

Plan:

1. Identify best practices for visualization
2. Explain how to improve a visualization
3. Describe the data:ink ratio

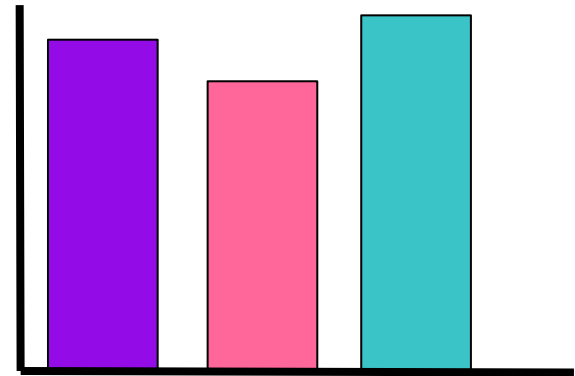
Dataviz: Best Practices

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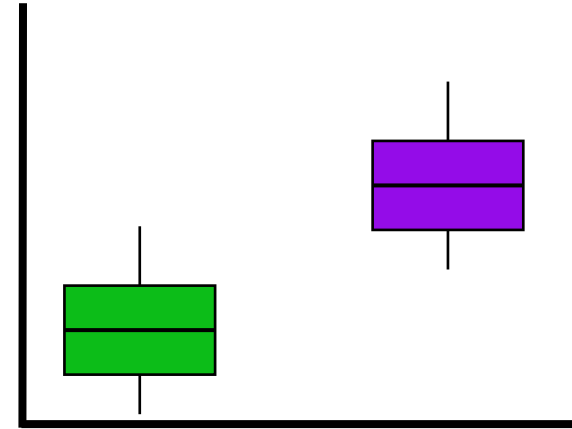
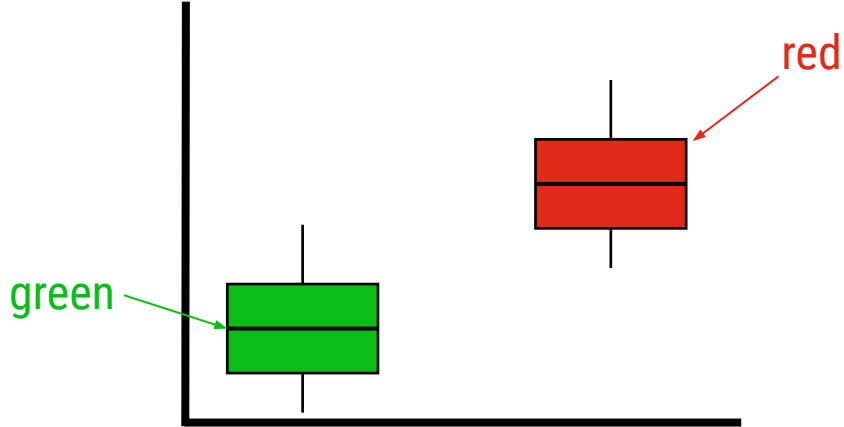
Department of Cognitive Science
sellis@ucsd.edu

