

# Kids in Nutrition

HEALTH BEGINS IN YOUTH.

Food Sustainability Program  
Weekly Newsletter

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# Lesson 2: Food Systems

A food system or food supply chain describes how food from a farm reaches our tables for consumption. This process consists of production, packaging and processing, transportation, retail, and consumption/disposal. Every step requires natural and/or human resources. Our current food systems contribute significantly to greenhouse gas (GHG) emissions in the atmosphere, thereby worsening climate change. Reducing emissions from food production will be one of the greatest challenges in the coming decades; however, individuals can make a HUGE difference through enacting specific dietary changes.

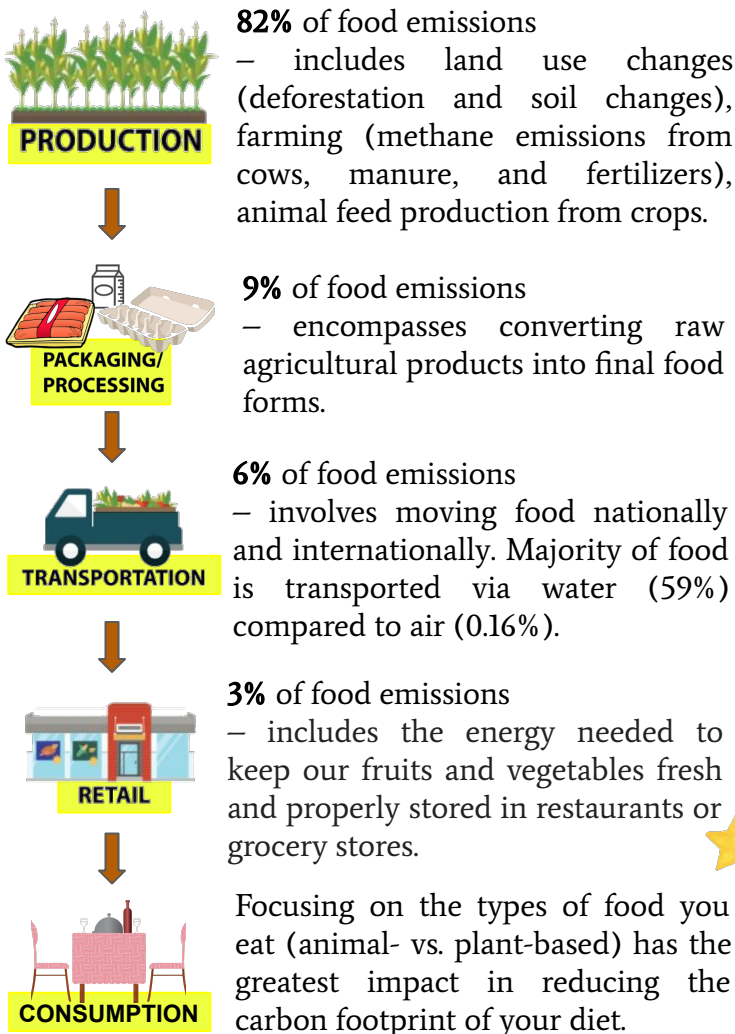
**26%**  
of global GHG  
emissions comes from  
food production!

## Lesson Objectives

- Explain how much the food system impacts overall GHG emissions.
- Explain the food system supply chain.
- Explain what part of the food systems contributes most to climate change.
- Explain that different foods require different levels of energy.

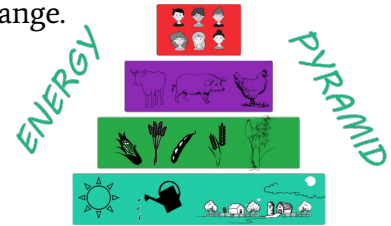
## Food System Supply Chain

Components of the supply chain vary in their impact on GHG emissions. Since transport produces fewer emissions than food production in the supply chain, what we choose to eat is more important than where the food comes from (i.e. eating local).



## Energy Pyramid

Food items differ substantially in the environmental impact their production generates, and therefore individuals have the ability to mitigate climate change through dietary choices. Animal-based foods are more resource-intensive than plant-based foods. However, some animal-based foods are less resource-intensive, such as chicken and eggs. Food items associated with high environmental impact include beef, sheep, pork, cheese, rice, and butter while fresh vegetables, pulses, and wheat are associated with low GHG emissions. Beginning to include plant-based foods in the American diet and moderate animal-based foods is the first step toward mitigating our food system's impact on climate change.



In the energy pyramid, energy flows from the bottom to the top level. The higher up on the energy pyramid, the more energy is used. At the top level of the pyramid are humans, who consume animals higher on the pyramid like cows, pigs, and chickens. These animals need to eat crops to live and grow, and also use the sun, land, and water needed to grow those crops. Thus, overconsumption of animal-based foods higher on the pyramid creates a problem for the environment by contributing to climate change's impact through carbon emissions. Conversely, foods at lower levels of the pyramid (i.e. plant-based foods) require fewer resources to be produced.

## ★ Weekly Challenge!

This week, try one of the following to help reduce emissions from food production:

- Meatless Monday
- Eat a new plant-based protein like tofu
- Be a flexitarian and replace beef with chicken