

# NIOS lesson adaptation project

by  **Embrace** Volunteers  
The power within you!

(A community initiative of Harchan Foundation Trust)

## CHAPTER -4

### METHODS OF COOKING FOOD

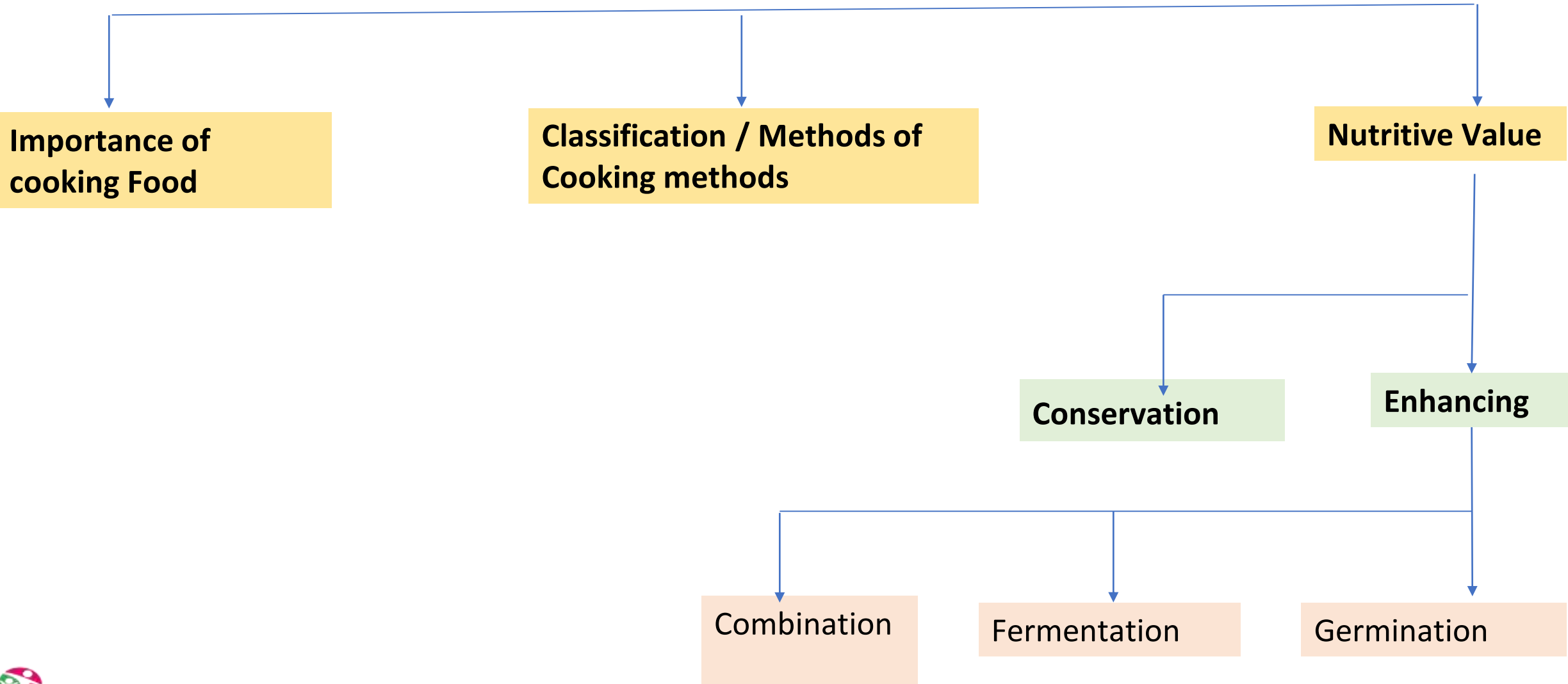
This project is aimed at supporting children with different needs. Information provided is adapted to the best of knowledge by the volunteers. For complete information please refer to the NIOS resources in <https://www.nios.ac.in/online-course-material/secondary-courses.aspx>.

