



Science Objectives

- Students will observe the relationships among different units of measure.
- Students will convert between different units using dimensional analysis.

Vocabulary

- unit conversion
- dimensional analysis
- conversion factors
- metric equivalents

About the Lesson

- This lesson introduces unit conversion and doing unit conversions with TI-Nspire™.
- As a result, students will:
 - Be able to convert between different units of measure.

TI-Nspire™ Navigator™

- Send out the *Conversions.tns* file.
- Monitor student progress using Screen Capture.
- Use Live Presenter to spotlight student answers.

Activity Materials

- *Conversions.tns* document
- TI-Nspire Technology



TI-Nspire™ Technology Skills:

- Download a TI-Nspire document
- Open a document
- Move between pages
- Use the Calculator

Tech Tips:

Make sure that students understand how to select the fraction (or ratio) math template.

Lesson Materials:

- *TI-Nspire document*
 - *Conversions.tns*



Discussion Points and Possible Answers

This activity is designed to help the students use dimensional analysis in their class. The activity shows students how units can be used with a TI-Nspire™ CAS handheld or software. The numeric TI-Nspire cannot use units but the numbers involved can still be placed in the appropriate ratios. Encourage students using CAS to use units in order to help them understand how units cancel. The procedure for converting units can be used in any document that students produce throughout the year.

Tech Tip: To enter items in ratio form, students need to press **ctrl** $\frac{\square}{\square}$ buttons. Students will need to put a multiplication sign between the units and the new ratio as shown in screen shots below.

Tech Tip: If students have their handheld set to Auto or Exact in the Document Settings, they will likely receive a fraction answer. They can either press **ctrl** **enter** to obtain an approximate result (decimal) or change the mode setting to Approximate.

Solution Screen Captures:

