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"THE WAVE"

Predicting Outcomes Using Data Analysis

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In this activity, you will generate data, enter your data into a graphing calculator, graph the data, analyze the data and make predictions using the graph.

Materials: Stopwatch
TI-Nspire
Worksheet

Using a stopwatch, find the time it takes for one student to do "The Wave". Enter the time on the data table. Then repeat "The Wave" with two students. Enter this data on the handout. Continue this process with three students, then five, and so on until "The Wave" has been all the way around room. (You do not have to increase by the same number of students each time.)

Enter and interpret your data:
After collecting the data, enter the data in your calculators, graph a scatter plot, find the line of best fit and make predictions based on your graph. Answer each question on your handout

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On your own:

Predicting Outcomes Using Statistical Data

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1. It is said that the chirping rate of crickets appears to be related to temperature. Use the table to
    a) Make a scatter plot of the data.
    b) Find and graph the regression line.
    c) Use the linear model to estimate the chirping rate at $100^{o}F$.

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Temperature (^{o}F)	Chirping rate (chirps/min)
67	109
73	136
78	160
61	87
66	103
66	102
67	108
77	154
74	144
76	150

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* http://www.public.iastate.edu/~swillson/LineFit.pdf

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