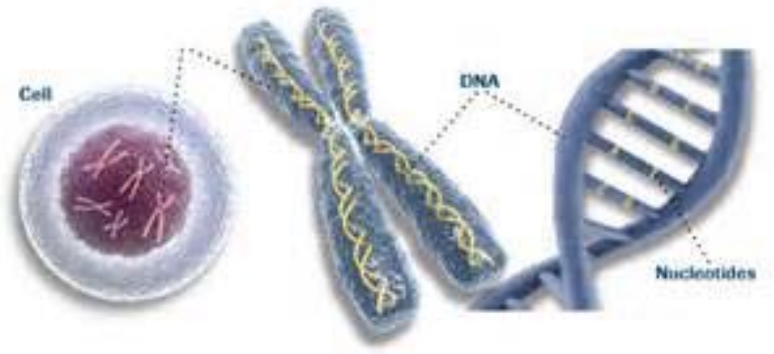


PHONES & EAR BUDS away Please!

Tues, Nov 28, 2017



## Pick up: DSQ

### Today you will:

- Discuss RNA structure & Transcription
- DNA Replication Video Clip
- Join.quizizz.com, code is on next pages, use real name please 😊.
  - This is a formative grade!! Retake at home by Fri 8am!!

## Homework/Planner:

- Quiz Friday!

# Quizizz Practice-**Formative** Grade

[join.quizizz.com](https://join.quizizz.com)

- **Per. 2**
- 007839
  - Open til Friday, 12/1 at 8am
  - Take as many times as you'd like

# Quizizz Practice-**Formative** Grade

[join.quizizz.com](https://join.quizizz.com)

- Per. 4
- 461495
  - Open til Friday, 12/1 at 8am
  - Take as many times as you'd like

# Quizizz Practice-**Formative** Grade

[join.quizizz.com](https://join.quizizz.com)

- Per. 5
- 821152
  - Open til Friday, 12/1 at 8am
  - Take as many times as you'd like

# Quizizz Practice-**Formative** Grade

[join.quizizz.com](https://join.quizizz.com)

- Per. 6
- 998527
  - Open til Friday, 12/1 at 8am
  - Take as many times as you'd like

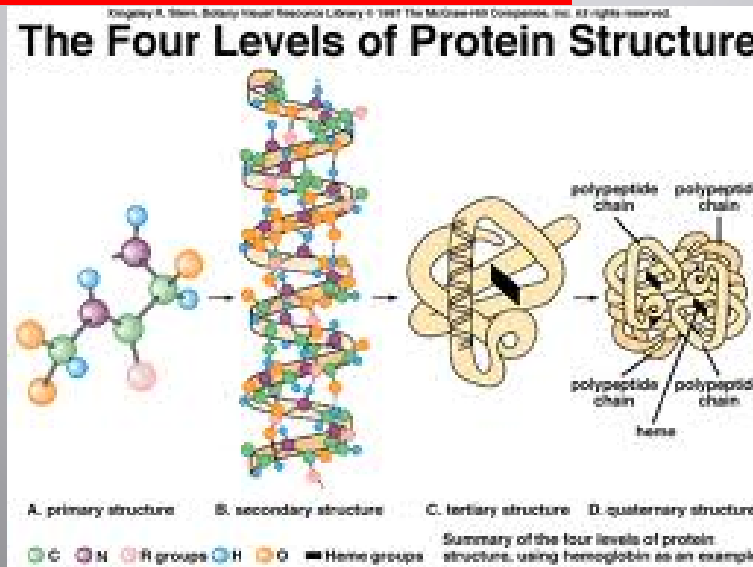
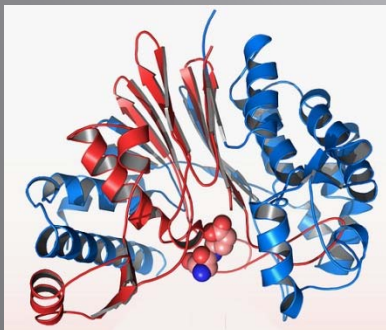
# Quizizz Practice-**Formative** Grade

[join.quizizz.com](https://join.quizizz.com)

- **Per. 7**
- 191809
  - Open til Friday, 12/1 at 8am
  - Take as many times as you'd like

# What does DNA really do...?

- You've been told that DNA stores & transmits genetic information... But what it really does is...  
...directs the ribosomes to make proteins & it's actually PROTEINS & how they are arranged that determine what we look like....!



