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**Essay Title:**

**Plastics in Our Society**

## Plastics in Our Society

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Throughout the 21st century, plastics have developed a negative reputation for doing nothing but ruining the environment. They are notoriously credited with polluting the oceans and killing marine life. However, the adaptability and durability of plastics provide immeasurable cost benefits to several industries and are utilized in the process of bringing these goods from manufacturer to the public. Plastics are also widely used for food, pharmaceutical and other consumer goods packaging. They can provide creative and eye-catching ways to generate market interest and consumer purchases, they can actually preserve the health-benefits and safety of food, and they are recyclable, thus limiting the negative impact on our environment and future conditions of planet health.

Plastics are particularly appreciated in the shipping and packaging phases of the supply chain because they allow manufacturers the ability to customize shape and size for more productive storage and shipping. With this customization ability, manufacturers can package goods in order to store and ship them more efficiently and effectively. For example, processes such as vacuum sealing compress the goods in plastic, making for a product package that takes up as little space as possible. This plastic packaging is extremely light-weight and space-smart, making possible and easy the storage of goods that have not yet been shipped. Moreover, the space to store goods costs a company money and is a cost that is passed onto the customer, so maximizing the space that a product takes in storage is a cost-saving measure that benefits everyone.

When only a small amount of storage space is needed, an equally small amount of space is needed to transport the goods. And in some cases, vacuum sealing may be forgone in favor of the creation of special, customized packaging that allows for the goods to be organized in a way that makes packing and shipping them much more efficient within a larger pallet, truck or cargo container. For example, in large trucks, more goods can fit in a given space when they are compressed in plastic and oriented in a particular shape. When the goods are wrapped or packaged in materials other than plastic, such as large cardboard boxes, more room can be taken up per good which leaves less room for goods and likely costs a company (and the consumer) more money to store, transport and purchase the good. This also saves manufacturers money because trucks and other transporters are able to take fewer trips when more goods are packed in each shipment. Manufacturers also save money because plastic packaging is light-weight and due to the light weight, more goods can be shipped per shipment for less money.

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In the food industry, plastic packaging is a better option than packaging with other materials. The properties of plastic, including its durability and ability to withstand extreme hot or cold temperatures, are important because of the requirement that food effectively be protected. Plastic can also be stabilized to prevent dangerous chemicals from affecting the food. Therefore, the packaging keeps the food inside preserved and nutritious for as long as needed. The plastic can also be manipulated to withstand extreme conditions for longer periods of time. For example, in the summer, packaging keeps cold foods colder for longer in order to keep the food from spoiling. In the winter these same packages are altered because the weather allows for a different structure.

In addition to its ability to withstand a wide range of temperatures and temperature changes, plastic packaging for foods saves distributors money because it preserves the food and limits waste that comes from unpredictable conditions that may occur during shipping. Plastic packaging also protects foods from moisture, oxygen, dust, light, and odors. In particular, plastic packaging on fruits protects them from unnecessary moisture during transportation. This effect is important because if this moisture was allowed to reach the fruits, they would rot faster and would not be able to be sold to consumers.

A further benefit of plastics in packaging is flexibility in advertising. The durability of plastics allows for manufacturers to create eye-catching designs that appeal to consumers. Manufacturers also save money when using plastics for advertising because of low cost. Using plastics costs much less than paper. This is because paper manufacturing is much more energy consuming than that of plastic, as seen in a study done by the United States EPA,\* stating that plastic uses 40% less energy to produce than paper. Therefore, if designers were to use paper while creating ads it would be much more expensive than using plastic. It would also be much harder to achieve the desired design with paper as plastic is more malleable, flexible, and durable than paper. Because of these characteristics of plastic, designers can create more appealing designs which increases consumer interest, sales and brings in more money for companies.

Finally, plastic is recyclable -- meaning, whatever is made out of plastic can be remade into something new. In fact, many companies today are working hard to increase the recyclability of plastic products. If companies are able to reuse materials, money is saved because it doesn't have to be spent on new raw materials. According to the study done by the United States EPA,\*\* a pound of paper requires 91% more energy to recycle than a pound of plastic. This is a huge cost saver for manufacturers because the materials they are reusing and recycling cuts the prices of producing new goods.

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The flexibility, adaptability, properties, characteristics, cost and recyclability of plastics combine to prove the cost-saving benefits and desirability of plastics for many industries worldwide.

So, while it can be argued that plastics may have negative effects on our environment, it is fair and persuasive to argue the many positives they bring to our society. Without plastics we would not have as effective or economical packaging, shipping, or advertising. These factors that save big companies and manufacturers money, also save the consumers' money. The less manufactures have to spend, the lower is the cost of any given good. All in all, plastics do have a positive influence on our society.

\*xplastics.com

\*\*xplastics.com