<b>K</b> - What does the child <b>KNOW</b>	<b>W</b> - What does the child <b>WANT</b> to know	<b>L</b> - What has the child <b>LEARNT</b>
	Importance of cooking food	
	Methods of cooking food	
	Cooking practices that enhance or destroy the nutritive value of foods	
	procedures used in preparing and cooking food at home.	
	Retaining the nutritive value of food	

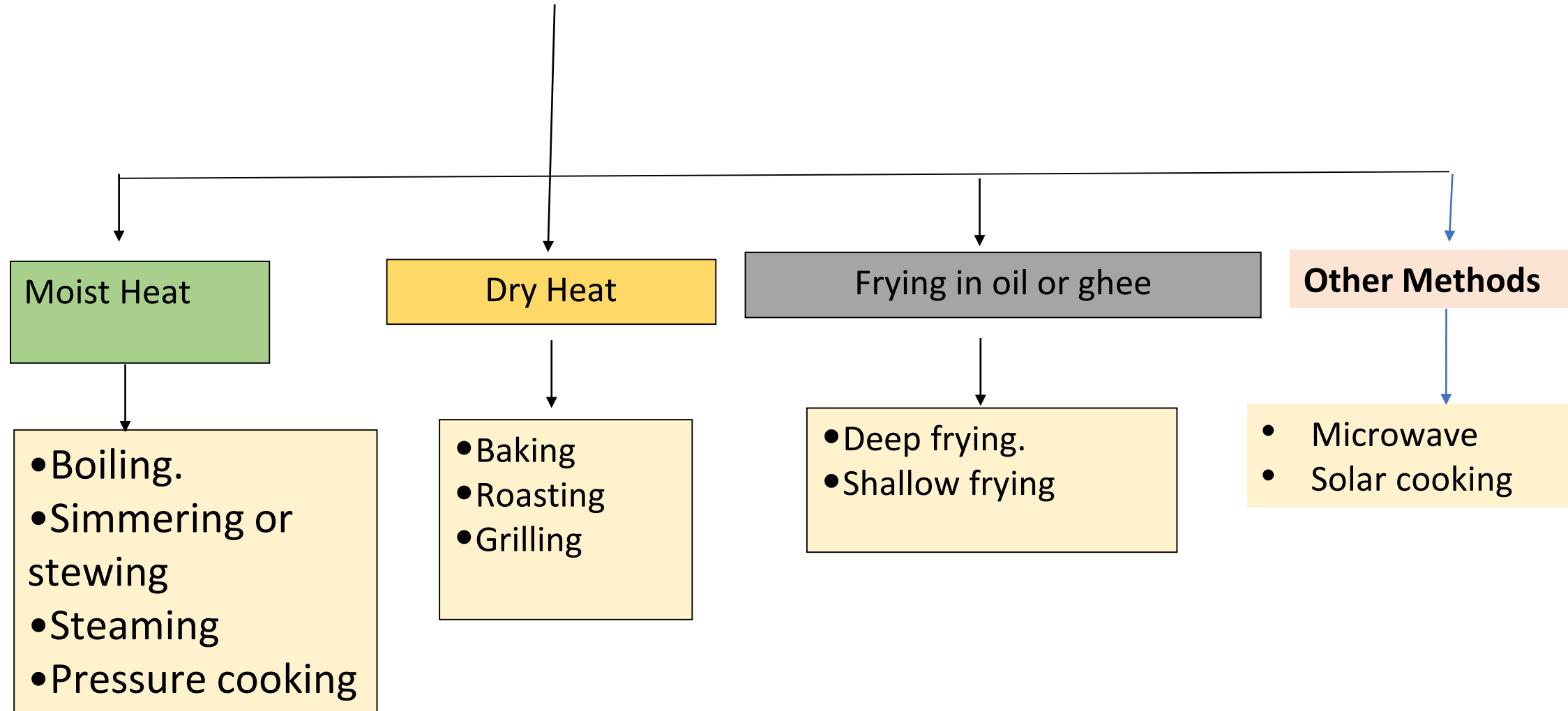
# Keywords and meanings

Swallow	Allow the food to pass down the throat
Texture	Appearance of surface
Micro organisms	That can only seen through microscope .
Nutritive Value	Contents of food and the impact of constituents on body
Water soluble nutrients	Nutrients capable of dissolving in water
Enhancing	Increase or further improve of quality.

# Chapter – 4 Methods of cooking food



# Methods of cooking food



# Importance of cooking food

- Easy to digest.
- Add Flavor and taste to food .
- Add variety to our meal .
- Helps to keeps food longer.
- Cooking makes food safe



# Classification of methods of cooking

Cooking by moist heat



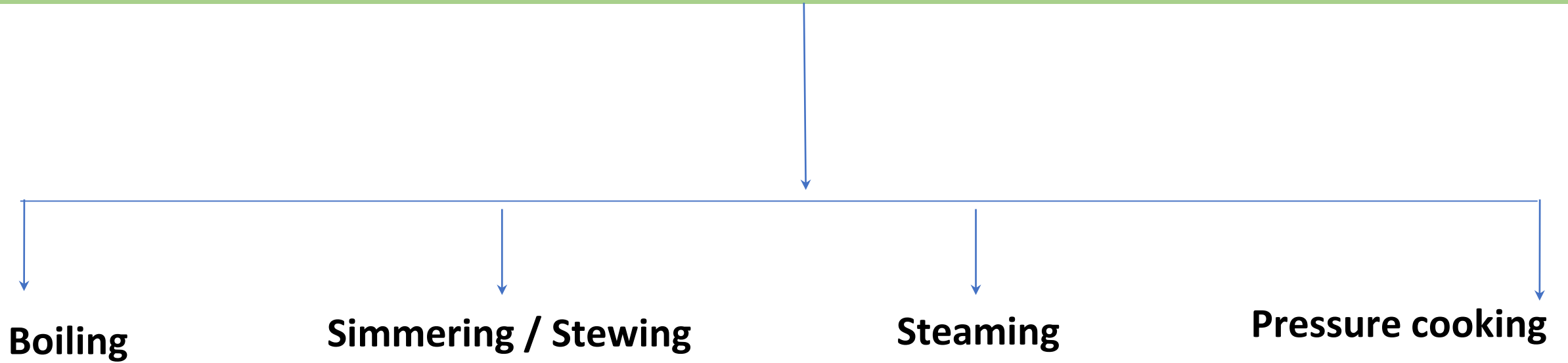
Cooking by dry heat



Cooking by frying in oil or ghee



# Cooking By Moist Heat





# Cooking by moist heat

## **Boiling**-Cooking with adequate quantity of water

- ✓ Wash food thoroughly
- ✓ Boil water and then put the food.
- ✓ Water should cover food completely.
- ✓ Boil in pan with well fitted lid.
- ✓ Don't cook for longer time



# Cooking by Simmering/ Stewing

- Process of cooking food in small quantity of water.
- Which is kept below boiling point for long time.
- Advantages:
  - Here food is served with liquid.(Juices of food )
  - The nutrients are conserved better



# Cooking by Steaming

- Process of cooking food with heat from water vapour .
- Keep food in a pan in such a way that it comes in contact with steam from the boiling water below.

Ex: Idly maker

Advantage: Shortens the duration of cooking , nutritious and easy to digest.



# Pressure Cooking

- Process of cooking food with lot of steam under pressure

- Points to remember while cooking in cooker are

- ✓ Lowering the flame under pressure.
- ✓ Clean the weight regularly
- ✓ Check for rubber gasket regularly.

- Advantages :

- ✓ Cooks Faster
- ✓ Safe and hygiene to eat.
- ✓ Several food can be prepared at one time



# Advantages and disadvantages of moist heat cooking

Moist Heat cooking	Advantages	Disadvantages
Boiling	<ul style="list-style-type: none"><li>▪ Safe and simple .</li><li>▪ Does not get charred.</li><li>▪ Digest easily .</li><li>▪ Large scale cooking .</li></ul>	<ul style="list-style-type: none"><li>▪ Water soluble nutrients are lost</li></ul>
Simmering/ Stewing	<ul style="list-style-type: none"><li>▪ Food and liquid is served together .</li><li>▪ Juices of food is retained .</li><li>▪ Nutrients are conserved better</li></ul>	<ul style="list-style-type: none"><li>▪ Food takes longer to cook.</li></ul>

