# FOOD PRODUCTION

Student Handbook

NSQF Level-2

CLASS X

CENTRAL BOARD OF SECONDARY EDUCATION

Shiksha Kendra, 2, Community Centre, Preet Vihar, Delhi-110092


BUILDING SKILLS•BUILDING FUTURE•

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**Food Production, NSQF Level - 2**

**Student Handbook, Class X**

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# भारत का संविधान

## उद्देशिका

**हम, भारत के लोग, भारत को एक सम्पूर्ण [1]प्रभुत्व-संपन्न समाजवादी पंथनिरपेक्ष लोकतंत्रात्मक गणराज्य बनाने के लिए, तथा उसके समस्त नागरिकों को:**

**सामाजिक, आर्थिक और राजनैतिक न्याय,**
**विचार, अभिव्यक्ति, विश्वास, धर्म**
**और उपासना की स्वतंत्रता,**
**प्रतिष्ठा और अवसर की समता**
**प्राप्त कराने के लिए**
**तथा उन सब में व्यक्ति की गरिमा**
**[2]और राष्ट्र की एकता और अखंडता**
**सुनिश्चित करने वाली बंधुता बढ़ाने के लिए**

**दृढ़संकल्प होकर अपनी इस संविधान सभा में आज तारीख 26 नवम्बर, 1949 ई॰ को एतद्द्वारा इस संविधान को अंगीकृत, अधिनियमित और आत्मार्पित करते हैं।**

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1. संविधान ( बयालीसवां संशोधन ) अधिनियम, 1976 की धारा 2 द्वारा ( 3.1.1977 ) से "प्रभुत्व-संपन्न लोकतंत्रात्मक गणराज्य" के स्थान पर प्रतिस्थापित।
2. संविधान ( बयालीसवां संशोधन ) अधिनियम, 1976 की धारा 2 द्वारा ( 3.1.1977 ) से "राष्ट्र की एकता" के स्थान पर प्रतिस्थापित।

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## भाग 4 क

# मूल कर्त्तव्य

**51 क. मूल कर्त्तव्य** – भारत के प्रत्येक नागरिक का यह कर्त्तव्य होगा कि वह –

(क) संविधान का पालन करे और उसके आदर्शों, संस्थाओं, राष्ट्रध्वज और राष्ट्रगान का आदर करे;

(ख) स्वतंत्रता के लिए हमारे राष्ट्रीय आंदोलन को प्रेरित करने वाले उच्च आदर्शों को हृदय में संजोए रखे और उनका पालन करे;

(ग) भारत की प्रभुता, एकता और अखंडता की रक्षा करे और उसे अक्षुण्ण रखे;

(घ) देश की रक्षा करे और आह्वान किए जाने पर राष्ट्र की सेवा करे;

(ङ) भारत के सभी लोगों में समरसता और समान भ्रातृत्व की भावना का निर्माण करे जो धर्म, भाषा और प्रदेश या वर्ग पर आधारित सभी भेदभाव से परे हों, ऐसी प्रथाओं का त्याग करे जो स्त्रियों के सम्मान के विरुद्ध हैं;

(च) हमारी सामासिक संस्कृति की गौरवशाली परंपरा का महत्त्व समझे और उसका परिरक्षण करे;

(छ) प्राकृतिक पर्यावरण की जिसके अंतर्गत वन, झील, नदी, और वन्य जीव हैं, रक्षा करे और उसका संवर्धन करे तथा प्राणी मात्र के प्रति दयाभाव रखे;

(ज) वैज्ञानिक दृष्टिकोण, मानववाद और ज्ञानार्जन तथा सुधार की भावना का विकास करे;

(झ) सार्वजनिक संपत्ति को सुरक्षित रखे और हिंसा से दूर रहे;

(ञ) व्यक्तिगत और सामूहिक गतिविधियों के सभी क्षेत्रों में उत्कर्ष की ओर बढ़ने का सतत प्रयास करे जिससे राष्ट्र निरंतर बढ़ते हुए प्रयत्न और उपलब्धि की नई उंचाइयों को छू ले;

[1](ट) यदि माता-पिता या संरक्षक है, छह वर्ष से चौदह वर्ष तक की आयु वाले अपने, यथास्थिति, बालक या प्रतिपाल्य के लिये शिक्षा के अवसर प्रदान करे।

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1. संविधान ( छयासीवां संशोधन ) अधिनियम, 2002 की धारा 4 द्वारा प्रतिस्थापित।

# THE CONSTITUTION OF INDIA

## PREAMBLE

**WE, THE PEOPLE OF INDIA,** having solemnly resolved to constitute India into a [1]**SOVEREIGN SOCIALIST SECULAR DEMOCRATIC REPUBLIC** and to secure to all its citizens :

**JUSTICE,** social, economic and political;

**LIBERTY** of thought, expression, belief, faith and worship;

**EQUALITY** of status and of opportunity; and to promote among them all

**FRATERNITY** assuring the dignity of the individual and the[2] unity and integrity of the Nation;

**IN OUR CONSTITUENT ASSEMBLY** this twenty-sixth day of November, 1949, do **HEREBY ADOPT, ENACT AND GIVE TO OURSELVES THIS CONSTITUTION.**

---

1. Subs, by the Constitution (Forty-Second Amendment) Act. 1976, sec. 2, for "Sovereign Democratic Republic" (w.e.f. 3.1.1977)
2. Subs, by the Constitution (Forty-Second Amendment) Act. 1976, sec. 2, for "unity of the Nation" (w.e.f. 3.1.1977)

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# THE CONSTITUTION OF INDIA

## Chapter IV A

## FUNDAMENTAL DUTIES

### ARTICLE 51A

**Fundamental Duties -** It shall be the duty of every citizen of India-

(a) to abide by the Constitution and respect its ideals and institutions, the National Flag and the National Anthem;

(b) to cherish and follow the noble ideals which inspired our national struggle for freedom;

(c) to uphold and protect the sovereignty, unity and integrity of India;

(d) to defend the country and render national service when called upon to do so;

(e) to promote harmony and the spirit of common brotherhood amongst all the people of India transcending religious, linguistic and regional or sectional diversities; to renounce practices derogatory to the dignity of women;

(f) to value and preserve the rich heritage of our composite culture;

(g) to protect and improve the natural environment including forests, lakes, rivers, wild life and to have compassion for living creatures;

(h) to develop the scientific temper, humanism and the spirit of inquiry and reform;

(i) to safeguard public property and to abjure violence;

(j) to strive towards excellence in all spheres of individual and collective activity so that the nation constantly rises to higher levels of endeavour and achievement;

[1](k) to provide opportunities for education to his/her child or, as the case may be, ward between age of 6 and 14 years.

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1. Subs. by the Constitution (Eighty - Sixth Amendment) Act, 2002

# Preface

The Student Handbook on Food Production for Level 2 (class X) has been designed for students to have a knowledge and understanding of the methods or processes of cookery and to be aware of the simple scientific, artistic and commercial implications to be considered regarding food preparation. At the end of the term they must be able to state which, why and how foods are cooked by various methods. They must be able to explain why these methods are chosen in relation to nutritional, menu and economic factors as well as suitable equipment.

The book deals with soups, salads and simple sandwiches for easy grasp of young students. Attempt must be made to simplify methods and describe ingredients as per local language for better understanding and application. Teachers must emphasize use of fresh ingredients, consistencies, preparation and service.

This book aims to provide a sound foundation for a beginner catering student and motivate them to join the catering industry. The Board acknowledges the contribution made by the team of National Council for Hotel Management and Catering Technology (NCHMCT), Noida in bringing out this book.

**Chairman, CBSE**

# Acknowledgements


## Advisors

- **Sh. R.K. Chaturvedi ,** IAS, Chairman, CBSE
- **Sh. K.K. Choudhury,** Director (ART&I), CBSE

## Content Developed By

- **Sh. Narinder Singh Bhuie,** Consultant (Academics), National Council for Hotel Management and Catering Technology, Noida – **(Convener)**
- **Ms. Shalini Sachdeva,** Senior Lecturer, Dr Ambedkar Institute of Hotel Management, Chandigarh
- **Ms. R. Parimala,** Senior Lecturer, Institute of Hotel Management, Chennai
- **Sh. Saurabh Modi,** Senior Lecturer, State Institute of Hotel Management, Kurukshetra

## Editing & Coordination

- **Dr. Biswajit Saha,** Additional Director (V.E.), CBSE

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# Learning Outcomes

## UNIT: 1

### Introduction to Cookery

| Learning Outcome | Knowledge Evaluation | Performance Evaluation | Teaching and Training Method |
|---|---|---|---|
| **Session 1 : Components of Food** | | | |
| • To explain the components of food and effects of heat. | • State the component of food.<br>• Explain the roles of these components. | • List the components of food.<br>• Identify the role of each component. | • Pictorial presentation of the components of food.<br>• Classifying food for getting the balance right. |
| **Session 2 : Objectives of Cooking Food** | | | |
| • To state the objective of cooking food. | • Explain the importance of cooking. | • Identify the objective of cooking. | • Flipchart presentation on objective of cooking food. |

## UNIT: 2

### Methods of Cooking

| Learning Outcome | Knowledge Evaluation | Performance Evaluation | Teaching and Training Method |
|---|---|---|---|
| **Session 1 : Heat Transfer** | | | |
| • To identify the principles of heat transfer. | • To list the principles.<br>• To explain the transfer of heat. | • Identify Radiation, Conduction, Convection. | • Movie on transfer of heat. |
| **Session 2 : Cooking Methods** | | | |
| • To explain the dry methods of cooking using Radiation principles. | • To list the method using radiation.<br>• To describe the methods to be followed. | • Identify Radiation as transfer of heat for dry method. | • Demonstration on dry method using Radiation.<br>• Pictorial presentation. |

| Learning Outcome | Knowledge Evaluation | Performance Evaluation | Teaching and Training Method |
|---|---|---|---|
| • To explain dry methods of cooking using conduction and convection principles. | • To list method using conduction and convection.<br>• To describe the method of cooking using these principles. | • Identify convection and conduction as transfer of heat for dry methods. | • Demo on dry methods using conduction, convection.<br>• Pictorial presentation. |
| • To describe the moist methods of cooking using radiation. | • To list methods using radiation.<br>• To describe the methods of cooking using this principles. | • Identify radiation as transfer of heat for moist method. | • Demo on moist methods using radiation.<br>• Pictorial presentation. |
| • To describe the moist methods of cooking using convection and conduction. | • To list methods using convection and conduction.<br>• To describe the methods of cooking using this principles. | • Identify conduction and convection as transfer of heat for moist method. | • Demo on moist methods using convection and conduction.<br>• Pictorial presentation. |
| • To explain the methods using medium of fat. | • List the method using fat.<br>• To describe the method using this principles. | • Identify methods of cooking using medium of fat. | • Fields visit to industrial canteen.<br>• Pictorial presentation. |

## UNIT: 3

### Vegetable and Fruit Cookery

| Learning Outcome | Knowledge Evaluation | Performance Evaluation | Teaching and Training Method |
|---|---|---|---|
| **Session 1 : Classification of Vegetables** | | | |
| • Culinary classification and identification of vegetables. | • Classification of vegetables: Roots, stems, flowers, fruits, leaves, fungi, pods etc. | • Chart on classification of vegetables with examples. | • Interactive Lecture: on classification and identification of common vegetables. |

| Learning Outcome | Knowledge Evaluation | Performance Evaluation | Teaching and Training Method |
|---|---|---|---|
| • Quality criteria for selection of fresh vegetable. | • Explain the quality criteria for selection of fresh vegetables. | • Distinguish between fresh and stale vegetable. | • Activity: Visit to local market to identify and select the fresh vegetables. |
| • Uses of vegetables. | • List uses of vegetables. | • Explain the importance of vegetables in diet. | • Interactive lecture on inclusion of vegetables in diet. |
| **Session 2 : Classification of Fruits** | | | |
| • Classification and identification of fruits. | • Classification of fruits: Simple, Aggregate and Multiple. | • Chart on classification of fruits with examples. | • Interactive Lecture: On classification and identification of common fruits. |
| • Quality criteria for selection of fresh fruit. | • Explain the quality criteria for selection of fresh fruits. | • Distinguish between fresh and stale fruits. | • Activity: Visit to local market to identify and select the fresh fruits. |
| • Uses of fruits. | • List various uses of fruits. | • Explain the importance of fruits in diet. | • Interactive lecture on inclusion of fruits in diet. |
| **Session 3 : Cuts of Vegetables and Fruits** | | | |
| • Identification and use of various cuts of vegetables. | • Draw and explain the cuts of vegetables. | • Identify various cuts of vegetables. | • Presentation on various cuts of vegetables using pictures.<br>• Activity: Cutting common vegetables in different shapes. |
| **Session 4 : Effects of Heat on Vegetables & Fruits** | | | |
| • Effect of heat on: colour, texture and flavour on vegetables. | • Describe the effect of heat on - colour, texture and flavour of vegetables. | • List the ways to preserve colour and get desired texture and flavour with application of heat on vegetables. | • Interactive session on colour pigments present in vegetables.<br>• Activity: Boiling vegetables and applying the techniques to preserve colour, texture and flavour. |

| Learning Outcome | Knowledge Evaluation | Performance Evaluation | Teaching and Training Method |
|---|---|---|---|
| **Session 5 : Tips for Preservation of Nutrients while Processing Fruits & Vegetables** | | | |
| • Ways to preserve nutrients while cutting and cooking of vegetables and fruits. | • Enumerate practical ways to preserve nutrients in vegetables and fruits while processing and minimising nutrient losses. | • Chart on healthy ways of cooking. | • Interactive session on importance of preserving natural nutrients while processing and ways to do it. |

## UNIT: 4

## Soups

| Learning Outcome | Knowledge Evaluation | Performance Evaluation | Teaching and Training Method |
|---|---|---|---|
| **Session 1 : Soups** | | | |
| • Define soups.<br>• Importance of soups in diet. | • Define soups and its role in diet. | • Explain the features of soup and its need in diet. | • Interactive session on soups and their nutritional importance. |
| **Session 2 : Types of Soups** | | | |
| • Classification of soup. | • Differentiate between different types of soups such as:<br>a) Thin soups<br>b) Thick soups<br>c) Cold soups<br>d) International soups. | • Chart depicting classification of soups with features and examples. | • Interactive session on various types of soups emphasizing their unique characteristics. |
| **Session 3 : Recipe for Vegetable Soup** | | | |
| • Recipe for preparing Vegetable soup. | • Write the recipe for preparing Cream of Vegetable soup for four persons. | • Selection of correct ingredients and following of given method of preparation of Vegetable soup. | • Interactive session on ingredients used, method and varieties.<br>• Activity: Preparation of Vegetable soup. |

| Session 4 : Recipe for Sweet Corn Soup | | | |
|---|---|---|---|
| • Recipe for preparing Sweet corn soup. | • Write the recipe for preparing Sweet corn soup for four persons. | • Selection of correct ingredients and following of given method of preparation of Sweet corn soup. | • Interactive session on ingredients used, method and varieties.<br>• Activity: Preparation of sweet corn soup. |
| **Session 5 : Recipe for Tamatar ka Shorba** | | | |
| • Recipe for preparing Tamatar ka shorba. | • Write the recipe for preparing Tamatar ka shorba for four persons. | • Selection of correct ingredients and following of given method of preparation of Tamatar ka shorba. | • Interactive session on ingredients used, method and varieties.<br>• Activity: Preparation of Tamatar ka shorba. |

**UNIT: 5**

## Salads

| Learning Outcome | Knowledge Evaluation | Performance Evaluation | Teaching and Training Method |
|---|---|---|---|
| **Session 1 : Classification of Salads** | | | |
| • Understanding the different types of salads prepared. | • The basic knowledge variety of salads.<br>• The importance of raw materials for salads. | • Chart out the different types of salads prepared in hotels.<br>• A list of international salads can be prepared. | • Interactive lecture: Highlight the different types of salads prepared in hotels.<br>• Activity: Visit to the nearest star hotel's kitchen and make a report on types of salads. |
| **Session 2 : Parts of Salads** | | | |
| • Understanding the different important parts of salads. | • The basic knowledge of different salad parts and their uses. | • Chart out the different parts of the salad.<br>• Explain the various salad parts with their examples. | • Interactive lecture: The different parts of salads.<br>• Activity: Visit to the internet and find the parts salads according to their need. |

## UNIT: 6

## Sandwiches

| Learning Outcome | Knowledge Evaluation | Performance Evaluation | Teaching and Training Method |
|---|---|---|---|
| **Session 1 : Parts of a Sandwich** | | | |
| • Understanding the different important parts of sandwich. | • The basic knowledge of different sandwich and its parts and their uses. | • Chart out the different parts of the sandwich.<br>• Explain the various salad parts with their examples. | • Interactive lecture: The different parts of sandwich.<br>• Activity: Visit to the hotels and restaurants and find the parts sandwich according to their need. |
| **Session 2 : Types of Sandwiches** | | | |
| • Understanding the different types of sandwich. | • The basic knowledge of the types of sandwich. | • Explain the various types of sandwich and their examples. | • Interactive lecture: Highlight and list the types of sandwich. |
| **Session 3 : Canapés** | | | |
| • Understanding the canapés. | • The idea of basic knowledge of methods of canapé making. | • Explain the various canapés. | • Interactive lecture: Highlight the different canapés made in hotels. |

# UNIT 1

## INTRODUCTION TO COOKERY

### Objectives

1. To explain the effects of heat on components of food.
2. To state the objectives of cooking food.

### 1.1 Components of Food

The purpose of cooking food is to break it down from its complex form to simple form so that it can be consumed by the human body. To break down the components of food mainly the protein, fat, carbohydrates, vitamins and minerals the effects of heat has to be understood.

**Proteins:** Protein plays the role of growth and repair, hence good source of protein is required. Sources of protein are meat, eggs, wheat, pulses, fish, milk and milk products. When heat is applied on protein it coagulates, from opaque the protein become white in colour. Excessive heat can make the protein rubbery and chewy. We can notice this while eating chicken or meat that is overcooked.

**Carbohydrates:** This gives energy. Sources of Carbohydrates are Rice, Wheat, Potatoes, Plantain, tapioca etc. There are two types of heat - moist and dry. When moist heat is applied the starch in the food absorbs moisture and swells. After sometime it bursts to form a gel. This process is called gelatinization. We have to handle the rice carefully since it continues to absorb moisture and might become a gel sticky by nature. When dry heat is applied on carbohydrates it tends to become slightly brown. When a slice of bread is toasted we notice a brownish reaction this is due to caramelisation of starch.

**Fats:** This provides heat and energy. Sources of fat are meat, eggs, milk, nuts etc. These are made of triglycerides which are a combination of free fatty acids and glycerol. On application of heat fat breaks into free fatty acids and glycerol. If they are cooked further the glycerol converts into acerolin which is not good for the digestive system. For example when oil is used for deep frying if exposed to a high temperature or reused frequently the product deep fried will not only give off flavour but also makes it difficult to digest.

**Vitamins and Minerals:** They protect the body's immunity systems. Sources are found in vegetables, fruits and legumes. Some vitamins are lost when introduced to water or heat but largely vitamins and twenty different minerals remain unchanged with heat. (Vitamin A & B are fat soluble (not water soluble) and are not destroyed by cooking, water soluble vitamins (vitamin C and B) are easily destroyed or lost into the cooking water. Vitamin C vanishes easily.

## 1.2 Objectives of Cooking Food are

1. To make the food more palatable.
2. To help in the digestion process since the food components are broken down by the effects of heat.
3. It kills the bacteria and keeps the food sterile.
4. It improves the eye appeal of the food.
5. When different ingredients are used in the preparation it enhances the nutrition value of the dish.

6. Different methods of cooking changes the texture of the food which brings flavour and aroma.
7. Cooked food can be stored for a longer time.

## Summary

Understanding the components of food and how they break down when heat is applied helps to achieve the objective of cooking food. Applying appropriate method enhance the taste and texture of food served e.g fish is rich in protein is added towards the end to prevent overcooking. Thus the knowledge of food composition is essential to improve the value, quality and shelf life of the product.

## Review Questions

I. **Answer the following in 4 or 5 lines :**

1. List any five objectives of cooking.
2. Explain the effect of heat on carbohydrates.
3. What happens to protein when it is overcooked?
4. State the role of fat and list its sources.
5. Describe the importance of vitamins and minerals.

II. **Answer the following in detail :**

1. Elaborate the role of protein, fat, carbohydrates in food.
2. Why is cooking food essential? Elaborate.

## Practical

1. Make a pictorial chart on the components of food.
2. Make presentation on ingredients rich in protein, fat, carbohydrates in three groups.

# UNIT 2

## METHODS OF COOKING

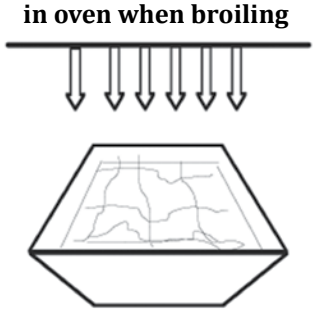
### Objectives

1. To identify the principles of heat transfer.
2. To describe the moist cooking method.
3. To explain the dry methods of cooking.
4. To explain the methods of cooking using medium of fat.

### 2.1 Heat Transfer

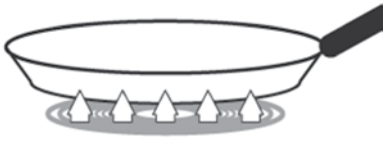
All methods of cooking requires any one or more of the following principles:

**Radiation :** Heat passes through directly on the object that has to be cooked e.g. Grilling.




**Cooking with Radiation**

**Conduction :** This is the process of using metals like pans and utensils for transferring the heat to object e.g. using stainless steel vessels.



Heat Source

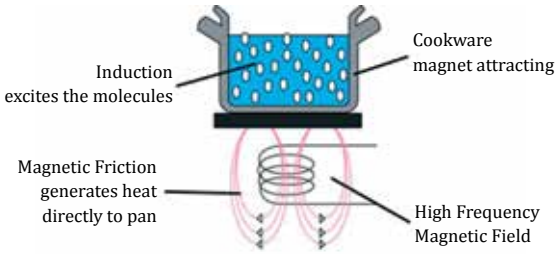
**Cooking by Conduction**

**Convection :** This process is the movement of the heated particles of gases or liquids. On heating the particles expand becomes less dense and rise, the cooler particles take their place e.g. Oven.

By Liquid Currents By Air Currents

**Cooking by Convection**

**Induction :** This process is to cook with the help of electromagnetic waves e.g. Induction stove.




## 2.2 Cooking Methods

**Cooking Methods are Divided into Three Categories:**

1. Moist Heat Methods
2. Dry Heat Methods
3. Medium of Fat

1. **Moist Heat Methods :** In this method the heat is conducted to the food product by water or by steam.
2. **Dry Heat Methods :** In this method the heat is conducted without moisture either by using any of the following:
   - Hot Air: e.g. Oven
   - Hot Metal: Grill, Salamander
   - Radiation: Microwave
3. **Medium of Fat :** In this method the heat is conducted with the help of fat.
   - Shallow Frying
   - Deep frying

### Moist Methods of Heat Cooking

1. **Boiling :** When the liquid is bubbling rapidly and when the water boil at $100^0$c ($212^0$f) at sea level it is known as boiling. Example : boiling of vegetables.
2. **Simmering** : When the liquid is bubbling gently with a temperature of about $85^0$c to $96^0$c it is known as simmering. e.g. making of stock.


3. **Poaching :** When the liquid is usually in a small quantity and the temperature is about 71°c to 82°c (160°f to 180°f) and the liquid is not actually bubbling it is called poaching e.g. poaching of fish, egg.

4. **Stewing** : This is a process in which the food particles are surrounded by liquid and it is cooked in slow heat for a long time. It is usually served along with the liquid which was used for stewing e.g. stew.

5. **Blanching** : This is the method in which the items are partially cooked in water. This enables the food particles to be half cooked e.g. blanching of potatoes for French fries.

6. **Steaming** : In this method the food is exposed directly to steam. Cooking an item by lightly covering the pan or by wrapping it in foil so that the food gets cooked in its own moisture e.g. Jacket potatoes, steamed fish.


Steamers can be used for cooking rice, dal that holds the steam under pressure, the temperature varying from 106° to 121°c (227°f to 250°f). This method is widely used as it minimises the dissolving away of nutrients.

7. **Braising** : This is a combination of two methods stewing and pot roasting. The food particles is browned in fat and then placed in small amount of liquid and the liquid is served along with the meat e.g. Irish stew.

## Dry Method of Cooking

1. **Roasting** : When the food is surrounded by dry hot air usually in the oven or over open fire it is known as roasting. The meat is usually cooked uncovered.

2. **Baking** : This term usually applies to breads, pastries, vegetables and fish when dry heat is applied.

3. **Barbeque** : In this method dry heat is created by burning hard wood or hot coal. The flavour of the coal is imparted to the meat that is used.

4. **Broiling** : In this method the food is cooked over dry heat e.g. Broiling of spices for Indian masalas, broiling of chicken etc.

5. **Grilling** : This is done on an open grooved griddle over heat source which may be from charcoal, an electric element or a gas heated element e.g. grilled chicken.

6. **Griddling :** This is done on a solid cooking surface called griddle with or without fat to prevent sticking. The temperature is approximately 175°c (350°f) e.g. steaks.

## Medium of Fat

1. **Sauté** : This French word means to "jump". Tossing the meat or vegetables in less oil to get a slight browning effect is sautéing.

2. **Deep Frying** : The food is usually submerged in hot oil. This method absorbs less fat, looses less moisture and gives a crispy attractive colour. The food particles are coated with batter or crumb to prevent the fierce heat of oil. Appropriate temperature for fry is 175°c to 190°c (350°f to 375°f). Oil used for frying should be protected from high temperature, oxygen by covering the oil, moisture, salt and food particles. The oil should be replaced by 15 to 20% to extend frying shelf life.

3. **Shallow Frying** : Using less amount of fat for frying the food particles is known as shallow frying. This method, however, absorbs more fat then deep frying e.g. shallow fried fish, parathas.

## Summary

The methods of cooking enables cooking of food particles in many ways is to get different colour, texture and taste. According to the requirement of the customers the cooking method can be adapted e.g. the older people could prefer the moist method for easy digestion and the younger generation could opt for dry methods of cooking. Cooking with combination of both with the help of Combi Ovens has widened the horizon of cooking.

## Review Questions

I. **Answer the following in 4 or 5 lines:**

1. Difference between steaming and stewing.
2. Explain the term braising.
3. What do you mean by the term broiling?
4. List the principles required for cooking food.
5. Describe the method "deep frying".

II. **Answer the following in detail:**

1. Elaborate the dry methods of cooking.
2. Explain the cooking methods using medium of fat.
3. Write about the moist methods of cooking.

## Practical

1. Make a pictorial chart on the different method of cooking.
2. Visit any fast food company or institutional catering.

# UNIT 3

## VEGETABLE & FRUIT COOKERY

### Objectives

1. Classification of vegetables and fruits.
2. Quality criteria for checking freshness of vegetables and fruits.
3. Uses of vegetables and fruits.
4. Nutritional contribution of vegetables and fruits in diet.
5. Identification of various cuts of vegetables and fruits.
6. Effect of heat on colour, texture and flavour of vegetables.
7. Ways to preserve nutrients while processing of vegetables and fruits.

### Introduction

Vegetable and fruits are part of a plants that are consumed by humans as food as part of a meal. They are an inseparable part of meal and are important source of nutrients and fibre.

### 3.1 Classification of Vegetables

The following classification of vegetables is based on the part of plant being used as vegetable:

| Type | Description | Common Example | Quality Criteria | Uses |
|---|---|---|---|---|
| Bulbs | They grow just below the surface of the ground and produce a fleshy, leafy shoot above the ground. Bulbs may contain layers or clustered segments. | Onion  | Firm, dry papery outer skin. No green shoots or soft spots. | Onion is the most used flavouring vegetable in the world. Onions can be eaten raw or cooked. They can be used in so many dishes : soups, vegetable and dal tempering, gravies, pizzas, pies, pasta, salads etc. |

| Type | Description | Common Example | Quality Criteria | Uses |
|---|---|---|---|---|
| | | Garlic  | White, firm, dry skin. No green shoots. Break cloves just before use as they tend to dry up once broken. | Raw garlic gives a strong pungent flavour while on cooking it gives a mellow flavour. It can be used in salads, soups, dals, vegetables, gravies, meats and even in curd. |
| | | Spring Onions  | Bright unblemished hollow green ends and firm small bulb. | They are milder than onions, making them more suitable for eating raw in salads. |
| | | Leeks  | Small or medium size bulbs as large ones are woody. Unblemished fresh greens. | Traditionally they are served with a white or cheese sauce. The white may be sliced and used in salads. Pairs well with ham or bacon and meats. |
| Roots | They grow below the ground as long or round shaped taproot and have green leafy shoots above the ground. | Carrot  | Firm, well-formed and have a good orange red colour. Smaller carrots tend to be sweeter and tenderer. Thick big ones tend to have a hard woody centre. Should be firm. | Can be eaten raw or cooked and are found in savoury as well as sweet dishes such as carrot cake, carrot halwa. They are used in vegetable dishes, salads, sandwiches, meat roasts etc. |

| Type | Description | Common Example | Quality Criteria | Uses |
|---|---|---|---|---|
| | | Radish  | Smooth and firm white colour. Should be crisp and not drying and turning easily when held. | Radishes are mostly eaten raw in salads and may also be cooked in vegetables and used for stuffing for paranthas etc. |
| | | Turnip  | Choose small to medium firm roots with smooth skins. | Turnips give a slightly peppery taste. It can be eaten raw as salad or cooked as a vegetable. |
| | | Beet root  | Roots should be smooth with a firm skin and deep red colour. The leaves, if they are still attached should be fresh and crisp. | The roots can be used raw, grated or finely sliced into a salad. The tender leaves can also be used as vegetable. |
| Tubers | Tubers are various types of modified plant structures that are enlarged to store nutrients. They can be root or stem. | Potato  | Pale yellow, dry skin, thin and smooth, firm no black eyes or shoots, no green surface. | Potatoes are cooked differently: Mealy or floury potatoes with high starch (suitable for mashing) and Waxy potatoes with low starch (suitable for salads, soups etc). |
| | | Ginger  | Choose firm, shiny-skinned and smooth knobs. Don't buy roots with sprouts. | Used to flavour numerous dishes such as dals, vegetables, meats, salads, curd, rice etc. |

| Type | Description | Common Example | Quality Criteria | Uses |
|---|---|---|---|---|
| Flowers | These are edible flowers of certain plants. | Cauliflower  | The leaves at the base of the flower should be fresh and hard not falling off. Tight buds, white in colour, compact- not far apart from each other. | Used in preparing dry vegetable dishes, snacks (pakodas), filled in paranthas and can even be made into sweets. |
| | | Broccoli  | Compact bud clusters with no yellowish or large open buds. | Broccoli has many uses - cooked, raw or lightly blanched - the serving possibilities are endless. From salads, pasta dishes, omelettes, quiches and soups and simple vegetable preparation. |
| | | Globe Artichoke  | Should be with a tight, compact heavy head which yields slightly to pressure. | Serve artichokes as a hot or chilled vegetable either alone or with a sauce. |
| Fruits | Fleshy fruits of a plant eaten as vegetables. | Capsicum / Bell Peppers  | Capsicums should be well shaped and have skins which are firm and shiny. There should not be soft spots or a shrivelled appearance. | They can be used raw in a salad or cooked in casseroles, kebabs, noodles, pizza topping, with meats or used to prepare snacks. |

| Type | Description | Common Example | Quality Criteria | Uses |
|---|---|---|---|---|
| | | Cucumber  | The best cucumbers will have a firm skin, blemish free and an even dark green colour. | Usually eaten raw as salad but may also be used to prepare cold soups, sandwich filling or canapé topping. |
| | | Brinjals  | Choose aubergines that feel heavy with smooth, taut, unblemished skin and no holes on surface. | They can be cooked as vegetable preparation, roasted and mashed to make a bhartha, snack (pakoda) or baby brinjals may be stuffed with spices to form stuffed vegetables. They also go well with lamb dishes. |
| | | Chilli  | Chilli peppers should be well shaped and have skins which are firm and shiny. No shrivelled appearance. | Chilli peppers are the key flavouring ingredient in a lot of Mexican, Spanish, Indian and Asian, especially Thai, dishes. They are also stuffed and fried to form snacks or cooked as Mirchi ka Salan. It's often pickled. |
| | | Pumpkin & Squash  | Choose firm pumpkins and squash that have undamaged skin and feel heavy for their size. | They are cooked to prepare vegetable dish, sweets, stuffed, added to pulses, made into soups etc. |

| Type | Description | Common Example | Quality Criteria | Uses |
|---|---|---|---|---|
| | | Tomato  | Choose smooth, firm and plump tomatoes with an even colour and no blemishes. | Tomatoes are very versatile and easily prepared. They can be eaten raw in salad, put in sandwich filling, canapé topping, pasta sauce, pizza topping, soup, vegetable dishes, tempering, gravies etc. |
| Leaf | Edible leaves of a plant. | Cabbage  | Firm heads that are heavy for their size with even colour and crisp outer leaves. | They are eaten raw in salads, stir fried for noodles, can be blanched and used as a wrapping for meat fillings. It is also pickled. |
| | | Lettuce (Salad patta)  | No sign of wilting, crisp, smooth and blemish free leaves. | Tender crisp leaves are used as salad. |
| | | Mustard leaves (Sarson ka saag) & Fenugreek leaves (methi)  | Crisp greens that are not wilted or blemished. | Mustard leaves are typically cooked in winters as sarson ka saag along with other greens such as spinach and fenugreek leaves. It may also be cooked with meat. |

