

Cell Division (Mitosis)

Why is it good?

- Cell replication
- Tissue development
- Maintain cell size

Daughter cells have
Same # of Chromosomes
as Parent

- Small is good - high SA/V
ratio

Vocab:

Nuclear Membrane: Contains Chromosomes, Surrounds nucleus

Chromosome: DNA, tightly coiled around a protein

Spindle Fiber: Attaches to Centromere,
moves chromosomes
around cell



Cytokinesis

(cell fully separate into 2 daughter cells)

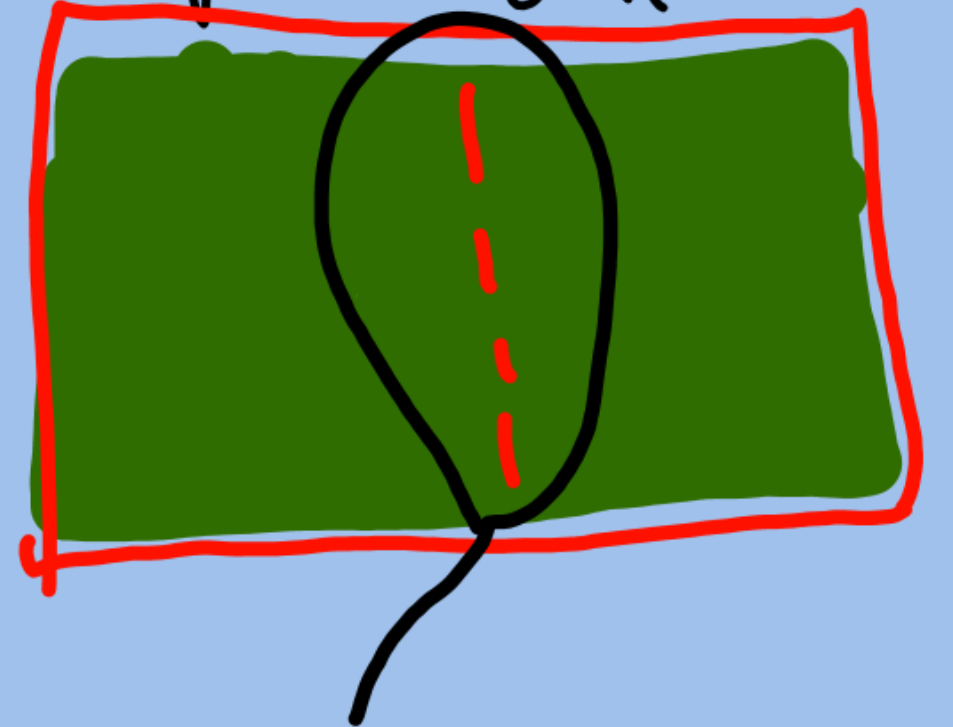
Animal

- pinches in half

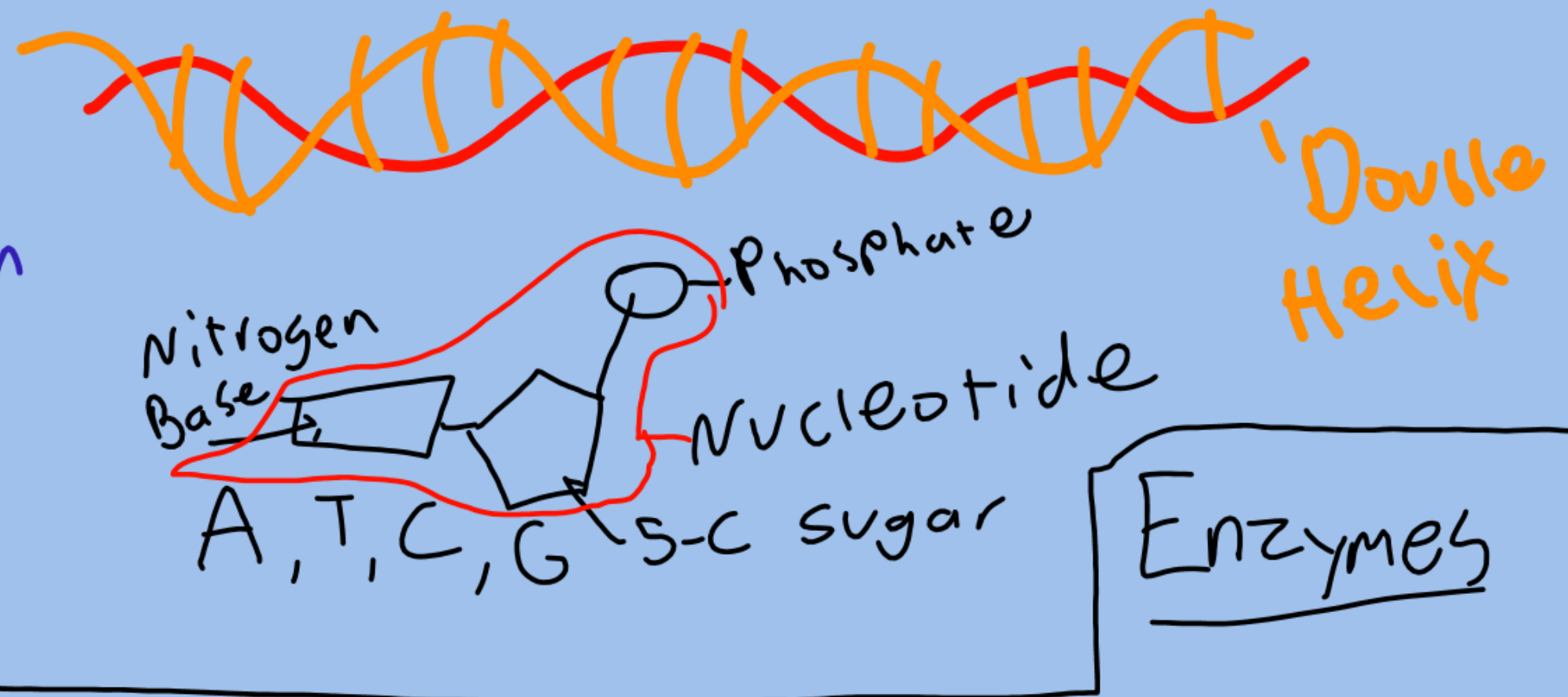
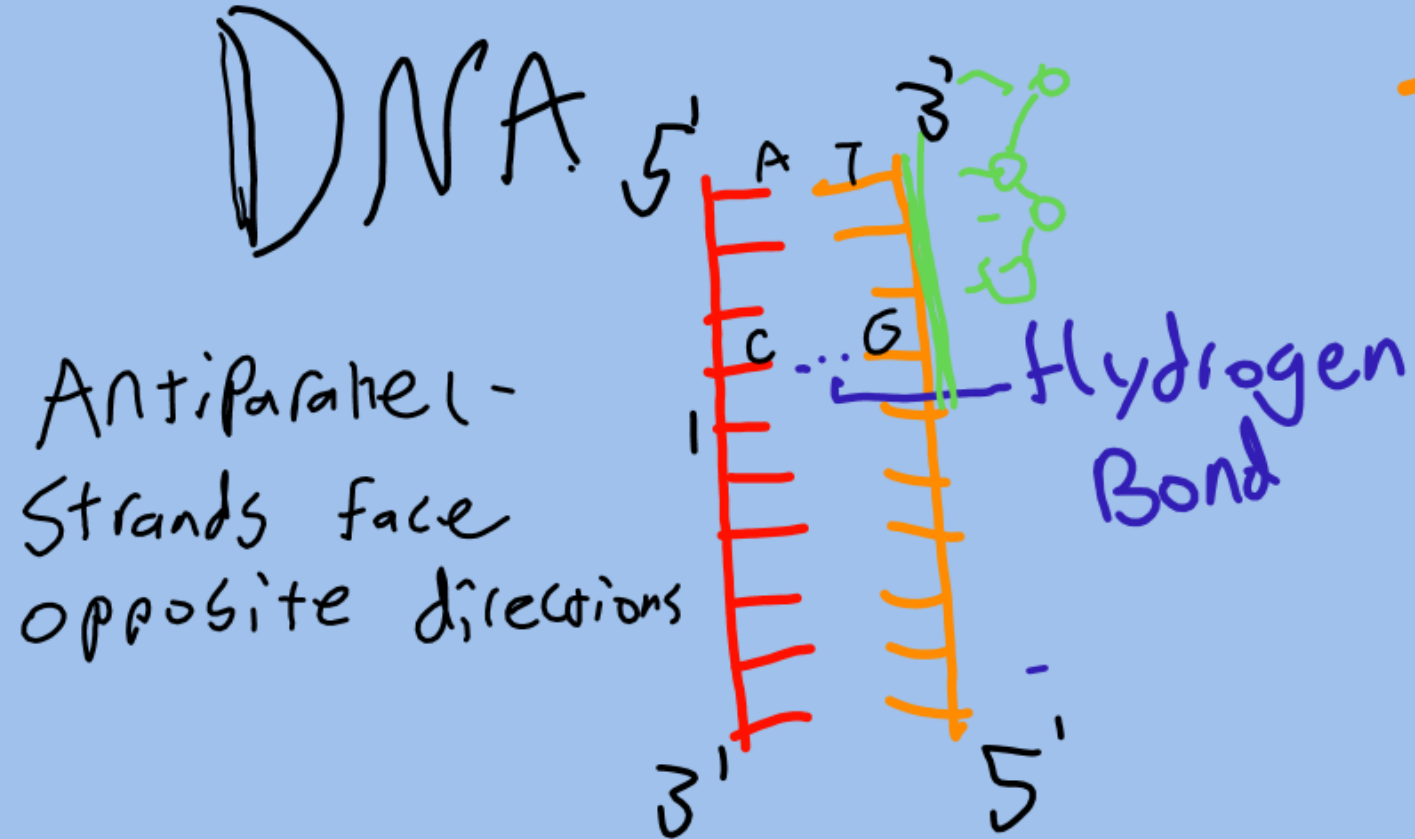


