

Histogram

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```
library(mosaic) library(tidyverse) library(ggplot2)
data(mpg) mpg head(mpg)
```

R's basic plotting commands

```
hist(mpg$cty) hist(mpg$cty, breaks=20)
plot(mpg$displ, mpg$hwy) plot(hwy ~ displ, data=mpg) # works if you've loaded mosaic
boxplot(cty~class, data=mpg)
```

Pros: simple syntax

Cons: not that pretty, and very hard to do complex things

We'll use ggplot2 instead

Cons: commands are less intuitive at first

Pros: much easier to make sophisticated, beautiful plots

creating a ggplot

The first line sets up a coordinate system.

the second line maps displ to x, hwy to y, and draws points

```
ggplot(data = mpg) + geom_point(mapping = aes(x = displ, y = hwy))
```

R Markdown

This is an R Markdown document. Markdown is a simple formatting syntax for authoring HTML, PDF, and MS Word documents. For more details on using R Markdown see <http://rmarkdown.rstudio.com>.

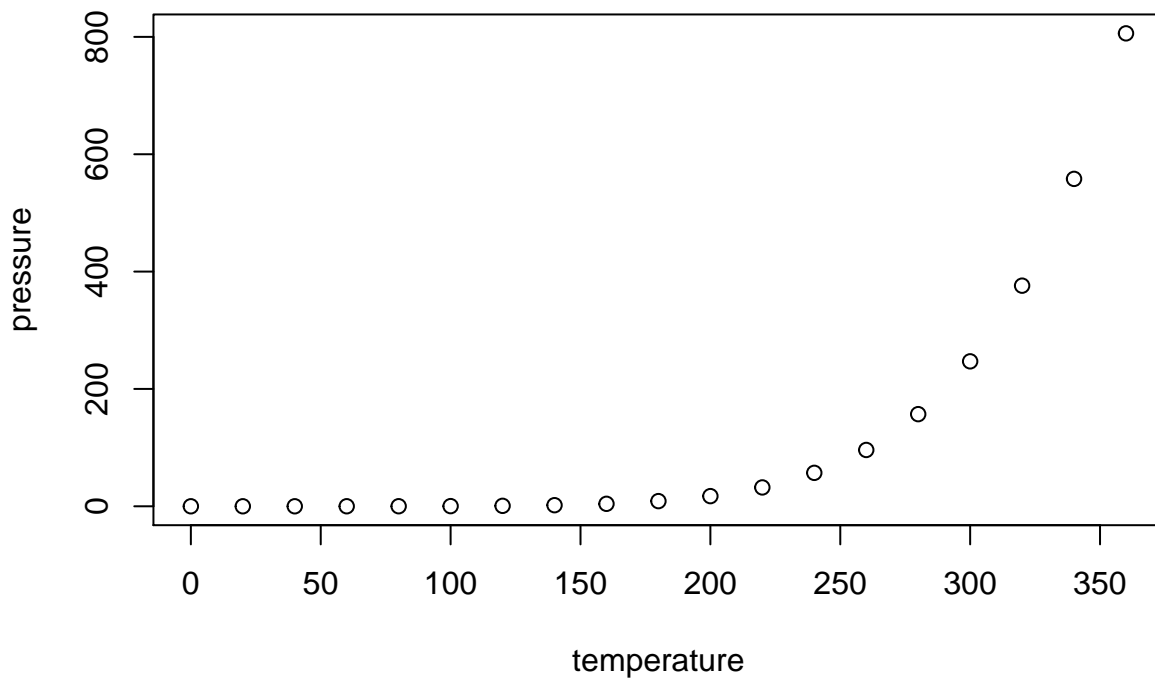
When you click the **Knit** button a document will be generated that includes both content as well as the output of any embedded R code chunks within the document. You can embed an R code chunk like this:

```
summary(cars)
```

```
##      speed      dist
##  Min.   : 4.0    Min.   :  2.00
## 1st Qu.:12.0    1st Qu.: 26.00
##  Median:15.0    Median : 36.00
##  Mean   :15.4    Mean   : 42.98
## 3rd Qu.:19.0    3rd Qu.: 56.00
##  Max.   :25.0    Max.   :120.00
```

Including Plots

You can also embed plots, for example:



Note that the `echo = FALSE` parameter was added to the code chunk to prevent printing of the R code that generated the plot.