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Shrink Plastic!

Who would've guessed that a thin sheet of plastic could be so much fun? The product known as Shrinky Dinks was invented in the early 1970s and became especially popular in the 80s. What is it? Shrink plastic is exactly what it sounds like: plastic that shrinks down to a fraction of its size. People use shrink plastic to make jewelry, pins, ornaments, keychains, and all sorts of other things. What will you make?

Books and Media:

Title	Author / Performer	Call Number:
Free Spirit Doodles	Corfee, Stephanie	J 741.2 COR
The Jewelry Recipe Book: Transforming Ordiary Materials Into Stylish and Distinctive Earring, Bracelets, Necklaces, and Pins	Soriano, Nancy	745.594 SOR 2015

Websites:

URL	Notes
https://www.extremetech.com/extreme/187736-harvard-mit-create-first-self-assembling-robots-the-first-real-transformers	This article and imbedded video talk about self-assembling robots.
http://www2.technologyreview.com/tr35/profile.aspx?trid=764	This *MIT Technology Review* article talks about the innovative way Shrinky Dinks are used in a discipline called microfluidics.

Vocabulary

Atoms—The smallest units of matter.

Chemical reaction—When substances undergo a change to form new substances.

Molecules—Two or more atoms bonded together.

Plastic—Plastics are typically organic polymers of high molecular mass. The word plastic comes from the Greek word "plastikos," meaning "able to be molded."

Polystyrene — is one of the most widely used plastics. Polystyrene can be transparent or colored with colourants.

Polymers— Large molecules made up of repeating units.

(Source: *Plastics* by Ruth Thomson (J 363.7282 THO). *You Wouldn't Want to Live Without Plastic!* by Ian Graham (J 620.1 GRA)).

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Shrinky Dink Fun Facts:

- Shrinky Dinks were invented in 1973 by Betty Morris and Kate Bloomberg as a Cub Scout project with their sons. The base material consists of thin, flexible polystyrene plastic (#6) sheets.

- Harvard and MIT engineers, showing a reckless disregard for the robocalypse, have created origami robots that can self-assemble themselves — from a flat piece of paper and polystyrene — and walk away in just four minutes.

- Professor Michelle Khine applied Shrinky Dinks to create tiny structures for the application of microfluidics to topics such as stem cell research.

Take Away Kit: Shrinky Dink

Bag Contents:

- #6 plastic sheet
- Permanent marker
- Hole punch
- Parchment paper
- Key ring

How to make a Shrinky Dink:

Ask an adult for permission or help using the oven for this project.

- Preheat the oven to 375 degrees.
- Cut the Shrinky Dink paper, or your #6 plastic into the shape you want. Punch a hole in your Shrinky Dink shape if you are making a keychain.
- On the plastic, trace a character from your favorite book in permanent marker. You can also color anything you want on there.
- Place the parchment paper on top of a baking sheet and put your Shrinky Dink on the baking sheet.
- Put the Shrinky Dink item(s) in the oven for one to three minutes. Watch them very carefully. First they will curl up and then flatten back down.
- Take the Shrinky Dink item(s) out of the oven when flat and let them cool completely