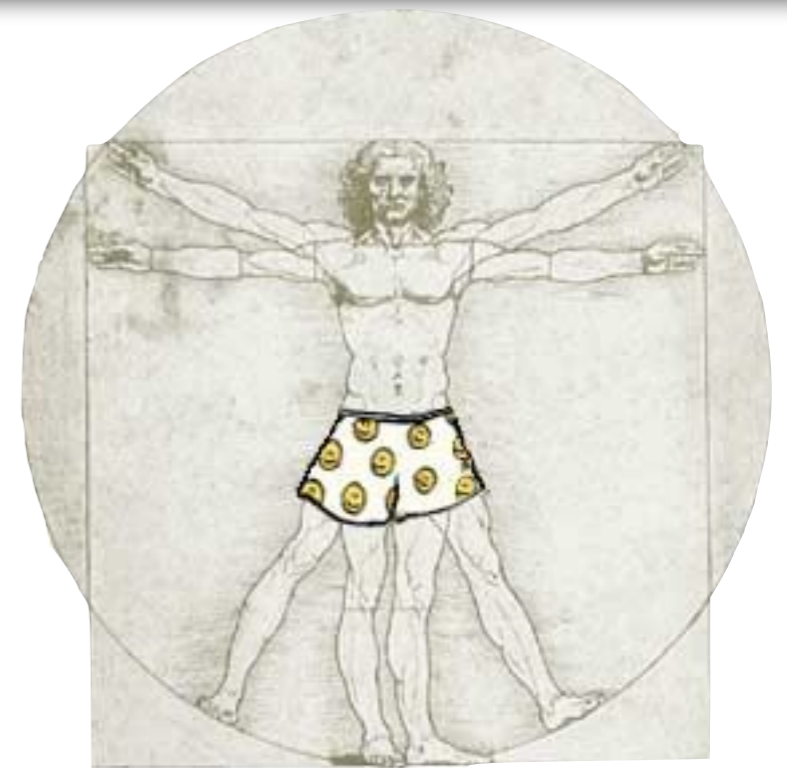
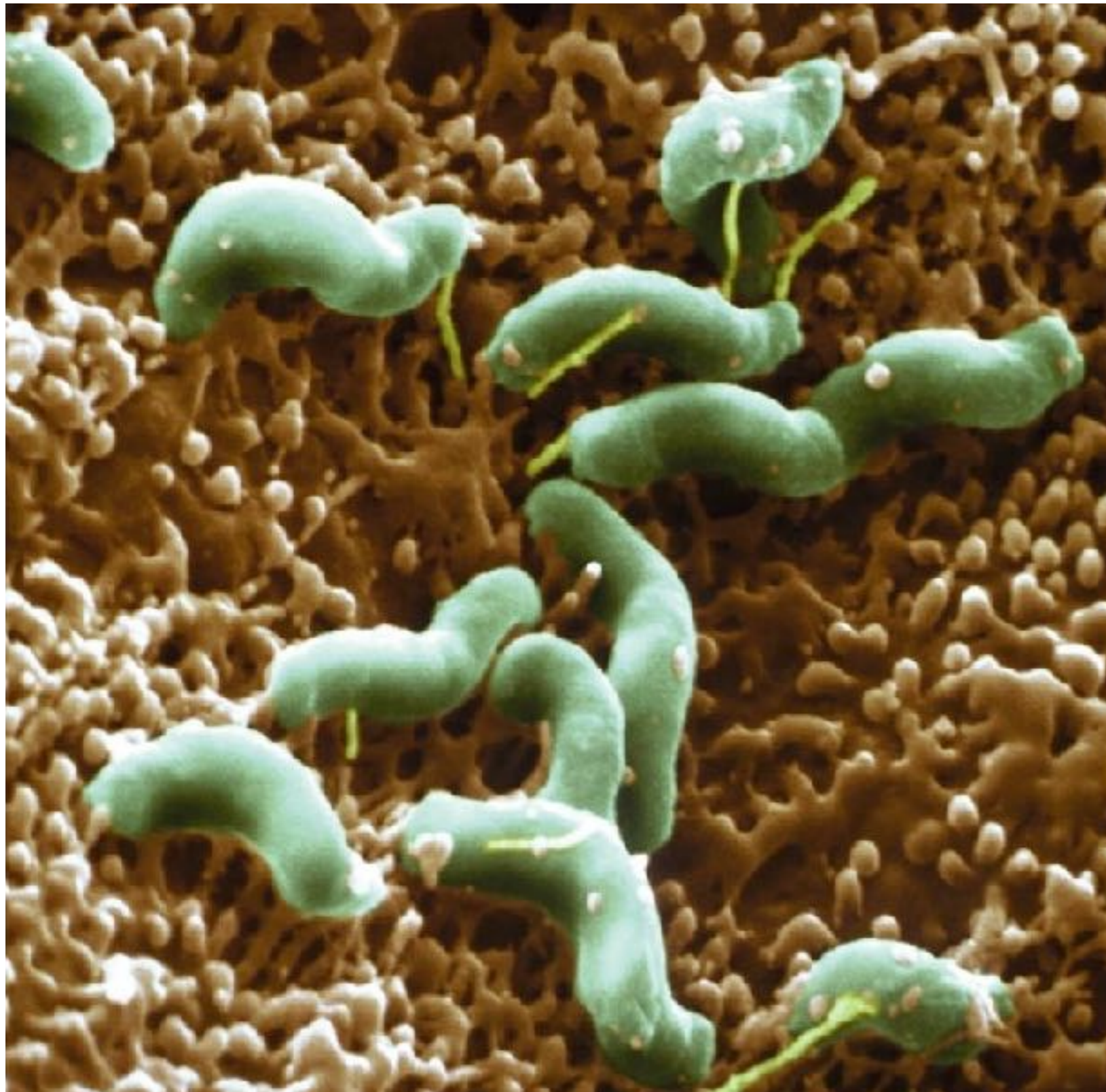


