

# Map It!

## Math Concepts

- whole numbers
- ratio
- addition
- relations and functions
- linear units of measure

## Materials

- TI-10, TI-15 Explorer™
- **Map It!** recording sheets
- linear measuring tools (rulers, tape measures, string, etc.)
- pencils

## Overview

Students will read a story, identify the locations of different places in the story, decide the distance between each set of places in the story, and create a map with a legend.

## Introduction

1. Collect a variety of books that have plots in which characters move from place to place.

### Examples:

Possibilities include some of the Laura Ingalls Wilder’s “Little House” books or *The Wizard of Oz* by Frank Baum.

2. With the class, choose a book and then read the story or a section of it to the class.
  - a. Make a transparency, which will be an imaginary map of the action in the story.
  - b. Create a legend with a scale for distances.
  - c. Identify at least three different locations from the story.
 

**Examples:** In Judith Viorst’s *Alexander and the Terrible, Horrible, No Good, Very Bad Day*, locations could include home, Dad’s office, the dentist’s office, and the shoe store.
  - d. Put the places in the story in logical locations on the map.
  - e. Use the legend to determine the distances between those places on the map.
3. Have students select a different story and work in pairs to develop a map with a legend to illustrate the primary action in the plot of the new story.
4. Ask students to write about the process they used to make their maps and any mistakes or discoveries they made.

# Map It! *(continued)*

## Collecting and Organizing Data

While students are developing their maps and measuring and recording their information, ask questions such as:

- Which locations did you choose from your story? How did you decide the distances between the locations? How do the distances between places in the story relate to the distances between places on your map? How does your legend reflect this?
- What measuring tool are you using? Why? How are you using it? Why is it important to use it in that way?
- What unit of measure are you using? What makes it the most useful for this purpose?

## Analyzing Data and Drawing Conclusions

After students have recorded their information, have them work as a whole group to analyze their recording sheets. Ask questions such as:

- What information did you include in your legend? How did you use that information to create your map?
- Did you choose any distances you were unable to show on your map? Why?
- How could you describe the way you found the distances on the map?
- How did you use estimation?
- Did you have any difficulties making your map? What discoveries did you make?

## Continuing the Investigation

Have students select another story, make up a “map” of the action in the story, create a legend for the map, and repeat the process of locating points and determining the distances each character in the story will travel between two points.



How are you using the calculator to help you find the distances on land and on your map?



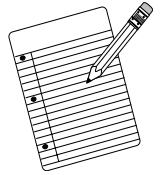
What operations are you using on the calculator to help you find the distances?



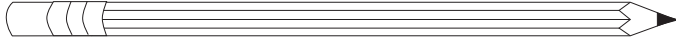
How can you decide if the answer you are getting on the calculator is reasonable or not?



How did you use the calculator to help you in making the legend for your map?



Name: \_\_\_\_\_



## Map It! Recording Sheet

### Collecting and Organizing Data

Legend: \_\_\_\_\_

Locations	Distance on Map	Distance on Land
From _____ To _____		
From _____ To _____		
From _____ To _____		

Use your legend and the information above to draw your map below or on the back of this sheet.

### Analyzing Data and Drawing Conclusions

From this activity, we discovered: