



BEYOND RECYCLING

Earth Day 2020 – Paper Coffee Cups



If you love coffee, but care about the environment you may have a dilemma. Every day many of us decide to take our coffee with us in easy-to-go paper cups, including those purchased from major coffee chains, fast food restaurants, or gas stations. The classic go-to coffee cup is designed for one-time use and cannot be recycled. Many of us think “paper cups are made of paper, paper is recyclable, and therefore I can recycle paper cups.” This is rarely the case however, because almost all paper cups have a plastic lining that renders them

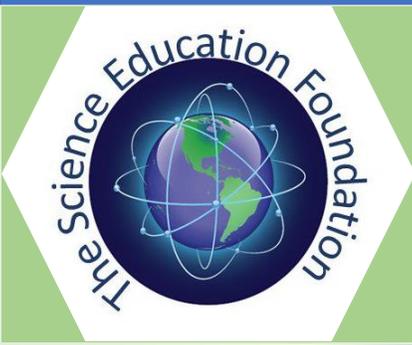
virtually unrecyclable. The lining found on the inside of paper cups is made of polyethylene, and it’s used to waterproof the cup, while protecting its integrity at hot and cold temperatures. This thin coating of plastic, cannot be easily separated from the paper during the recycling process.

Other paper cups are lined with polylactic acid (PLA) which is derived from corn starch instead of petroleum. But this bio-based plastic requires extreme temperatures to break down into compost. Generally, home-based compost systems do not operate at high enough temperatures to break down PLA, and commercial compost options in the U.S are limited. It is estimated that in the U.S. alone, 60 billion paper cups end up in landfills every year. This quantity includes cups sold by all major coffee chains.

- ✓ Using one paper cup a day for a year, creates 23 pounds of waste.
- ✓ Saving one paper cup a day for 40 years, saves 24 trees, 18 days’ worth of power for your whole house, and 1,800 pounds of wood.
- ✓ Depending on forestry practices paper cup production results in loss of trees and ecosystem degradation.

Alternatives to Using Paper Coffee Cups

As consumers, the best solution is to avoid using paper cups and instead purchase a reusable coffee mug or beverage container. If you have time, stay in and treat yourself – sit down and enjoy that premium cup of coffee in a cafe from a warmed cup and saucer. Or take your own reusable cup with



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you. A lot of establishments provide discounts on beverages if you bring your own cup. Reusable coffee mugs or cups options include stainless steel, recyclable plastics, glass, ceramic, or bamboo products.



Problems Linked to Disposable Coffee Cups

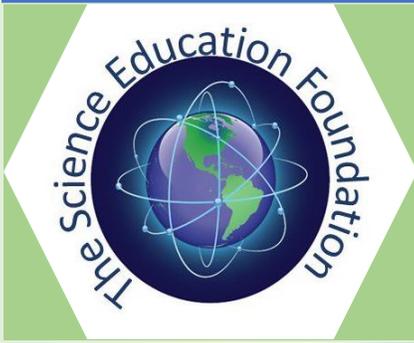
Disposable coffee cups with polyethylene lining are bad for the environment. In addition to polluting the land and water, they require a massive amount of resources and energy to manufacture. Once they're used, they are rarely recycled, and the plastic lining takes years to degrade. As the plastic lining breaks down into smaller particles (e.g., microplastics) they are often mistaken as food by animals. Once the plastic pieces are swallowed, it cannot be digested and gets stuck in the stomachs of animals often resulting in fatality.

Globally, it is estimated that 500 billion coffee cups are produced each year. Because paper-based cups are usually lined with a membrane of polyethylene plastic to make them waterproof, it means they are not recyclable alongside paper or cardboard products. There are also many varieties of coffee cups on the market including wax-coated cups (like milk cartons) and "biodegradable cups." However, without clear labeling, most people and recycling facilities cannot distinguish which cups can be processed and recycled with the cardboard and paper recycling.

Energy, Paper, and Water Use

*It takes 98 tons
of resources to
produce just 1
ton of paper*

"It has been calculated that one disposable cup contains only 5% of the raw materials that were used to create and transport it. The paper component of coffee cups is made from bleached virgin material. This involves the harvesting of trees and pulping, washing, and processing the material, all of which require large amounts of water and energy. In fact, it takes 98 tons of resources to produce just 1 ton of paper. Plastic and polystyrene (Styrofoam) cups are made from non-renewable crude oil and require significant energy for their production. A 2016 World Economic Forum report found that for single use



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plastic packaging, 95% of its invested value is lost to the global economy after its short first use.” - <https://www.choice.com.au/food-and-drink/drinks/tea-and-coffee/articles/are-takeaway-coffee-cups-recyclable>

In our world of shrinking forests and growing landfills, the continued use of one-use paper coffee cups is environmentally unsustainable.

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