Unit 14

Modeling Digestion of Organic Molecules



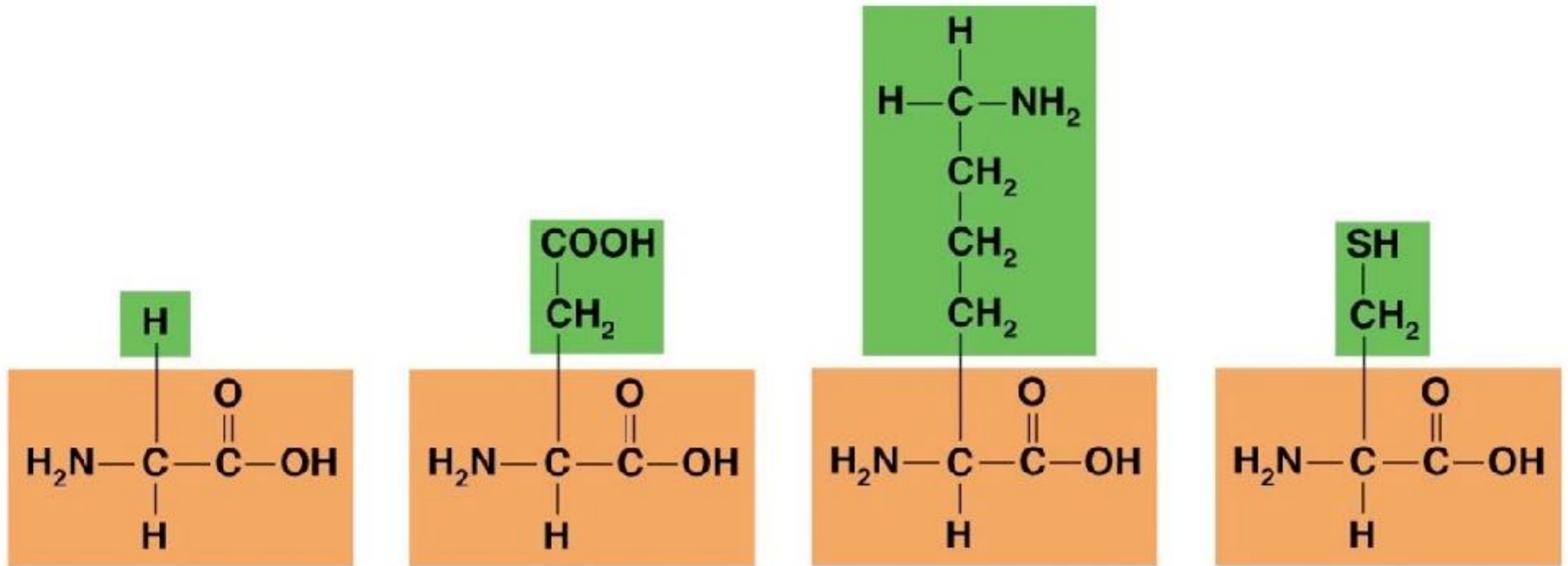
Miss School, Miss Out!

