

Welcome to



Tuesday

9/14/21

Phones away and things
out of ears please -
Masks covering face
holes
Thank you!!

*NEVER TRUST AN
ATOM*



*THEY MAKE UP
EVERYTHING*

Daily Agenda

1. Finish Coloring Growth
and Development

2. Unit 2:
Characteristics
of Life
Lecture Notes

3. Unit 2:
Characteristics
of Life
Fill-in-blanks



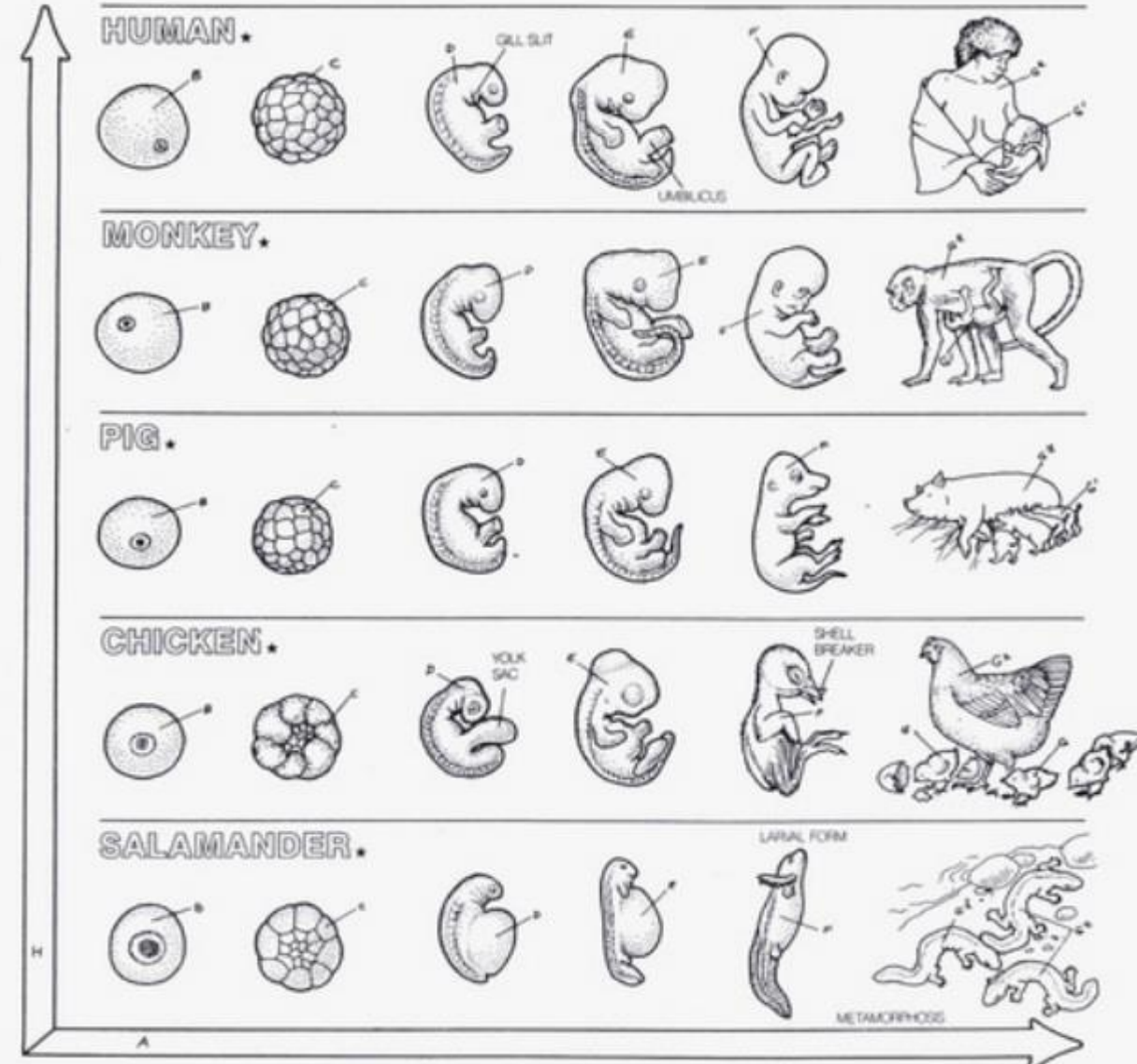
Embryo – after zygote to forming of body segments

