

# **Lesson 5: Processing & Packaging**

Most of the foods we eat have been altered in some way before they get to our plates. They undergo a process called food processing, which can involve chemically altering food with artificial flavors, additives, and other ingredients. While minimal food processing is done for food safety, convenience and taste, other foods have been processed extensively. These heavily processed foods impact our health and the environment, causing <u>increased cancer risk</u> and lasting effects on ecosystems. Food packaging and its use of plastics is one method of food processing that has significantly impacted the environment.

#### **Lesson Objectives**

- Explain what food processing is.
- Explain the different food processing techniques and their impact on health and environment.
- Explain over-packaging and packaging life cycle.
- Know different ways to reduce food packaging and waste.

## **Food Processing**

Processed food is any food that is altered during preparation to improve convenience, shelf-stability, or flavor. While most foods have been technically processed, not all processed foods are unhealthy as long as there is not much added into the foods. Foods like bagged salad and canned tomatoes are considered to be minimally processed because their natural states have not changed. However, highly processed foods like crackers and jarred pasta sauces are often chemically modified with artificial flavors and additives. Heavily processed foods often lack nutritional value, are quicker to digest, and are calorie-dense. Here are some examples of food processing techniques and their impact on our health and the environment:

- Food Coloring & Artificial Flavors Over 5,000 substances can get added to our food, such as <u>aspartame</u> (an artificial sweetener) and <u>MSG</u> (monosodium glutamate) which have been linked to obesity and cancers.
- **Packaging** Additional chemicals that give the packaging its texture can affect our health, remain in the environment, and interfere with ecosystems.
- Drying, Freezing, & Canning Most dried, frozen, and canned foods have high amounts of added sugars or salt. Overconsumption of these foods can lead to serious health issues like high blood pressure and diabetes.







#### **Packaging Life Cycle**

Majority of plastics are not biodegradable. Instead of degrading, they persist in the environment as smaller pieces or "microplastics," which can be carried across the world by wind and ocean currents.

This plastic pollution has serious impacts on marine ecosystems. For example, the Great Pacific Garbage Patch is an accumulation zone of over 79,000 tons of debris particles and non-biodegradable plastics.



## Over-packaging

Single use food packaging, which involves throwing out plastic bags, styrofoam food containers, and straws after just one use, is damaging to the environment. Most processed foods are often unnecessarily highly packaged, and this packaging pollutes and collects in our landfills and waterways.

# **Ways to Reduce Waste**

Zero waste is the idea of minimizing overall packaging and food waste. We can accomplish this by re-using materials, recycling, using reusable bags and water bottles, and choosing foods with more sustainable packaging at the grocery store. For example, choose cardboard over styrofoam whenever possible because styrofoam never decomposes.

## **Weekly Challenge!**

This week, try a couple of the following to reduce waste a home:

- Try to eat minimally processed foods.
- Use recyclable packaging (say no to straws, use reusable water bottles, etc.).
- Re-use items (paper bags, grocery bags, etc.).