# Day 2

- **Data analysis course with Jonathan (9h–11h)**

- **Brainstorming session : finding an other insecticide (because nicotinic acid is definitely not an insecticide)**
  → insecticide : caffeine

- **Lab session (14h–16h30) : we made our experiment**
  → our protocol :

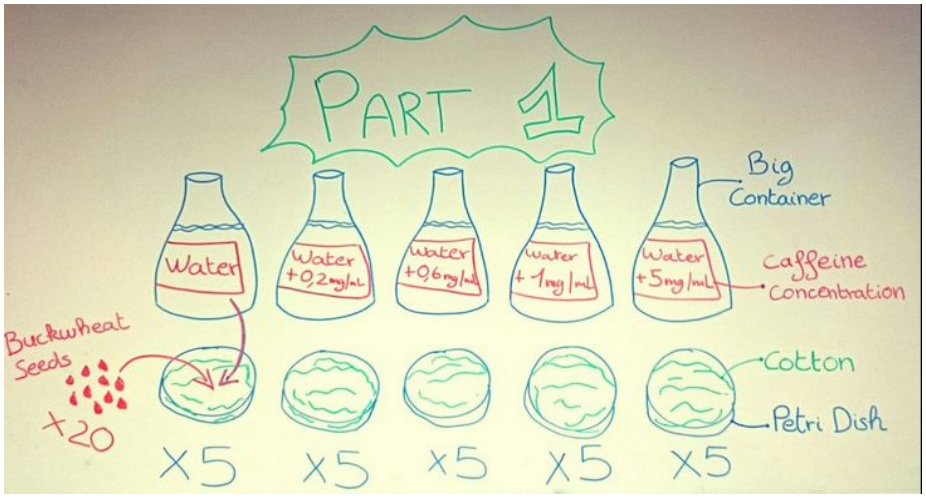
  ***Title :*** *Insecticide effects on plants growth*
  ***Aim :*** *Determining the impact of caffeine on the growth of buckwheat seeds*

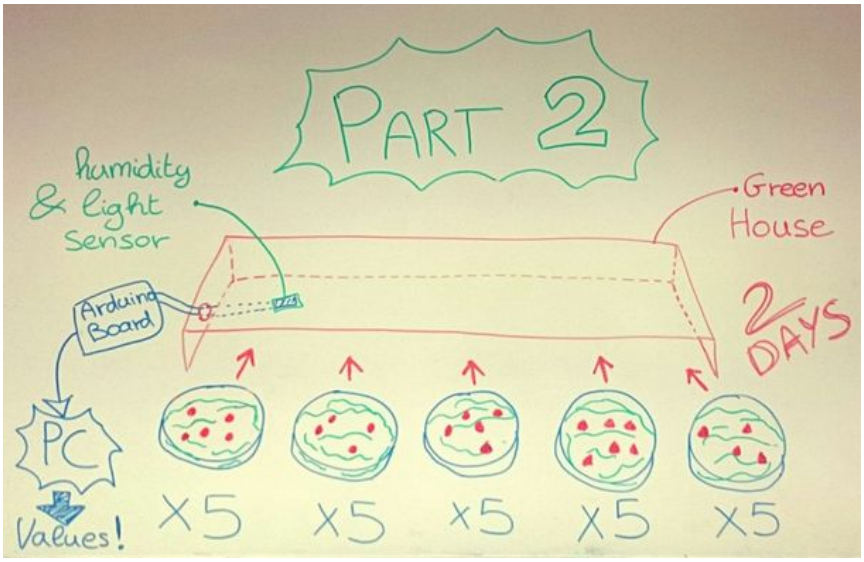
  ***Materials :***
  - *caffeine*
  - *buckwheat seeds*
  - *25 petri dishes*
  - *2 humidity & temperature sensors*
  - *cotton*
  - *water*

  ***Protocol :***
  - *Prepare 5 solutions*
    **A= 500mL of water + 0mg of caffeine (0mg/mL)*
    *→ negative control*
    **B= 500mL of water + 100mg of caffeine (0,2mg/mL)*
    **C= 500mL of water + 300mg of caffeine (0,6mg/mL)*
    **D= 500mL of water + 500mg of caffeine (1mg/mL)*
    **E= 500mL of water + 2500mg of caffeine (5mg/mL)*
    *→ positive control*
  - *Put 20 buckwheat seeds in each of the 5 solutions and let them in it during half an hour*
  - *Label 5 petri dishes : 0mg/mL , 0,2mg/mL , 0,6mg/mL , 1mg/mL and 5mg/mL*
  - *Spread 15mL of solution A on the "0mg/mL" petri dish*
  - *Spread 15mL of solution B on the "0,2mg/mL" petri dish*
  - *Spread 15mL of solution C on the "0,6mg/mL" petri dish*
  - *Spread 15mL of solution D on the "1mg/mL" petri dish*

- *Spread 15mL of solution E on the "5mg/mL" petri dish*
- *Put cotton in the 5 petri dishes and soak it*
- *Put the 20 buckwheat seeds of the solution A on the cotton of the "0mg/mL" petri dish*
- *Put the 20 buckwheat seeds of the solution B on the cotton of the "0,2mg/mL" petri dish*
- *Put the 20 buckwheat seeds of the solution C on the cotton of the "0,6mg/mL" petri dish*
- *Put the 20 buckwheat seeds of the solution D on the cotton of the "1mg/mL" petri dish*
- *Put the 20 buckwheat seeds of the solution E on the cotton of the "5mg/mL" petri dish*
- *Repeat the experiment 5 times (= 5 replicates)*
- *Place randomly 20 petri dishes without their lids, in a transparent greenhouse previously constructed with the cutter laser (The greenhouse was too small so put the other 5 petri dishes outside of the greenhouse)*
- *Place the first humidity & tempearature sensor on a extremity of the green house , and the other one on the other extremity → it will allows us to control the temperature and humidity of the environment*

***Visual Protocol :***






- **Brainstorming session : thinking about how to measure the colors of the germs**
  → chromatography method (not sure)