Choose the right type of visualization



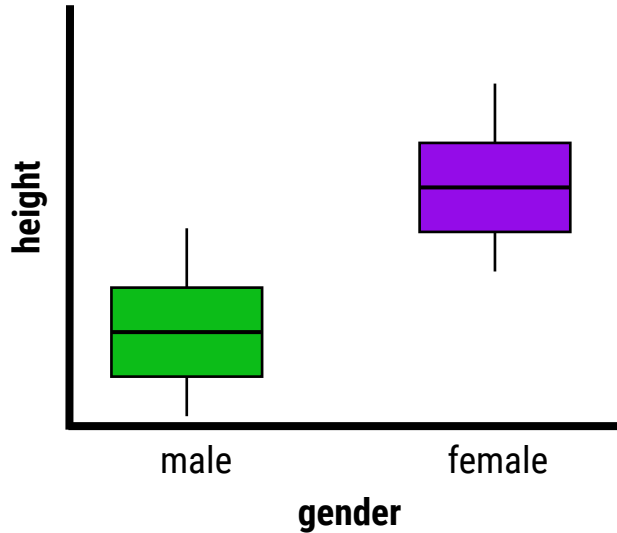
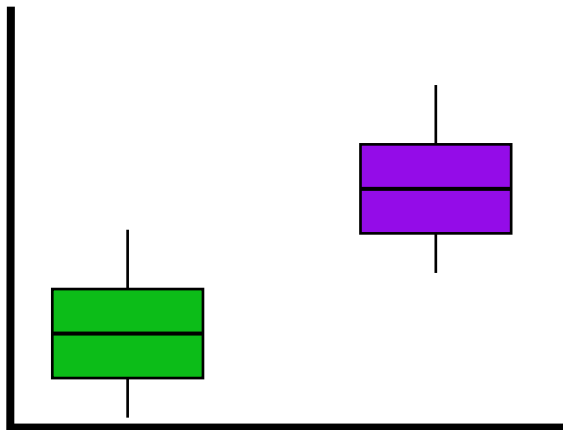
When looking at values, bar charts make it much easier to see the difference between groups!

Be mindful when choosing colors

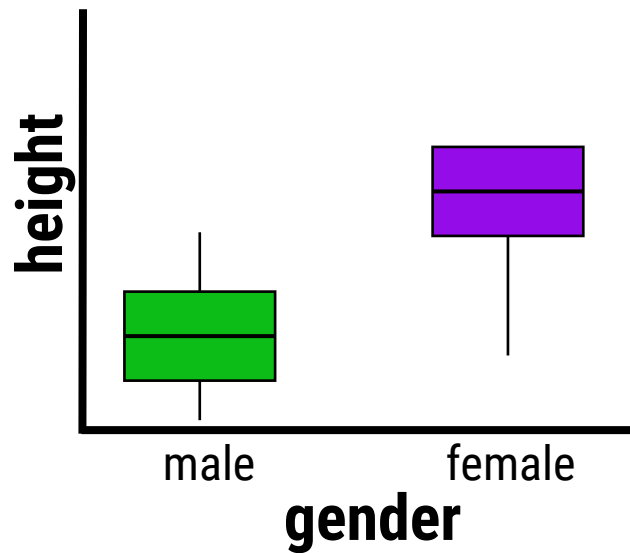
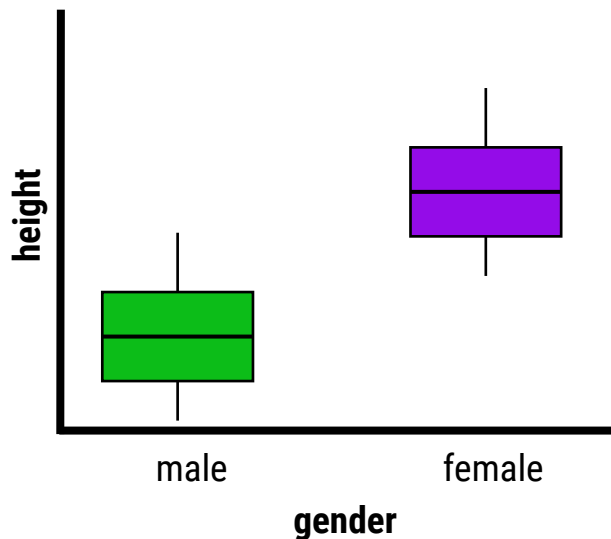


Many color-blind individuals cannot see the difference between red and green.

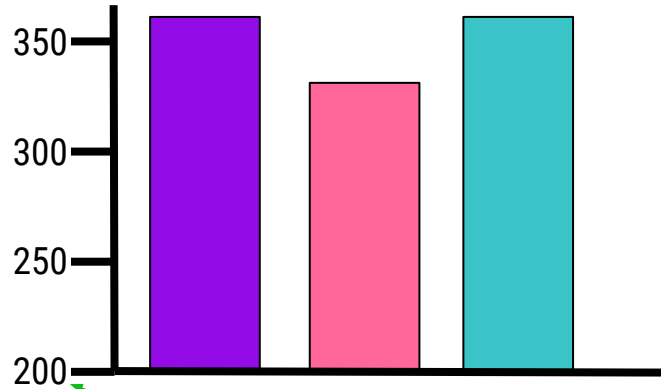
Label your axes!



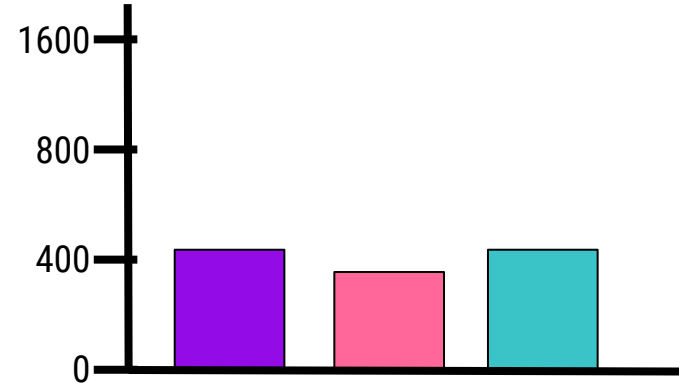
Make sure the text size is big enough!



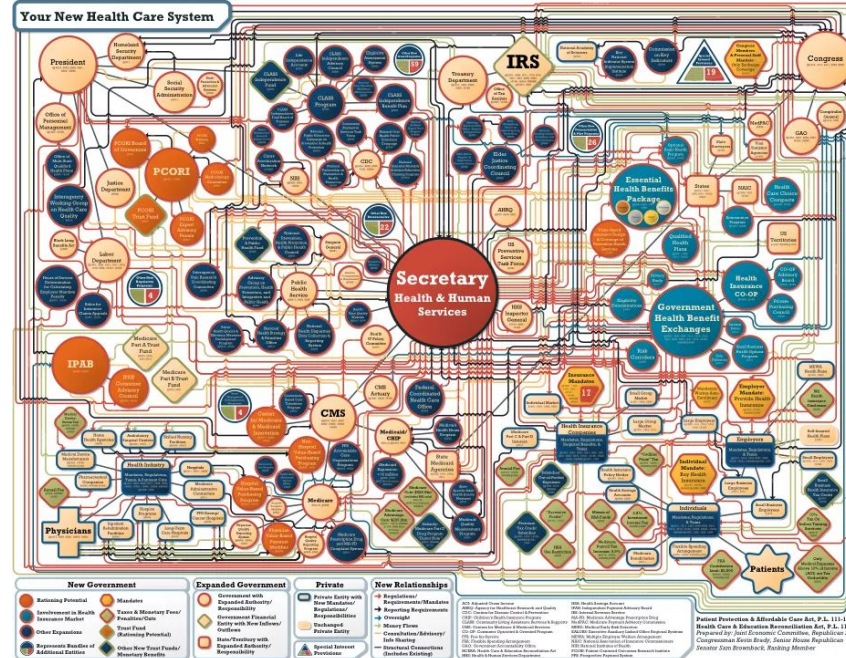
Use y-axes that start at 0 for barplots



The y-axis starts at 200.
This is misleading & makes differences
look larger than they actually are



Keep it Simple



“...detailed organization chart displays a bewildering array of new government agencies, regulations and mandates”

Everything on the page should serve a purpose. If it doesn't, remove it or edit it (declutter!).