# DNA = DeoxyriboNucleic Acid

*molecule that contains the Genetic Blueprint of Life*





# Protein Synthesis Notes **COPY**

## **CELL**

→ **Nucleus**

→ **ChromoSOMES**

→ **DNA**

→ **mRNA** (Transcription=transcribe=summarize)

→ **RIBOSOMES**

→ **tRNA** (Translation=put into simpler terms)

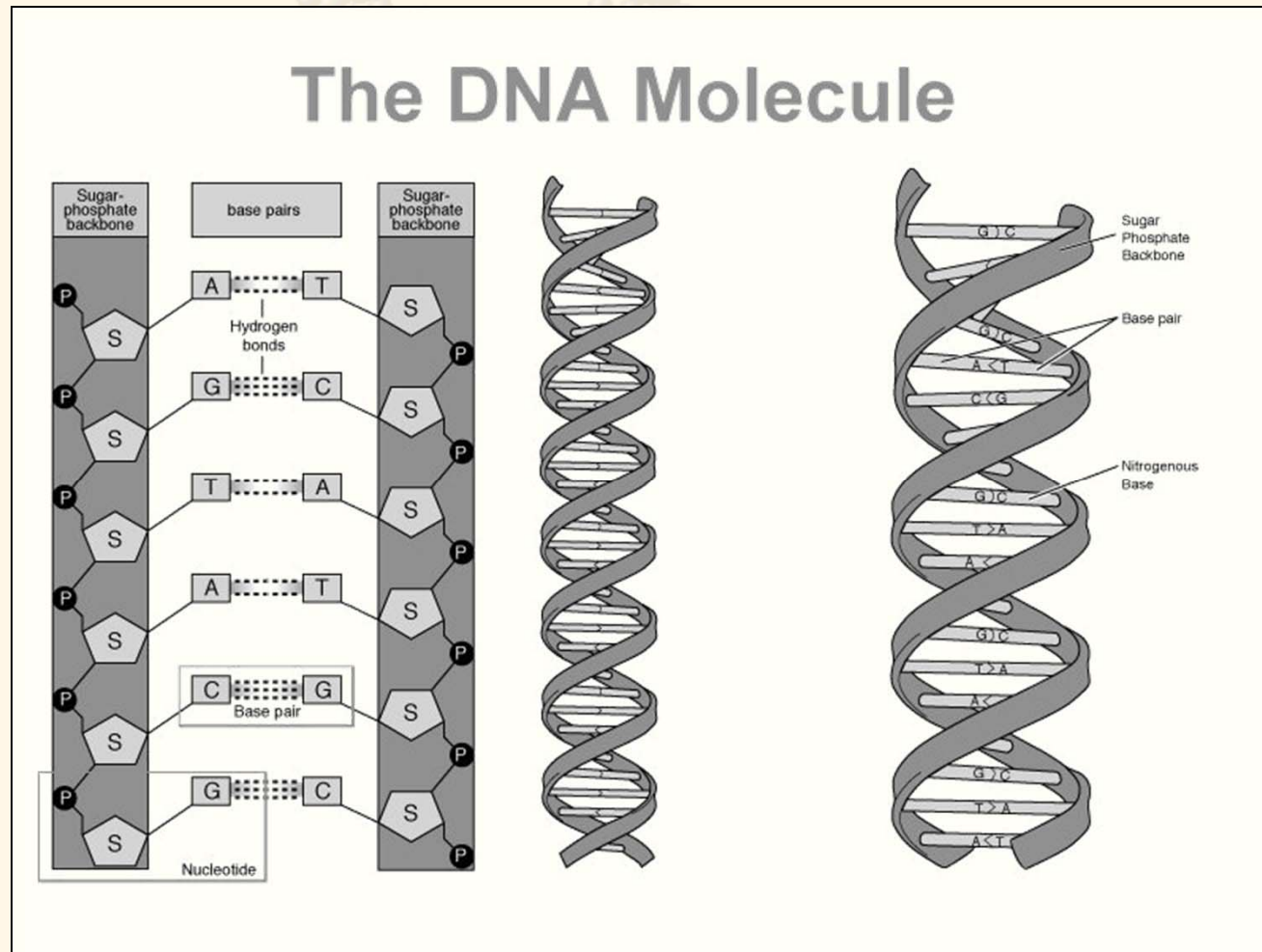
→ **Amino Acids**

→ **PROTEIN shape**

→ **Protein Function**

→ **TrAÍts**

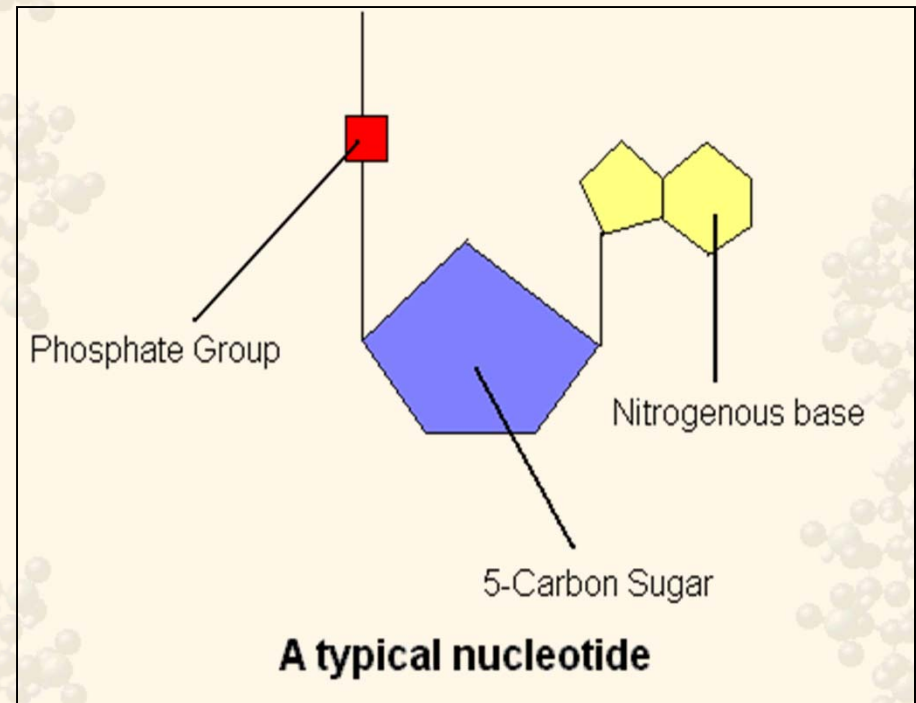
# DNA Structure



DNA is Formed of in a "Double Helix" - like a spiral staircase

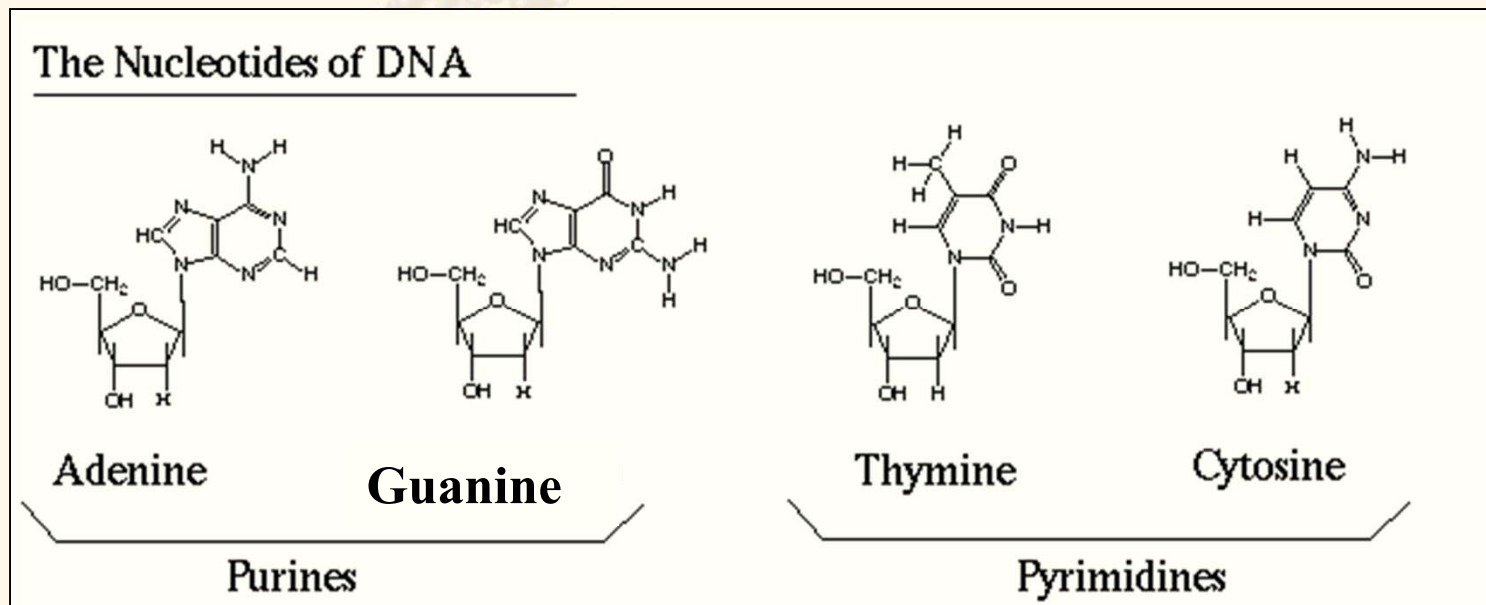
# Nucleotides

- DNA is formed by Nucleotides
- These are made from three components:
  1. 5-Carbon or pentose Sugar
  2. Nitrogenous base
  3. Phosphate group



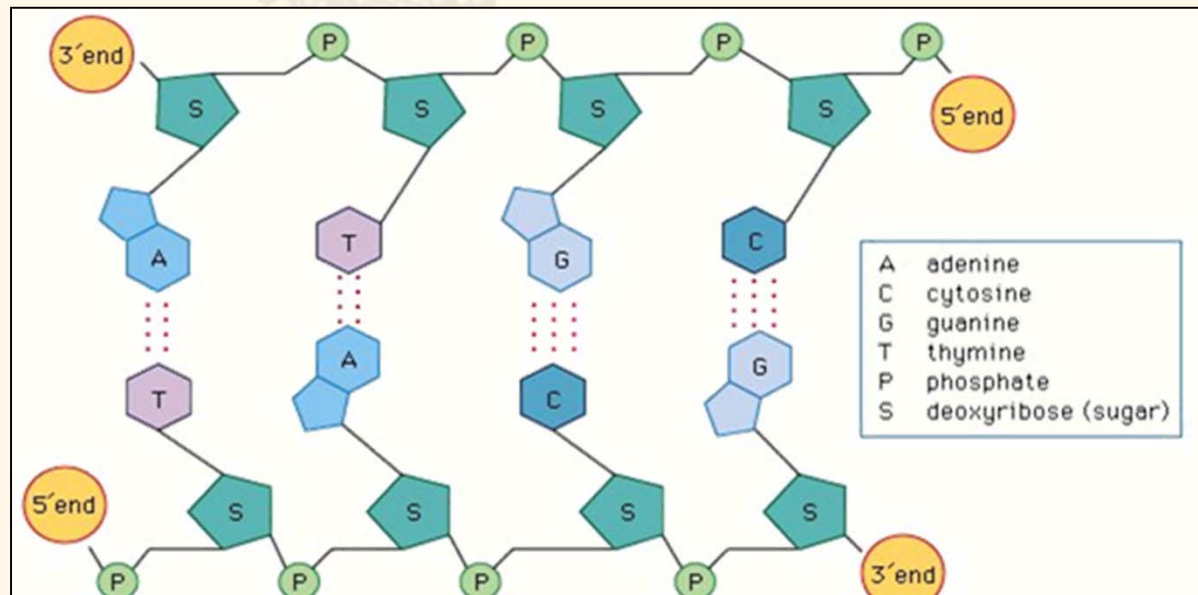
# Types of Nucleotides

- For DNA There are 4 different Nucleotides categorized as either **Purines** (Double rings) or **Pyrimidines** (Single ring). These are usually represented by a letter. They Are:
  1. Adenine (**A**)
  2. Cytosine (**C**)
  3. Guanine (**G**)
  4. Thymine (**T**)



# Base Pairing

- Each "Rung" of the DNA "staircase" is formed by the linking of 2 Nucleotides through Hydrogen Bonds.
- These Hydrogen bonds form only between specific Nucleotides. This is known as Base Pairing. The rules are as follows:
  - Adenine (A) will ONLY bond to Thymine (T) (by 2 hydrogen bonds)
  - Cytosine (C) will ONLY bond to Guanine (G) (by 3 hydrogen bonds)



# Nitrogen Base Pairing Rules

- **A** – **T**      (**A**denine – **T**hymine)
- **C** – **G**      (**C**ytosine – **G**uanine)
  
- **AAA – TTT – CCC – GGG – ATG – GCA**
- **TTT – AAA – GGG – CAC – TAC – CGT**



# JOB TODAY

10:00

1. **COMPLETE IN CLASS TODAY, the RNA Notes!**
  - **ISN p.127 (10 mins)**
  - **I'll check pg 122, 123, 125**
  - A. **Formative Performance Check**  
**Grade: 2, 1, or 0**
  - B. **These notes will NOT be graded beyond today!**
    - *This semester, you must understand that a deadline actually means something!*