Moist Heat cooking	Advantages	Disadvantages
Steaming	<ul style="list-style-type: none"> <li>▪ Shortens duration.</li> <li>▪ Conserve nutritive value .</li> <li>▪ Conserve color and flavor.</li> <li>▪ Easy to digest</li> </ul>	<ul style="list-style-type: none"> <li>▪ It won't taste that great</li> </ul>
Pressure cooking	<ul style="list-style-type: none"> <li>▪ Kills all bacteria.</li> <li>▪ Safe and hygienic.</li> <li>▪ Faster .</li> <li>▪ Saves fuel .</li> <li>▪ Several food is cooked using separators</li> </ul>	<ul style="list-style-type: none"> <li>▪ Cooked for long time it loses its texture .</li> <li>▪ May even burn</li> </ul>



# Cooking By Dry Heat

## Baking :

Food is cooked by placing it inside a heated closed box called oven.



## Roasting :

Cooking food by dry heat directly on hot tava or girdle or fire .



## Grilling:

Cooking over glowing fire and uses more indirect heat.



# Advantages and disadvantages of dry heat cooking

Moist Heat cooking	Advantages	Disadvantages
Baking Ex: Roti, Naan , Kulchas	<ul style="list-style-type: none"><li>▪ Adds variety to the texture.</li></ul>	<ul style="list-style-type: none"><li>▪ Should be done properly otherwise it will get burnt.</li></ul>
Roasting Ex: Brinjals, Potatoes, nuts, papad, meat	<ul style="list-style-type: none"><li>▪ Tastier when cooked</li></ul>	<ul style="list-style-type: none"><li>▪ Slow method of cooking</li><li>▪ Dry</li><li>▪ Served with chutney and sauce</li></ul>
Grilling Ex: Panner tikkas, Kababs	<ul style="list-style-type: none"><li>▪ Adds nice flavors to the food</li></ul>	<ul style="list-style-type: none"><li>▪ It causes too much of smoke while cooking.</li></ul>



# Cooking By Frying Method

Cooking food in hot ghee or oil

## Deep Frying :

Immersing the food fully in well heated oil or ghee.

## Shallow Frying:

Cooking is done by using little oil as possible.



# Precautions while frying

- Food should be cut into even size to ensure cooking.
- Food should be placed in well heated oil/ghee.
- Only few pieces should be put into oil.
- Food should be placed on clean absorbent kitchen napkin.
- Oil should not be reused for frying again.



# Advantages and disadvantages of frying

Advantages:

Fried item has longer shelf life



Disadvantages:

- Difficult to digest.
- It has too much calories.
- It is bad for health





# Other methods of cooking food

## Micro wave:

Food is cooked through Micro wave radiation.

- Remember to open a microwave a few seconds after it has stopped to avoid radiation exposure



## Solar cooking:

Uses sunlight as its source for cooking .

- Box type cooker useful for family.
- Panel type cooker useful for large scale cooking



# Advantages and disadvantages of other methods of cooking

Other Methods of cooking	Advantages	Disadvantages
Microwave	<ul style="list-style-type: none"><li>▪ Quick</li><li>▪ Time reduced significantly .</li></ul>	<ul style="list-style-type: none"><li>▪ Electrical energy has to be used.</li></ul>
Solar Cooking	<ul style="list-style-type: none"><li>▪ Do not produce smoke.</li><li>▪ Low maintenance</li><li>▪ Environment friendly method .</li></ul>	<ul style="list-style-type: none"><li>▪ Food takes longer to cook.</li><li>▪ Works only when there is plenty of sunshine</li></ul>