Fetus – from development of body segments to birth

In some organisms immature form and adult form are different

Larva – from birth to metamorphosis; typically reproductively and developmentally immature

FERTILIZED EGG.
LATE CLEAVAGE.
BODY SEGMENTS FORM.
LIMB BUDS APPEAR.
LARVAL FORM/LATE FETAL.
NEWLY HATCHED. NEWBORN. ADULT.



Unit 2: The Characteristics of Life

9/14/21

Before you take notes...

In this set of notes we will look briefly at 8 characteristics shared by all living things

We will look more closely at most of these characteristics throughout the semester



ALL LIVING THINGS...

5. Are able to reproduce, or play some role in doing so



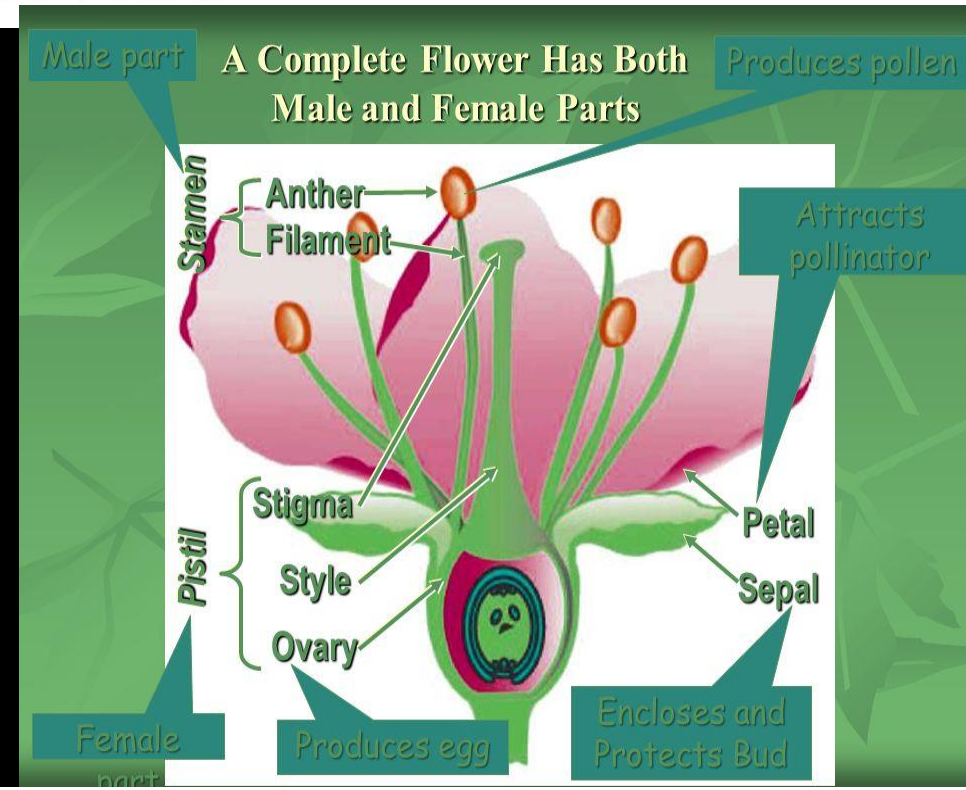
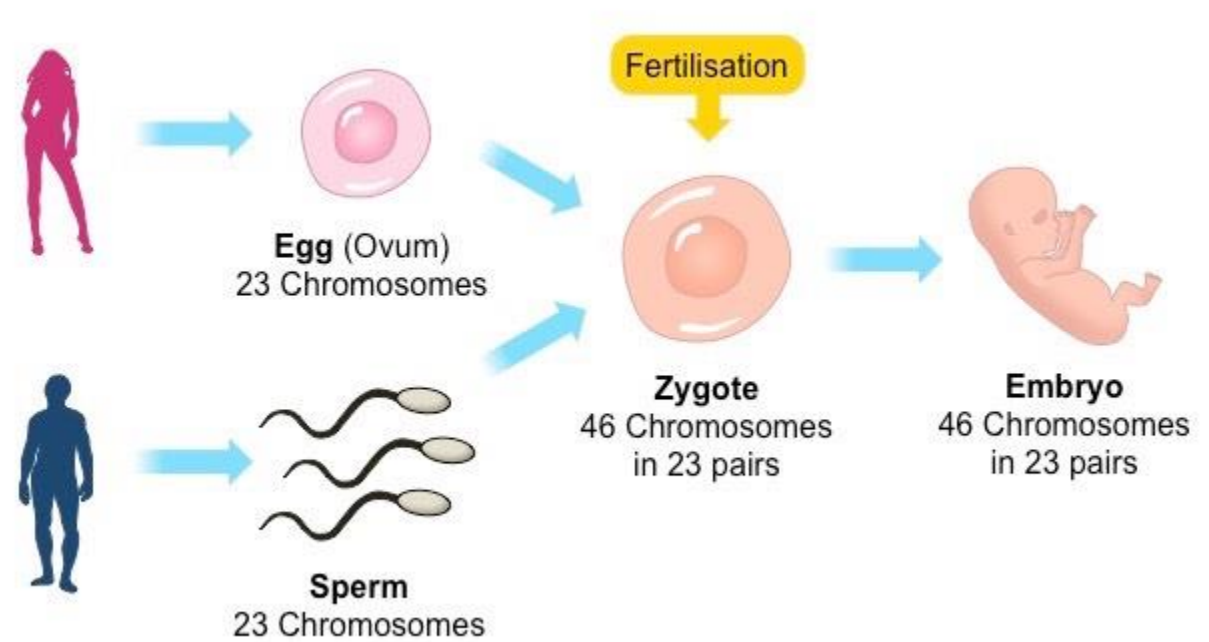
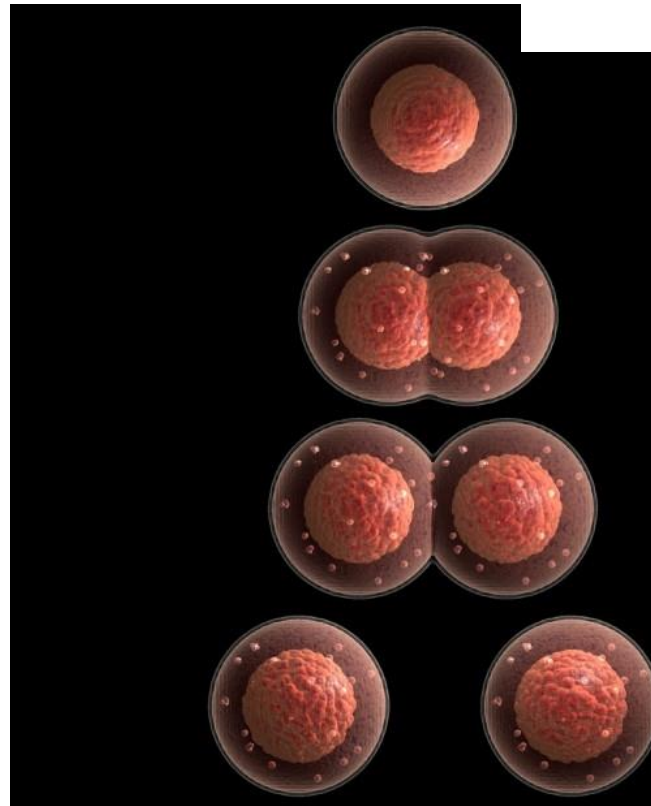
Sexual Reproduction

Offspring are produced by the combination of two specialized cells, called gametes, or sex cells.

Genetically diverse offspring

Asexual Reproduction

Offspring come directly from one parent's body or cell. Offspring are clones (genetic duplicate) of parent.

