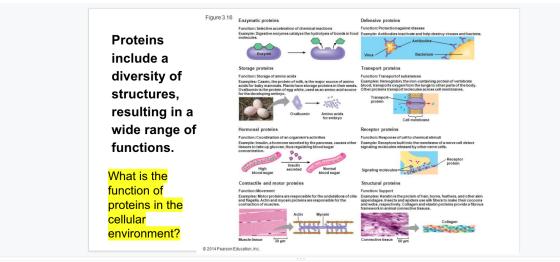
#ref #disorganized

1 | Overview

- · Rubisco is apparently a cool protein
- · Most abundant protein in the world
- Enzyme that is very slow, which is why plants make so much of it
- · Rubisco in pop science

2 | Slide Intro



- Proteins include a diversity of structures made of folded chains of amino acids, resulting in many molecules with a wide range of functions.
 - a. Proteins are made up of long, folded chains of amino acids held together by peptide bonds. Amino acids share a common structure with an amino group, a carboxyl group, a hydrogen atom, and an R-group
 - b. R-groups have variable chemical structures and properties, which determines how the amino acid chain will fold, and subsequently the structure and the function of the protein

Figure 1: Pasted image

3 | Carbon Fixation

- · Turning carbon from the air into carbohydrates
- Combines carbon from CO_2 , light, and water to get carbohydrates
 - $6CO_2 + 6H_2O + light =$ carbs # Faults
- · Rubisco sometimes accidentally binds oxygen to a sugar chain in a process called photorespiration
 - The cell actually has to expend more energy to fix this mistake
- Also it's like really really slow, processing around 3 reactions per second instead of other enzymes which often process thousands

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