

DePaul Center for Urban Education
Chicago Math Connections

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Dwight D. Eisenhower Professional Development program

Topic: Distances in Chicago

Goal(s): 6,7

Skill(s): Creating ratios to approximate distances on a map

What's the context?

Creating a scale to measure distances between locations in Chicago.

Resources students will need?

A map of the city of Chicago

A ruler (inches and metric)

What will students learn from this project?

Know how – what will they be able to do better?

Create ratios in inches to miles to obtain approximate distances on a map.

Know what – what idea(s) will they clarify through the project?

Use maps to gain a better sense of spatial relationships in the city of Chicago.

What's the challenge?

1). Students will be given a map of the City of Chicago **without a scale**. They will be informed that eight city blocks equals one mile. For example, 1000 west to 1800 west equals 1 mile. Students will then come up with their own scales to calculate approximate distances between points within the city.

Σ The scale must be a ratio of either inches or centimeters to actual miles on the map. For example, if eight city blocks measures two inches on the map then the ratio of inches to miles 2 :1 .

2). Students must use their homemade scales to calculate the distances between ten prominent locations within the city.

Checkpoint: Students will pair up and check calculations for accuracy, then use each other's scales to write directions to different places within the city.