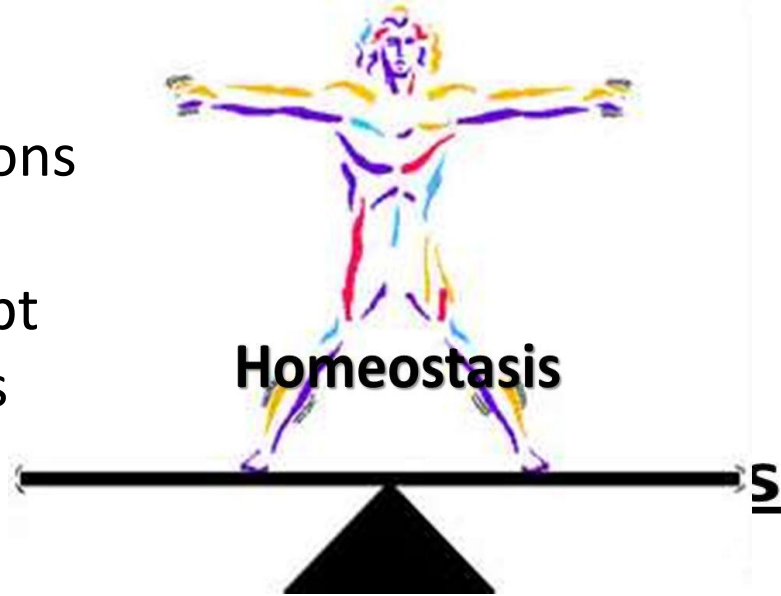


6. Are able to maintain a stable internal environment

Homeostasis - the state wherein internal conditions (temperature, water content, pH, etc.) are kept within acceptable ranges

Life is run by chemical reactions occurring in just the right way in cells, in the blood, in the immune system, etc.

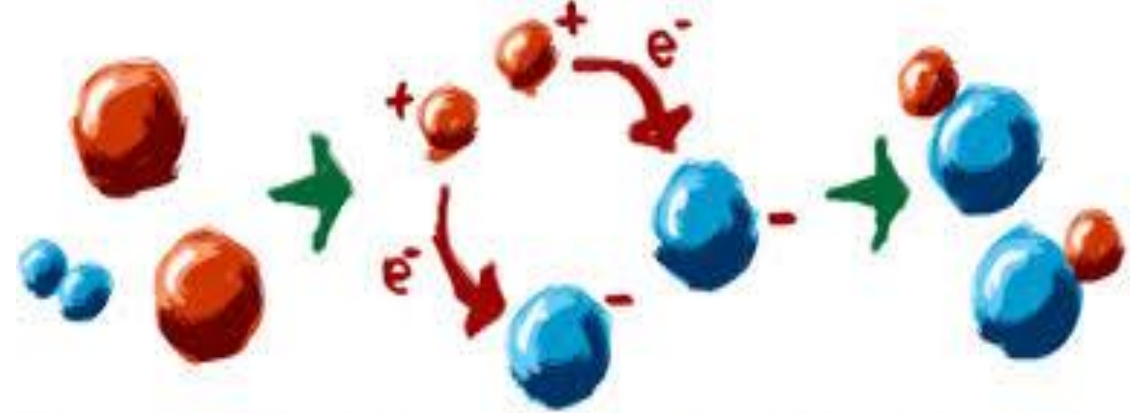
In a chemical reaction atoms in molecules are rearranged.



