



**D**id you know that many toys are made from polymers? Polymers are made of tiny chemical units that are hooked together to form very long chains. “Poly” means many and “mer” means part. Together, the word polymer means “many parts.” Imagine a long line of blue beads connected together. This chain of blue beads is like a polymer. It has many parts hooked together. If you place a white bead between two blue beads, you make a new pattern. You can string blue and white beads in many ways, making many different patterns. Each pattern is like a different polymer. These polymers can be used in toys. They can be rubbery like a bouncy ball, oozy like glue, or as hard as skateboard wheels!

People have been making toys from polymers for hundreds of years. Wood is made of a natural polymer called cellulose. Before plastic was invented, people sometimes carved or made wood into toys. Other natural polymers, called proteins, can be found in feathers, beaks and fur. They were used as toy decorations or for toys like drums. One of the first balloons was made from the sap of a rubber tree. Your great-grandparents probably played with toys like spinning tops, dolls, and kites. They were made from silk, wood, cotton or rubber—all naturally occurring polymers!

Some of the toys you have today may still be made out of these natural polymers. But most toys are made from materials called synthetic polymers which were created by chemists. Examples of these are plastics and artificial versions of rubber. To make these synthetic polymers, chemicals are mixed together in factories. Since plastics and other synthetic polymers are light, strong, flexible, and stretchy, they are good materials to make toys.

Plastic toys are lighter than toys made from metal. They can be made with curved edges and molded into any shape. Some toys made from plastics are Lego blocks and Mr. Potato Head. Big Wheels bikes are also made out of special polymers. The polymers are heated and formed into their special shapes. In the “Super Shrinkers” activity, you will cut out bits and shapes of a certain type of plastic, color them, and heat them to make art.

Look around your room or the place where you keep your toys. Are the toys you see made out of polymers?

