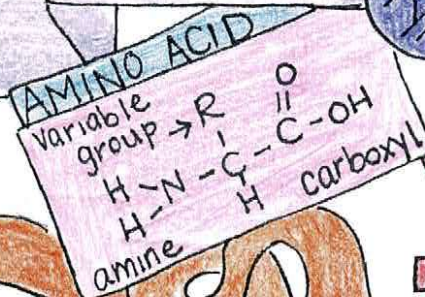


POLYMERS MADE OF AMINO ACIDS

# PROTEINS

Linked by peptide bonds



VAL  
 TYR  
 HIS  
 GLY  
 PRO  
 SER  
 ALA

Polar R groups point outward

Hydrophobic groups point inward

**1 Primary Structure**  
 o unique sequence of amino acids

Alpha helix

o changing one amino acid can change function

**2 Secondary**  
 o Results from Hydrogen bonding between amino and carboxyl groups of protein backbone

B pleated sheet

**3 TERTIARY STRUCTURE**

o Results in complex globular shape due to interactions between R groups

EX  
 o -Hydrogen bonds  
 o -Disulfide bridges

**4 Quaternary Structure**

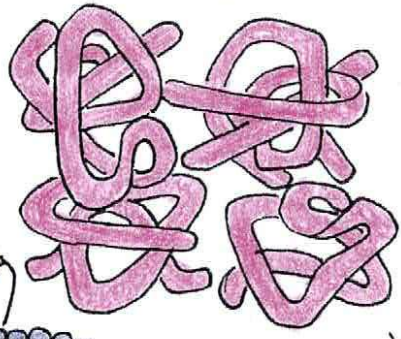
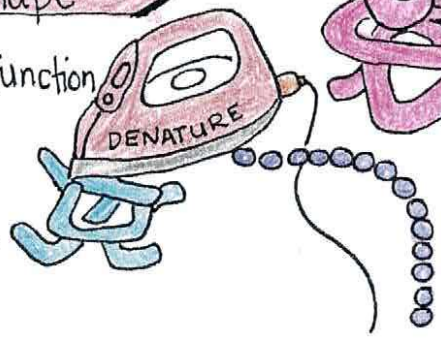
STRUCTURE = FUNCTION

## Denaturing Proteins

Protein loses shape

o Lose shape → Lose function

Reasons:  
heat or pH



o association of two or more proteins into one large protein

Ex: Hemoglobin

Transports O<sub>2</sub> in RBC's

