

Project

Load packages and data

Y'all, the data file is just called data and cases is cases.

Larry's stuff

```
countries <- c("United States", "China", "Italy")

data_use <- data %>%
  filter(
    CountryName %in% countries
  )
data_use

# A tibble: 323 x 40
  CountryName CountryCode   Date `S1_School clos~ S1_IsGeneral S1_Notes
  <chr>        <chr>       <dbl>      <dbl>      <dbl> <chr>
1 China       CHN        2.02e7         0         0 <NA>
2 China       CHN        2.02e7         0         0 <NA>
3 China       CHN        2.02e7         0         0 <NA>
4 China       CHN        2.02e7         0         0 <NA>
5 China       CHN        2.02e7         0         0 <NA>
6 China       CHN        2.02e7         0         0 <NA>
7 China       CHN        2.02e7         0         0 <NA>
8 China       CHN        2.02e7         0         0 <NA>
9 China       CHN        2.02e7         0         0 <NA>
10 China      CHN        2.02e7         0         0 <NA>
# ... with 313 more rows, and 34 more variables: `S2_Workplace closing` <dbl>,
# S2_IsGeneral <dbl>, S2_Notes <chr>, `S3_Cancel public events` <dbl>,
# S3_IsGeneral <dbl>, S3_Notes <chr>, `S4_Close public transport` <dbl>,
# S4_IsGeneral <dbl>, S4_Notes <chr>, `S5_Public information
# campaigns` <dbl>, S5_IsGeneral <dbl>, S5_Notes <chr>, `S6_Restrictions on
# internal movement` <dbl>, S6_IsGeneral <dbl>, S6_Notes <chr>,
# `S7_International travel controls` <dbl>, S7_Notes <chr>, `S8_Fiscal
# measures` <dbl>, S8_Notes <chr>, `S9_Monetary measures` <dbl>,
# S9_Notes <chr>, `S10_Emergency investment in health care` <dbl>,
# S10_Notes <chr>, `S11_Investment in Vaccines` <dbl>, S11_Notes <chr>,
# `S12_Testing framework` <dbl>, S12_Notes <chr>, `S13_Contact
# tracing` <dbl>, S13_Notes <chr>, ConfirmedCases <dbl>,
# ConfirmedDeaths <dbl>, StringencyIndex <dbl>,
# StringencyIndexForDisplay <dbl>, X40 <lgl>

data_use %>%
  filter(
    `S1_School closing` == 1
  )

# A tibble: 2 x 40
  CountryName CountryCode   Date `S1_School clos~ S1_IsGeneral S1_Notes
  <chr>        <chr>       <dbl>      <dbl>      <dbl> <chr>
1 United Sta~ USA        2.02e7         1         0 "Depart~
2 United Sta~ USA        2.02e7         1         0 <NA>
```

```
# ... with 34 more variables: `S2_Workplace closing` <dbl>, S2_IsGeneral <dbl>,
# S2_Notes <chr>, `S3_Cancel public events` <dbl>, S3_IsGeneral <dbl>,
# S3_Notes <chr>, `S4_Close public transport` <dbl>, S4_IsGeneral <dbl>,
# S4_Notes <chr>, `S5_Public information campaigns` <dbl>,
# S5_IsGeneral <dbl>, S5_Notes <chr>, `S6_Restrictions on internal
# movement` <dbl>, S6_IsGeneral <dbl>, S6_Notes <chr>, `S7_International
# travel controls` <dbl>, S7_Notes <chr>, `S8_Fiscal measures` <dbl>,
# S8_Notes <chr>, `S9_Monetary measures` <dbl>, S9_Notes <chr>,
# `S10_Emergency investment in health care` <dbl>, S10_Notes <chr>,
# `S11_Investment in Vaccines` <dbl>, S11_Notes <chr>, `S12_Testing
# framework` <dbl>, S12_Notes <chr>, `S13_Contact tracing` <dbl>,
# S13_Notes <chr>, ConfirmedCases <dbl>, ConfirmedDeaths <dbl>,
# StringencyIndex <dbl>, StringencyIndexForDisplay <dbl>, X40 <lgl>
```

```
data_use %>%
  filter(
    `S1_School closing` == 2
  )
```

```
# A tibble: 179 x 40
```

