

My Food, My Choice

Overview

This learning unit is designed to help students make an informed choice of food; keeping health and nutrition in mind. Students will be asked to bring different foods from their home and keep the foods in transparent petri-dishes or watch-glasses. Students will observe and record changes happening in the foods as they spoil. They will then have a discussion on how television advertisements promote certain packed food and how to look at them critically rather than getting carried away! Finally, students will explore certain food labels of packaged food. Reading food labels is an important skill which enables the learner to make a choice between different packed foods available around them. This learning unit will provide the essential skills to students to make informed choices of buying/consuming nutritionally healthier rather than junk food.

Time required

Preparation of the learning unit begins 5 days ahead. Only 5 min are required on day 1. Students observe their plates everyday and record observations. Total time required on the day of conducting the learning unit- 80 min.

Type of learning unit

Laboratory and classroom. In case of unavailability, laboratory part can also be done at home.

Important note: We request teachers to mention this to students right at the beginning that this learning unit is NOT to stop them from consuming/buying the food of their choice. It is aimed at creating awareness about certain factors we ignore while trying to satisfy our taste buds! This learning unit will help students become considerate of the environment or their own health.

Introduction

Our health largely depends on what we eat. While we know of the nutrition we get from different foods, we also know that certain foods can be preserved in a way so that they last longer. But this preservation comes with a cost. Let us see how. Tomato ketchup (sauce) is made from tomatoes. But this ketchup contains high amounts of sugar (~30%) and other preservatives. Of course, a tomato cannot replace sauce, especially when one is tempted by its tangy taste! But one can certainly decide how much of the sauce can be consumed at a time, given its nutritional value.

This learning unit is NOT about comparing a fresh food with its preservable form. It is also not about stopping you from consuming any food. It is about what choice to make when one thinks about questions like *“Which food should I buy? How much of this preserved food can I eat? Can I eat it everyday? Can I make the same food at home to retain some of*

its nutritional value?" The learning unit makes students think about their own choices of packed food and the ways in which they could harm/benefit us. Towards the end, students explore empty food packets of biscuits for the information they provide. Food packets are a good source of information, often ignored by the consumer. This information includes nutrients, ingredients, packaging and storing information, certification, allergy alerts, etc. Finally, students get to know of this as a resource and can also use it to make healthier choices when they are in the consumer's shoes.

Learning objectives

This learning unit will make students understand

1. Changes in fresh foods when they undergo spoilage and reasons for the same.
2. How preservation minimizes food spoilage?
3. That nutritive value of a food is affected upon processing and packaging
4. Reading and exploring food labels as a skill
5. Comparing food labels of the same kind of food and how food labels inform the choice of buying

Links to the curriculum

Class 6 th	Class 7 th	Class 8 th	Class 9 th
Chapter 1: Food: Where does it come from?	Chapter 2: Nutrition in animals	Chapter 8: Micro-organisms: Friend and Foe	Chapter 13: Why do we fall ill?
Chapter 2: Components of Food		Chapter 10: Reaching the age of adolescence	
Chapter 9. Living organisms and their surroundings			

References

- Dana Zeidler and Sami Khan. It's Debatable: Using socio-scientific issues to promote scientific literacy K-12 NSTA Press

Task 1: What spoils first?

Material needed

A slice of tomato, a slice of cooked potato, a spoonful of tomato ketchup or *chutney*, a potato chip, a spoonful of wheat flour and a piece of bread or *chapati*, petri-dishes or watch glass.

- This is to be done 3-4 days before the actual task. Teacher can divide students in groups of 3-4 members and ask each group to bring 6 kinds of foods- a tomato slice, tomato ketchup or chutney, a cooked potato slice, potato chips, wheat, biscuits and a piece of bread.
- Each of these samples can be placed in petri-dishes or watch-glasses (covered) and labelled.
- Everyday, starting from this day, students record changes in the food with respect to color, appearance, texture and smell, if any. Details can be recorded in the format given below.
- Different groups can take different food items and the whole class can keep entering the details in a common journal.
- Tomato and Tomato ketchup/chutney in this table can be replaced by potato and potato chip or wheat, bread and biscuit for different groups depending upon the availability.

What students will do?

Ask them to keep all the food items in plates or watchglasses separately and label them. Make sure they cover the plates with a lid or a beaker (in case of watch glass). Let students observe them everyday for change (if any) in color, appearance or smell. They can record the observations in the table below. Repeat this for 3-4 days until the day you actually plan to end the LU. This may take 2 class periods.

The spoiled foods can be discarded as 'wet waste' after the end of the activity.

Table: What changes do you see in the food samples you are observing? Record in the table below

Tomato/Potato/Wheat	Day 1	Day 2	Day 3	Day 4
Colour				
Appearance				
Smell				
Ketchup/Chip/Bread or chapati				
Colour				
Appearance				
Smell				

Now that students have completed 3-4 days of observation, you can answer the following questions:

1. Which all foods have spoiled? How do you know they are spoiled?
2. Which food was the first one to spoil and how did you know it was spoiled?
3. Which foods are still fresh and why have they not spoiled?
4. Look at the table above and answer the questions. What is the difference between a tomato and tomato ketchup; a potato slice and potato chip; wheat flour and bread? What are the additional changes in a ketchup, a chip or bread?

For this table, encourage students to write what is DIFFERENT in the food on the right side. What are the additional ingredients that are added to make the final product from the one on left?

Tomato	Ketchup/chutney
Potato slice	Potato chip
Wheat flour	Bread/Chapati

5. Now, tomato ketchup/chutney, potato chip and bread/chapati are made from tomato, potato and wheat, respectively. Wheat flour stay fresh for longer compared to a tomato or potato slice? Why?

6. Do you think tomato ketchup/chutney or potato chip will stay fresh for longer? What is in these foods that they don't spoil quickly? Can you find out what all is present in preserved foods?

Task 2. I crave...

This task requires students to think about factors which affect their choices of packed food. Students will solve this part in their worksheet. While students solve this part, teacher would choose one advertisement from the links below to engage students in a discussion.

We all crave that one delicious packed food. It may be a crisp like chips or biscuit, a chocolate, a drink, a *namkeen* or other packed food. Which is your favourite packed food?

What makes you buy that food? Tick whichever is applicable (You can tick more than one).

I like its taste ☐ My friends like it ☐ It comes with a special gift ☐

It is advertised by my favourite star/sportsperson ☐ Any other reason ☐

Please state your reason

It is highly likely that the packed food of your choice is also advertised on the television. Now, your teacher will show you a video of a packed food/drink.

Following is a list of links from which teachers can choose OR you may choose an advertisement which could be your students' popular choice. We suggest you choose anything within most of the students' experience.

- 1) <https://www.youtube.com/watch?v=NoYdJbjgZq8> (Boost ad.)
- 2) <https://www.youtube.com/watch?v=TpZ-QWX6Prw> (Complan latkeram)
- 3) <https://www.youtube.com/watch?v=fWsarvI4LHo> (Horlicks)

After showing the video, you may engage students in a discussion using questions below. It is advised to NOT use the name of the product. You may say 'health drink' or 'snack'. Invite all possible answers from students to get a diverse perspective from the class.

Questions for discussion (You may add your own questions too!)

1. Name something that you liked and did not like about the advertisement.
2. What are the benefits of consuming this food?
3. Are there any risks of consuming this food?
4. Would you buy it? Why or why not?
5. What factors will you consider before buying it?
6. After consumption of the food, how will the empty packet be disposed? Will the disposal process affect the environment?
7. Can the packaging be reused instead of disposing?
8. Will these questions influence your choice of buying such products in future?

You will then have a class discussion. After the discussion, watch the advertisement of your favourite food again. Is there anything that surprised you about the advertisement of your favourite food?

Task 3: Explore the labels

Material needed: Empty packets or biscuits, chips or namkeen. To maintain uniformity, you may ask all students to get empty packets of biscuits. If you feel appropriate, you may also ask students to bring an empty packet of ANY food item.

Important note: Energy requirement- Daily allowance of an adult: **2000 kcal**
Excess energy will add to the calories and increase in amount of fat if not burned by exercising.

Have you ever CAREFULLY seen the backside of a packet of chips or *namkeen* or biscuit? Take a look at the backside of the packet that you have brought or your teacher gives.

1. What all information does it provide?
-
-

2. Which nutrients are present in the food label you explored?
-
-

3. After reading the food labels, is there anything that surprised you?

4. Which food would you prefer out of the ones displayed? Why?

5. When you go out for buying packed food, how will you make a choice, now that you can explore a food label?

6. Any other information on the label that you consider equally important?

7. Any other information which is NOT on the label but you think it should be added to the label?

Classroom activity

We all know that most packed food is junk. It also leads to increase in amount of waste generated. The purpose of this learning unit will be truly served when students apply their learning beyond the classroom, to their life. Thus, students can begin by making a chart which can be kept in your classroom near the dustbin, so that students enter details of an empty packet before it lands into the dustbin. Every week or every month, students can record how many packets of which kind of snack were dumped. Towards the end of the year, they can make a graph/chart to see if there is any drop in the amount junk food consumed or waste generated due to packed food. We provide a template as follows:

Monthly log of empty food packets

Class _____ Month _____

[illegible]