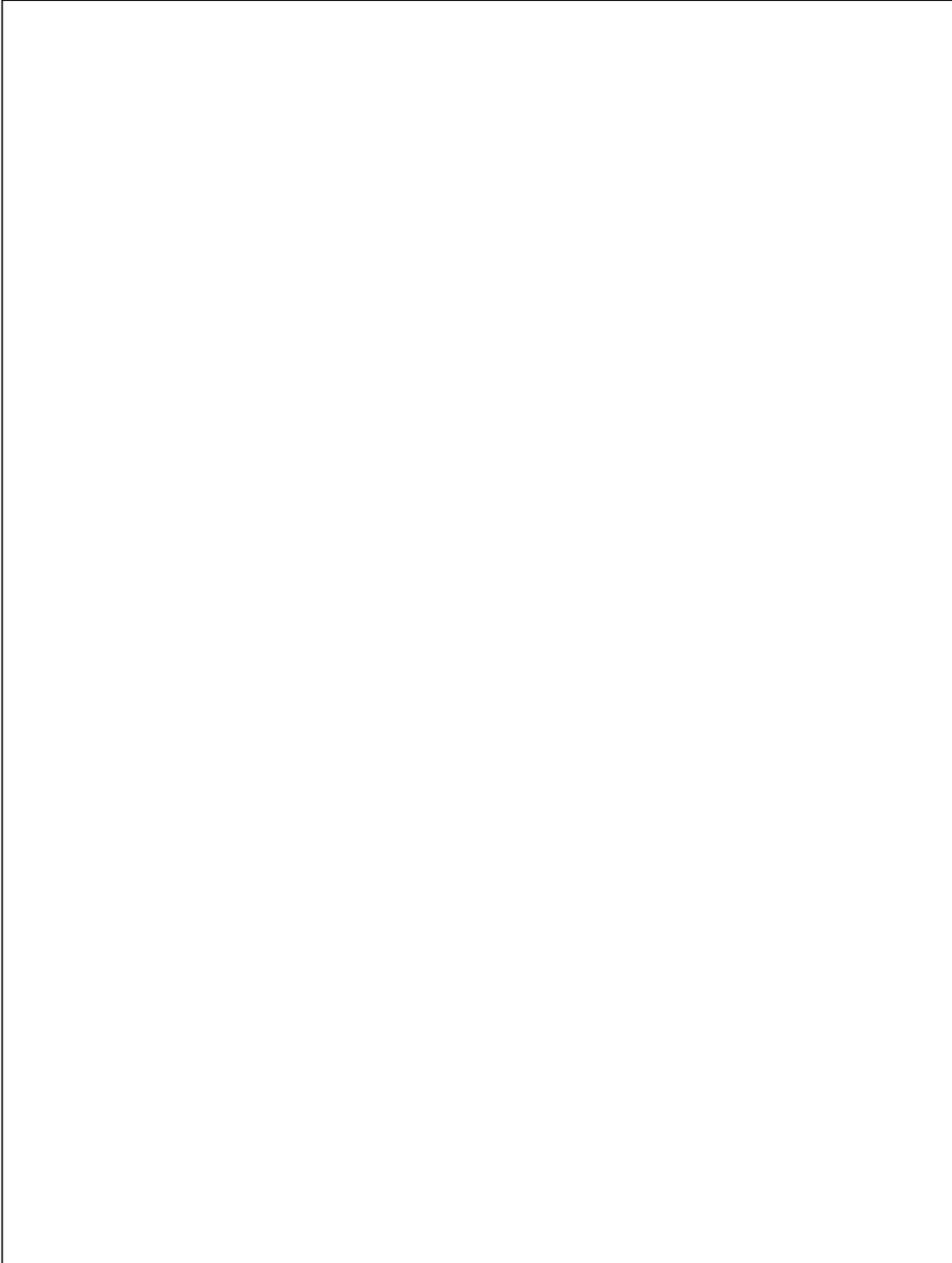
Read directions and requirements for the handout, *Build Wilbur A Farm*. Make sure students understand directions. Students will then proceed to design the farm. For those students who have difficulties with measuring, it may be helpful to add a grid pattern on the *Build Wilbur A Farm* handout.

Evaluation and Follow-Up

Assessment Tools and Methods:

Observe and evaluate students' work. A rubric created for grading the final product is helpful so that students know the assessment criteria and expectations.

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Build Wilbur A Farm Directions & Requirements

Read the following directions and requirements regarding Wilbur's Farm.
Then, build the farm.

- 1) Measure and label each side of the farm in feet. (1 inch = 50 feet).
- 2) What is the perimeter of the Wilbur's Farm? _____
- 3) What is the area of Wilbur's Farm? _____
- 4) The following items need to be placed on your farm: (Use symbols and a key on your map to identify what the symbols mean.)
 - ◆ house
 - ◆ barn
 - ◆ area for planting corn
 - ◆ pig pen
 - ◆ chicken coup
 - ◆ duck pond
- 5) The corn needs to be planted on **half** of the area on the farm.
- 6) The house needs to have an area of **5000 square feet**. Measure and label each side of the house.
- 7) The barn needs to be **3 times** the area of the house. Measure and label each side of the barn.
- 8) The pig pen needs to be **50 feet by 75 feet**. Measure and label each side of the pig pen and calculate the area of the pig pen.
- 9) The perimeter of the chicken coup is **half** that of the pig pen. Measure and label all sides of the chicken coup and calculate its area.
- 10) The duck pond needs to be equal to the **combined** area of the house, the pig pen and the chicken coup. Measure and label all sides of the duck pond and calculate its area.
- 11) Calculate the **remaining area** if the farm so that the Avery's know how much more land they are able to use on their farm.