Modeling Digestion of Organic Molecules

- **Question:** Can molecular models be used to demonstrate the digestion of common organic macromolecules?
- **Observations/Data:** Your sketches of the various structural formulas

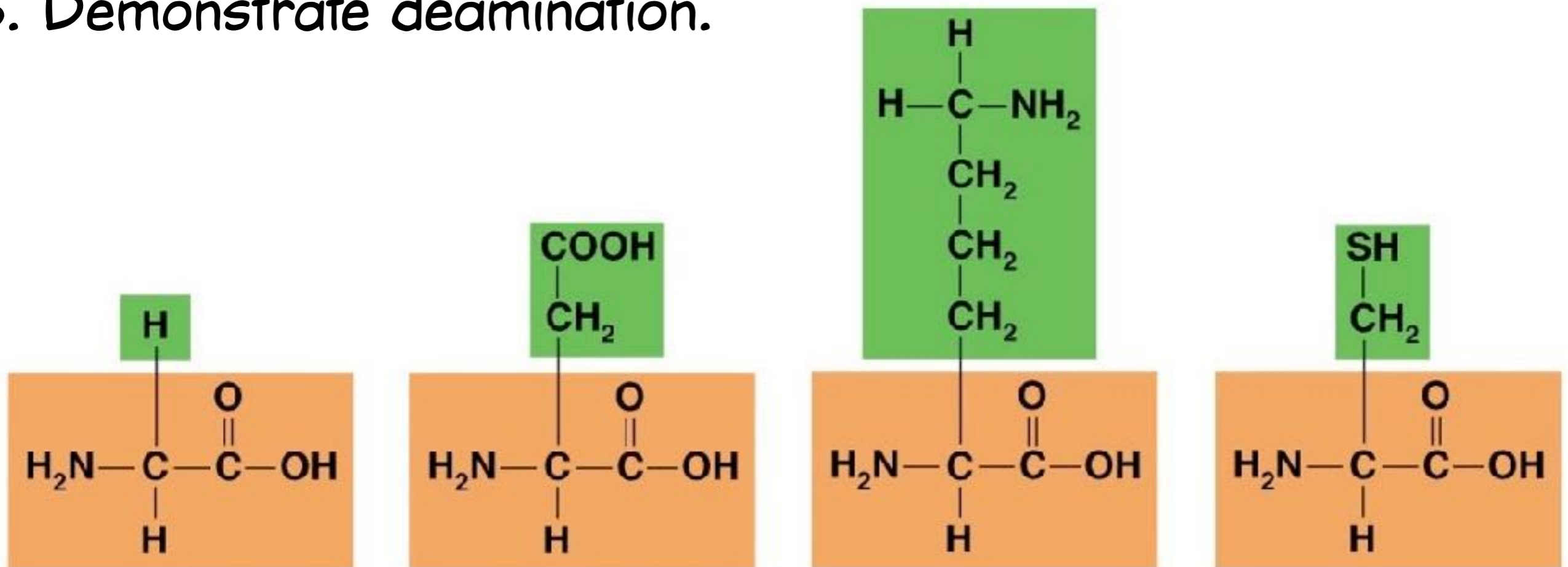
Protein Observations

You and your partner should each make one of the following Amino Acids:



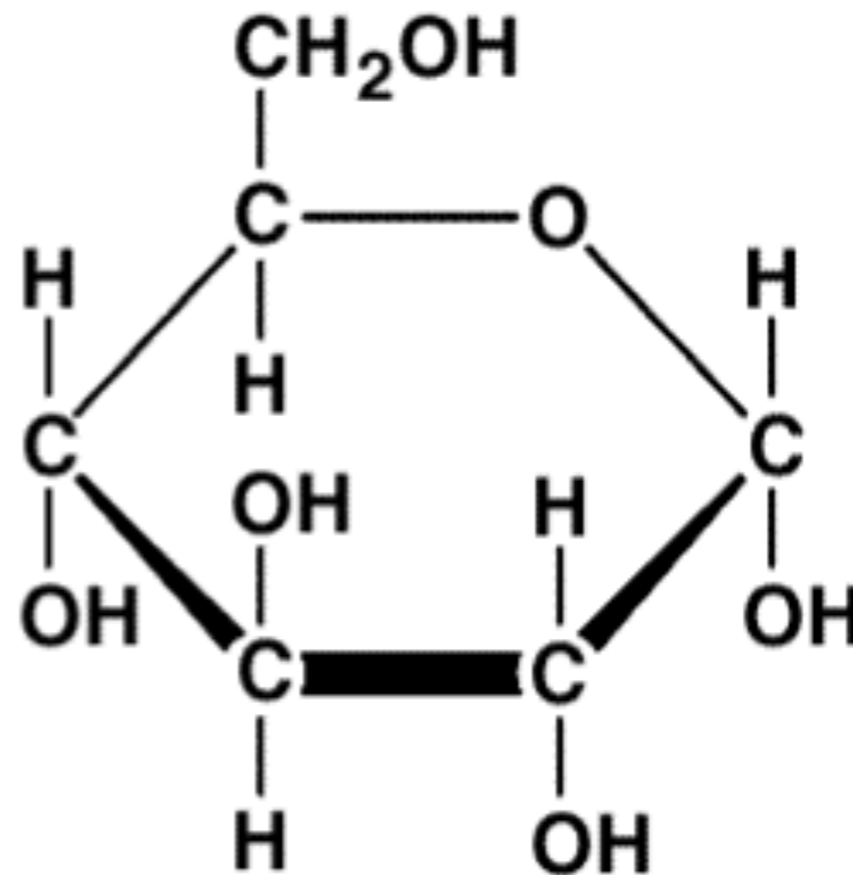
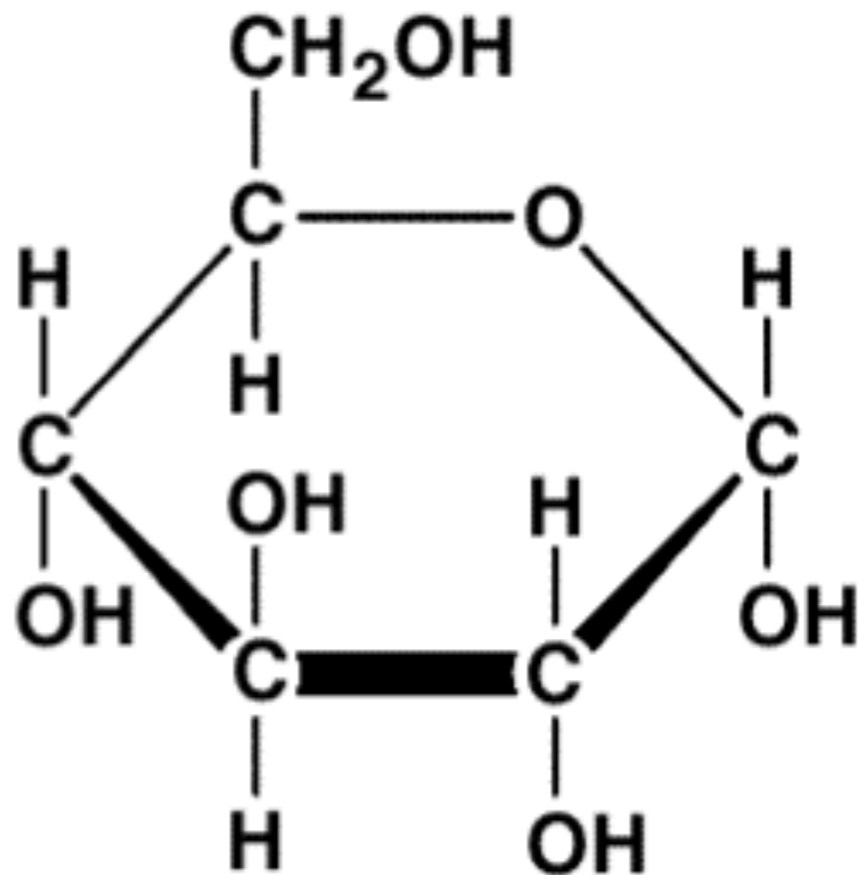
Protein Observations

1. Draw your amino acid's structural formula.
2. Draw your lab partner's amino acid next to yours.
3. Show a dehydration reaction between the two adjacent amino acids and connect them with a covalent bond.
4. Identify the peptide bond, along with the amino end and carboxyl end of the dipeptide you've created.
5. Demonstrate how carboxypeptidase and aminopeptidase would digest the dipeptide.
6. Demonstrate deamination.



Carbohydrate Observations

Sketch a glucose molecule using the structural formula below as a template. Sketch a second glucose next to the original.



Demonstrate a dehydration synthesis reaction. Name the molecule that is formed as a result of this reaction. Finally, name the enzyme that would digest this disaccharide.

