

Cells	It's all in the "genes"	EVOLVE	Organs and such	Mixed Bag
<u>10 pt</u>	<u>10 pt</u>	<u>10 pt</u>	<u>10 pt</u>	<u>10 pt</u>
<u>20 pt</u>	<u>20 pt</u>	<u>20 pt</u>	<u>20 pt</u>	<u>20 pt</u>
<u>30 pt</u>	<u>30 pt</u>	<u>30 pt</u>	<u>30 pt</u>	<u>30 pt</u>
<u>40 pt</u>	<u>40 pt</u>	<u>40 pt</u>	<u>40 pt</u>	<u>40 pt</u>
<u>50 pt</u>	<u>50 pt</u>	<u>50 pt</u>	<u>50 pt</u>	<u>50 pt</u>

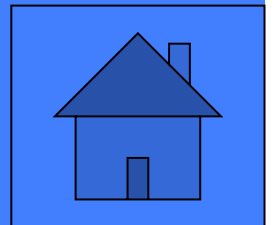
The macromolecule  
plants make during  
photosynthesis  
(3 ways of  
describing it)

# Carbohydrates (sugar, glucose)



The process cells  
use glucose and  
oxygen for

# cellular respiration



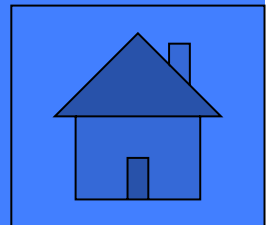
What molecules in the photosynthesis reaction can pass through the cell membrane without help?

# Carbon dioxide and oxygen



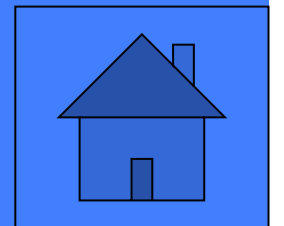
Describe and draw  
the structure of a  
cell membrane

Need to show a  
lipid bilayer with  
protein molecules  
inserted  
throughout.



What happens to the level of  $CO_2$  in the room of a sleeping human and dog? Explain by referencing the equation of cell respiration.

The level of  $\text{CO}_2$  increases as the two animals use  $\text{O}_2$  (a reactant) and release  $\text{CO}_2$  (a product).



heterozygous

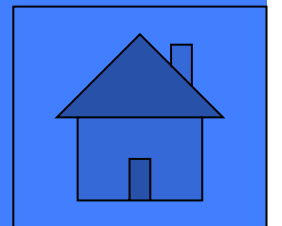
Two different  
alleles of a gene



ATTCTGGGC

Write  
complementary  
DNA strand

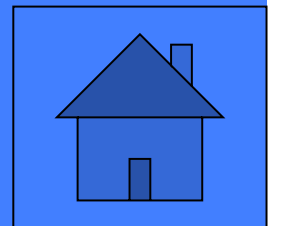
TAAGACCCG



Write  
complementary  
RNA strand:

GGTTTACACGA

CCAAAUGUGCU



Identify a disease  
that has both  
genetic and  
environmental  
causes and explain  
what that means.

Cancer, heart  
disease, others....

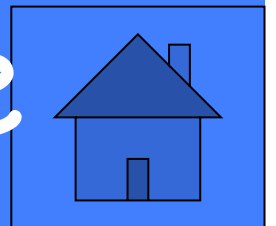
A person can be both

genetically

predisposed and make

lifestyle choices that

lead to the disease



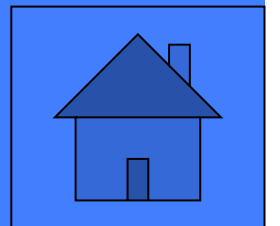
Will a mutation in  
DNA always lead to  
a misshapen  
protein?

No, some mutations are silent and do not affect the protein they make because each amino acid is coded for by more than one codon.



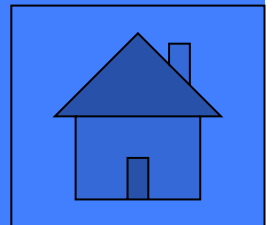
Define geographic  
reproductive  
isolation

When two groups  
of a species are  
separated by a  
geographic feature  
and cannot not  
mate



What type of reproductive isolation can happen due to bird song?

# Behavioral isolation



Name and explain two  
different lines of  
evidence for common  
ancestry

Homology - similar  
bone structures  
DNA homology -  
similar DNA  
sequences



List at least 6  
characteristics  
that all living things  
share

DNA, use energy,  
respond to environ,  
evolve, grow and  
develop,  
homeostasis, ...