	CountryName	CountryCode	Date	`S1_School clos~`	S1_IsGeneral	S1_Notes
	<chr>	<chr>	<dbl>	<dbl>	<dbl>	<chr>
1	China	CHN	2.02e7	2	1	http://~
2	China	CHN	2.02e7	2	1	<NA>
3	China	CHN	2.02e7	2	1	<NA>
4	China	CHN	2.02e7	2	1	<NA>
5	China	CHN	2.02e7	2	1	<NA>
6	China	CHN	2.02e7	2	1	<NA>
7	China	CHN	2.02e7	2	1	<NA>
8	China	CHN	2.02e7	2	1	<NA>
9	China	CHN	2.02e7	2	1	<NA>
10	China	CHN	2.02e7	2	1	<NA>

```
# ... with 169 more rows, and 34 more variables: `S2_Workplace closing` <dbl>,
# S2_IsGeneral <dbl>, S2_Notes <chr>, `S3_Cancel public events` <dbl>,
# S3_IsGeneral <dbl>, S3_Notes <chr>, `S4_Close public transport` <dbl>,
# S4_IsGeneral <dbl>, S4_Notes <chr>, `S5_Public information
# campaigns` <dbl>, S5_IsGeneral <dbl>, S5_Notes <chr>, `S6_Restrictions on
# internal movement` <dbl>, S6_IsGeneral <dbl>, S6_Notes <chr>,
# `S7_International travel controls` <dbl>, S7_Notes <chr>, `S8_Fiscal
# measures` <dbl>, S8_Notes <chr>, `S9_Monetary measures` <dbl>,
# S9_Notes <chr>, `S10_Emergency investment in health care` <dbl>,
# S10_Notes <chr>, `S11_Investment in Vaccines` <dbl>, S11_Notes <chr>,
# `S12_Testing framework` <dbl>, S12_Notes <chr>, `S13_Contact
# tracing` <dbl>, S13_Notes <chr>, ConfirmedCases <dbl>,
# ConfirmedDeaths <dbl>, StringencyIndex <dbl>,
# StringencyIndexForDisplay <dbl>, X40 <lgl>
```

Recommended Closing schools: USA only one out of them that recommended closing before requiring closing, during 20200303

