Composting is a process of turning plant material into a soil like material called compost. It requires ​insects, earthworms (Various invertebrates) as well as bacteria and fungi (microorganisms) to help break down plant materials into fertile soil for agriculture.  It is a natural recycling process that occurs naturally.  It allows nutrients from uneaten foods to reenter to food chain and be used in new plants.

Unfortunately, the US culture has been in the habit for many years of throwing away all organic waste into trash barrels which add to landfill. Food and yard products make up over 30% of landfill in the US. If all of this material was instead composted, our landfill would be reduced by over a quarter and we would create more nutrient rich soil as well and nutrient rich foods rather than our current foods which are void of nutrition.  Even those who only eat organic products must eat a multivitamin today to get their nutrition.  It currently takes the consumption of about 20 oranges today to equal the nutrition we got 50 years ago from 1 orange.  Under our current food and waste industry, we are becoming a culture of obese yet nutritionally depleted individuals.  We eat a lot but our foods, deemed healthy or not, are lacking nutrients.

There are many benefits to compost.  When it is added to soil, it improves water retention, aeration, soil fertility and structure as well as ph balance. It contributes to healthy root development in plants  and also helps control erosion. Sandy soil is able to hold more water and clay soil is lighter when compost is added.

The current means of disposal in our households are via landfill and incineration. Landfill has limited availability of oxygen which contributes to significant delay in breakdown as well as the production of methane gas and acidic leachate.1

Methane gas is a major contributor to climate change.  While it does not linger as long as Carbon Dioxide, its impact is far greater as its ability to retain heat is much higher than that of CO2. Its short term effects are 84 times more potent than CO2.  It is contributing to about 25% more manmade global warming. It is the primary constituent of natural gas thus the major contributor of methane gas is the oil and gas industry. However other sources include cow burps and farts as well as poor aeration of natural food products in landfill.  We can do our part by advocating for fixing methane leaks but also by composting and recycling and becoming primarily vegetarian and vegan in our food choices.  2/3

Acidic leachate is the byproduct of rainwater mixing with toxic chemicals coming from landfill items.  Newer landfill systems  have worked to create a system to minimize leachates ability to mix with groundwater and other elements of the environment but in some cases, it still is able to carry minerals and toxins such as pesticides that may leak into our groundwater and other surrounding environment leading to toxicity.

Incineration leads to increase pollutants. Composting is better for the environment.  It decreases the environmental load by decreasing the quantity of landfill as well as minimizes production of toxic gases which further contribute to climate change.  None the less, composting is putting healthy nutrients back into the soil and thus our foods.  Having foods with better nutrition contributes to greater health, wellness, and overall satisfaction with our meals.   This, in turn, will decrease issues with our current obesity epidemic.

The process of composting can be rapid or slow. If one has a heap of plant items and  never turns them, it may take a long time to compost. The key ingredients to rapid composting include: one, aeration (accomplished by turned the pile), two, hydration, and three, the proper ratio of carbonaceous to nitrogenous waste (30 to 1). Carbon is ideally found in dried leaves and Nitrogen in fresh grass, manure and foods.  Carbon is then energy or food required by microorganisms and nitrogen helps microorganisms digest. These 3 elements help raise the temperature and lead to rapid decomposition.  The ideal temperature for composting is between 90 and 140 degrees fahrenheit.

Composting can be done in your own back yard or by large scale composting companies who collect your waste and do it for you.  The main difference is that large scale composting uses large machines to turn the compost/soil.  Doing it yourself eliminates the environmental and economic stress of using large scale equipment.  However, not doing it at all has a far greater environmental impact.

Another type of composting is called vermicomposting or worm composting.  It is done with red worms, "Eisenia Foetida." The worms quickly turn food products, save oils and meats and fish products, into castings  which are great additives to fertilizers. A box of these worms can consume 4-6 lbs of food waste a week.  After 4-6 months, the castings produced by the worms needs to be placed in gardens as fertilizer.  This system is good for in kitchen use for those who do not have an outdoor composter.

If you want to contribute to the health or our ecosystem and our foods, please compost yourself or join a large composting company to have it done for you.

1. http://www.howtocompost.org/info/info\_composting.asp

2. https://www.edf.org/climate/methane-other-important-greenhouse-gas

3. https://www.greenandgrowing.org/methane-and-global-warming/