Flowchart

ONLY FOR:

SAME SAMPLE SIZE!!!

Randomized Experiment or Observational Study?

PLOT DATA!!!

HISTORGRAM, BOX PLOT, QQPLOT

Read the Problem Carefully

No

Pooled T-Test

*Difference of Means*

No

Same Shape?

Yes, CLT Kicks In

Pooled T-Test

*Difference of Means*

Yes

No

One Sample or Matched Pairs

Yes

Evidence Against Normality?

Evidence Against Normality? 

Sufficient Sample Size?

Two Samples

One Sample, Two Sample, or Matched Pairs? 

!!! Remember to write the conclusion as Causal if Randomized Experiment and as simply difference of Means if it is an Observational Study. !!!!

No

Rank Sum Test

*Difference of Distribution*

Rank Sum Test

*Difference of Medians*

Yes

Sign Test or Signed Rank Test

*Median*

Yes, CLT Kicks In

1 Sample T-Test

*Mean*

No

Sufficient Sample Size?