Required Closing schools: CHN 20200126 first day ITA 20200223 first day USA 20200305 first day

```
data_use %>%
  filter(
    `S2_Workplace closing` == 1
  )
```

```
# A tibble: 6 x 40
  CountryName CountryCode   Date `S1_School clos~ S1_IsGeneral S1_Notes
  <chr>        <chr>       <dbl>      <dbl>      <dbl> <chr>
1 China      CHN         2.02e7         2         0 "'Over ~
2 China      CHN         2.02e7         2         0 "'Over ~
3 China      CHN         2.02e7         2         0 "'Over ~
4 China      CHN         2.02e7         2         0 "'Over ~
5 China      CHN         2.02e7         2         0 "'Local~
6 China      CHN         2.02e7         2         0 "'Local~
# ... with 34 more variables: `S2_Workplace closing` <dbl>, S2_IsGeneral <dbl>,
# S2_Notes <chr>, `S3_Cancel public events` <dbl>, S3_IsGeneral <dbl>,
# S3_Notes <chr>, `S4_Close public transport` <dbl>, S4_IsGeneral <dbl>,
# S4_Notes <chr>, `S5_Public information campaigns` <dbl>,
# S5_IsGeneral <dbl>, S5_Notes <chr>, `S6_Restrictions on internal
# movement` <dbl>, S6_IsGeneral <dbl>, S6_Notes <chr>, `S7_International
# travel controls` <dbl>, S7_Notes <chr>, `S8_Fiscal measures` <dbl>,
# S8_Notes <chr>, `S9_Monetary measures` <dbl>, S9_Notes <chr>,
# `S10_Emergency investment in health care` <dbl>, S10_Notes <chr>,
# `S11_Investment in Vaccines` <dbl>, S11_Notes <chr>, `S12_Testing
# framework` <dbl>, S12_Notes <chr>, `S13_Contact tracing` <dbl>,
# S13_Notes <chr>, ConfirmedCases <dbl>, ConfirmedDeaths <dbl>,
# StringencyIndex <dbl>, StringencyIndexForDisplay <dbl>, X40 <lgl>
```

```
data_use %>%
  filter(
    `S2_Workplace closing` == 2
  )
```

```
# A tibble: 152 x 40
  CountryName CountryCode   Date `S1_School clos~ S1_IsGeneral S1_Notes
  <chr>        <chr>       <dbl>      <dbl>      <dbl> <chr>
1 China      CHN         2.02e7         2         1 http://~
2 China      CHN         2.02e7         2         1 <NA>
3 China      CHN         2.02e7         2         1 <NA>
4 China      CHN         2.02e7         2         1 <NA>
5 China      CHN         2.02e7         2         1 <NA>
6 China      CHN         2.02e7         2         1 <NA>
7 China      CHN         2.02e7         2         1 <NA>
8 China      CHN         2.02e7         2         1 <NA>
9 China      CHN         2.02e7         2         1 <NA>
10 China     CHN         2.02e7         2         1 <NA>
# ... with 142 more rows, and 34 more variables: `S2_Workplace closing` <dbl>,
# S2_IsGeneral <dbl>, S2_Notes <chr>, `S3_Cancel public events` <dbl>,
# S3_IsGeneral <dbl>, S3_Notes <chr>, `S4_Close public transport` <dbl>,
# S4_IsGeneral <dbl>, S4_Notes <chr>, `S5_Public information
# campaigns` <dbl>, S5_IsGeneral <dbl>, S5_Notes <chr>, `S6_Restrictions on
# internal movement` <dbl>, S6_IsGeneral <dbl>, S6_Notes <chr>,
# `S7_International travel controls` <dbl>, S7_Notes <chr>, `S8_Fiscal
# measures` <dbl>, S8_Notes <chr>, `S9_Monetary measures` <dbl>,
# S9_Notes <chr>, `S10_Emergency investment in health care` <dbl>,
# S10_Notes <chr>, `S11_Investment in Vaccines` <dbl>, S11_Notes <chr>,
# `S12_Testing framework` <dbl>, S12_Notes <chr>, `S13_Contact
# tracing` <dbl>, S13_Notes <chr>, ConfirmedCases <dbl>,
# ConfirmedDeaths <dbl>, StringencyIndex <dbl>,
# StringencyIndexForDisplay <dbl>, X40 <lgl>
```

Recommended Closing workplaces: CHN 20200403 first day

Required Closing workplaces: CHN 20200126 first day ITA 20200222 first day USA 20200319 first day

```
countries <- c("United States", "China", "Italy")
```

