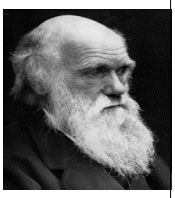
EVOLUTION

- A gradual change over time.
- Diversity of living things.
- Traits best suited continue.

Charles Darwin

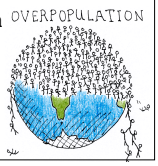
- Studied and came up with Natural Selection.
- Collected and studied variations within species.



NATURAL SELECTION

OVERPOPULATION

- Too many organisms within a specific area
- Limited needs for number of population.



VARIATION

We Know: traits decided by genes.

genes can be altered or mutated.

Variation: different traits within a species.

Do you see the Genetics?

Variation within species

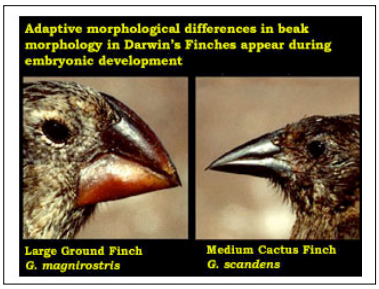
ADAPTATION

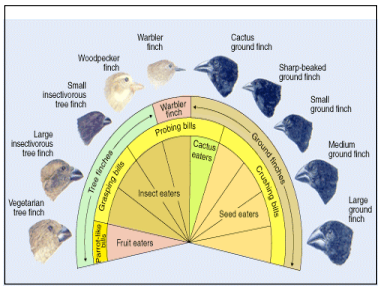
A variation that allows an organism to adapt/improve to its environment.

A positive variation.

MUTATION

A change in an organism's DNA.



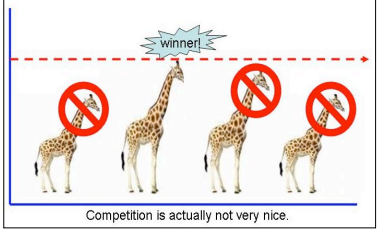


COMPETITION

- Organisms will fight for their survival.
- The ones best adapted will survive.

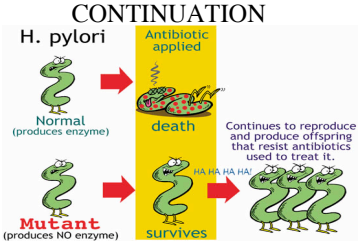
[Remember: limited resources]

Competition of resources



Competition is actually not very nice.

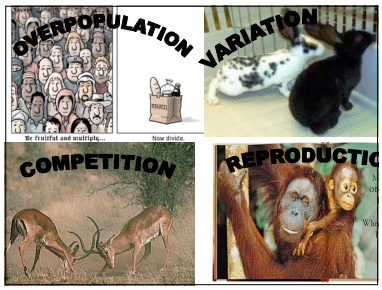
SURVIVAL & CONTINUATION

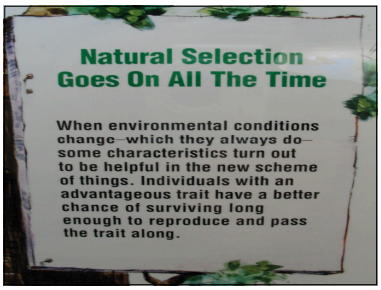


NATURAL SELECTION

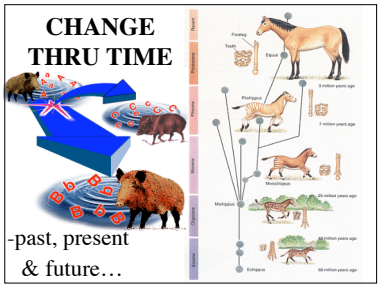
Survival of the Fittest.

- Four main steps:
  - –1. Overpopulation of organisms.
  - –2. Variations within species.
  - –3. Adaptations help Compete.
  - –4. Survive & Reproduce traits continue.





