NILA NAVARRO
10/18/24

BIO NOTES 10/18 TROPHIC LEVELS - ENERGY FLOW

$C_6H_{12}O_6$ = SUGAR CHEMICAL FORMULA

$CO_2 + H_2O \longrightarrow C_6H_{12}O_6 + O_2$ = PHOTOSYNTHESIS

$H_2O + CO_2 \longleftarrow$ WOOD $+ O_2$ = COMBUSTION

ENERGY = ABILITY TO DO WORK

WORK = FORCE X DISTANCE

T_0 = STARTING TEMP

T = FINAL TEMP

$\Delta T = T - T_0$ (ΔT = CHANGE IN TEMP)

$\Delta Q = m \cdot \Delta T \cdot cp \longrightarrow \frac{4.2}{g \cdot °C}$

(Δ CHANGE IN TEMP; m MASS OF STUFF (WATER))

$\Delta T = T - T_0$ (Δ CHANGE, T CURRENT, T_0 INITIAL)

TODAY, ~~cp~~ $C_p = 4.2$

- JOULES = CHANGE IN HEAT. WE MEASURE HEAT IN JOULES LEX: 200 Joules
- TEMP. IS HOW A SYSTEM RESPONDS ~~IN DEGREES~~. TO ENERGY
- HEAT IS A FORM OF ENERGY
- CALORIE AND CALORIE ≠ 1 ML = 1 EYEDROPPER HAS ENERGY
  - 1 ML = 1 CM^3
  - MATCH H_2O GOES FROM 15-16 → 23-24, ΔT 77-78
  - 1 CALORIE IS ENOUGH TO RAISE TEMPERATURE BY 1°
  - CALORIE = FOOD CALORIE (FC)
  - CALORIE = SCIENCE CALORIE (SC)
  - 1 FC = 1000 SC