

Final Review

130 questions

30% of your final grade

Pseudoscience

- false, can't prove, can't be tested
- Palm reading, Psychics, Astrology, Ghosts, UFO

Sciences

1. Ecology - organisms & their environment.
2. Astronomy - stars, planets, galaxies, universe
3. Toxicology - Poisons

4. Botany - Plants
5. Mammalogy - Mammals
6. Herpetology - Reptiles
Amphibians
7. Ornithology - Birds
8. Entomology - Insects
9. Ichthyology - Fish
10. Arachnology - Spiders
11. Chemistry - Chemicals

The Scientific Method

1. Observation
2. Question
3. Hypothesis (If/Then)
4. Experiment

.. --> 5. Analyze

6. Conclusion

SI Units

Length - meter

Weight - grams

Volume - Liters

Time - seconds

Medical Terms

1. Hypo - below

2. Hyper - above

3. Auto - Self

4. Photo - Light

- r - I - terminal

5. Gastro - stomach

6. Podo - foot

7. Homo - same

What makes something alive.

1. Cell Respiration

2. Growth

3. Cells

4. Use energy

5. Make waste

6. Reproduction

7. Homeostasis

8. Evolve

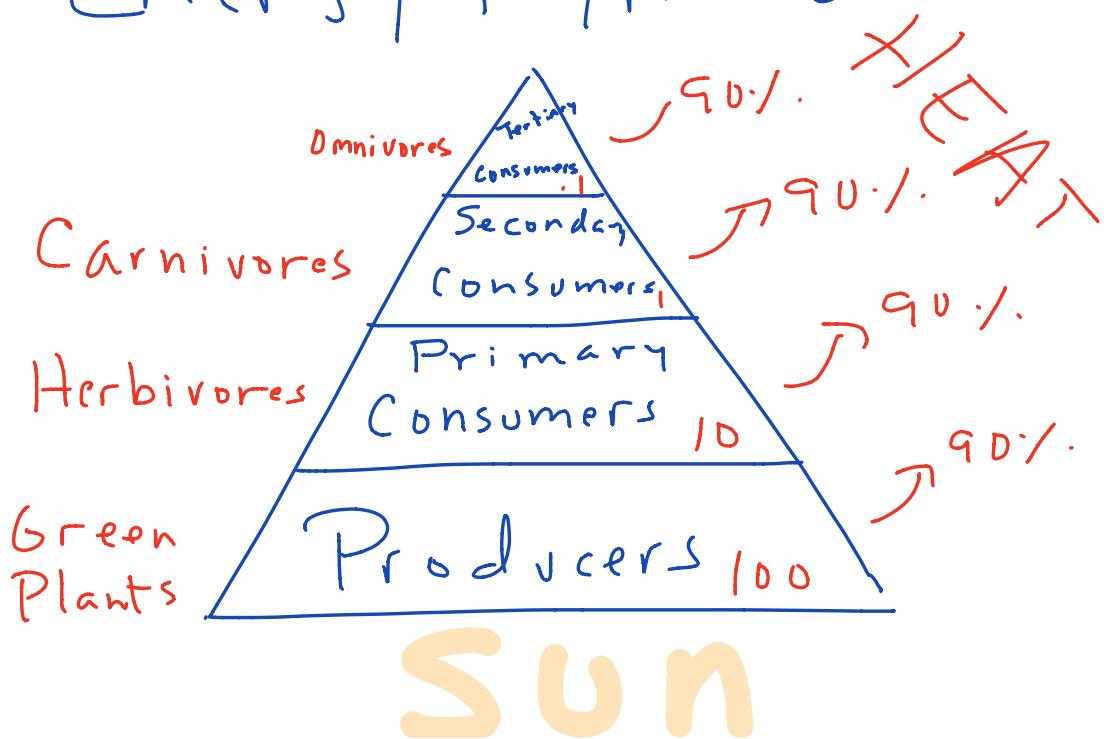
9. Die

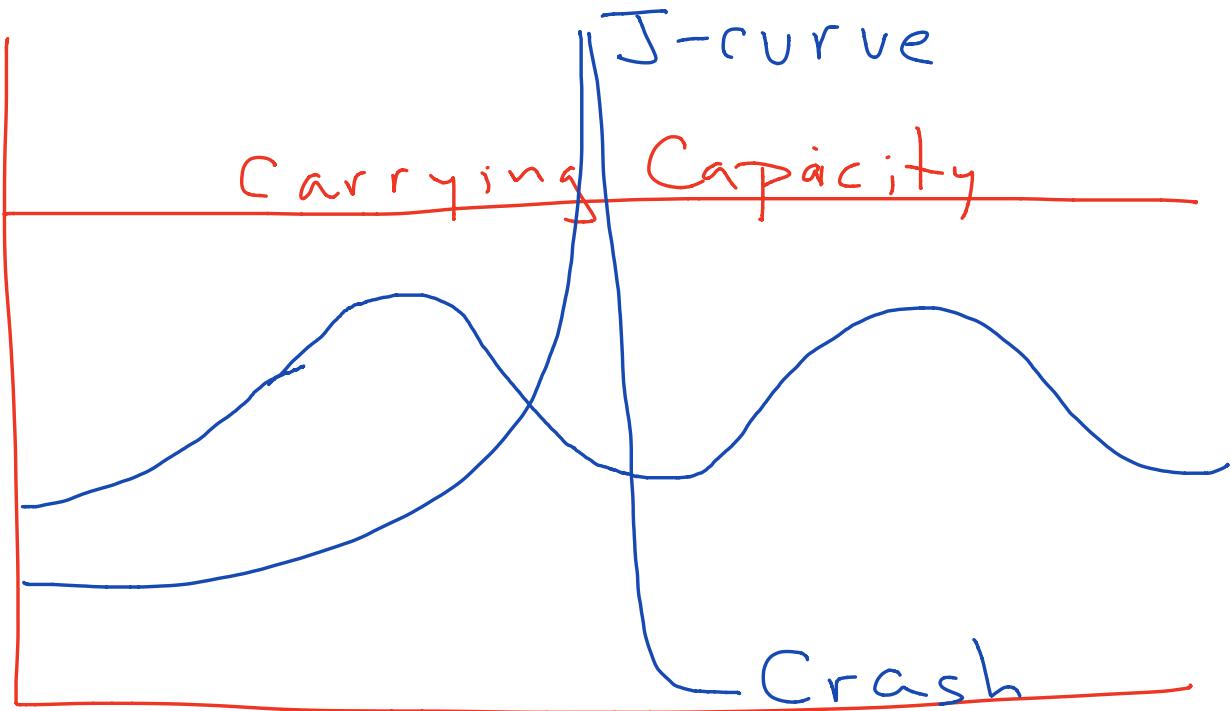
Cell Theory

1. All living things are made of cells.
2. Cells come from cells.
3. Cells are the basic unit of life.

All energy comes from the Sun.

Energy Pyramids





Organization of life.

atom → molecules → macromolecules
 → organelles → cells → tissues →
 → organs → organ systems → organism →
 → population → community →
 → ecosystem → biosphere

Biomes - same vegetation

due to climate.

- Cold Desert
- tropical rainforest
- coral reef

Biotic vs. Abiotic

Living

Non-living
Sun
minerals
water
oxygen

Primary Succession -

- complete destruction (lava)

Secondary Succession

- forest fire, logging

Relationships

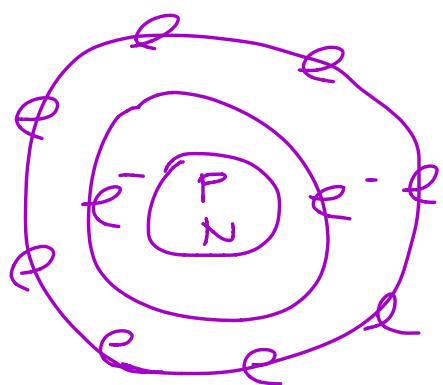
- 1. Mutualism - both benefit
- 2. Commensalism - one benefits
the other is not affected.
- 3. Parasitism - one benefits
the other is harmed.