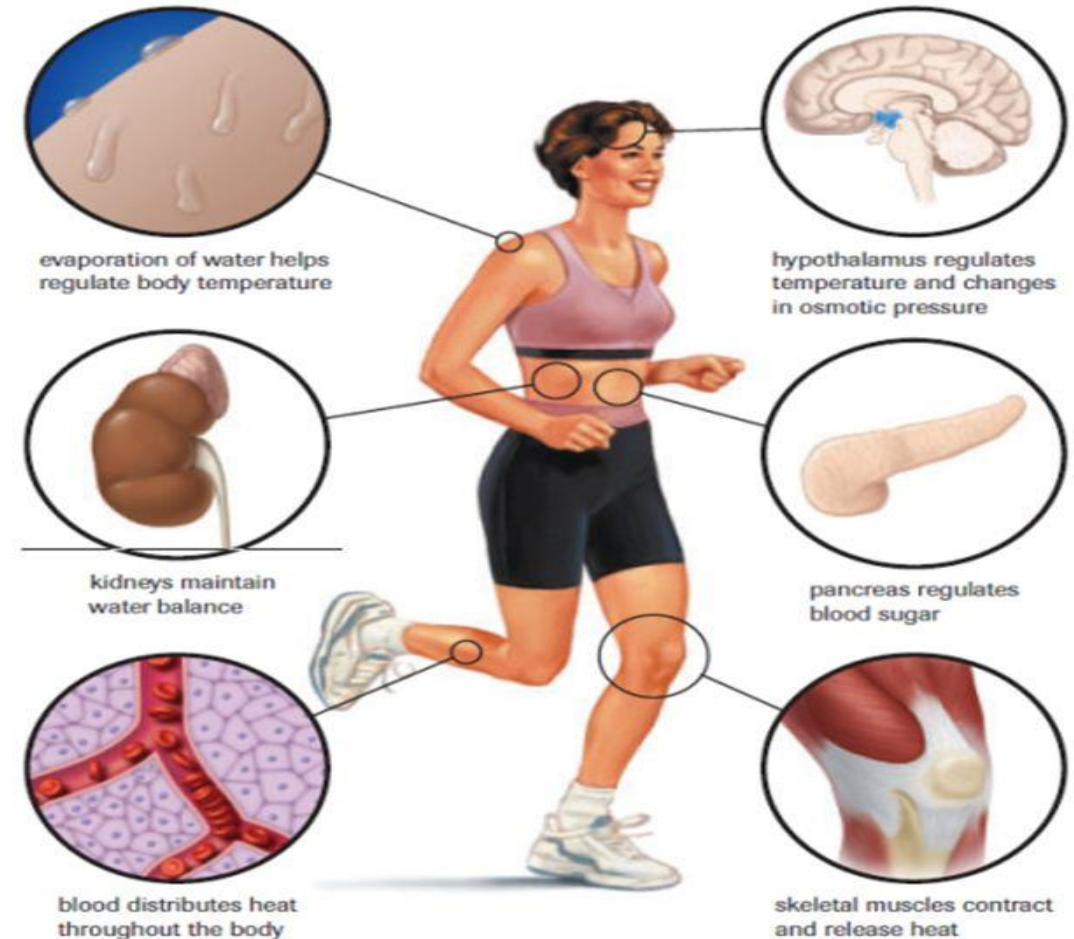
Body Temp.

H₂O

Blood Sugar



REACTIONS INVOLVE THE CHEMICAL CHANGE OF ATOMS AND MOLECULES.



