

**Standard:** Students will analyze the nature of the relationships between **structures and functions** in living cells.

**Element:** Identify the **function** of the four major macromolecules (i.e., carbohydrates, **proteins**, lipids, **nucleic acids**).

**EQ:** What is the **structure and function** of nucleic acids and proteins in cells?

# Nucleic Acids:

molecules made out of nucleotides  
(DNA, RNA)

## **A. Functions of nucleic acids**

1. Hereditary information  
(genetic)

## **B. Structure of nucleic acids:**

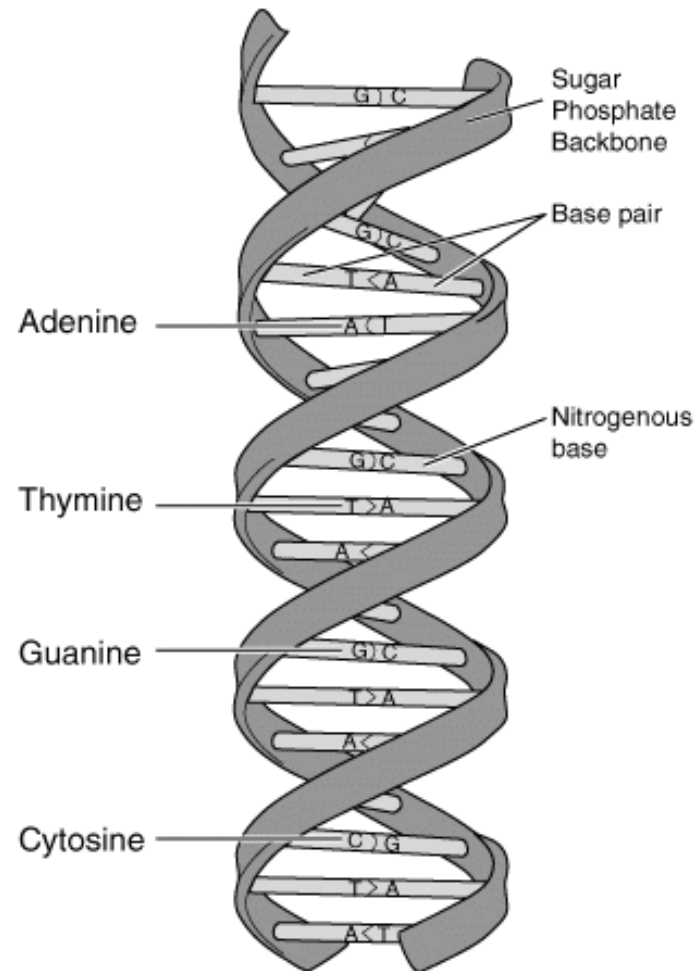
The building blocks of nucleic acids are nucleotides.

