

Evolution  
&  
Natural Selection

# Importance of learning evolution

- It is important to learn evolution because it is a scientific theory and we are learning science in this science classroom.
- Evolution can help us classify and tell us about relationships among different organisms
- It can also show us how things change over time in response to the environment
  - Which can help us predict what may happen in the future

# What is evolution?

- **Evolution is;**
  - **The change in allele frequencies within a population over the course of time in response to the environment.**
  - **Remember genetics? Allele frequencies are the amounts of AA vs. Aa vs. aa.**
  - **Evolution works by natural selection**

# What exactly is natural selection?

- **Natural selection is;**
  - A process in which favorable heritable (inherited) traits will be more successful than non-favorable heritable traits.
  - In other words; organisms that have characteristics that will help them survive better in an environment will live on to produce many more babies than those who do not have favorable characteristics.

# What we're going to do

- We are going to simulate natural selection!
- There are 9 stations in the back of the room, you need AT LEAST 3 people per station and no more than 4!
- You will write each person's role on your worksheet which will be written on by the recorder.
- Each groups needs a;
  - Recorder
  - 2 “hunters”
  - A “game warden”

# How it works

1. The recorder will write each person in the group's name and "title" (ex; recorder) on the worksheet, they will ALSO write the fabric letter (A,B,C)
2. Each baggy has 20 Woozles of each color, the recorder will write down the colors and starting populations of each
3. The 2 hunters will turn around while the game warden spreads out the population on the fabric
4. I will say "go" and the 2 hunters will have 20 seconds to pick up as many dots ONE AT A TIME and place them in the petri dish. ONLY THE HUNTERS PICK THEM UP. OTHERS-DO NOT HELP THEM FIND WOZZLES
5. After 20 seconds I will say "stop", YOU MUST STOP
6. Count the remaining woozles of each color and record
7. Add 2 woozles for each that is left and record the new population # for each color
8. Repeat

- We need to CLEAN UP
  - Put colors back in appropriate baggies
- Put 20 of each color BACK in the “beginning populations” baggie for the next class

# YOU NEED TO TURN IN...

1. Your “natural selection of Woozles worksheet”
  - With everyone’s name and title on it
  - The letter of your fabric (A,B,C)
2. Your own “Questions” handout  
**INCLUDING** your graph!!!