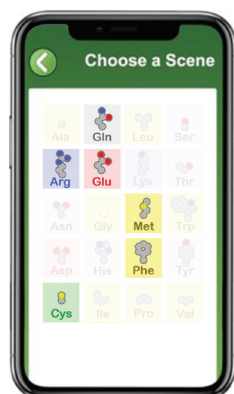


Sidechain Explorer Activity



Pick an amino acid

in current version, only 6x are live to select (Arg, Cys, Gln, Glu, Met and Phe). Final version will include all 20x amino acids.



Scan the sidechain chart

This activity does not require the plastic sidechain models themselves, just the sidechain chart.



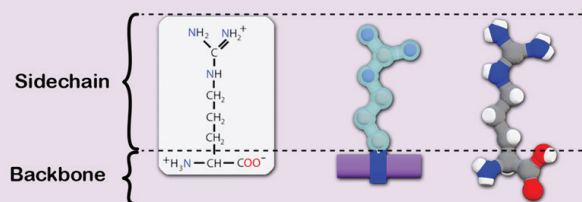
AR graphics appear over the chart

Each amino acid is shown with three representations: a chemical structure, a sidechain clipped to a mini-toober, and a ball-and-stick rendering.

Each amino acid has the **same four AR graphics/animations overlays** (see below).

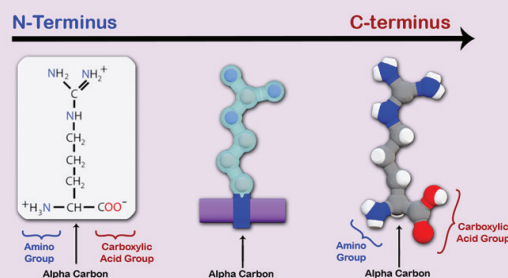
Overlay 1

Highlights the sidechain and backbone of the amino acid.



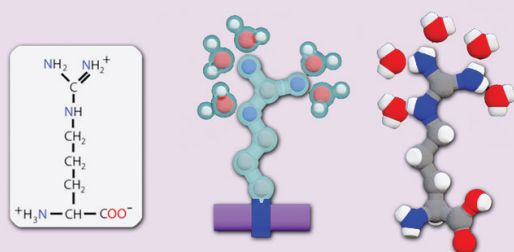
Overlay 2

Highlights the backbone groups and directionality of the amino acid.



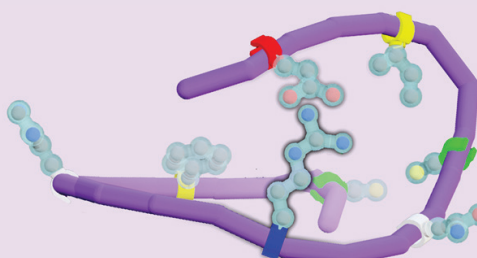
Overlay 3

Highlights the way water interacts with the amino acid.

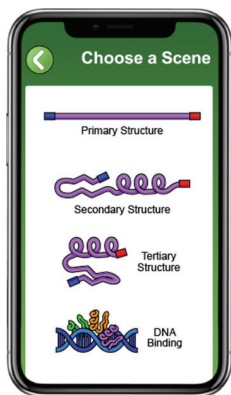


Overlay 4

Highlights the way other amino acids interact with the amino acid.



Folding Real Proteins: Zinc Finger



Pick a scene



Scan the sidechain chart

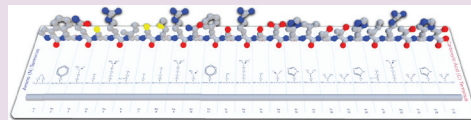


AR graphics appear over the chart

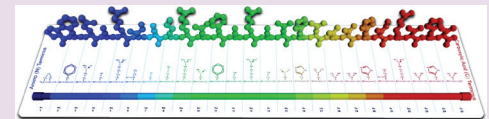
Scene 1:

Shows the primary structure of the zinc finger protein with three representations: a chemical structure, a mini-toober, and a ball-and-stick rendering.

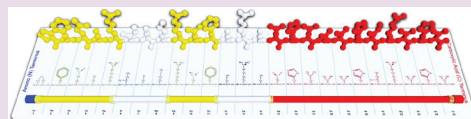
Four color schemes can also be shown (see images to the right).



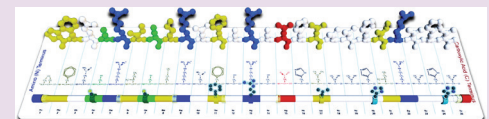
Color Scheme 1 - Colored by atom type



Color Scheme 2 - Colored by gradient from N-terminus to C-terminus



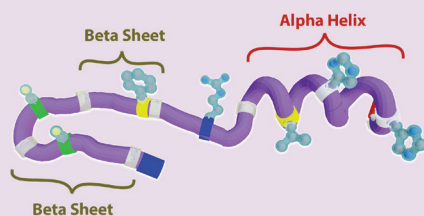
Color Scheme 3 - Colored by secondary structure (alpha helix and beta sheet)



Color Scheme 4 - Colored by amino acid property (matching the ASK clips/chart)

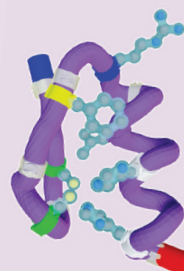
Scene 2:

Shows the secondary structures of the zinc finger protein.



Scene 3:

Shows the tertiary structure of the zinc finger protein.



Scene 4:

Shows the zinc finger protein bound to DNA.

