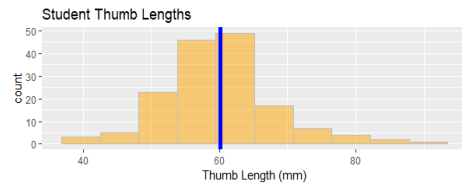


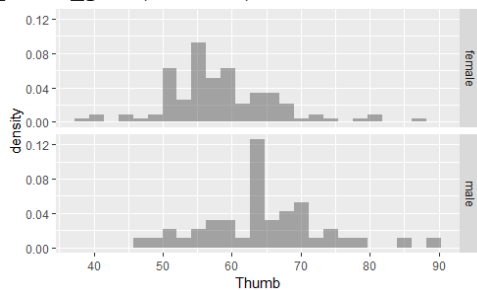
Basics <pre>print("hello") # assigns value to object my_number <- 5 # combines elements into vector my_vector <- c(1,2,3) # first element in vector my_vector[1] # variable in data frame Fingers\$Sex</pre>	Tables <pre>tally(my_vector) tally(~ Condition, data = MindsetMatters) tally(~ Thumb > 65, data = Fingers) tally(Thumb ~ Sex, data = Fingers, margins = TRUE, format = "proportion")</pre>	Fitting and Evaluating Models <pre>empty_model <- lm(Thumb ~ NULL, data = Fingers) Sex_model <- lm(Thumb ~ Sex, data = Fingers) predict(empty_model) resid(empty_model) supernova(Sex_model)</pre>	Data <pre># ways to view data frame str(MindsetMatters) head(MindsetMatters) tail(MindsetMatters) # orders values or cases sort(my_vector) arrange(Fingers, Thumb) # selects variables select(Fingers, Sex, RaceEthnic, Thumb) # selects cases filter(Fingers, SSLast != "NA") # head() of selected variables head(select(Fingers, Thumb)) # transform values as.numeric(Fingers\$Interest) factor(Fingers\$Sex) factor(Fingers\$Sex, levels = c(1,2), labels = c("female", "male")) recode(Fingers\$Job, "0" = 0, "1" = 50, "2" = 100) # creates two equal sized groups ntile(Fingers\$Height, 2) # creates data frame from csv file new_dataframe <- read.csv("long-csv- link-from-published-google- spreadsheet", header = TRUE)</pre>
Operators <pre>sum(1,2,100) +, -, *, / >, <, >=, <=, ==, != # results in a variable with # values of TRUE or FALSE Fingers\$RingLonger <- Fingers\$Ring > Fingers\$Index # absolute values abs(Fingers\$Residual) Fingers\$Residual^2 sqrt(157)</pre>	Simple Statistics <pre>mean(Fingers\$Thumb) var(Fingers\$Thumb) sd(Fingers\$Thumb) favstats(~ Wt, data = MindsetMatters) cohensD(Thumb ~ Sex, data = Fingers) cor(Thumb ~ Height, data = Fingers) b1(Thumb ~ Sex, data = Fingers) b1(Sex_model) # PRE and fVal work like b1 PRE(Sex_model) fVal(Sex_model)</pre>	Probability Distributions <pre>xpnorm(65.1, Thumb_stats\$mean, Thumb_stats\$sd) zscore(Fingers\$Thumb)</pre>	
		Simulation & Resampling <pre># sample without replacement sample(Fingers\$Thumb, 10) # sample with replacement resample(Fingers\$Thumb, 157)</pre>	

Plots

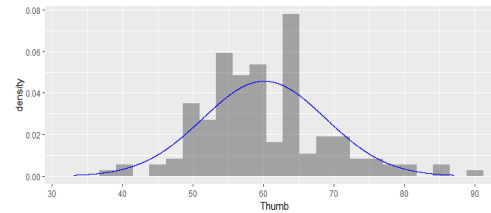
```
gf_histogram(~ Thumb, data = Fingers, fill =
"orange", color = "gray", bins = 10) %>%
  # changes labels
  gf_labs(title= "Student Thumb Lengths", x =
"Thumb Length (mm)") %>%
  # adds density curve to a histogram
  gf_density() %>%
  # adds vertical line
  gf_vline(xintercept = ~mean, data =
Thumb_stats, color = "blue", size = 2)
```



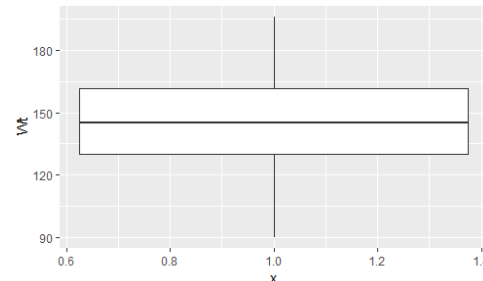
```
gf_dhistogram(~ Thumb, data = Fingers) %>%
gf_facet_grid(Sex ~ .)
```



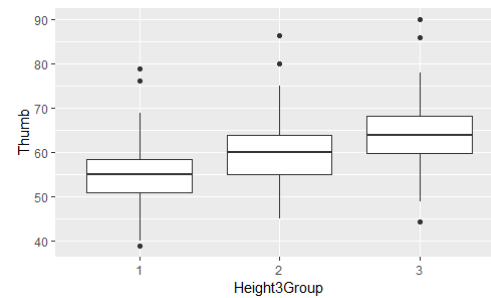
```
gf_dist("norm", color = "blue", params =
list(Thumb_stats$mean, Thumb_stats$sd))
```



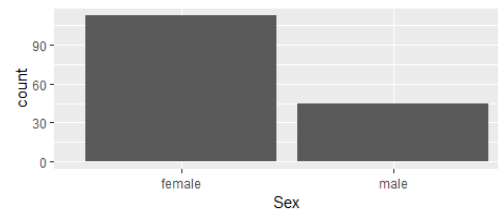
```
gf_boxplot(Wt ~ 1, data = MindsetMatters)
```



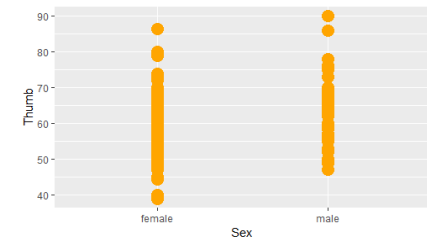
```
gf_boxplot(Thumb ~ Height3Group, data =
Fingers)
```



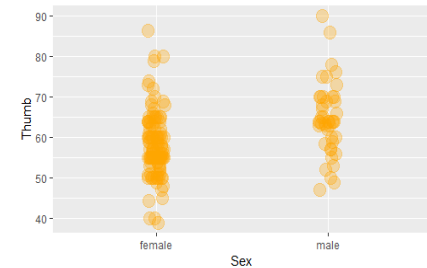
```
# creates bar graph
gf_bar(~ Sex, data = Fingers)
```



```
gf_point(Thumb ~ Sex, data = Fingers, color =
"orange", size = 5)
```



```
gf_jitter(Thumb ~ Sex, data = Fingers, color =
"orange", size = 5, alpha = .5)
```



```
gf_point(Thumb ~ Height, data = Fingers, size
= 2) %>%
```

```
# adds a regression line
```

```
gf_lm(color = "orange", size = 2)
```

