DePaul Center for Urban Education

Chicago Math Connections

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Topic: Chicago Weather
Goal(s): 6,7,8,10
Skills: Utilizing algebraic formulas to convert degrees Fahrenheit into degrees Celsius and graphically representing information.

What's the context?
Analyzing monthly mean temperatures in Chicago

Which data will students use?
Monthly temperatures in Chicago.

What will students learn from this project?

Know how – what will they be able to do better?
Utilize mathematical formulas
Convert Fahrenheit temperature units to Celsius temperature units

Know what – what idea(s) will they clarify through the project?
Students will become more familiar with the Celsius temperature scale, and gain an understanding of patterns and trends in a set of numbers by analyzing number ranges and by creating visual representations of these patterns and trends with graphs.

What's the challenge?
1). Analyze the portion of the Chicago monthly temperature chart that gives the mean temperatures for each month. Using the formula given below, convert the mean temperatures given for each month from degrees Fahrenheit to degrees Celsius.

- Formula for converting Fahrenheit to Celsius;$°C = 5/9 (°F - 32)$

2). After all conversions are complete, create two line graphs, one to chart mean temperatures in Chicago in Fahrenheit and one to chart mean temperatures in Celsius. Compare the two line graphs to find any differences or similarities.

Checkpoint: Students can pair up to check temperature calculations and line graphs for clarity. Students can then work together to figure out what room temperature ranges would be in both Fahrenheit and Celsius.