CHONPS - found
in living things

Atoms

protons + > nucleus
neutrons 0

electrons -



Ions - charged particles

Cl^- , Ca^+ , K^+ , Na^+

Atomic number = # of protons

Atomic mass = # of protons
+
neutrons

Organelles

Nucleus - DNA inside

Golgi apparatus - packager

Nucleolus - makes ribosome

Ribosome - make protein

ER - highway

Vacuole - water storage

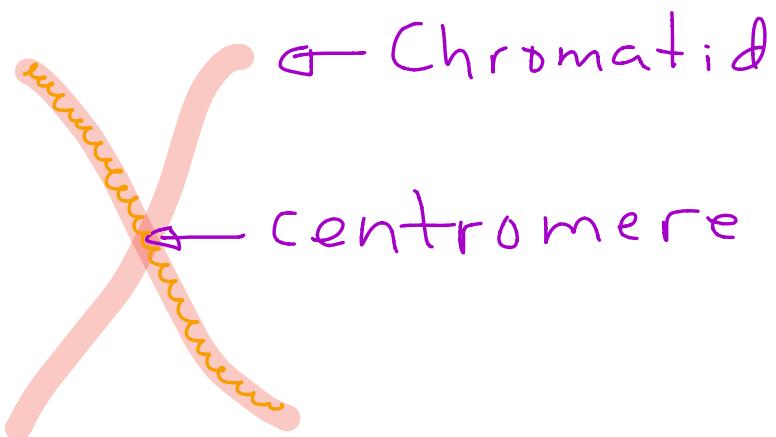
Lysosomes - digestive enzymes

XX - Female

XY - Male

46 chromosomes

23 sex cells

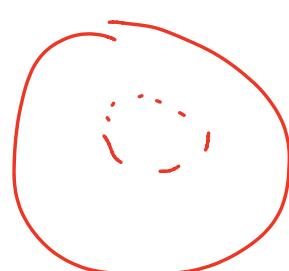


Interphase Mitosis

G_1, S, G_2

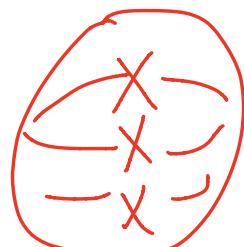
P M A T

Prophase

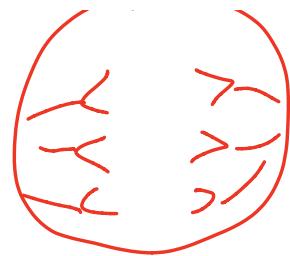


Nucleus
dissolves

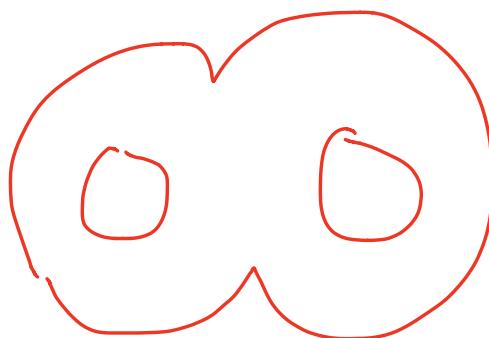
Metaphase



Anaphase



Telophase



Meiosis - makes sex cells

- reduce

Chromosome

by $\frac{1}{2}$

- Crossing over

- 4 new cells

that are

different

Homozygous dominant R R

Heterozygous R r

Homozygous recessive rr

	R	R
r	Rr	Rr
r	Rr	Rr

Scientific Names

- Written in Latin
