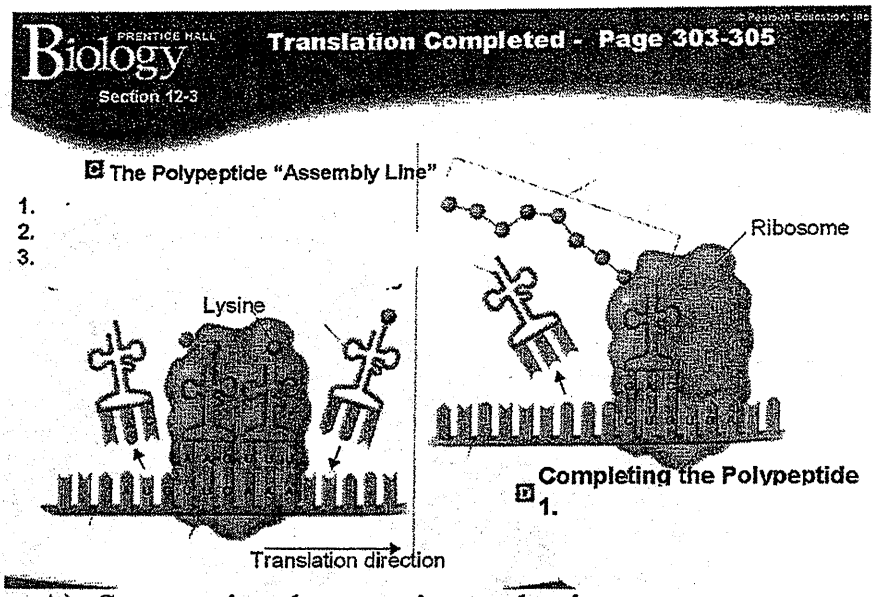


A) Summarize the protein synthesis steps.

Identify the amino acid from the following mRNA codes:

1. AGU

2. CCC

3. UAA

4. GAU

5. CGG

6. UUG

7. UGG

8. ACA

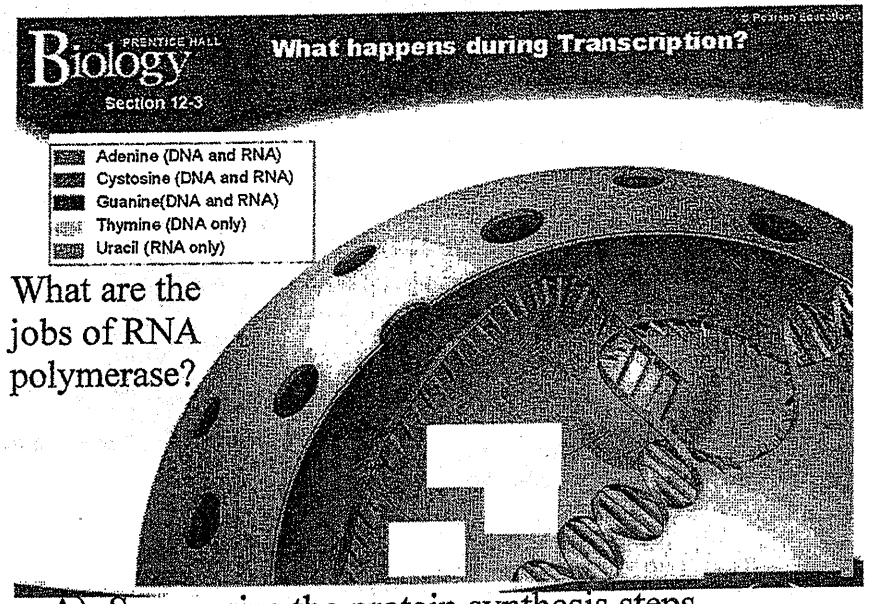
9. AUG

Codons Found in Messenger RNA

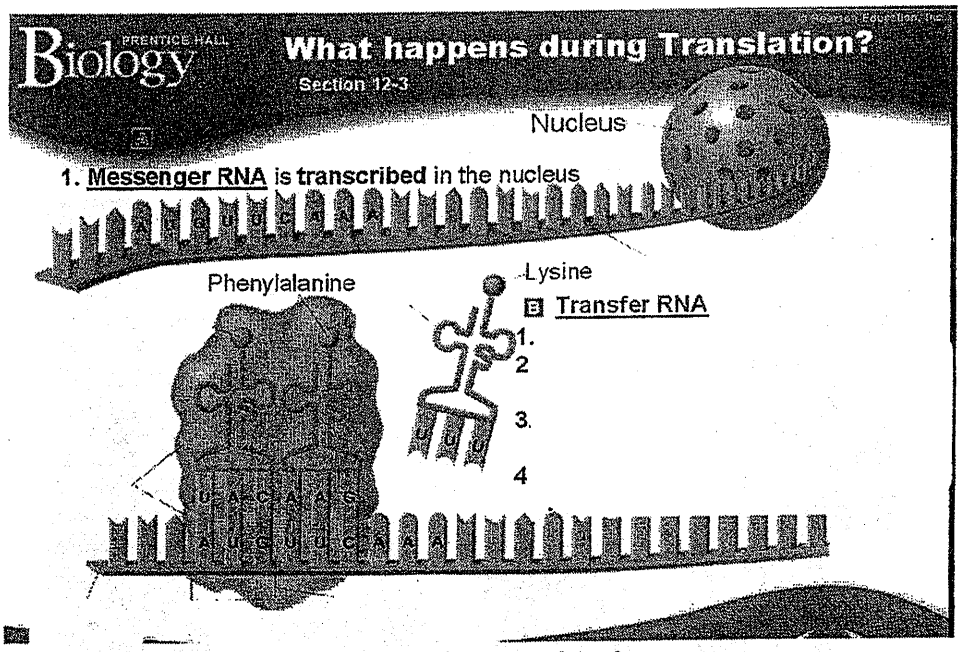
Second Base

First Base	U	C	A	G	Third Base
U	Phe	Ser	Tyr	Cys	U
	Phe	Ser	Tyr	Cys	C
	Leu	Ser	Stop	Stop	A
	Leu	Ser	Stop	Trp	G
C	Leu	Pro	His	Arg	U
	Leu	Pro	His	Arg	C
	Leu	Pro	Gln	Arg	A
	Leu	Pro	Gln	Arg	G
A	Ile	Thr	Asn	Ser	U
	Ile	Thr	Asn	Ser	C
	Ile	Thr	Lys	Arg	A
	Met	Thr	Lys	Arg	G
G	Val	Ala	Asp	Gly	U
	Val	Ala	Asp	Gly	C
	Val	Ala	Glu	Gly	A
	Val	Ala	Glu	Gly	G

B) Use the genetic code to determine the amino acids that match up to mRNA codons.



A) Summarize the protein synthesis steps.



A) Summarize the protein synthesis steps.

Transcripton and Translation Worksheet

Name _____

Period: _____ Date _____

For each of the following sequences, fill in the DNA, the mRNA sequence, the tRNA anticodons, or the amino acid sequences that have been left blank. If several sequences might work choose any one.

1.

DNA	TAC	CGC	TCC	GCC	GTC	GAC	AAT	ACC	ACT
mRNA									
AA									

2.

DNA									
mRNA	AUG	ACU	AGC	UGG	GGG	UAU	UAC	UUU	UAG
AA									

3.

DNA									
mRNA	AUG	GUG	GGG	GCA	UAC	CGA	CCC	UUA	UAG
AA									

4.

DNA									
mRNA									
AA	MET	ARG	GLY	PHE	PHE	MET	VAL	GLY	STOP

5.

DNA	TAC					ATG			
mRNA		GAG	UGU	GAU			AAC		UAA
AA					ALA			PRO	

6. Compare three differences between RNA and DNA.

DNA	RNA

7. Where is DNA found in the cell? _____ Where are tRNA and rRNA found in the cell? _____

8. Complete the table naming the three types of RNA and what they do.

RNA Type	Function

9. Identify the mRNA bases that are complementary to the DNA strand. How many codons are present in this strand?

DNA	AAT	TGC	CGC	ATG
mRNA				

10. Complete the table summarizing the two stages of protein synthesis.

Stage Name	Location	What happens?