Name _____ Date _____ Class _____

CHALLENGE

Chapter 7

FIGURE OUT THE CODONS AND AMINO ACIDS

Use what you have learned about pairing of nitrogen bases, and a biochemistry book to fill in the missing parts in the chart below. The first one is done for you.

Order of Codon in DNA	Order of Codon in mRNA	Amino Acid Coded for by mRNA
CTT	GAA	glutamic acid
GCA		
	UCA	
CCT		
	ACU	
GGG		
	UAA	stop code
CAT		
	AUC	
CGA		
ATC		stop code
	CAA	
AAA		
ACT	UGA	
	UUG	
ATG		
		histidine
		lysine
		trytophan
		methionine (and start code)

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5. Summary of Key Concepts *(continued)*

Review Key Terms

On the line provided, write the term from the list that matches each description.

amino acids	genetic code	protein	RNA
codon	messenger RNA	protein synthesis	transcription
cytoplasm	nucleic acid	replication	transfer RNA
DNA	nucleotides	ribosomal RNA	translation
double helix	nucleus	ribosome	

_____ 1. type of molecule composed of many nucleotides

_____ 2. group of three nucleotides in mRNA that specifies an amino acid

_____ 3. shape of the DNA molecule

_____ 4. form of RNA that carries copies of DNA's instructions out of the nucleus

_____ 5. form of RNA that forms a particle where proteins are assembled

_____ 6. process in which part of the DNA nucleotide sequence is copied into mRNA

_____ 7. basic building blocks of proteins; carried to ribosomes by tRNAs

_____ 8. task of manufacturing proteins from DNA blueprints

_____ 9. basic building blocks of nucleic acids

_____ 10. single-stranded nucleic acid that carries out instructions coded in the DNA

_____ 11. part of the cell that surrounds the nucleus

_____ 12. macromolecule made of amino acids outside the nucleus

_____ 13. double-stranded nucleic acid contained in the cell nucleus

_____ 14. part of the cell that contains the DNA

_____ 15. key to using the instructions in nucleic acids to synthesize proteins

_____ 16. form of RNA that transfers amino acids to the ribosome

_____ 17. particle in the cell cytoplasm on which protein synthesis takes place

_____ 18. process in which DNA makes copies of itself

_____ 19. process in which codons of mRNA are decoded to a sequence of amino acids