

Polymer Paper Dolls Demo

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This helps students of any level understand polymers. Each student is given a piece of paper. They fold it like they are making a fan (1' -2" wide). With the paper folded, they draw the following on the paper:

(image missing)

They cut on the lines noted above. They have made "paper dolls". Have the students fold them back up and write "mer" on the chest of the first paper doll. Then they will stretch it out and ask, "What have we made?" We have many "mers", what is another way to say many? Think of math, a many sided object is called a (polymer) etc. until they realize they have made a polymer.

Depending on the level of your students, you can talk about dehydration reaction to join the monomers together. You can talk about hydrolysis and how you can break the monomers off.

When you then talk about carbohydrates....refer to the polymer. What is the monomer in a carbohydrate? (sugar) What do we call it when we have many saccharides? (polysaccharide)

When you talk about proteins....What is the monomer? (amino acid)

When you talk about nucleic acids....What is the monomer? (nucleotide)

I tell my students to keep their polymer, it is a valuable part of their notes. If they get confused later on, we pull out the polymer....someone still will have it and reconnect the idea.