

# Interpreting Maps

## Interpreting Maps

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Summary	Students construct a narrative of a trip, given a simplified map and a table of arrival and departure times. They also determine how much time was spent along each segment of the trip (and how much time was spent at each place along the way.) If time permits, they construct a table ordered by time, showing the duration of each segment and the accumulated times.
Goals	<ol style="list-style-type: none"><li>1. Work with displacements in maps and their analogues in tables.</li><li>2. Encourage students to organize data that are presented in a non-ordered table.</li><li>3. Work with unit magnitudes of 200m and 1 km.</li></ol>
Materials	Overheads, Handouts
Keywords	Contextualized Situations Full Class Discussion Production of Stories

### Activity Plan:

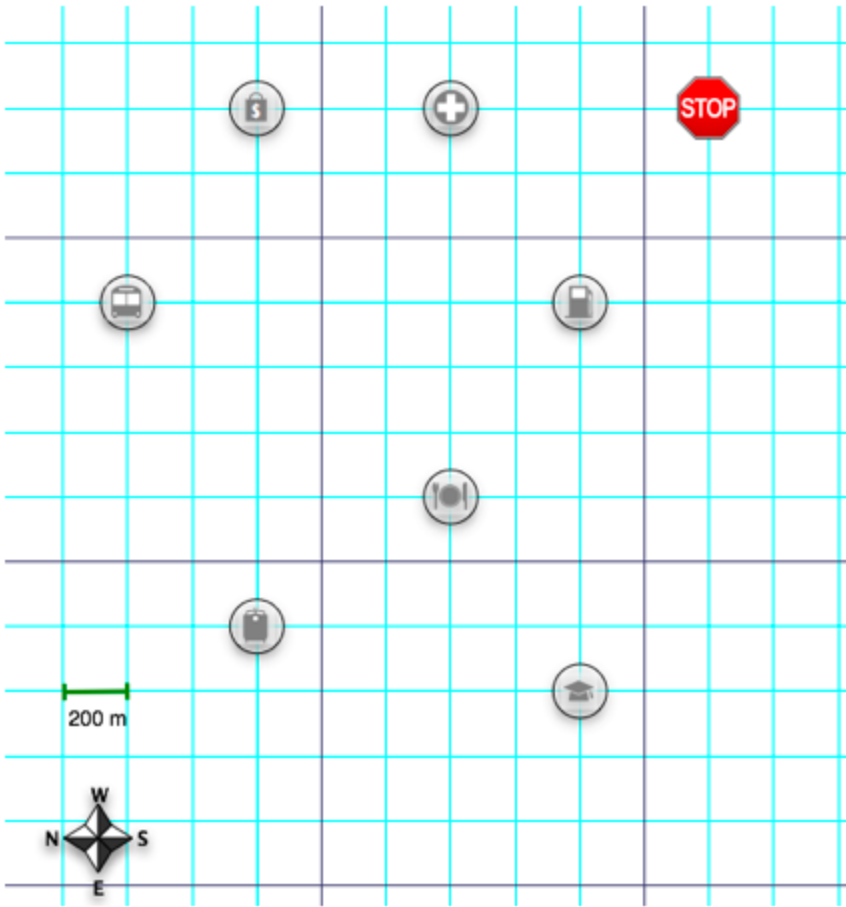
#### 1. Studying the Map

Show the overhead on page 1 [map].

Go over various things.

- What the symbols refer to: a school, a bank, a hospital, etc.
- What smaller unit refers to? (200 m)
- What the larger unit refers to? (1000 m or 1 km)
- Which direction is North?

Call attention to the legend at the bottom left of the screen.



## 2. Disorganized table [Group Work]

The following table shows all of the critical information in Margaret's trip. The students will **not** be given this table, but you may find it useful to look it over.

We display the elapsed time, elapsed distance, in a row located **between** each of the two respective events.

