

Intro to genetics

What is the chromosomal theory of inheritance?

What is the difference between a gene and a chromosome?

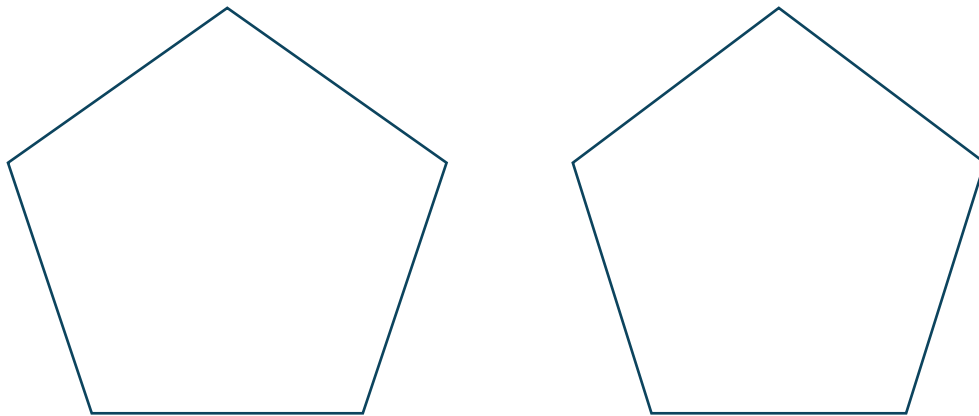
List the differences and similarities between DNA and RNA?

Using the chart I provided, what would be the corresponding amino acid to the RNA sequence?

5' - UUUAUGGCUCACUGA-3'

What do scientists do when they are studying a gene using gene knockout?

Using the space below, draw both DNA and RNA:



To serve as genetic material, molecule must be able to (hint: there are 5 things):

What is the difference between a nucleotide and a nucleoside?

What bases are purines? What bases are pyrimidines?

What is the difference between phosphodiester bonds and hydrogen bonds?

DNA is (negatively/positively) charged. This is caused by the (PO₄⁻/oxygen) bonded to the (nucleoside/nucleotide). Circle the correct answer for each.

A DNA sample from a poison dart frog is found to have 18% cytosine. What is the composition of all other bases in this frog's DNA?

Describe (or draw) what Watson and Crick described as the semiconservative model for DNA replication?

What is B DNA? Which forms of DNA lack guanine?

Describe all 3 classes of RNA:

mRNA:

tRNA:

rRNA:

What is RNA replicase and what is reverse transcriptase?

List a few reasons why viruses are unique genetically: