

Instructional Unit Title: Survey Says...

The teacher may provide a variety of one-variable data sets (see teacher resources) so that students can begin to explore the concept of normal distributions.



The teacher may provide related data sets with a variety of means and standard deviations (e.g., state test scores) so that student can begin to understand the need for standardization of statistics (e.g., z-scores) in order to make valid inferences.



The teacher may provide research questions (e.g., What do American eat every day?, Will the ballot measure pass or fail in the next election?, Does having a television in your bedroom cause difficulties with sleeping?), so that students can develop an understanding and begin to analyze the three main ways of answering research questions: surveys, experiments and observational studies.



The teacher may provide data about sampling scenarios (see possible examples in teacher notes) so that students can understand how simulation can be used to test the likelihood of a sample (e.g., Is this sample an aberration or not?).



The teacher may provide scenarios or reports, which use statistics to make interpretations about a population (see link in teacher resources for examples) so that students can critique interpretations of statistics and begin to understand the dangers of using simple statistics in real-world contexts.



PERFORMANCE ASSESSMENT: Lake County “Build a Generation” wants to hire you as statistician to examine student data from Lake County High School in one or more of the following areas: alcohol, tobacco, or drug use, health and safety, violence and crime, and education. Data in Colorado can be obtained in each community from the Healthy Kids Colorado Survey (HKCS) (<http://collaboration.omni.org/sites/hkc/Pages/default.aspx>). As part of the report they would like you to compare Lake County High School data to state and national data for each area. The audience for the project is a coalition of community leaders including such as: County Health Department, Human Services, City Council, and County Commissioners. The products from your investigation will be used to help craft public policy and spur discussion of changing trends in the community. Information on an how Lake County School District partners with Lake County Build a Generation to do this project can be found at <http://lcbag.org/initiatives/student-programs>.

This unit was authored by a team of Colorado educators. The unit is intended to support teachers, schools, and districts as they make their own local decisions around the best instructional plans and practices for all students. To see the entire instructional unit sample with possible learning experiences, resources, differentiation, and assessments visit <http://www.cde.state.co.us/standardsandinstruction/instructionalunitsamples>.