Notice that:

- Margaret spent 1 hour in the restaurant.
- Margaret did not stop at the stop sign (the arrival and departure times are identical.)

Time	Event	Δ Time	Δ Distance	Speed
2:30 PM	Leaves school			
		30 min	1000 m	2 km/hr
3:00 PM	Arrives at restaurant			
		60 min	0 m	0 km/hr
4:00 PM	Leaves restaurant			
		30 min	2000 m	4 km/hr
4:30 PM	Arrives at stop sign			
		0 min	0 m	0 km/hr
4:30 PM	Leaves stop sign			
		30 min	800 m	1.6 km/hr
5:00 PM	Arrives hospital			

This is the table students will encounter first on the handout of page 2:

<b>Time</b>	<b>Event</b>
4:00 PM	Leaves restaurant
4:30 PM	Arrives at stop sign
2:30 PM	Leaves school
5:00 PM	Arrives at hospital
3:00 PM	Arrives at restaurant
4:30 PM	Leaves stop sign

Distribute the Handout in Page 2 and ask students to work in groups and answer:

- Where did Margareth begin?
- Where did she end?
- Arrange the data in a table ordered by time.

<b>Time</b>	<b>Event</b>
2:30 PM	Leaves school

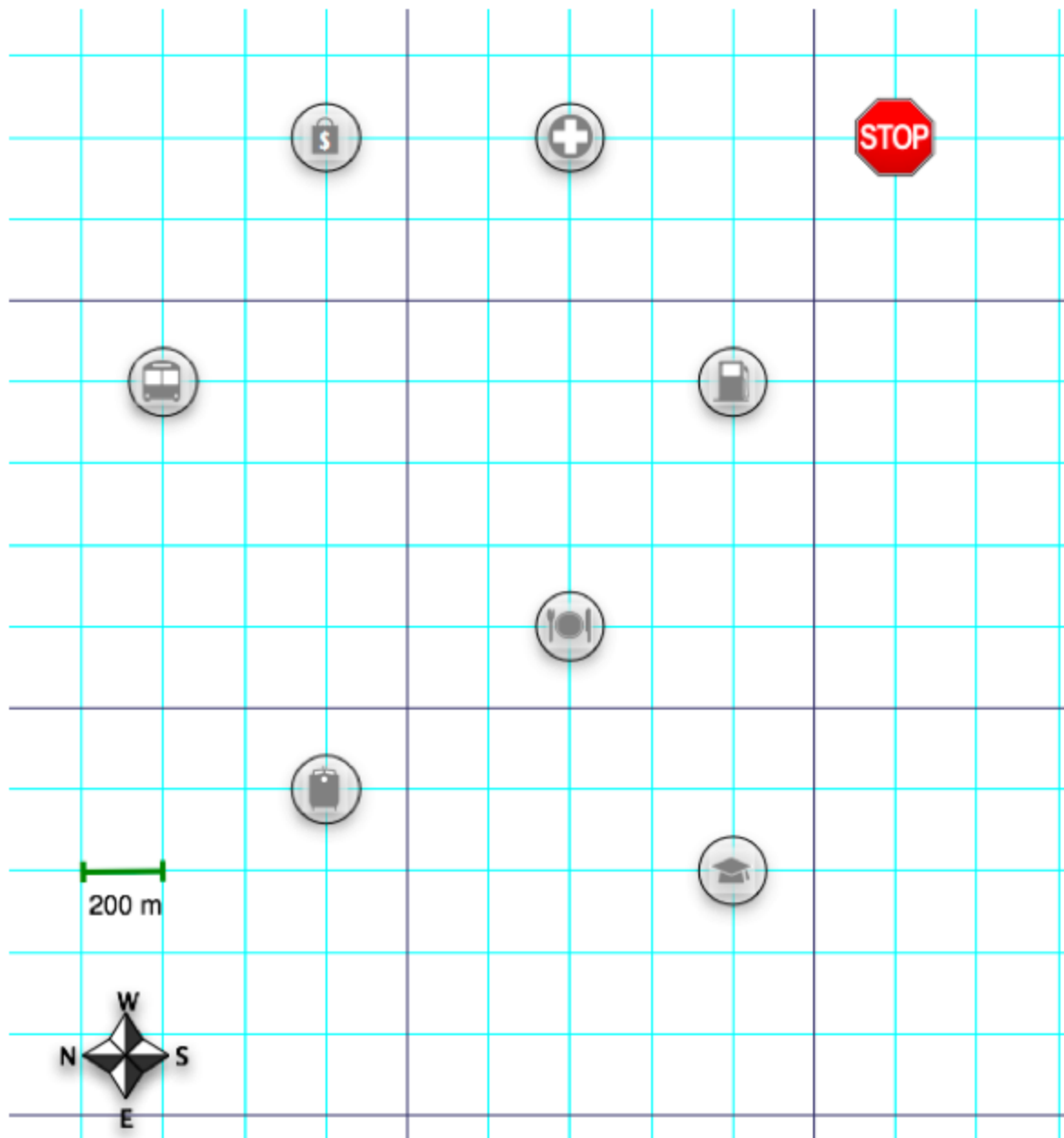
Students will also create a story about Margaret's trip. The story has to match the information in the table. Ask students to draw Margaret's trip on the map, based on the information in the table.