- Binomial Nomenclature

Homo sapiens
 ♀ ♀
Genus Specific
 epithet

D K P C O F G S

Cell Respiration



1 glucose = 36 ATP if O₂

1 glucose = 2 ATP in no O₂

- Fermentation

- Lactic acid

- Ethanol

1. Keratin - skin, fingernails

- rhinoceros horns

- hair

2. Cellulose - plant cell walls

3. Chitin - mushrooms

insect exoskeletons

- sugar

4. Melanin - darkens skin

5. Layers of skin

- Epidermis

- Dermis

- Subcutaneus layer

Bones

1. Flat bones - makes blood

2. Round bones - store fats

3. Structure, support, protection

4. 206

Brain

Cerebrum - intelligence
memory

Cerebellum - balance, motor

Brainstem
(Pons, Medulla)
Oblongata -

Breathing
heart beat
sexual arousal

DNA

A-T

C-G

RNA

A-U

C-G

mRNA - messenger

tRNA - carries amino acids

rRNA - ribosome

A-T G-C C-T A

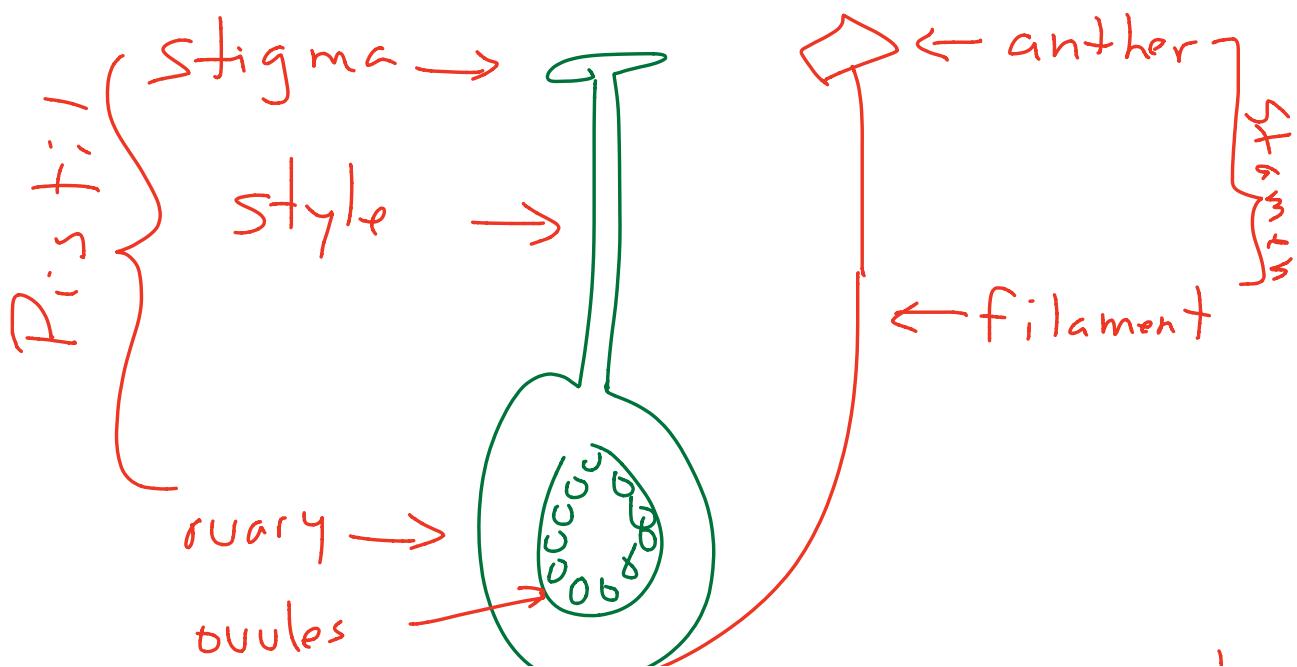
U-A C-G G-A U

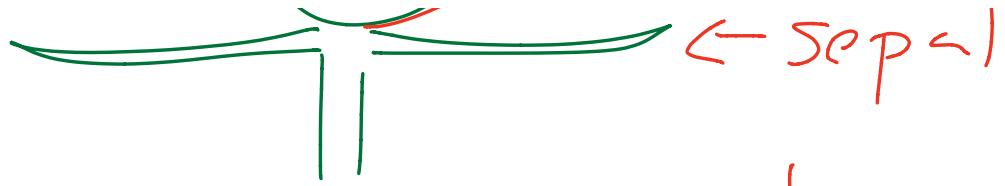
Evolution

1. Natural Selection
2. Artificial Selection

Virus

- Non-living
- needs a host





The end!