# Loss Of Nutrients During Cooking

Nutrients	Examples	How it lose its Nutrients	How it can be prevented
Vitamin A (fat soluble)	Methi , Spinach , Carrot, Potato	<ul style="list-style-type: none"><li>▪ It gets oxidized when it reacts with oxygen present in air</li></ul>	<ul style="list-style-type: none"><li>-It has to be cooked in covered pan</li><li>-avoid deep frying for food rich in Vitamin A ,as it is fat soluble</li></ul>
Vitamin B (water soluble)	Rice, pulses ,vegetables ,milk (vitamin B2)	<ul style="list-style-type: none"><li>▪ when washed ,soaked or cooked in water.</li><li>▪ Adding cooking soda</li><li>▪ Vit B2 in milk gets destroyed with sunlight</li></ul>	<ul style="list-style-type: none"><li>• Do not wash thoroughly.</li><li>• Do not add soda</li><li>• Don't expose milk to sunlight</li></ul>
Vitamin C (water soluble)	Citrus fruits, sour and Juicy vegetables.	<ul style="list-style-type: none"><li>▪ Destroyed by heat and when exposed to air.</li><li>▪ Washing &amp; Cooking after cutting too fine</li></ul>	<ul style="list-style-type: none"><li>▪ Don't cut too fine.</li><li>▪ Don't wash after cutting</li></ul>

# Loss of nutrients during cooking

Nutrients	Examples	How it lose its Nutrients	How it can be prevented
Proteins	Egg , Fish , and meat	Overcooking leads to dryness Lemon juice.tomatoes,curd,tamarind juices increases cooking time	Adding lemon and tamarind at the end stage of cooking.
Oils and Fats	Nuts, Fatty fish , Cheese	Repeated frying of food	Don't reuse the oil
Minerals	Spinach ,Avocados	Minerals gets dissolved in water when washed	Wash thoroughly before cutting Don't throw excess water which is used to cook.

# Conservation of nutrients

Saving nutrients during the process of preparation and cooking of Food

- ✓ Wash vegetables before cutting .
- ✓ Scrape the peel as thin as possible.
- ✓ Cut vegetable into large pieces
- ✓ Put vegetables in boiling water
- ✓ Don't throw away extra water





# Conservation of nutrients

- ✓ Do not use soda.
- ✓ Use lemon or tamarind during cooking to conserve vitamins.
- ✓ Cook rice in just enough water.
- ✓ Cook in a pan with well fitting lid.
- ✓ Don't over cook



# Enhancing nutritive value of food item

The process of improving the nutrients in food by special method is called Enrichment/ Enhancement of Nutrition.

Purpose :

- ☐ Can meet nutritional requirement of the body.
- ☐ Gives opportunity for proper selection and preparation of food items.
- ☐ Opportunity for balanced food.
- ☐ Improve flavour and texture.
- ☐ Availability of variety of food.
- ☐ Prevent deficiency diseases in body
- ☐ Develop good food habits.

# Method of food enrichment

## ➤ Combination :

Combining foods from different food group is the easiest way of eating all nutrients.

Ex: When pulse and rice are combined the quality of protein becomes good.

### Advantages

Quality of meal increased without increasing cost

Simple technique



# Method of food enrichment



## Fermentation :

Process of changing nutrients by micro organisms which is already present in the food to simpler and better form.

Ex: Idly batter, auto fermentation happens with the micro organisms present in rice and pulse.

Advantages

Improves digestibility

Spongy and soft – suitable for children and elderly



# Method of food enrichment

## ➤ Germination :

Process in which grains are germinated and increased with the nutritive value of food at no additional cost.

Advantages :

- ✓ Increases digestibility of food
- ✓ Increase in nutritive value of food with no additional cost





# Process of germination



Green Moong Dal



Soaked overnight



Drain water



12 to 24 hours



Tie in a wet cloth

# List of Volunteers

## Embrace-NIOS lesson adaptation project

(A community initiative of Harchan Foundation Trust)

**Mentors ( Volunteers ) :** Banu Arjun, Hema Bhatia, Indumathi , Kalpana Sankar, Priya Balasubramanian, Renu Goyal, Sowmya Srikumar, Viraja.

### Special educator/Parent Volunteers:

Beverly Sujit ,Chantelle Saldana, Gayathri,Haritha Meda,Jaishree Muralidharan, Madhushree Bhat, Meenakshi, Nisha Narayanan, Pavithra, S. Arjun , Savita Sharma Bhardwaj, Sathyabhama Naryanan, Selvarani, Shakkeela Narikkoottungal, Shweta Taneja, Sucharitha Karthik, Suja Varghese, Sunitha R , Rohitesh Sharma , Tinu Anna Sam.

"volunteers don't necessarily have the time, they just have the **HEART**."

~ elizabeth andrew

Thank You  
Volunteers.

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