# Formative Check

1. A gene is a piece of a chromosome which is made up of ---. DNA
2. The main purpose of DNA is to Instructions/ Code
3. DNA is made up of smaller subunits called Genes
4. Hydrogen Bonds hold the 2 sides of the DNA helix together.
5. DNA is found in the Nucleus of the cell.
6. Do all cells have DNA? YES!
7. The shape of the DNA molecule is like Double Helix
8. DNA actually directs the ribosomes to make Proteins.
9. Proteins are made up of smaller subunits called -  
Amino Acids



DNA

Replication

• It is the SEQUENCE of NUCLEOTIDES that determines traits of all living things!

• G – □ – C  
• A – □ – T  
• T – □ – A

• T – □ – A  
• A – □ – T  
• C – □ – G

• A – □ – T  
• A – □ – T  
• G – □ – C

• *Maybe this SEQUENCE gives you a small nose*

*Or*

• *Maybe this SEQUENCE tells your body to have the right # of blood vessels*

• *Or*

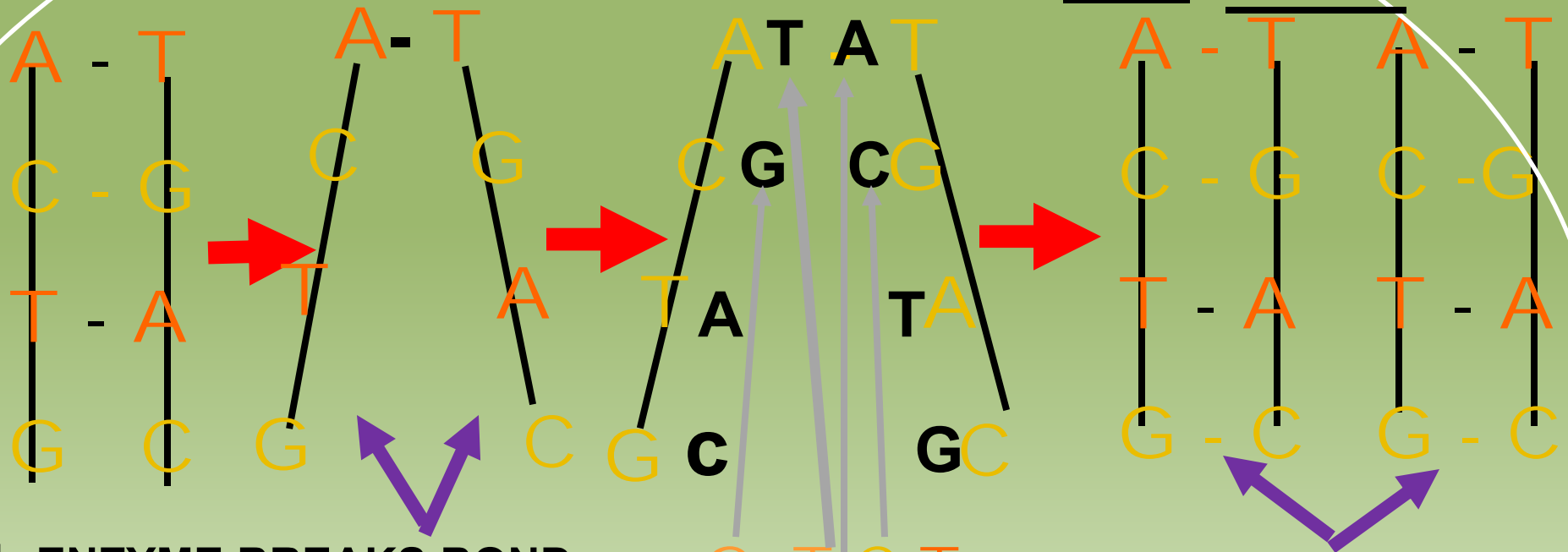
• *Maybe this SEQUENCE is junk DNA...Non-Coding DNA*

# Steps to DNA REPLICATION!

Takes place in the NUCLEUS of the cell.....

Semi Conservative

Old New Old



1. ENZYME BREAKS BOND  
→ DNA Unzips

2. Extra Free Nucleotides  
move in to pair with  
matching 1/2

3. Results in 2  
identical DNA  
mol. – 1 for  
each daughter  
cell

# Video Clip

## DNA Replication

[https://www.youtube.  
com/watch?v=5qSrm  
eiW/suc](https://www.youtube.com/watch?v=5qSrm<br/>eiW/suc)