Some rules:

- Stay in the streets; do not move diagonally.
- Try to go directly between locations; but you can choose the exact route.
- Use arrows to show the direction.

### 3. Homework (Page 3)

This activity is similar to the one done in class, except now the students get to create their own adventure.



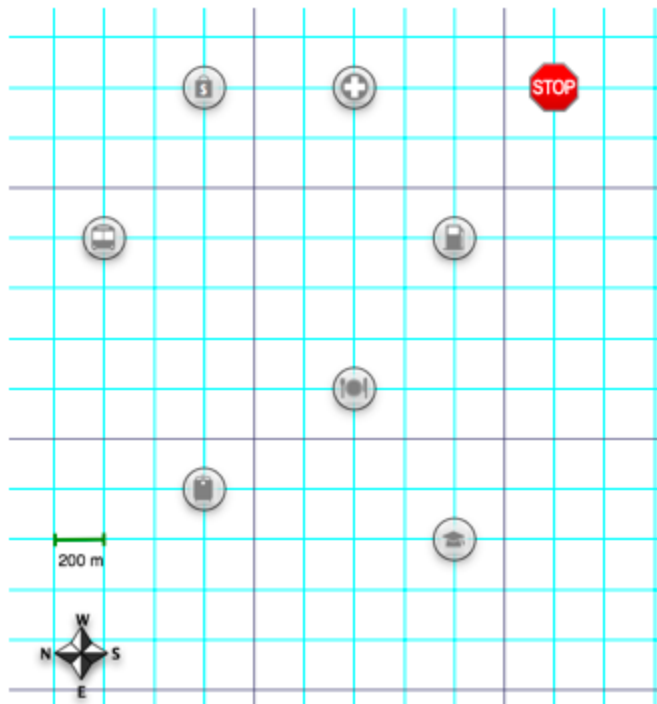
# Overhead and Handout: Margaret's Trip

(Page 2)

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

1. The table below is confusing. Make an ordered table on the right.

Time	Event		Time	Event
4:00 PM	Leaves Restaurant		2:30 PM	
4:30 PM	Arrives at Stop Sign			
2:30 PM	Leaves School			
5:00 PM	Arrives at hospital			
3:00 PM	Arrives at Restaurant			
4:30 PM	Leaves Stop Sign			



2. On the left, use arrows to show Margaret's trip.

3. Below, write a story about her trip.

# Overhead and Homework: Making Up Your Own Trip (Page 3)

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

Use the map below to make up a story about your own trip. Write the times and events in your story. Draw arrows in the diagram below to show where you went.

Time	Event	

