

Grammar of graphics

`dataset %>%`

`ggplot(mapping = aes(x = xvar,
y = yvar,
colour=colour)) +`

Plots are made of aesthetic mappings that specify how the data in `dataset` map onto the axes and aesthetic properties like colour

`geom_jitter(size=3) +`

`facet_wrap(~var) +`

`theme_bw() +`

`labs(title = "Title",
subtitle = "Subtitle",
x = "X",
y = "Y")`

Geoms that specify what the plot should look like (i.e., what kind of plot it is). Geoms take arguments that affect how the parts of them look.

Facets allow you to break your data into different panels, where each panel corresponds to one of the values of the given variable.

Themes make the plot look nice in terms of background colours and things like that

You can also specify the axis labels, title, etc

Geoms

One variable,
continuous:

`geom_histogram()`

`geom_density()`

`geom_dotplot()`

Two variables,
continuous:

`geom_point()`

`geom_rug()`

`geom_jitter()`

Two variables,
one discrete:

`geom_boxplot()`

`geom_violin()`

See cheatsheet for details
about parameters!

Adding coolness

There are two kinds of ways to add colour to a graph: as a **fill** (for filling in shapes) or as a **colour** (for lines)

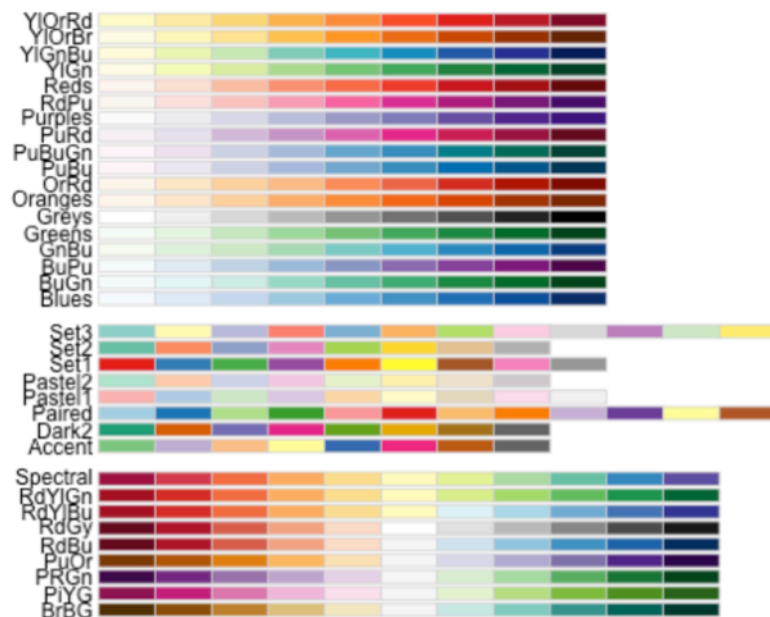
Different libraries offer different palettes, e.g. ColorBrewer:

For fills:

```
scale_fill_brewer(palette="palettename")
```

For lines:

```
scale_colour_brewer(palette="palettename")
```



Miscellaneous

To save your figures:

```
ggsave( filename="file.pdf", plot=plot_name, device="pdf")
```

For bar plots you need to first create datasets that have the summary statistics (e.g., means, standard error) you want to plot

```
geom_col()
```

```
geom_errorbar()
```

If you want to combine with individual data points (or anything that needs a different tibble) give that tibble separately to only that geom