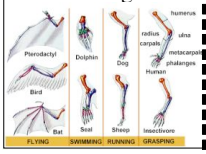
CHANGE THRU TIME



-past, present & future…

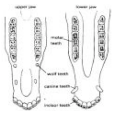
HOMOLOGOUS

Characteristics that are the same between organisms.



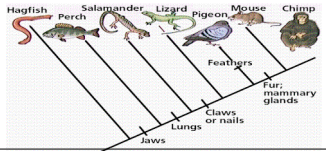
VESTIGAL

PARTS THAT SEEM TO HAVE NO PURPOSE.

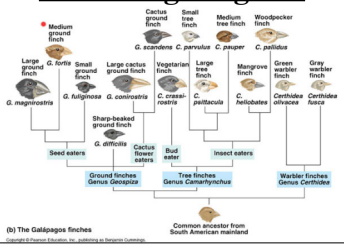


Branching Diagram

Used to trace ancestor's traits through time. Shows relationships between organisms.



Branching Diagram



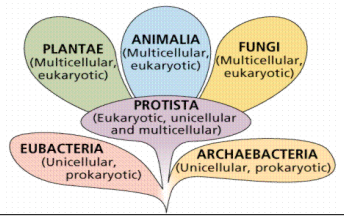
Classification of Species

- Putting all living organism into groups. As move to next grouping the requirements are more specific.
- **Kingdom**: 5/6 Protists, Fungi, Plants, Animals and Bacteria (Archebacteria & Eubacteria).

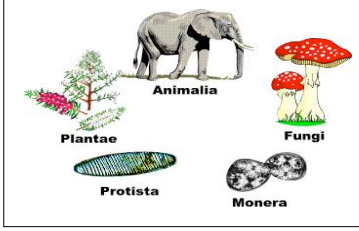
KINGDOMS

- WAYS TO GROUP:
  - –TYPE OF CELL
  - –NUMBER OF CELLS
  - –WAYS TO OBTAIN FOOD

KINGDOMS



KINGDOMS



Classification Con't

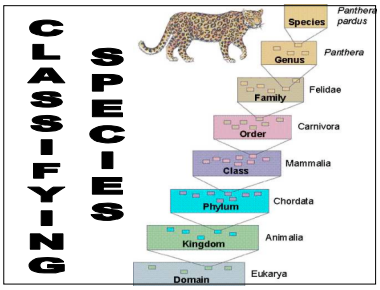
- ***Kingdom, Phyllum, Class, Order, Family, Genus & Species.***

[King Phillip came over for grape soda]
[Kings play chess on funky green squares]

- ***Scientific name: Genus & Species***

[similar to our last name and first name]

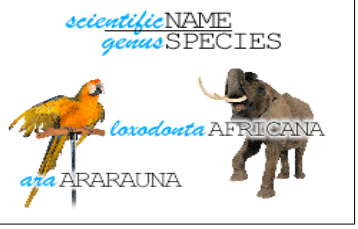
CLASSIFYING SPECIES



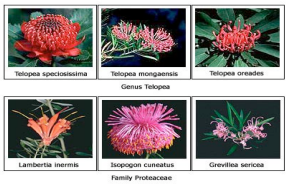
SCIENTIFIC NAME

- The GENUS and SPECIES put together.
- BINOMIAL NOMENCLATURE
- Find using a DICOTOMOUS KEY

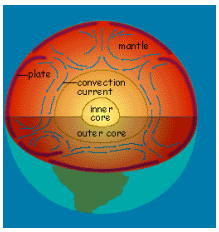
SCIENTIFIC NAMES



SCIENTIFIC NAMES



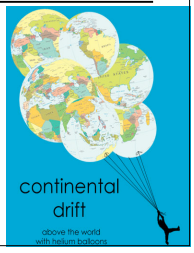
The Earth



- Center- hot
- Outside- cool / made of plates
- 4.6 billion years

PLATE TECTONICS

- The movement of the Earth's plates.
- Creation of the continents as we know today. CONTINENTAL DRIFT