Cleavage furrow

Plant cell



Cell plate
(becomes new
cell wall)



Replication: DNA Copies itself

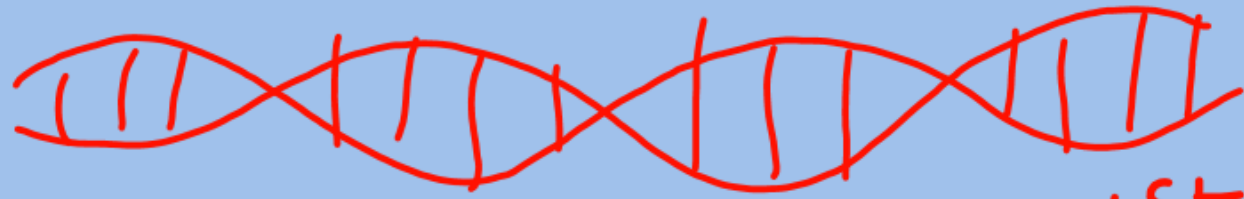
Semiconservative: Each new DNA is $\frac{1}{2}$ old + $\frac{1}{2}$ new strand

- Ensures Genetic Continuity (Same ness)

- Helicase: unzips DNA

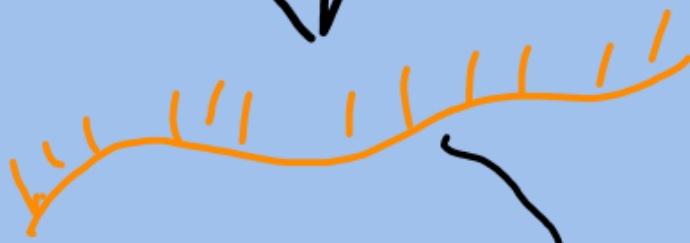
- DNA Polymerase: Makes new DNA strand

DNA



Transcription

1st
- DNA is copied to mRNA



mRNA

(A, U
G, C)

Nuclear pore

2nd

Translation



Codon

Ribosome

Peptide bond



polypeptide (protein)

Amino Acid

tRNA

Anticodon



Stop Codon

mRNA

Nuclear Membrane

- Cytoplasm -

DNA	TAC
mRNA	AVG
tRNA	UAC

Translate
from
mRNA