**Main Learning Objectives**

**Group 1** – “To load a clean data file into R and make boxplots and scatterplots”

Objectives:

* Determine how to import and control data stored in different filetypes
* Understand the best practices for structuring data in *tidyverse/ggplot*
* Construct basic plots using *ggplot*

**Group 2** – “To learn how to structure data to produce single plots that are ready for presentations and publications”

Objectives:

* Articulate the advantages of literate programming
* Employ piping to restructure data for *tidyverse*
* Describe the grammar of graphics that underlies plotting in *ggplot*
* Manipulate plots to improve clarity and maximize the data:ink ratio

\* pre-reading: Hadley Wickham’s guide to piping

**Group 3** – “To make a multi-panel figure with a clear narrative arc”

Objectives:

* Plan a sequence of plots that support a declarative statement of a result
* Construct a multi-panel figure using *cowplot*
* Evaluate which among a diversity of plotting options most effectively communicates a logical argument