

Teaching Intro Statistics

GAISE

- Emphasize statistical literacy and statistical thinking
- Use real data
- conceptual understanding over procedural knowledge
- active learning
- use tech to develop conceptual understanding
- use assessments to improve and evaluate learning

thoughts on GAISE

- What are the 'concepts' in statistics?
- Statistical literacy & thinking: what do all students need to know?
- Develop assessments first, classroom experiences later.

Some resources

CAUSEweb.org

www.causeweb.org

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Consortium for the **A**dvancement of **U**ndergraduate **S**tatistics **E**ducation

A national organization whose mission is to support and advance undergraduate statistics education, in four target areas:
resources, professional development, outreach, and research.



Resources



Professional Development



Research



eCOTS 2012



Workshops



Webinars





Welcome to the ARTIST Web site!

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Our goal is to help teachers assess **statistical literacy, **statistical reasoning**, and **statistical thinking** in first courses of statistics.**

This Web site provides a variety of assessment resources for teaching first courses in Statistics. Please use the navigation bar on your left to access these resources.

Learn more about [Statistical Literacy, Statistical Reasoning, and Statistical Thinking](#):

- Definitions of Statistical Literacy, Reasoning, and Thinking
- Examples of Assessment Items coded as Statistical Literacy, Reasoning, and Thinking
- How Statistical Literacy, Reasoning, and Thinking are related
- How Statistical Literacy, Reasoning, and Thinking relate to Bloom's and other taxonomies
- Words that characterize assessment items for Statistical Literacy, Reasoning, and Thinking

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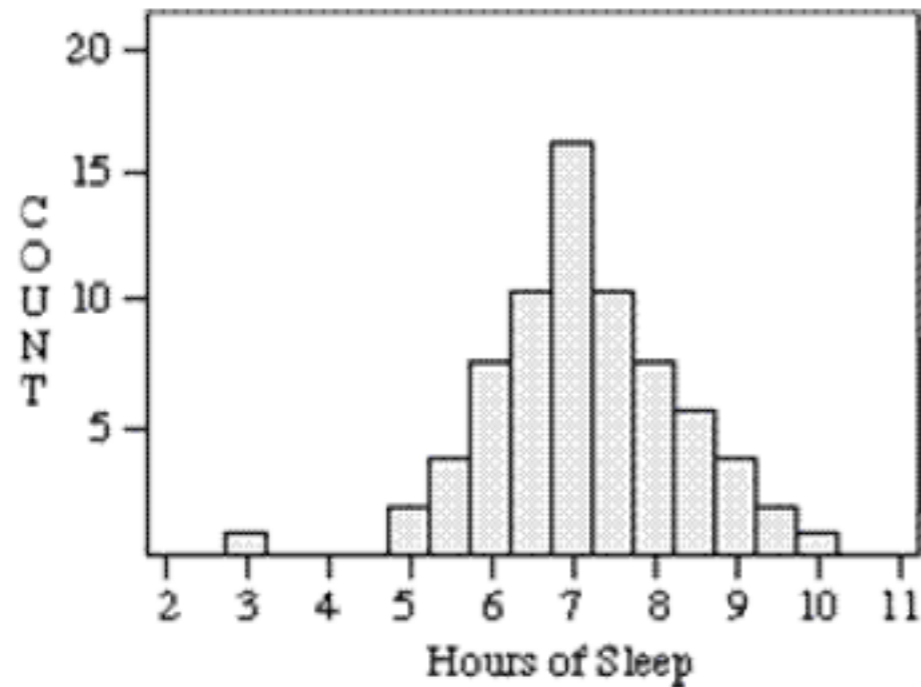


For more information about this project, or to contribute materials, please contact Dr. Joan Garfield by e-mail: jbg@umn.edu.

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ARTIST CAOS 4 POSTTEST

The following graph shows a distribution of hours slept last night by a group of college students.



1. Select the statement below that gives the most complete description of the graph in a way that demonstrates an understanding of how to statistically describe and interpret the distribution of a variable.
 - a. The bars go from 3 to 10, increasing in height to 7, then decreasing to 10. The tallest bar is at 7. There is a gap between three and five.
 - b. The distribution is normal, with a mean of about 7 and a standard deviation of about 1.
 - c. Most students seem to be getting enough sleep at night, but some students slept more and some slept less. However, one student must have stayed up very late and got very few hours of sleep.
 - d. The distribution of hours of sleep is somewhat symmetric and bell-shaped, with an outlier at 3. The typical amount of sleep is about 7 hours and overall range is 7 hours.

Other resources

- Gelman & Nolan, Teaching Statistics: A Bag of Tricks
- Clickers
- Project Mosaic:
<http://cran.r-project.org/web/packages/mosaic/index.html>

Journals

- Technology Innovations in Statistics Education
- Journal of Statistics Education
- Statistics Education Research Journal
- See CAUSEweb for more, and also dissertations on Stats Ed

Listservs

- IsoStat
- APStats