

**DePaul Center for Urban Education  
Chicago Math Connections**

This project is funded by the Illinois Board of Higher Education through the Dwight D. Eisenhower Professional Development program

**Topic: Traveling to major cities from Chicago**

**Goal(s):6,7,8,10**

**Skills: Organizing, analyzing, graphing and interpreting data, and calculating rate and distance problems**

**What's the context?**

Calculating travel times to other major cities by plane and by car.

**Which data will students use?**

Distance from Chicago

**What will students learn from this project?**

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

Interpret and organize numbers on a table

Estimate travel time

Visually represent data on a bar graph

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

Gain a better sense of Chicago's relative location to other major cities.

**What's the challenge?**

- 1). Choose five places you would like to visit from Chicago.
- 2). Create a bar graph showing their distances from Chicago in rank order.
  - Students may need help numbering the vertical axis on their bar graphs and it may be appropriate to round numbers off.

**Checkpoint:** Students break up into pairs and check each other's graphs for clarity. Students then calculate how long it would take to travel to these locations from Chicago by airplane traveling at an average rate of 550 mph., and by car averaging 65 mph. For example, an approximate air travel time to Denver, Colorado would be calculated by dividing the distance, which is 1005 miles, by the rate of speed of the plane, which is 550 mph.

- $1005 \div 550 = 1.83$  hours.

In other words, one full hour plus  $\frac{83}{100}$  of a second hour- which can be expressed as 83 % of the second hour which can be figured out by multiplying  $.83 \times 60$  (minutes), which equals 49.8 minutes. The total trip by plane will therefore take approximately 1 hour and 50 minutes.