

CONCEPT: AMINO ACID THREE LETTER CODE

- For convenience, amino acids can be abbreviated in two different ways:

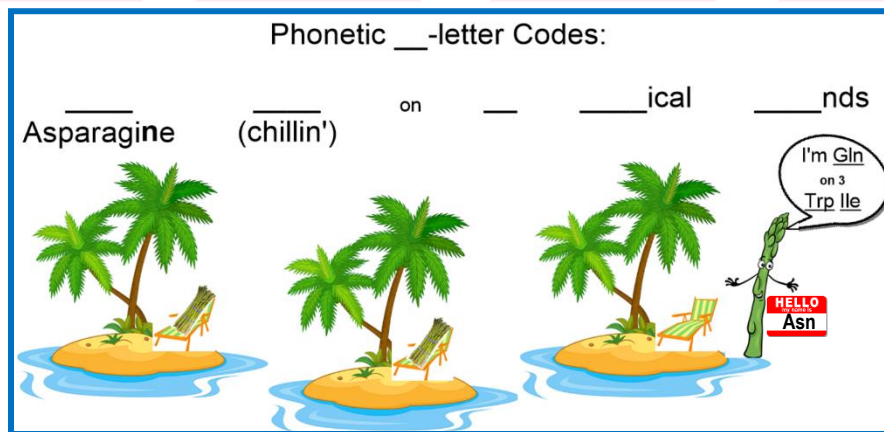
1) a ____-letter-code. 2) a ____-letter-code.

□ Abbreviations are commonly used & were designed to be easily _____.

3-Letter Amino Acid Code

- Most 3-letter abbreviations are simply the first ____ letters of the amino acid.
- ____ of the 3-letter abbreviations are slightly altered to help identify them _____ (by sound of speech).

EXAMPLE: Asparagine = Asn Glutamine = Gln Tryptophan = Trp Isoleucine = Ile



Amino Acid 3-Letter-Symbols

Alanine-----Ala	Glutamic Acid-----Glu	Leucine-----Leu	Serine-----Ser
Arginine-----Arg	Glutamine-----	Lysine-----Lys	Threonine-----Thr
Asparagine-----	Glycine-----Gly	Methionine-----Met	Tryptophan-----
Aspartic Acid-----Asp	Histidine-----His	Phenylalanine----Phe	Tyrosine-----Tyr
Cysteine-----Cys	Isoleucine-----	Proline-----Pro	Valine-----Val

PRACTICE: Match the amino acids to their appropriate 3-letter-code.

1. Gln 2. Ile 3. Glu 4. Trp 5. Asn 6. Leu

Asparagine ____ Glutamate ____ Leucine ____
Glutamine ____ Isoleucine ____ Tryptophan ____

PRACTICE: Convert the following amino acids into their 3-letter codes: Glycine, Isoleucine, Valine, Tryptophan, Proline.

- a) Gly, Ile, Val, Try, Pro. c) Gly, Ile, Val, Trp, Pro.
b) Gly, Iso, Val, Trp, Pro. d) Gly, Ile, Val, Try, Pro.