

**Pennsylvania Governor's Institute
for Mathematics Educators
2004**

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Topic/Theme: Conversion of Customary Linear Units

Level: Grade 4

Time Element: Two days

NCTM Standards Addressed:

- Identify and use relationships between operations, such as division as the inverse of multiplication, to solve problems.
- Develop fluency in adding, subtracting, multiplying, and dividing whole numbers.
- Develop and use strategies to estimate the results of whole-number computations and to judge the reasonableness of such results.
- Understand such attributes as length, area, weight, volume, and size of angle and select appropriate type of unit for measuring each attribute.
- Understand the need for measuring with standard units and become familiar with standard units in the customary and metric systems.
- Carry out simple unit conversions, such as from centimeters to meters, within a system of measurement.
- Understand that measurements are approximations and understand how differences in units affect precision.
- Select and apply appropriate standard units and tools to measure length, area, volume, weight, time, temperature, and the size of angles.
- Select and use benchmarks to estimate measurements.

PA Math Standards Addressed:

- 2.1.3. L Demonstrate knowledge of basic facts in four basic operations.
- 2.2.3. F Determine the reasonableness of calculated answers.