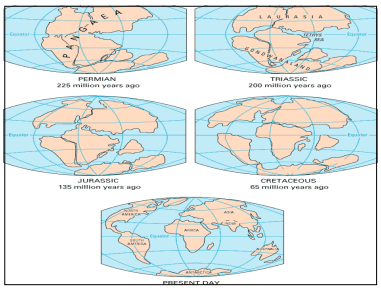
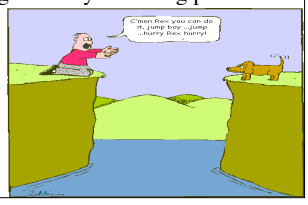
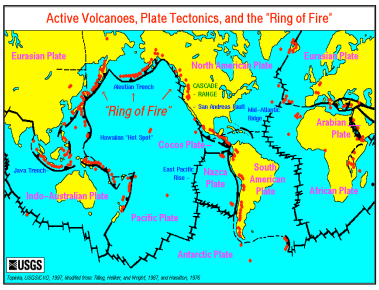


PLATE TECTONICS

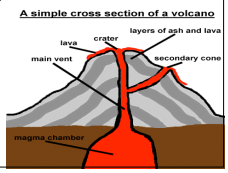
- Changes slowly over long periods of time.
- 5cm/ year

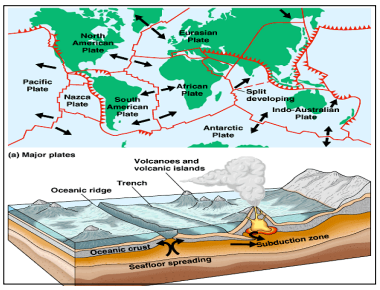




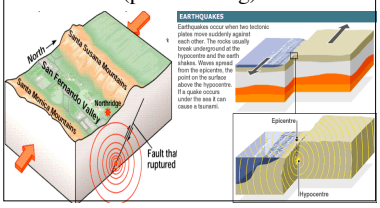
EARTH'S CATASTROPHIC EVENTS

- Same things happen today as mya.

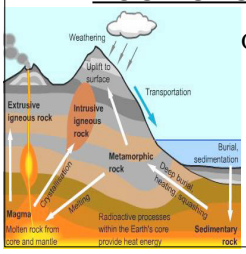




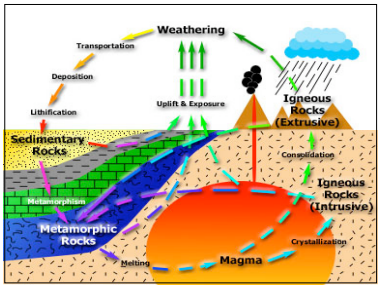
CATASTROPHIC EVENTS:
EARTHQUAKES
(plate shifting)



ROCK CYCLE

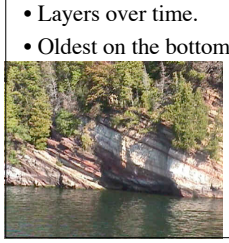


Change over time due to earth's activities & weather.



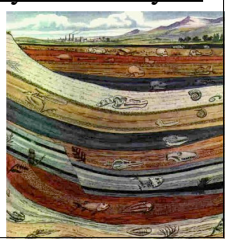
Sedimentary Rock- Layers

- Layers over time.
- Oldest on the bottom.



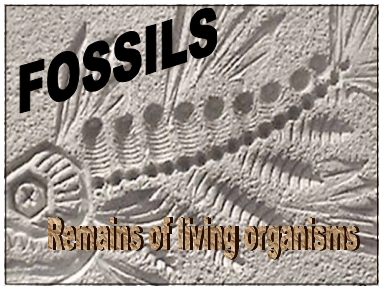
Sedimentary Rock- Layers

- Where most fossils are found.
- Gives relative age.
- Shows what lived @ same time.



Fossils

- Remains of living organisms embedded in sedimentary rock, ice, amber, etc.
- Helps tell us what organisms have lived in relation with time and other organisms.


FOSSILS
Remains of living organisms