

# Plastics

5 (or so) sites & 10 videos

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How long does it take for a plastic water bottle to disintegrate? Who invented plastic? Do elephants like plastic? How many types of plastic are there?

Plastic is an amazing substance that we use for just about everything. It's greatest advantage -- strength and the fact that it never decomposes -- is also it's greatest disadvantage (that it never decomposes). It's amazing to think that as recently as 100 years ago, people lived without it. Let's learn some more!

**1. Why do elephants love plastic?** According to Scientific American, thousands of elephants were hunted in the early 1800's to make billiard balls (for the game of pool) out of their tusks. That changed in 1867, when John Wesley Hyatt, a printer in New York, figured out how to make billiard balls out of a crude form of molded plastic called bakelite. His invention saved many elephants. <http://bit.ly/2LV0jIh>

**2. How long does it take for a plastic water bottle to naturally break down?** It depends on where it. If it's in the ocean, it might float for a year before being ground into billions of tiny bits that will float for hundreds of years. A bottle by the side of the road could last for at least 400 years. That means if George Washington's army left their water bottles by the banks of the Delaware, they would still be there! Learn more at <http://bit.ly/2LWBRqf>

**3. Can a "brass" instrument be made out of plastic?** Yes! Increasingly, plastic is replacing metal and wood for all sorts of things. The Allora brand plastic trombones and trumpets are cheap (1/10 the cost of a good brass instrument), light and dent free, made with ABS plastic -- the same kind that LEGOs are made from. They come in 11 colors <http://bitly.com/2Q5MbPI>. Here's a video of one being played <https://youtu.be/NLAHSgZaMU0>

**4. Where does plastic come from?** Oil, mostly, although different types of plastic have different components; and LEGO is exploring using sugar cane based plastic (see <https://bloom.bg/2M2qJbc>). Here's a video that explains the entire plastic life cycle, from oil to plastic. <https://youtu.be/IwdUwffecsM>

## APPLICATION: Make a Plastic Collection

How many types of plastics can you find in your house? Look on the bottom of containers and you can find numbers that help you know what type of plastic you're dealing with. Here are the seven standard classifications for plastics. Learn more about each type, at <http://bitly.com/2wOvtLU> or watch <https://youtu.be/qTelxi3MjU>

- #1 - PET (Polyethylene Terephthalate) cold drink bottles
- #2 - HDPE (High-Density Polyethylene) grocery bags
- #3 - PVC (Polyvinyl Chloride) pipes, clothes, toys
- #4 - LDPE (Low-Density Polyethylene) squeezable bottles
- #5 - PP (Polypropylene) microwave plastics
- #6 - PS (Polystyrene) styrofoam cups, egg cartons
- #7 - Other (BPA, Polycarbonate) baby bottles

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## Plastics on YouTube

Want more? Here's a video playlist that go along with this column:

<https://www.youtube.com/playlist?list=PLcBVHzUUEKwlohvRyFjXCP-Kb4Da1PcWV&jct=m41OijNSgMm0aOvgxxlOc8RUPbsMtA>

