

Making Things Count– Farm Math



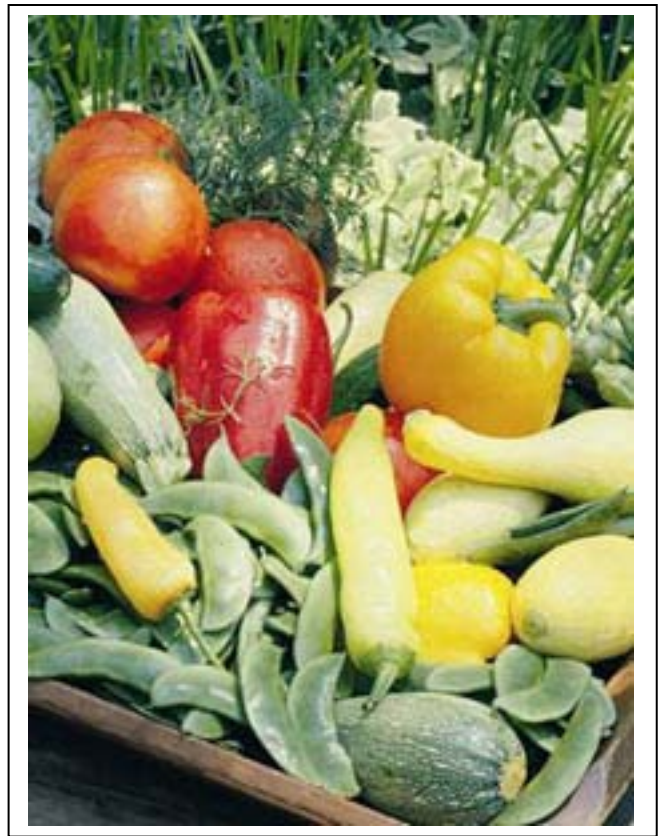
Teacher Packet

Michigan's Farm Garden
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Chore Time



Step Up to the Produce Stand



Visit the Kitchen Gardens



Board Game in the Barn

OVERVIEW

These three math-related lessons are taught in our unique outdoor farm setting by certified teachers over a two-hour period; students and chaperones should dress for the weather. Each exercise lasts about 35 minutes, but can be adjusted to meet the needs of the group.

Teachers and chaperones will be asked to assist with activities.

All exercises incorporate a degree of physical movement. Frederik Meijer Gardens & Sculpture Park is ADA compliant.

Lesson One: Chore Time

Using teaching clocks and a schedule of daily farm chores, students will match the time on the schedule to the appropriate chore, answer word problems about times and chores, and participate in actual farm chore contests (gathering eggs, hanging laundry, feeding animals, watering flowers, sweeping the porch).

Curriculum Standards and Benchmarks

- Demonstrate an understanding of time using analog and digital clocks within five-minute intervals.
- Solve word problems related to daily living.

Major concept: Farm chores and activities last from sun-up to sun-down. Farm families work as a team to produce things they need; even the kids help.

Lesson Two: Step Up to the Produce Stand

Using play money, both paper currency and coins, and artificial produce, students will buy and sell produce at the produce stand. Buyers will select “word problem scenario cards” to help them focus on buying challenges, and sellers will weigh goods, write specials on the chalkboard, make change, write receipts and practice customer service skills. All students will get a chance to be both buyer and seller.

Curriculum Standards and Benchmarks:

- Record money using dollar-and-cents notation, convert money and make money exchanges
- Solve word problems related to daily living.
- Develop strategies for estimating quantity.

Major concept: If a farm family produces more than it can consume, the excess is sold at a produce stand.

Lesson Three: Board Game in the Barn

Using a giant board game format, students will compute basic adding and subtracting facts based on things and situations found on the farm. Each question on the board will require students to go out and seek visual evidence for their answers. Students will work in groups of two.

Curriculum Standards and Benchmarks:

- Practice and know basic computation facts.
- Solve word problems related to daily living.
- Develop strategies for estimating quantity.

Major concept: Adding, subtracting, comparing, measuring, and estimating are integral parts of daily life on a farm.

Suggested Classroom Activities

1. Discuss the word “produce.” How is it pronounced? What does it mean? How is it different from produce and productivity? What is a “produce stand”? What would be sold on a produce stand? Schedule a field trip to the Farmer’s Market to see real produce.
2. Have a classroom garage sale. Ask each student to bring in 5 items from home to sell and one dollar in change for buying (or provide fake coins or poker chips). Set up a display area for kids to peruse ahead of time. Give everyone a chance to be both buyer and seller.
3. Launch a “Change for a Dollar” contest. Divide the class into teams and challenge each team to develop as many ways as possible to make change equal to a dollar. Distribute the same array of coins to each team.
4. Play “Please Pass the Bell.” Starting at one end of the room, ask each student to ring the bell when the clock hits a five-minute mark, starting on the hour. When the bell rings, all students stand up and do ten jumping jacks (or clap hands or whistle, etc.) . (Students work on independent projects in between rings.)
5. Bring a scale into the classroom. Ask each student to weigh one of his/her books, then chart the weight on a bar graph. Analyze the class “book weight” graph.
6. Interview kids who have been to a real farm. What did they see? What did they smell? Touch? Taste? Hear? What crops were planted? What animals were raised? What was fun?
7. Create a pretend vegetable garden in the classroom. Clear away the desks in the middle of the room and use them as a boundary. Set up rows of erasers, markers, shoes, blocks, books, etc. Do quick computation of the rows by adding and subtracting. How many “vegetables” are there all together? How many are in the first two rows? Etc.