

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

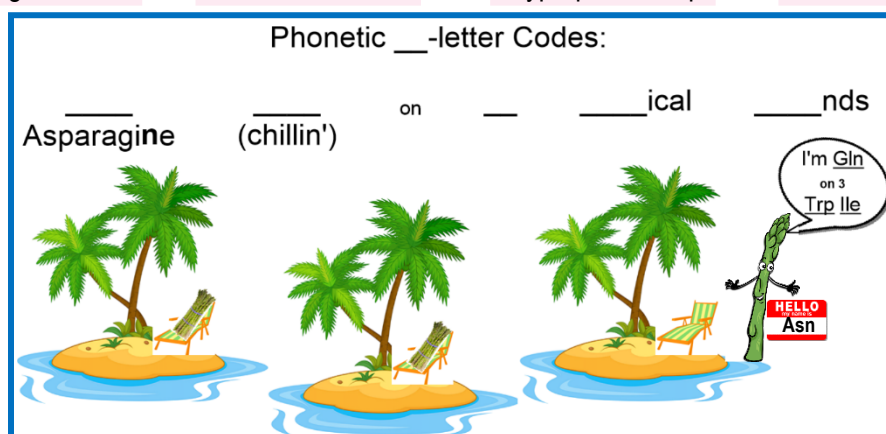
- Most 3-letter abbreviations are simply the first ____ letters of the amino acid.
- _____ of the 3-letter abbreviations are slightly altered to help identify them _____ (by sound of speech).

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

EXAMPLE: 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 ____

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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. |