Importing the library

```
import matplotlib.pyplot as plt
```

Plots and key arguments

Line graph	plt.plot()	(x_data, y_data)
Scatter plot	plt.scatter()	(x_data, y_data)
Bar chart	plt.bar()	(x_locs, bar_heights, width = int)
Histogram	plt.hist()	(data, bins = int)
Pie chart	plt.pie()	(data, labels = list)

Optional arguments

color ="color"	Change plot color
marker = "symbol"	Change marker for line or scatter plot (".", "x", "|", "o")
markersize = int	Change marker size
linewidth = int	Change line width for line graph
cmap = colormap	Color plot according to a colormap

Key functions

plt.clf()	Clear figure
plt.savefig("filename")	Save figure (call before plt.show())
plt.show()	Show figure

Axis functions

plt.xlim(xmin, xmax)	Set the limits for the x axis
plt.ylim(ymin, ymax)	Set the limits for the y axis
plt.xscale("scale type")	Set scale for the x axis (ex. "log")
plt.yscale("scale type")	Set scale for the y axis (ex. "log")
plt.twinx()	Add a second y axis
plt.axis("off")	Do not show the axes
plt.gca().invert_xaxis()	Invert the x axis
plt.gca().invert_yaxis()	Invert the y axis

Labeling functions

plt.title("title")	Add a title
plt.xlabel("x axis label")	Add a label to the x axis
plt.ylabel("y axis label")	Add a label to the y axis
plt.legend(loc = int)	Add a legend
plt.xticks(range(min, max, interval)	Modify the x axis tick marks

Multiple plots

```
plt.plot(x_data1, y_data1)
plt.pl ot( x_d ata2, y_data2)
plt.pl ot( x_d ata3, y_data3)
plt.show()
```

You can put multiple plots in one figure by defining each one before plt.show() or plt.savefig()

Using colormaps

```
# Choose a colormap and assign
to a variable
cm = plt.cm.ge t_c map ("Rd -
YlB u")
# Set the color map in a plot
plt.sc att er( x_data, y_data,
cmap=cm)
```

See all colormaps here: https://matplotlib.org/users/colormaps.html