

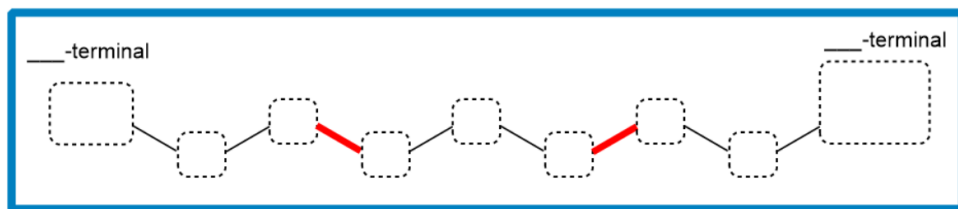
CONCEPT: DRAWING A PEPTIDE

- The structure of a peptide can be drawn simply from its _____ *protein structure*.
 - There are _____ easy steps to draw a protein.

Step #1

- 1st step to drawing a peptide: draw the _____ & identify _____-carbons.
 - Backbone consists of repeated _____ - _____ - _____ bonds for *each* residue.
 - Only first & last residues have free _____ amino or carboxyl groups respectively in the backbone.

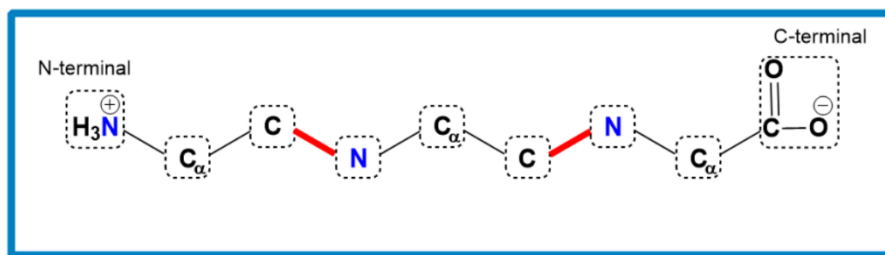
EXAMPLE: Step #1 of Drawing a Peptide: Draw Backbone & identify α -carbons.



Step #2

- 2nd step: fill-in _____ groups & consider amino acid _____.
 - Recall: life almost exclusively uses _____-amino acids.
 - R-group **down** = _____; R-group _____ = wedged.

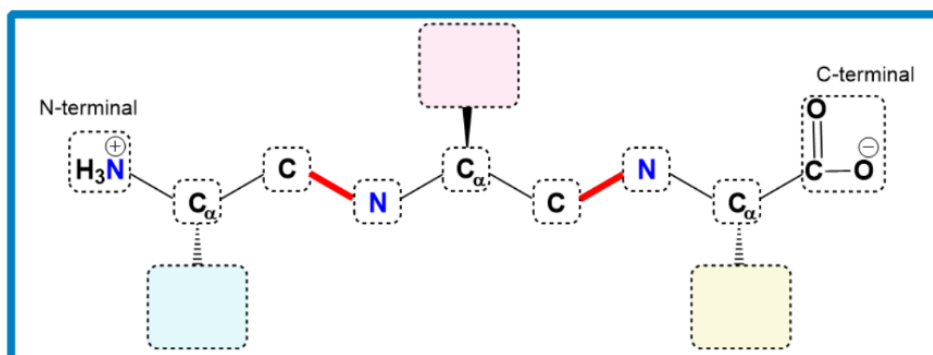
EXAMPLE: Step #2: Draw C=O groups & consider chirality.



Step #3

- 3rd step: fill-in remaining _____ on **Nitrogen** atoms & draw in the _____-groups for *each* amino acid residue.

EXAMPLE: Step #3: Draw in the R-groups for the peptide A-V-L.



CONCEPT: DRAWING A PEPTIDE

PRACTICE: Draw the following peptide given its primary protein structure: D-R-A-W.

PRACTICE: Strive for greatness and draw the chemical structure of the following peptide: S-T-R-I-V-E.

PRACTICE: Aim high and draw the following peptide: A-I-M-H-I-G-H.

PRACTICE: Be a boss & draw the chemical structure of the following peptide: P-C-Y-N-F-Q-K.