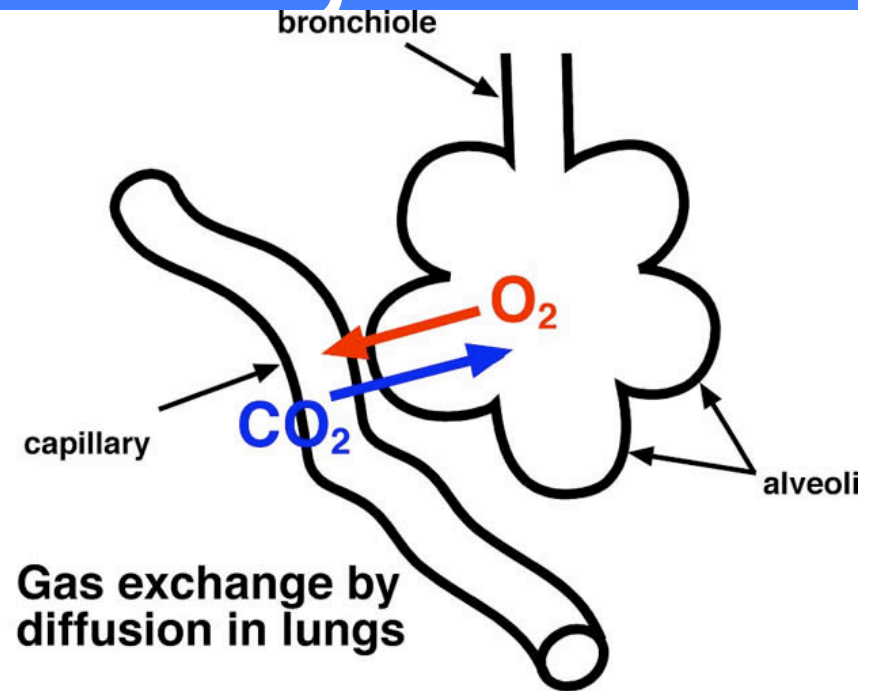


Describe the evolutionary relationship of wolves and elk...how have they affected each others speed? Give specifics on how evolution happens.

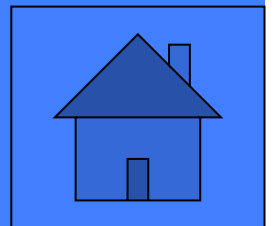
Elk that can run fast survive and reproduce...over time, elk get faster. The same happens to wolves.



What is the concentration of  $O_2$  in the capillary compared to the alveoli as blood enters the lungs?

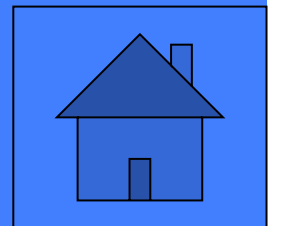


The concentration in the capillary is lower, that is why the O<sub>2</sub> moves that way.



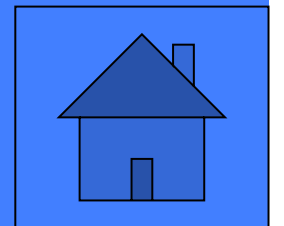
The respiratory system works with which other system to deliver O<sub>2</sub> to all parts of the body?

# The circulatory system



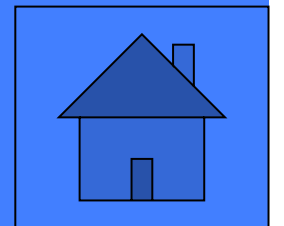
What two organs  
are involved in  
blood sugar  
regulation?

# Liver and pancreas

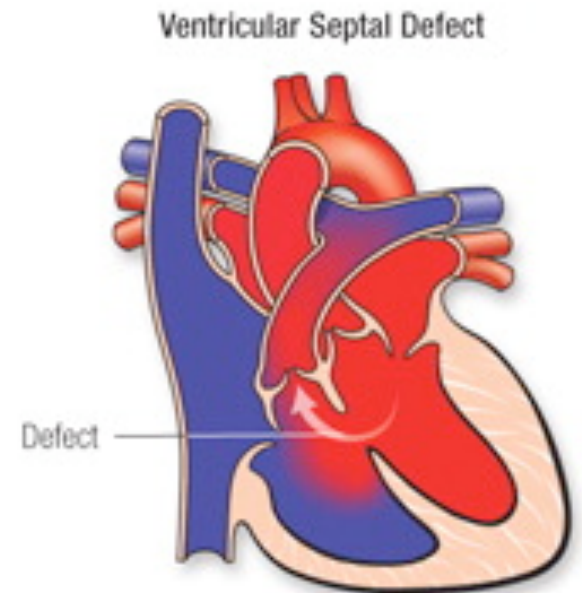


What molecule used  
to make ATP enters  
the body through  
the respiratory  
system?

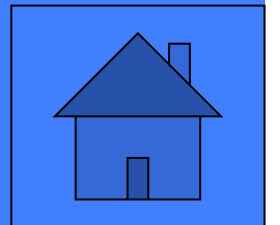
oxygen



What might happen if there was a hole in the septum of the heart?

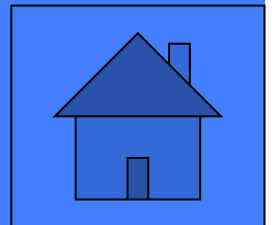


Oxygenated and deoxygenated blood would mix and less oxygen would be in blood pumped to the body.



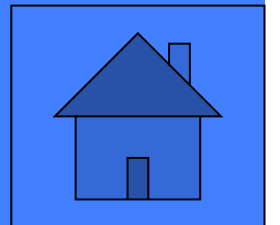
What is the shape  
of a DNA molecule?

A double helix



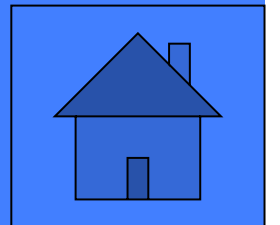
Name two non-polar  
molecules

# Oxygen and carbon dioxide



What system does sickle cell anemia most immediately affect?

Circulatory system  
(misshapen red  
blood cells)



Why do bees sent  
in the mail need  
sugar water  
enclosed with  
them? (name a  
specific process)

Their cells need to  
perform cellular  
respiration



Explain how dogs may have evolved the ability to communicate with humans with barking sounds.

Dogs with more barking sounds were more likely to be selected by humans to breed, thus passing on their genes.

