

Food Waste

Learning Indicators:

Performing activities; questioning; recording and discussion; demonstration of the imbibed values

Learning Objectives:

- To help children understand the importance of food and of avoiding wastage of food
- To help children appreciate and practice methods for treating and reusing food waste, and the social context of it

Level: Class 6

Subject: Science

We eat food to stay healthy and function well in our day to day lives. What we eat usually travels a long way and goes through an elaborate process before it lands on our plate. Can you think of the steps and processes our food might have gone through to be made edible for us?

Food is a valuable resource, and must not be wasted. Do we waste food? If the answer is 'yes', the next step is to know the quantity wasted and how this food waste can be reused. Remember, to allow reuse, food waste – raw as well as cooked – must be segregated.

Activity 1: Estimating the amount of food wasted

This activity can be carried out at home or in school (if you have a kitchen in school).

Collect the waste from the kitchen in separate bags. In the table below, try to fill in the day-wise details, for a week.*

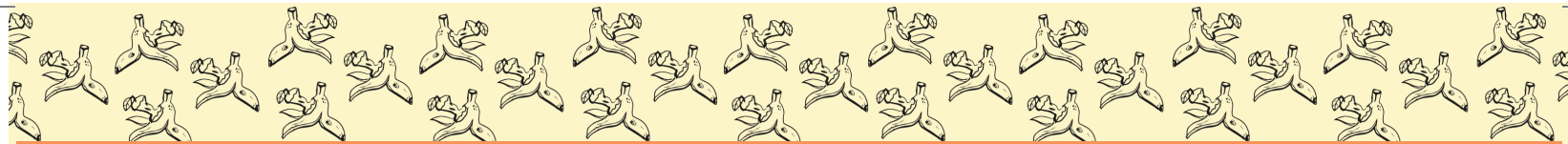
Day and Date	Weight of cooked food waste (gms)	Weight of raw food waste (gms)	Total food waste (gms)
Monday			
Tuesday			
Wednesday			
Thursday			
Friday			
Saturday			
Sunday			

***Note:** A weighing instrument (spring balance, weighing scale, etc.) will be needed to carry out this activity.

Now that we know the amount of food we waste, we will certainly think twice before we take that extra serving! It is best to take little and finish it first and then go for a second helping. Share the findings of your activity with your friends and family members, and discuss how food waste can be reduced further.

Of course, what we call as 'waste' can itself be useful – but only if we want to make use of it. Kitchen waste is biodegradable waste which can be broken down by micro-organisms into simpler substances, which can then be absorbed back by nature.





Biodegradable waste can be reused as compost. This is done through an easy process, and it provides us with manure by the end. This manure can be used in kitchen gardens to grow food again!

Activity 2: Do we reuse our food waste?

Let us carry out a small survey of five households in your locality to know how food waste is taken care of by them.

Write down the responses in the table below:

House number	Response on food waste disposal or treatment method
1.	
2.	
3.	
4.	
5.	

Suppose none of the five households bother to reuse their food waste, and dispose them off without segregating them. Imagine all the households in your town or city doing that – what a mountain of waste would there be!

Would you like to treat your food waste? Let us carry out this simple activity of treating food waste in a process called pit composting.

Activity 3: Pit composting

Step 1: Take two earthen pots and plates for covering them.

Step 2: Make a few holes (one small hole at the bottom of the pot and just 2-3 holes in upper side of the pot and the plate) at different heights to maintain the air flow.

Step 3: Make a mixture of soil and kitchen waste (food and horticultural waste). A layer of soil has to be added at the bottom the pot (maximum one inch).

Step 4: Fill up the pots with waste till they are full. Add composting agent* (1 gram for every 1 kg of waste) to the piles.

Step 5: After every three-four days, turn the piles with a sickle. Make sure the waste is neither too dry nor too wet.

Step 6: After 30-45 days, depending on the climate, you will get your compost. (In rainy season or areas with heavy rainfall, the composting will be slow; in hot climate it will be faster; and in cold climate it will be much slower).

**Organic composting agents like neem, jaggery, coco-peat, etc can be added to expedite the process.*



Things to remember

- The compost that you get is usually 1/5th of the total waste.
- Composting can happen in rainy season as well; keeping the pot covered is important. (The holes in the plate will ensure aeration and a little rain going into your compost won't damage the pile, since we require the pile to be a little wet).
- Cooked food waste can be composted easily. The leachate** is absorbed by the earthen pot; you can add horticultural waste to allow the leachate to be easily absorbed.
- This is an aerobic process – hence a few holes need to be made in the pot at different heights to maintain air flow.
- Avoid adding meat/fish waste in the compost. These are difficult to break up. Even citrus food items such as lemons should be avoided.

****Leachate:** Kitchen waste has high water content which is discharged when decomposition begins. This discharged liquid is called leachate.

- If you wish to buy a readymade composting structure, websites like <http://dailydump.org/> offer good choices.
- If you wish to learn more about making compost pit, please visit <http://www.greenschoolsprogramme.org/knowledge-bank/waste/>