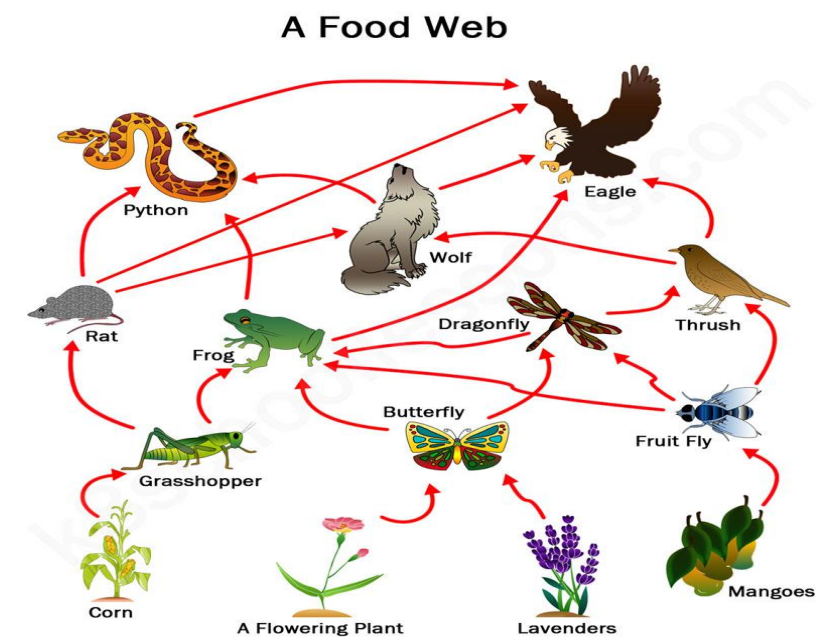
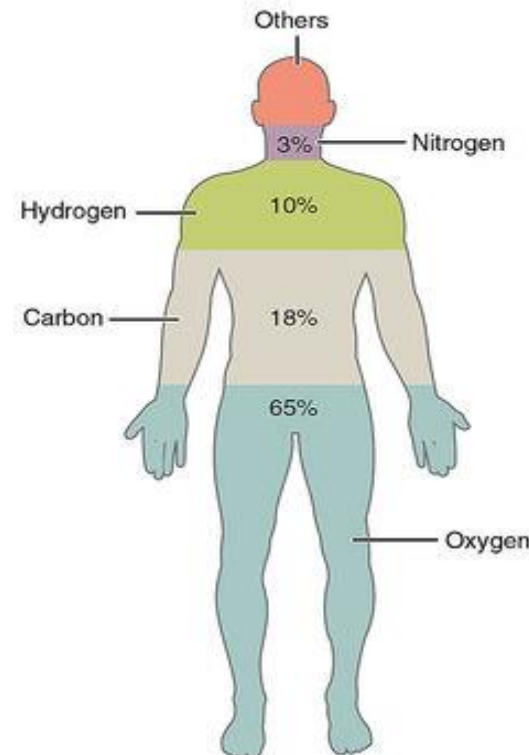
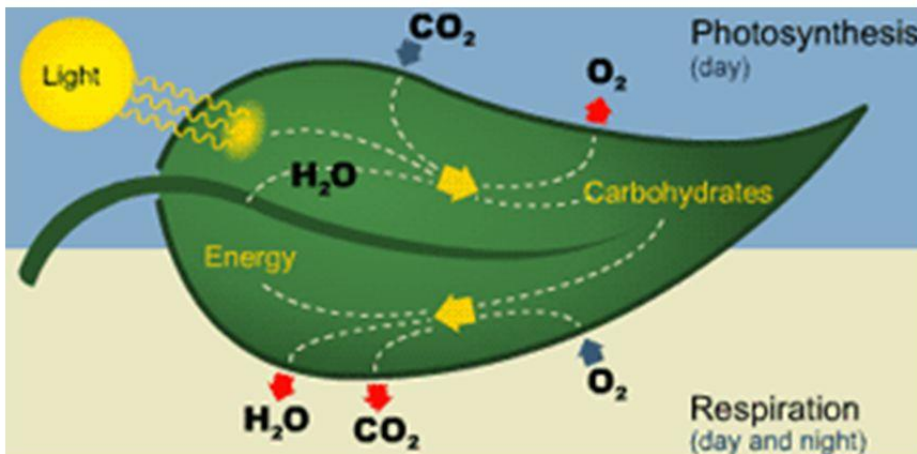
7. Obtain and use the energy and elemental building blocks of life

Metabolism - the combination of chemical reactions that obtain and use energy and the chemicals necessary for life

Organisms must be able to obtain and use the chemical elements necessary for life.

Organisms must be able to obtain and use the energy necessary for life.

Photosynthesis and Cellular Respiration work together



Element	Symbol	Percentage in Body
Oxygen	O	65.0
Carbon	C	18.5
Hydrogen	H	9.5
Nitrogen	N	3.2
Calcium	Ca	1.5
Phosphorus	P	1.0
Potassium	K	0.4
Sulfur	S	0.3
Sodium	Na	0.2
Chlorine	Cl	0.2
Magnesium	Mg	0.1
Trace elements include boron (B), chromium (Cr), cobalt (Co), copper (Cu), fluorine (F), iodine (I), iron (Fe), manganese (Mn), molybdenum (Mo), selenium (Se), silicon (Si), tin (Sn), vanadium (V), and zinc (Zn).		less than 1.0

8. Are part of groups that evolve

Evolution is change in a group's characteristics over time.

This is caused by changes in the DNA that the group shares and passes down from generation to generation.

Enough change in a group's DNA and characteristics leads to new species.

