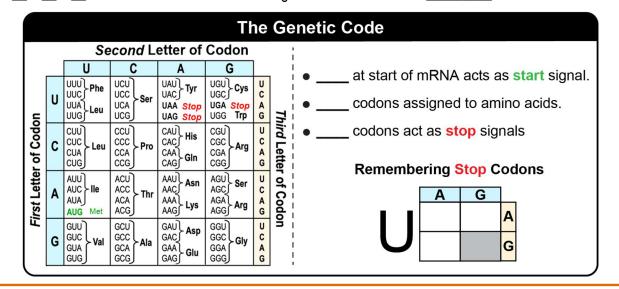<u>CONCEPT:</u> THE GENETIC CODE

● **Genetic Code** is the assignment of each _____ to one of the ___ amino acids.

 □ **Recall:** a codon is a nucleotide triplet that codes for an amino acid or acts as a [_____]or[_____]signal.

 □ __ × __ × __ = 64 total codons    □ A single amino acid can have _____ codons.

## The Genetic Code



**EXAMPLE:** Determine the polypeptide sequence from the mRNA sequence given below:

  5' GGCCAUACCAUGUAU 3'

**STEP 1:** Break the given mRNA sequence in _____ (nucleotide triplets).

  5' _____ – _____ – _____ – _____ – _____ 3'

**STEP 2:** Identify the amino acid for each codon and write the peptide sequence.

  5' GGC–CAU–ACC–AUG–UAU 3'

  ____ – ____ – ____ – ____ – ____



**PRACTICE:** Determine the number of bases in the information strand for the gene that codes for the peptide below:

  Pro–His–Gly–Gly–Lys–Arg

a) 6

b) 12

c) 18

d) 3