# DNA

Deoxyribonucleic Acid

-Double-stranded

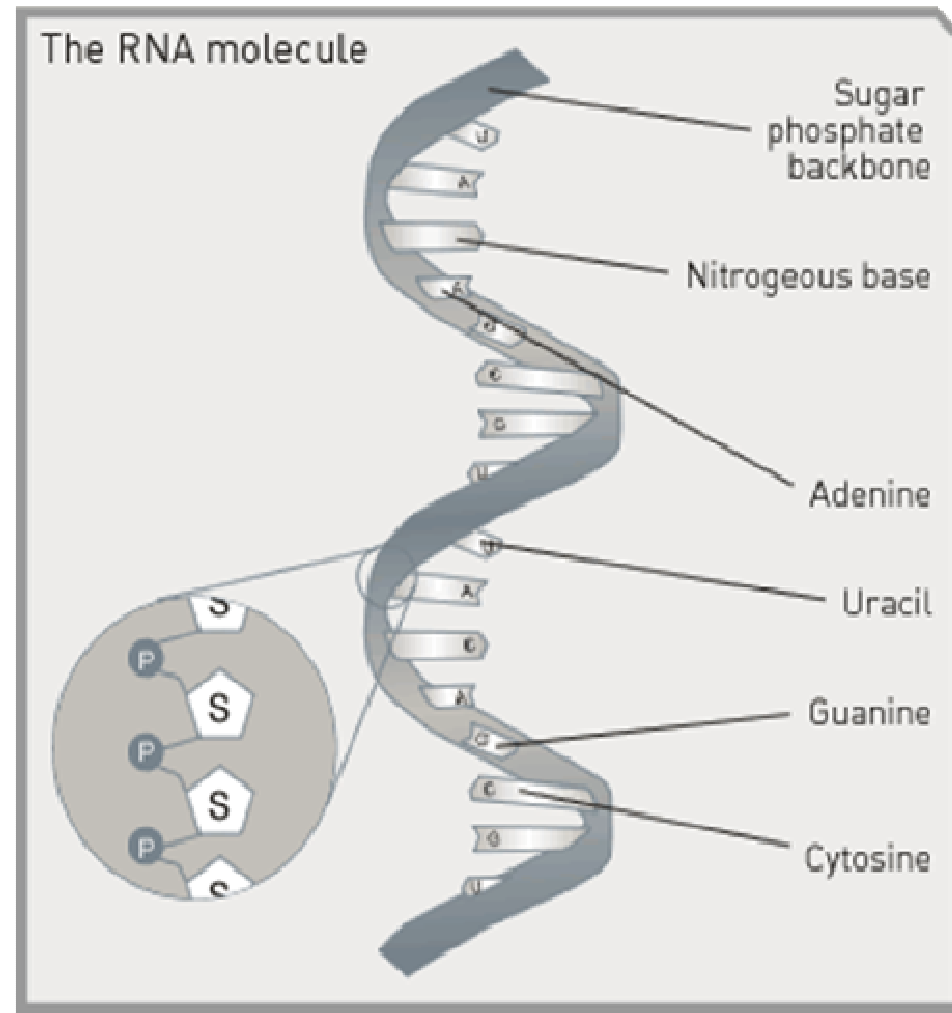
-Found in the nucleus

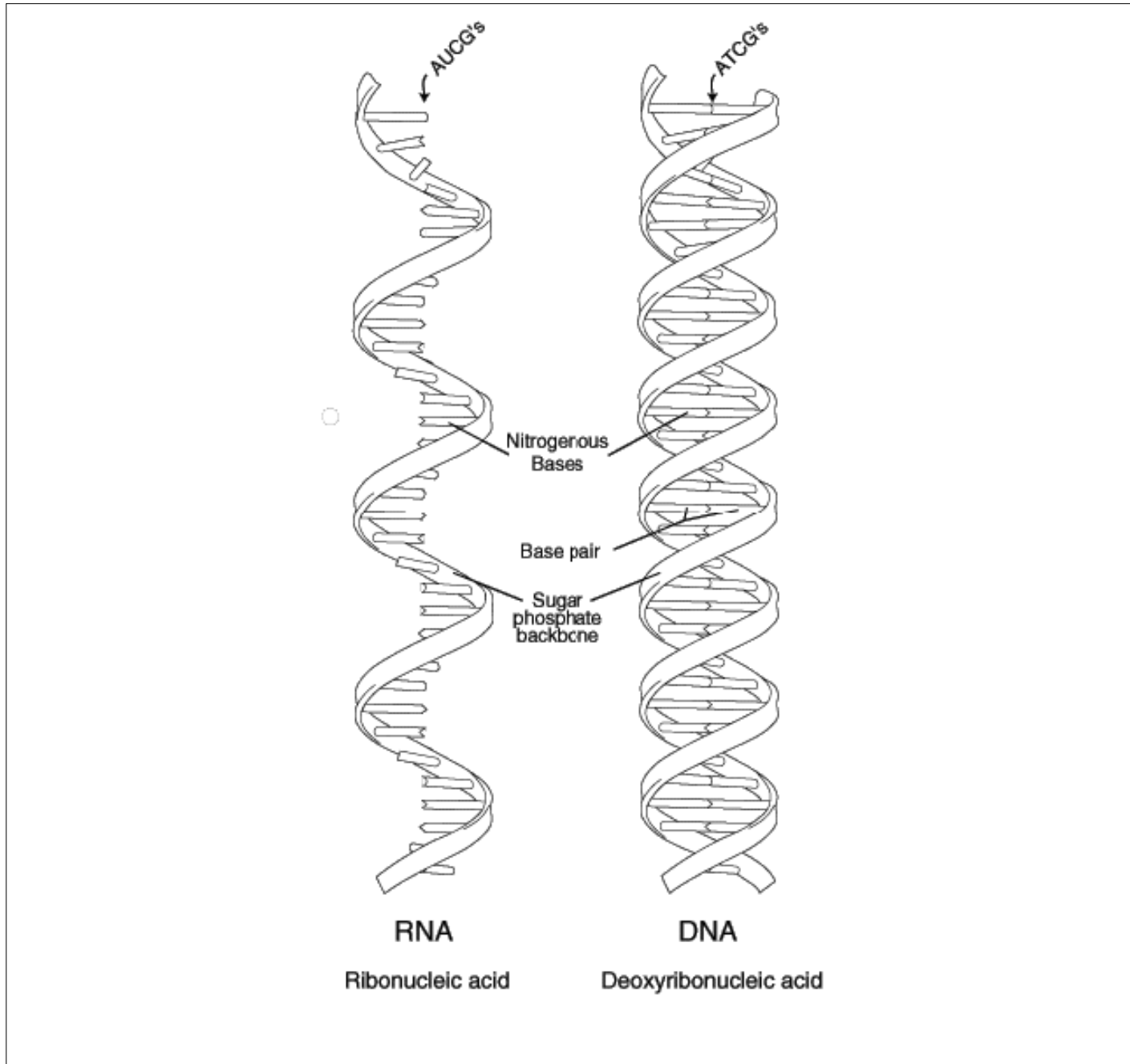


# RNA

Ribonucleic Acid

-Single stranded





# Proteins:

molecules made from amino acids  
that perform many functions



## A. Function of proteins

1. Provide structure and support

2. Enable movement (muscles)

3. Transport materials across the cell membrane

4. Speed up chemical reactions (enzymes)

## B. Structure of proteins

The building blocks of proteins are amino acids.

