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Modeling and Census Data from the WWW: Introducing the Derivative.

A project that asks students to collect and use population data derived from the U.S. government census web site will be described. In this investigation, students use modeling techniques to graph the data derived from several different U.S. Cities. Students then explore rates of population change over time, which serves as a context for introducing derivatives and other important attributes of graphs (such as concavity and local linearity). Students' general knowledge of population change help connect together the new calculus concepts they are learning with their prior knowledge. Students can also choose their own state or region to model its population and describe its population change using the newly acquired calculus ideas. (Received September 11, 2000)