

## DNA TEST, PART 2: DNA MESSAGE DECODING

You will be given a short DNA message or word to decode just as you did earlier with some practice messages. It is important that you **SHOW HOW** your cells do this, step by step. Show this on the special Message Sheet given you to do this. (16 points)

**FIRST:** Put your name, seat number, date, and period at top of page.

**SECOND:** copy the **number** of your message and the DNA message itself in the spaces so designated.

**THIRD:** decode the message, showing each step completely, just as it happens in your cells; be sure to label each step with the type of molecule involved in that step. **NO SHORT CUTS!** Use the dictionary provided below to determine which amino acids correspond with their respective t-RNA codes.

**FOURTH:** Take the letter-symbol of each amino acid used, arranged in its proper position, and print these letters on the "Decoded Message" line. They should spell out one or more short words.

### DICTIONARY OF tRNA CODONS & THEIR AMINO ACIDS (SYMBOLS & ABBREVIATIONS)

tRNA	sym	AA
AAA	F	Phe
AAC	L	Leu
AAG	F	Phe
AAU	L	Leu
ACA	C	Cys
ACC	W	Trp
ACG	C	Cys
ACU	-	spc
AGA	S	Ser
AGC	S	Ser
AGG	S	Ser
AGU	S	Ser
AUA	Y	Tyr
AUC	-	spc
AUG	Y	Tyr
AUU	-	spc

tRNA	sym	AA
CAA	V	Val
CAC	V	Val
CAG	V	Val
CAU	V	Val
CCA	G	Gly
CCC	G	Gly
CCG	G	Gly
CCU	G	Gly
CGA	A	Ala
CGC	A	Ala
CGG	A	Ala
CGU	A	Ala
CUA	D	Asp
CUC	E	Glu
CUG	D	Asp
CUU	E	Glu

tRNA	sym	AA
GAA	L	Leu
GAC	L	Leu
GAG	L	Leu
GAU	L	Leu
GCA	R	Arg
GCC	R	Arg
GCG	R	Arg
GCU	R	Arg
GGA	P	Pro
GGC	P	Pro
GGG	P	Pro
GGU	P	Pro
GUA	H	His
GUC	Q	Glu
GUG	H	His
GUU	Q	Glu

tRNA	sym	AA
UAA	I	Iso
UAC	M	Met
UAG	I	Iso
UAU	I	Iso
UCA	S	Ser
UCC	R	Arg
UCG	S	Ser
UCU	R	Arg
UGA	T	Thr
UGC	T	Thr
UGG	T	Thr
UGU	T	Thr
UUA	N	Asn
UUC	K	Lys
UUG	N	Asn
UUU	K	Lys

Name \_\_\_\_\_ SN \_\_\_\_\_

Date \_\_\_\_\_ Per. \_\_\_\_\_

DNA TEST: MESSAGE SHEET  
See Directions in the Main Test Booklet

PART 2: SOLVE DNA MESSAGE:

Number of Test DNA Message: \_\_\_\_\_

DNA Message Given to You to Solve: \_\_\_\_\_

(Label the different molecules involved)

Decoded Message (English word or words): \_\_\_\_\_

=====

Name \_\_\_\_\_ SN \_\_\_\_\_

Date \_\_\_\_\_ Per. \_\_\_\_\_

DNA TEST: MESSAGE SHEET  
See Directions in the Main Test Booklet

PART 2: SOLVE DNA MESSAGE:

Number of Test DNA Message: \_\_\_\_\_

DNA Message Given to You to Solve: \_\_\_\_\_

(Label the different molecules involved)

Decoded Message (English word or words): \_\_\_\_\_