Purpose

1. Demonstrate the power of iSENSE software to amalgamate data from multiple sources.
2. Compare the accuracy of estimation and multiple measurement tools.

Materials

1. Class set of metric rulers
2. Class set of meter sticks (precision 1 cm)
3. Computer or tablet with internet connection
4. Interactive website – www.isenseproject.org

Method

1. Answer the following questions on a separate sheet of paper:
   a. What are the benefits of running multiple trials of the same experiment?
   b. What are the benefits of different scientists running the same experiment from different locations?
2. Estimate the height of the lab bench in centimeters (counter top) in this room, and record the value.
3. Enter your *Estimation* into iSENSE
   - Go to www.isenseproject.org
   - Click on *Projects*.
   - Search for and select *Measuring Lab Bench Height*.
   - Enter your contributor key (see the whiteboard) and your last name (i.e. Richter) in the *Contribute Data* fields. Click *Submit Key*.
   - Click on *Manual Entry* under *Contribute Data.*
   - Enter the data set name as your last name and the current time (i.e. Richter 8:21)
   - Enter your estimation and click on *Save.*
4. Measure the height of the lab bench in centimeters using only one ruler. Enter your data into iSENSE.
5. Measure the height of the lab bench using one meter stick. Enter your data into iSENSE.

iSENSE Analysis

1. Click on the project title to return to the Home screen, and then click the *Visualize* button.
2. Examine your data and visualization options by clicking the *Bar*, *Histogram*, *Table*, and *Summary* tabs. Be sure to explore by toggling different buttons. You will use this information to answer the discussion questions.
3. Save any interesting visualizations.
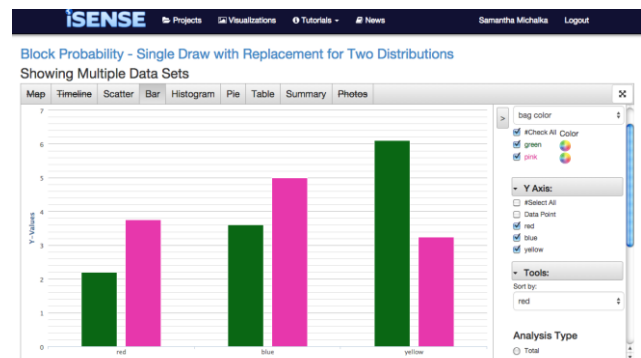
Discussion Questions

Compose an email to your teacher with the subject YourLastName – Height (i.e. Richter – Height) and answer the questions below in **2-3 complete sentences**.

1. Which "measuring device" had the widest range of data? What was it, and why do you think that is?
2. Which "measuring device" do you think was the most accurate? Why?
3. Which student do you think was best at using the ruler to measure? Why?
4. What is an interesting thing you figured out how to do with iSENSE that is NOT in the procedure? How do you do it, and why is it important?