Iowa Science Teachers Journal

Volume 15 | Number 2 Article 22

1978

Metric Conversions

Linda B. Holm
Adel-DeSoto Community School

Quickies

If you have an idea that facilitates science teaching, jot it down and send to Editor, *Iowa Science Teachers Journal*, Biology Department, University of Northern Iowa, 50613. Be sure to include the name of your school and position. Here are some recent contributions.

* * *

Metric Conversions

Linda B. Holm, Adel-DeSoto Community School, Adel, Iowa 50003

After considering several approaches to the problem of teaching metric conversions, I developed an approach of my own which seems easy for students to work with and understand.

After introducing linear measurements and defining prefixes, I write the following chart on the board with the appropriate abbreviations of the linear units in order of largest to smallest.

km/hm/dkm/m/dm/cm/mm

This chart is used to make conversions such as, "Convert 63.57 m to cm." using the following procedure:

1. The student finds the units to be converted on the chart. In this case, meters to centimeters.
2. The student then notes the *direction* and *number of moves* required to make the conversions as shown below.

km/hm/dkm/m/dm/cm/mm
→ →

3. To make the conversion, the student moves the decimal point *two* places to the *right*. Thus, 63.57 m is equal to 6357 cm.

This procedure can be applied to any metric unit by simply making the appropriate substitutions in the chart. The system can also be used with square or cubic units as follows:

Example: 63000dm^2 equals ____ dkm^2.

km^2/hm^2/dkm^2/m^2/dm^2/cm^2/mm^2
← ←

The procedure is the same as outlined previously except the units involved are squared. First, determine the direction of movement; second, determine the number of moves required; third, multiply the number of moves by the exponent. Thus, 63000 dm^2 is equal to 6.3 dkm^2.

The only additional information that students require is that whole numbers without decimal points must have decimals placed to the right of the number.

I have had a great deal of success with this method in helping students learn to convert within the metric system. The method is useful in helping students to perform an operation that will become more common as the national move towards the metric system is completed. It also illustrates the ease with which metric conversions can be made when compared to conversions in other systems of measurement.