



# Biology I

## Translation Practice Sheet

Refer to the figure. Respond to each statement.

3. Express the following sequence of DNA nucleotides as complementary mRNA codons.

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

4. Write the specific amino acid or code that each mRNA codon from statement 3 above represents.

5. Identify the start and stop mRNA codons.

First Base	Second Base				Third Base
	U	C	A	G	
U	UUU phenylalanine	UCU serine	UAU tyrosine	UGU cysteine	U
	UUC phenylalanine	UCC serine	UAC tyrosine	UGC cysteine	C
	UUA leucine	UCA serine	UUA stop	UGA stop	A
	UUG leucine	UCG serine	UAG stop	UGG tryptophan	G
C	CUU leucine	CCU proline	CAU histidine	CGU arginine	U
	CUC leucine	CCC proline	CAC histidine	CGC arginine	C
	CUA leucine	CCA proline	CAA glutamine	CGA arginine	A
	CUG leucine	CCG proline	CAG glutamine	CGG arginine	G
A	AUU isoleucine	ACU threonine	AAU asparagine	AGU serine	U
	AUC isoleucine	ACC threonine	AAC asparagine	AGC serine	C
	AUA isoleucine	ACA threonine	AAA lysine	AGA arginine	A
	AUG start methionine	ACG threonine	AAG lysine	AGG arginine	G
G	GUU valine	GCU alanine	GAU aspartate	GGU glycine	U
	GUC valine	GCC alanine	GAC aspartate	GGC glycine	C
	GUA valine	GCA alanine	GAA glutamate	GGA glycine	A
	GUG valine	GCG alanine	GAG glutamate	GGG glycine	G

In your textbook, read about translation and the role of the ribosome.

Use each of the terms below only once to complete the passage.

anticodon  
ribosome

cytoplasm  
start codon

mRNA  
translation

protein  
tRNA

Once the (6) \_\_\_\_\_ is synthesized, it leaves the nucleus and enters the (7) \_\_\_\_\_. The 5' end of the mRNA connects to the (8) \_\_\_\_\_, where the code is read and translated to make a(n) (9) \_\_\_\_\_ in a process called (10) \_\_\_\_\_. In translation, (11) \_\_\_\_\_ interprets the mRNA codon sequence. Once the mRNA is associated with the ribosome, a tRNA with the (12) \_\_\_\_\_ CAU will bind to the mRNA (13) \_\_\_\_\_ AUG.