

SBI4U

Name: _____

GENETIC CODE WORKSHEET

Procedure A: Using the first table (identify the protein coded for by the DNA in your flask)

1. Record the flask # _____.
2. Record the DNA bases from your flask in ascending numerical order.
3. *Transcribe* the DNA triplets into the corresponding mRNA codons.
4. *Translate* the mRNA codons into amino acids using a Codon Table (from text).
5. Choose your protein from the list (bottom of page) by comparing the 3 amino acids.

DNA triplets	_____ - _____ - _____
mRNA codons	_____ - _____ - _____
amino acids	_____ (aa1) - _____ (aa2) - _____ (aa3)
name of protein	_____

Procedure B: Using the other tables

1. Use one table for each of the remaining proteins. Write the name of the protein on the bottom line of a table then work backwards (from bottom to top of table). Note: there may be more than one mRNA codon and DNA triplet that fits; just choose any one that works.

DNA triplets	_____ - _____ - _____
mRNA codons	_____ - _____ - _____
amino acids	_____ (aa1) - _____ (aa2) - _____ (aa3)
name of protein	_____

DNA triplets	_____ - _____ - _____
mRNA codons	_____ - _____ - _____
amino acids	_____ (aa1) - _____ (aa2) - _____ (aa3)
name of protein	_____

DNA triplets	_____ - _____ - _____
mRNA codons	_____ - _____ - _____
amino acids	_____ (aa1) - _____ (aa2) - _____ (aa3)
name of protein	_____

insulin
myoglobin
ribonuclease
hemoglobin

... alanine - serine - valine ...
 ... arginine - leucine - phenylalanine ...
 ... serine - glutamine - lysine ...
 ... leucine - histidine - cysteine ...