

## Build a Polymer Game

From: Mary Garrison Neimeyer

### Supplies for Each Group

1. Pop Beads, Legos,
2. Run the cards below on different colored cardstock.
3. Print the directions for each group.

### Two Ways to Play:

The objective is:

- a. to be the first to build a chain of five monomers, making a polymer.

Or

- b. Set a time limit and whoever has the longest polymer at the end, wins.

### TO START THE GAME:

1. Place the cards and beads in the middle of the group.
2. Each student starts with one bead and one water.
3. Oldest student goes first.

### WHEN IT IS YOUR TURN:

1. Roll the dice.
  - a. If you roll an odd number, you get to pick up a monomer (bead).
  - b. If you roll an even number, choose a card: dehydration synthesis, hydrolysis, or a water card.
2. Make **at least 1 play**, if you can. You can make more than 1 play, if possible. You cannot save cards or beads until the end. Here are your play options:
  - a. Use a **hydrolysis card and water card** to break another player's polymer and take the removed monomer.
  - b. Use a **dehydration card** to connect two monomers, then pickup a **water card**. (When you put two monomers together, it creates water!)

When you are done making plays your turn is over and the next player gets to go.



[illegible]

<b>DEHYDRATION SYNTHESIS</b> (GET A WATER CARD WHEN PLAYED)	<b>DEHYDRATION SYNTHESIS</b> (GET A WATER CARD WHEN PLAYED)	<b>DEHYDRATION SYNTHESIS</b> (GET A WATER CARD WHEN PLAYED)
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