

Hungry *kya*?

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Photo: Divya Choudhary

Food is an important topic taught in middle school. While on the surface it appears as if it is an easy topic to teach, the truth is that it isn't. The idea of food is very complex and is shaped by cultural, political, and social factors. In this article, I will propose an approach to teach food, sources of food, and nutrients in middle school. But, before I give suggestions on teaching 'food', let us first discuss the content and pedagogical issues of teaching about food.

Misconceptions about food

At the middle school level students are yet to understand food in terms of the nutrients it contains.

They will more readily think of food as the sum of different ingredients put together. For instance, *Khichri* is rice, dal, salt, spices, and water cooked together. However, an expert understanding of food is based on its nutritional value. It is important to clarify at this point that this understanding is different from knowing the nutrients in isolation. Apart from this, the understanding of food is also based on personal and social experiences. For example, a lot of people, adults included, consider only solid food items as food. Some people believe that pregnant women should be fed less so that the child doesn't get very big in the stomach and complications don't arise during delivery.

Food habit is not uniform

Food habits also vary from people to people. The choice of food depends on several factors like culture, tradition, religious affiliations, and access to food. There are also other issues such as ethical considerations and personal choice in choosing food items. This variety of food habits should be looked upon as rich diversity, and not as cultural superiority or inferiority. Sometimes, textbooks fail to address this diversity and in extreme cases, propagate cultural taboos against particular food habits like claiming that non-vegetarianism develops a tendency of ill-doing among people. These claims are not only unfounded on empirical evidences but also unethical and politically incorrect.

Sometimes not having access to food due to extreme poverty forces people to choose food that is stale or thrown away. Often, textbooks do not connect the issues of poverty and hunger with the choice of food and rather present an elitist perspective on food. For example, the chapters on food often have pictures of legitimate food items, the major sources of particular nutrients, and discuss the problems of over eating. When they do talk about malnutrition, it is often restricted to providing clinical information and moral sermon. Textbooks portray a simplistic picture of hunger by connecting it with the scarcity of food rather than the lack of accessibility to food.

We consume several things which are not food or do not include nutrients. For example, drugs including addictive drugs, antibiotics, etc. In some food items artificial chemicals are also used as preservatives, colours, emulsifiers, and flavours.

The problems cited above suggest that there is no straightforward approach to teaching food. And contemporary *neutral* pedagogy seems to be inadequate to address the challenges. Therefore, we have to look for a pedagogy that will bring about a balance in these ideas and initiate critical discourse in the classroom.

Searching for a pedagogy

The understanding of food and food related issues can be best developed if “food” is treated as a theme rather than taught in isolation. While dealing with the topic in middle school, it is pedagogically sound to argue that teaching food should start with the students’ intimate experience about food. The National Curriculum Framework 2005 (NCERT, 2005) advocates such pedagogic strategy.

The students’ experience of food is derived from their food habits. Therefore, without defining food, it is reasonable to look at what we eat. And from there we can explore the sources too. Teachers and students have to bring all the diverse food habits on one platform and take it as a resource to understand different food items, constituents of food items, sources of the constituent food items, etc. For example, the NCERT textbook has first introduced the idea of sources of “food” rather than the idea of food itself.

Interestingly, the task of knowing the food item and their source is inherently a social issue. Therefore, it provides students the opportunity to engage in group work. In continuation to this a discussion on other potential topics can be initiated like what are the different food habits among people and the reasons behind such differences. It also provides scope to observe critically the issues like access to food.

Learning goal

We can list the following key points as learning goals:

1. That there are a variety of food items
2. That food items may contain one or more ingredients
3. To identify the sources of food ingredients
4. To identify plants and their parts that we eat
5. To identify animals and animal products we eat
6. To learn about the different food habits
7. To understand the unequal access to food
8. To learn about food items and nutrients
9. To learn the nutrient requirement of the human body
10. To learn about national food production
11. To understand the issues related to packing, transportation, and processing of food.

Plan of teaching

Teacher can distribute a worksheet (Worksheet 1) to individual students to fill in during the holidays.



Worksheet 1: Where does our food come from?

Name of the group:

Name of the individual member:

Date:

Sr. no.	Food item	Ingredients	Sources of ingredients	Parts of plants or animals used, or animal product

Students have to list all the food items they consume in a day. When they bring the filled-in worksheets, teachers can ask them to form groups of four and fill up a consolidated worksheet. It is quite likely that no two lists will be the same. This diversity across students' worksheets will motivate them to discuss and know from each other. In a class of 40 students, there will be 10 such consolidated lists. Students should also write their observations at the end of the worksheets, such as differences or similarities if any in the food item for Worksheet 1. Now each group can read out their list in class. Other groups need to take notes to avoid repetition in the presentation.

To address the issues of production of and access to food organize a student debate on the topic of hunger. Here are some questions that teachers can ask

1. Why do we have so many hungry people in India?
2. What are the reasons for hunger?

Teacher can bring some statistics on production of food, its pattern of distribution and consumption, and price in the Indian market. This can be connected to people's incomes and the lives of farmers. Teacher can share news reports and statistics on farmers' profit and loss from the production. At this point, teacher can ask who has the right to access food? Why do farmers commit suicide? What factors should decide who should have access to food?

In addition to this it is also possible to discuss the issue of processing food and food products, packaging and transportation in terms of economic and environmental impact. The discussion can be initiated with suitable case studies.

This discussion will lead to nutrient value in food items. Here, teacher can share the list of ingredients given on the packaging material of food items (e.g., milk packet) with the students. This list will help



Worksheet 2: Ingredients in food items

Name of the group:

Name of the individual member:

Date:

Sr. no.	Food item	Cost	Names of ingredients	Ingredient is a nutrient (Y/N)?	Amount present (mention with unit)	Amount in %

teachers introduce students to nutrients. This will also help highlight the nature of additives used in processed food and whether we should consume these additives. Students can use Worksheet 2 to record their observations.

From this activity students need to summarize the following:

1. The variety of nutrients they found in the given food items
2. The proportion of nutrients present in a particular food item
3. Estimate the nutrients present in the food items listed in Worksheet 1
4. Compare the cost of food items with similar nutrient values listed in Worksheet 1 and Worksheet 2
5. Estimate the amount of food and nutrition required in a day with the help of Worksheet 1 and 2
6. Compare the food items and non-food items in the ingredient list in both the worksheets.

In addition to this students can estimate the economic and ecological impact of cooking their own food or using processed food.

A set of experiments can be designed to demonstrate the presence of carbohydrates, fat, and protein in different food items. Some of these experiments can be found in the recent NCERT textbooks. However, care must be taken to view the experiments as exploratory and tentative and not definitive. Students might ask for ways to test the presence of vitamins and minerals in food. The presence of some minerals can be demonstrated by keeping cut vegetables and fruits in open air and discussing possible reasons of the change in colour. The history of discovery of particular nutrients and their role in nutrition can be narrated in class or relevant reading materials can be shared with the students.

The sources of nutrients need to be discussed with reference to the local and familiar food items. The discussion can be extended to finding out whether local food production will be enough to supply

food to all people. This will create the context for introducing the profile of production of different food items in different regions of the country. The packaging and transportation of food items from one part of the country to another and its economic and ecological impact can also be talked about. The role of the Food Corporation of India, the total storage of food items in storehouses, wastage of food due to transportation, relocation, and storage, and the actual amount of food required to feed hungry people can be a project that students can undertake.

If there is not enough production of food in a locality, on what basis are the consumers decided? Does anyone have the right to purchase any amount of food items for his/her personal consumption? Ask students to give some thought to these questions. Teachers can come up with several more important questions based on students' responses and the overall classroom discourse.

List of resources

The activities mentioned above will need 100 sheets of paper (worksheet 1 and 2 for each student as well as each group of four members, for a class of 40 students). The discussion activities will require relevant newspaper clippings.

Reading materials for students can be gathered from wide literature survey. I have listed some reading materials on my blog. Interested teachers can visit the link <http://continuinglearning2teach.wordpress.com/e-r/d-p/resource-letter-food/>.

Request to practising teachers

The ideas in this article are not the only definitive teaching-learning plan. Only teachers can validate this plan in their respective classrooms. I will appreciate it if teachers share their rich expertise in order to develop better teaching-learning plans.

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