Three Applet Resources No Statistics Instructor Should Teach Without

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GAISE Guidelines

1) Teach statistical thinking.
   a) Teach statistics as an investigative process of problem-solving and decision making.
   b) Give students experience with multivariable thinking.

2) Focus on conceptual understanding.

3) Integrate real data with a context and purpose.

4) Foster active learning.

5) Use technology to explore concepts and analyze data.

6) Use assessments to improve and evaluate student learning.

Found at
Rossman Chance Applets

- Most allow CLT and SBI based inference, some include animations
- My Favorites:
  - Least Squares Regression
  - Simulating CIs for Population Parameter
  - Guess the Correlation
  - Sampling Words
  - Improved Batting Average (Power)
ArtOfStat.Com

- Accompanies Agresti/Franklin/Klingenberg (disclosure)
- Uses Shiny (R)
- URL: [http://www.artofstat.com/webapps.html](http://www.artofstat.com/webapps.html)
Some Others...

- **StatKey**
  - Very useful for Simulation-based Inference (SBI)
  - Associated with “Unlocking the Power of Data”, aka Lock5
  - URL: [http://www.lock5stat.com/StatKey/](http://www.lock5stat.com/StatKey/)

- **Sampling Distribution of Sample Mean**
  - Used to be at Rice
  - Replaced by others
Other Resources

- **Stat101**, a series of case studies for teaching Intro Stat from experts in the field - http://community.amstat.org/stats101/home
- **ARTIST** (Assessment Resource Tools for Improving Statistical Thinking) - https://apps3.cehd.umn.edu/artist/
- **CAUSEweb** – Consortium for the Advancement of Undergraduate Statistics Education - http://www.causeweb.org/. CAUSE puts on the USCOTS and eCOTS – two very worthwhile conferences!
- **ASA recommendation for second applied course** (http://www.amstat.org/education/pdfs/Second-Course-Syllabus.pdf)
- **Simulation-based inference blog** - https://www.causeweb.org/sbi/