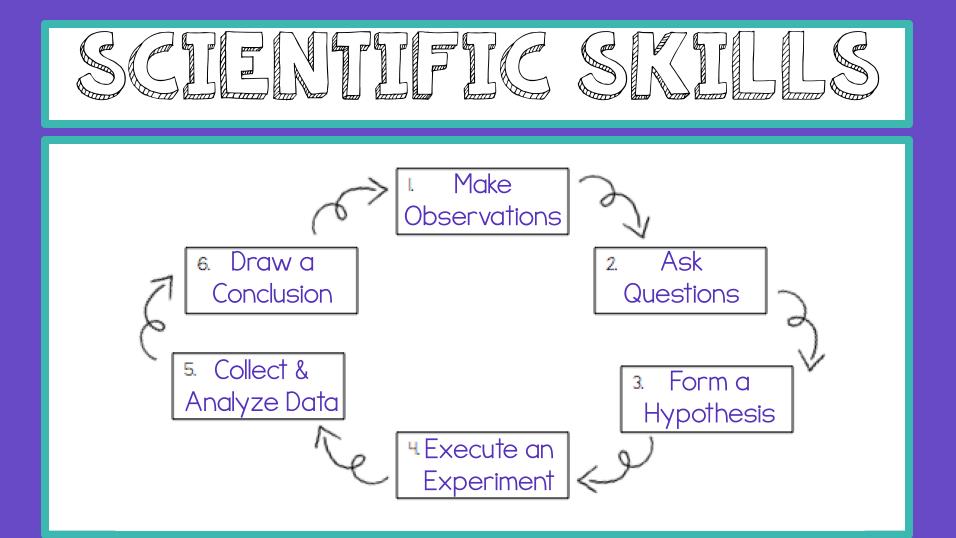


#### TODAY'S OBJECTIVES:

## I CAN FORM A REASONABLE HYPOTHESES TO EXPLAIN A SCIENTIFIC PROBLEM

## I CAN THE SCIENTIFIC VARIABLES IN A SCIENTIFIC PROBLEM OR SCENARIO





#### 1. QUALITATIVE

QUALITIES OR CHARACTERISTICS USE YOUR FIVE SENSES

EXAMPLES:





### 2. QUANTITATIVE

## QUANTITIES, NUMBERS, AMOUNTS

#### **MEASUREMENTS!**

#### EXAMPLES:





# A HYPOTHESIS IS AN IF THEN BECAUSE STATEMENT!

# A HYPOTHESIS SHOULD LEAD TO AN EXPERIMENT!



<u>QUESTION:</u> HOW DOES THE <u>TYPE OR WEIGHT</u> OF PAPER AFFECT HOW LONG A PAPER AIRPLANE FLIES?

IF: WHAT YOU ARE GOING TO CHANGE

THEN: WHAT WILL HAPPEN BECAUSE OF CHANGE

BECAUSE: REASON WHY TO EXPLAIN THE "THEN"





VARIABLE:

ANYTHING THAT CAN POSSIBLY CHANGE IN AN EXPERIMENT!

INDEPENDENT VARIABLE:

THE VARIABLE THAT YOU CHANGE!

(MANIPULATED VARIABLE!)

★\*IMPORTANT! → ONLY ONE INDEPENDENT VARIABLE!!!



#### DEFINITIONS:

### DEPENDENT VARIABLE:

VARIABLE THAT "RESPONDS" TO YOUR CHANGE

(RESPONDING VARIABLE)

#### CONTROLLED VARIABLES:

VARIBLES THAT MUST BE KEPT THE SAME!

(REMEMBER: ONLY ONE INDEPENDENT VARIABLE)



VARIABLE EXAMPLES:

INDEPENDENT:

**TYPE OF PAPER USED FOR PLANE** 

DEPENDENT:

HOW LONG OR HOW FAR PLANE FLIES

CONTROLLED:

SHAPE OF PLANE, HOW YOU THROW IT ...



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