

BREAKING DNA'S CODE

DIRECTIONS: The following series of letters represent a coded message in a DNA molecule. Match the correct bases to record, or transcribe, the message just as DNA does. Next, being very careful not to lose count or your place, break the code into codons. Each codon of your RNA represents a word. Finally, record the words into the written message. Good luck! *Double check to make sure each codon has 3 bases, and that you did not make any errors. You at least get to double check! There's no double check system in our cells!

DNA start ---> T T A A A G A A C A A T A A A A T G A T C A T T A T

RNA start ---> A A T T T T C T T G T T _____

A T A G T A C T A T A C A T T G T T C T T T G C A T G G T G C T G

T G G A G G G G C C G C T G T A G C G G G C G G T C T C T A A C C

G G A G T T C T T T G C C G T T G C T C A A C G G C T G T T C C A

C C A T C G A C A G C G C C T T G T C C C C C G

The end!

The end!

* Aren't you glad this coded DNA is only 150 basepairs long? In our cells they are often 1000's of times longer!

DNA is made of 4 amino acid bases: ^(T) thymine, ^(A) adenine, ^(C) cytosine, & ^(G) guanine. When DNA replicates (makes copies of itself) the RNA strand that helps it reads the DNA code "backwards". RNA translates DNA's code in this way \Rightarrow A = T
C = G.

Each set of 3 amino acid bases is called a "codon," and each codon directs production of a different protein. In this activity, each codon means a different word.

The code is on the back of this page - I gave you a start...