



## SfS Away from the Classroom!

### C03: Polymer Investigation (Recommended for Grades 3-8)

Please use the following resources to learn about polymers.

Watch this Video: <https://ed.ted.com/lessons/from-dna-to-silly-putty-the-diverse-world-of-polymers-jan-mattingly>

#### Answer these questions:

- What is a polymer?
- What are some examples of polymers that we use, or see, everyday?
- How was Silly Putty invented?

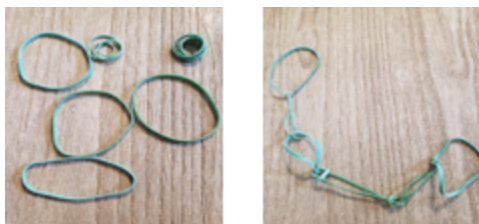
**Activities:** Follow these directions to make monomers and polymers.

You will need:

<ul style="list-style-type: none"><li>• Several paper clips or rubber bands</li></ul>	<ul style="list-style-type: none"><li>• Several colored Legos, blocks, or small pieces of paper</li></ul>
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Material 1 (choose paper clips or rubber bands; not both!)

1. Lay out all of the rubber bands. These are the monomers.
2. Attach all of the rubber bands to each other to create a polymer.
3. Answer these questions: Is this polymer strong? Does it break easily? Why?



Material 2 (choose Legos, blocks, or small pieces of paper; not all three!)

1. Select 2 or 3 colored blocks to make the monomer.
2. Create as many monomers as you can with the blocks.
3. Attach all of the monomers, in the same pattern, to create a polymer.
4. Answer these questions: Is this polymer strong? Does it break easily? Why?



## **Make observations & use Claims, Evidence, and Reasoning!**

1. **Claim:** Polymers are made up of many repeating units (monomers).
  - **Evidence:**
  
  - **Reasoning:**
  
2. **Claim:** Depending on the material, polymers will either break or twist.
  - **Evidence:**
  
  - **Reasoning:**