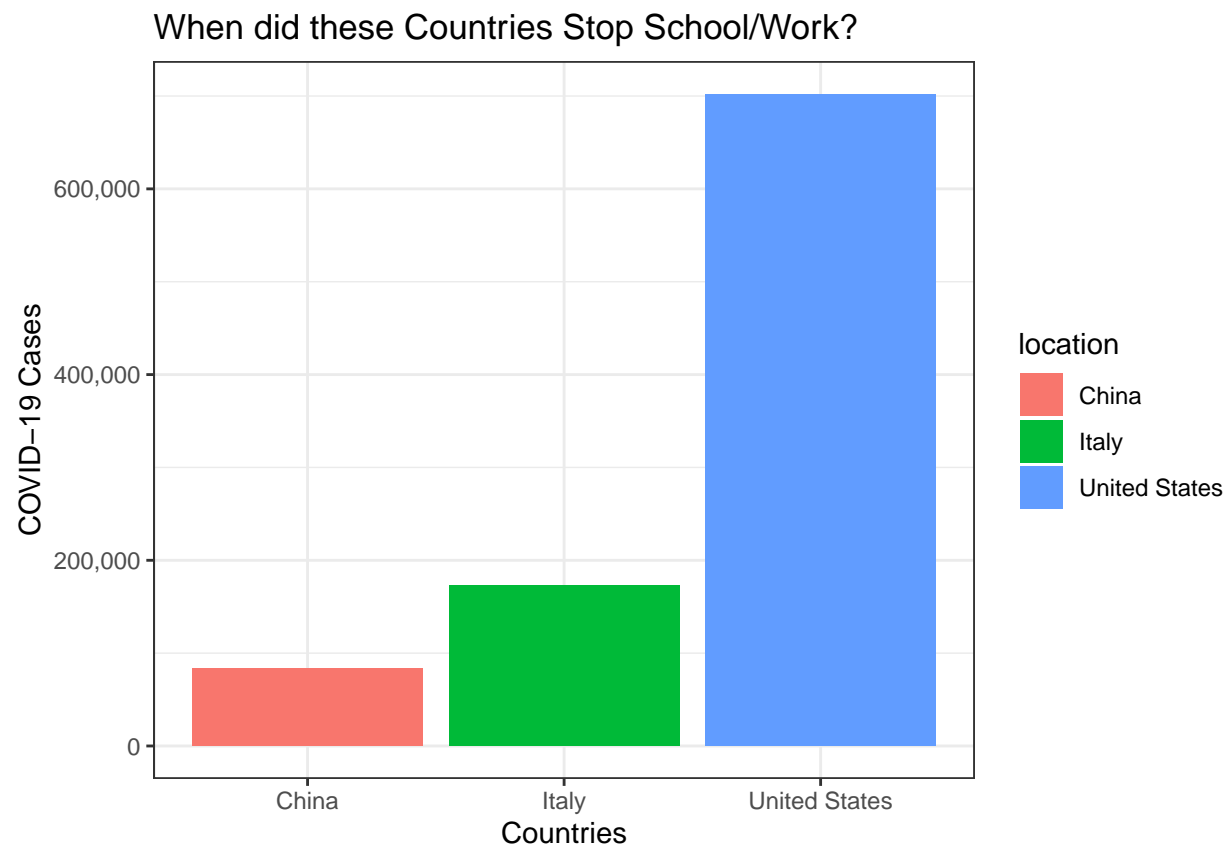
```
cases_use <- cases %>%  
  filter(  
    location %in% countries  
  )  
cases_use
```

```
# A tibble: 330 x 16
```

	iso_code	location	date	total_cases	new_cases	total_deaths	new_deaths
	<chr>	<chr>	<date>	<dbl>	<dbl>	<dbl>	<dbl>
1	CHN	China	2019-12-31	27	27	0	0
2	CHN	China	2020-01-01	27	0	0	0
3	CHN	China	2020-01-02	27	0	0	0
4	CHN	China	2020-01-03	44	17	0	0
5	CHN	China	2020-01-04	44	0	0	0
6	CHN	China	2020-01-05	59	15	0	0
7	CHN	China	2020-01-06	59	0	0	0
8	CHN	China	2020-01-07	59	0	0	0
9	CHN	China	2020-01-08	59	0	0	0
10	CHN	China	2020-01-09	59	0	0	0

```
# ... with 320 more rows, and 9 more variables: total_cases_per_million <dbl>,  
#   new_cases_per_million <dbl>, total_deaths_per_million <dbl>,  
#   new_deaths_per_million <dbl>, total_tests <dbl>, new_tests <dbl>,  
#   total_tests_per_thousand <dbl>, new_tests_per_thousand <dbl>,  
#   tests_units <chr>
```

```
cases_use_new <- cases_use %>%  
  filter(  
    date == as.Date("2020-04-18")  
  )  
  
ggplot(data = cases_use_new,  
  aes(x = location, y = total_cases, fill = location)) +  
  geom_bar(stat = "identity") +  
  scale_y_continuous(breaks=seq(0, 700000, 100000)) +  
  scale_y_continuous(labels = comma) +  
  labs(title = "When did these Countries Stop School/Work?",  
    x = "Countries", y = "COVID-19 Cases") +  
  theme_bw()
```



`abline(h=200, col = "Red", lty = 5)` *Add lines later on.