AIM TO IMPROVE YOUR:

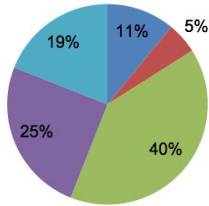
data:ink
ratio



Survey Results

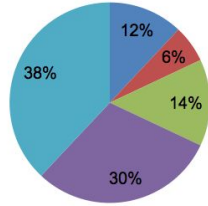
PRE: How do you feel about doing science?

■ Bored ■ Not great ■ OK ■ Kind of interested ■ Excited



POST: How do you feel about doing science?

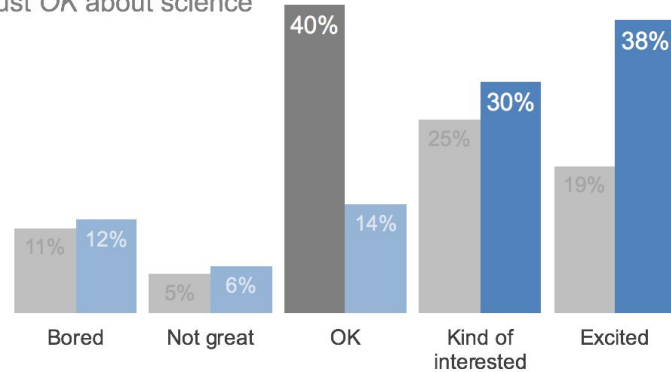
■ Bored ■ Not great ■ OK ■ Kind of interested ■ Excited



Pilot program was a success

How do you feel about science?

BEFORE program, the majority of children felt just *OK* about science



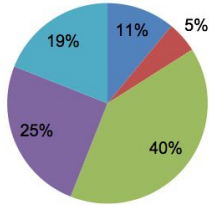
AFTER program, more children were *Kind of interested & Excited* about science.

Based on survey of 100 students conducted before and after pilot program (100% response rate on both surveys).

Survey Results

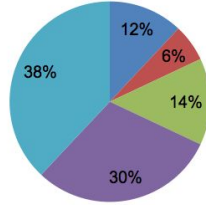
PRE: How do you feel about doing science?

■ Bored ■ Not great ■ OK ■ Kind of interested ■ Excited



POST: How do you feel about doing science?

■ Bored ■ Not great ■ OK ■ Kind of interested ■ Excited



Pilot program was a success

After the pilot program,

68%

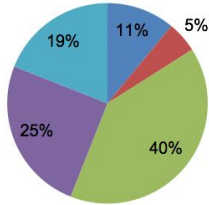
of kids expressed interest towards science,
compared to 44% going into the program.

Based on survey of 100 students conducted before and after pilot program (100% response rate on both surveys).

Survey Results

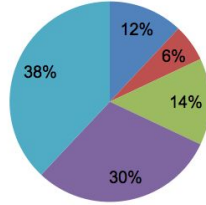
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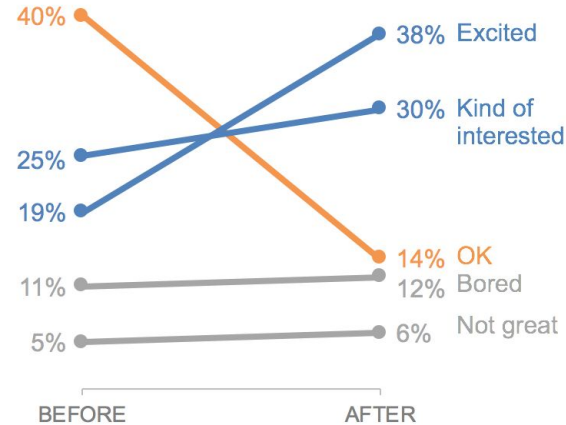
POST: How do you feel about doing science?

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Pilot program was a success

How do you feel about science?



BEFORE program, the majority of children felt just *OK* about science

AFTER program, more children were *Kind of interested & Excited* about science.

Based on survey of 100 students conducted before and after pilot program (100% response rate on both surveys).

less
is more

(effective)

(attractive)

(impactive)