| Type | Description | Common Example | Quality Criteria | Uses |
|---|---|---|---|---|
| | | Spinach (Paalak)  | Choose crisp green leaves with no signs of wilting or blemishes. | Young leaves are eaten raw as salad. The flavour of spinach is particularly good with eggs and is used in many soufflé, omelette or quiche dishes. Spinach is great in soups, paté and pasta sauces. It is also the base for green Indian gravy. |
| Pods (Legumes) | A legume that opens and contain seeds. These are the pods that are eaten while seeds are still tender and pods are green. | French beans  | Firm, even green, should break when bent at 90° angle. | Used in vegetable dishes, noodles etc. |
| | | Peas  | Look for firm bright green pods which are not too full. Once picked the sugars naturally present in the peas are converted to starches, hence the fresher the pea the sweeter it will be. | Used as a vegetable, soup or added in snacks. |
| Stems | The edible stalks of plants when the stalk is the main part of the vegetable. | Asparagus  | Firm i.e. if a stem is broken, it should "crack" easily, should be of good colour and closed tips. | White asparagus is used to make thick, creamy soup. Green asparagus is traditionally eaten as a side vegetable or as an ingredient with pasta. |

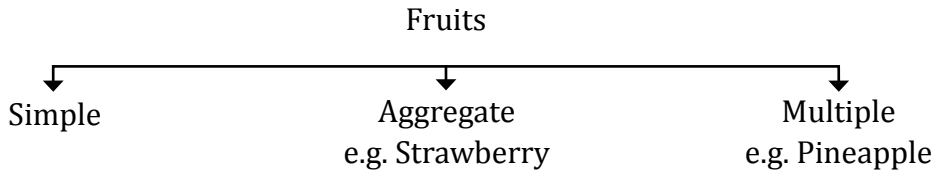
| Type | Description | Common Example | Quality Criteria | Uses |
|---|---|---|---|---|
| | | Celery  | Stems should be firm and crisp when snapped. Leaves should be fresh green and not wilted. | Celery is added to stocks, soups, salads, pies, roasts etc. Lightly stir fried celery with sesame oil is a vegetable dish in itself. |
| | | Kohlrabi  | It should be about the size of a tennis ball or smaller. Should be thin, tender and have unblemished skin. | Kohlrabi is served mainly as a side vegetable, steamed, mashed or in a stir-fry. It may also be baked, stuffed, or added to casseroles and soups. |
| Fungi | All varieties of mushrooms fall into this category. | Button mushrooms, Enoki, Shittake, Truffle, Oyster mushrooms  | With all mushrooms, the fresher the better. They should have good colour and avoid the ones with damaged or bruised skin or stem. Mushrooms continue to grow after harvesting and they respire or 'sweat' in plastic bags. They should be stored in paper bags. | They are frequently served either on their own, although sometimes stuffed and in stir-fry recipes too with soy sauce. Mushrooms are incredibly versatile and will add flavour to many dishes. They can be used with meat, in soups, sauces, on pizzas, in casseroles, in stir-fries, in omelettes, in pies and salads. |

## 3.2 Classification of Fruits

Fruit is the structure of plant that contains its seeds. Botanically many vegetables fall into the category of 'fruits' such as capsicum, tomato etc. However, as per culinary classification, we consider the final use of the ingredient. Hence, the fleshy fruits that have a slightly acidic or

sweet taste that are not used as vegetables are culinary fruits.

A fruit botanically has following parts : The seeds inside, and layer surrounding it called Pericarp. Pericarp is further divided into endocarp (inner layer), Mesocarp (middle layer) and Exocarp (outer layer). Depending on this structure, fruits can be classified as:




- Berries e.g. Grapes
- Hesperidium e.g. Orange
- Pepos e.g. Melon
- Drupes or stones e.g. Peach
- Pome e.g. Apple

**Simple Fruits :** One fruit develops from one flower.

- **Berries** : Mesocarp and endocarp form the pulp in which seeds are scattered. The soft epicarp forms the skin. E.g. Grapes, kiwi, passion fruit, etc.

- **Hesperidium** : It is a fruit with tough aromatic exocarp. All fruits belonging to citrus family fall into this group. E.g. Orange, Lemon, Grapefruit etc.

- **Pepo** : These are fruits where outer pericarp is stiffened. E.g. Melons.

- **Drupes** : Thin epicarp, fleshy mesocarp and stone like hard endocarp. E.g. Cherry, Apricot, Plum and Peach.

- **Pome** : A Pome is a fleshy fruit with thin skin, not formed from the ovary but from another part or parts of the flower. The seeds are contained in chamber in the center of fruit. E.g. apple.

- **Aggregate Fruits** : Many fruits develop from a single flower. E.g Strawberry, Blackberry.

- **Multiple Fruits :** A single fruit is obtained by an aggregate of many flowers. E.g. pineapple, mulberry.

## Uses

- Fruits can be eaten on their own as a good source of nutrition.
- They can be made into fruit salads with varied dressings such as cream, honey, mayonnaise etc.
- Some fruits can be used for pickling e.g. Raw mango.
- Fruits are used to prepare jams, jellies, marmalade (the 'preserves') and chutneys.
- Fruits are blended with milk and other ingredients to make a vast variety of shakes, smoothes and chilled drinks.

- Fruits are widely used in flavouring and topping bakery products such as cakes, pastries, tarts etc.
- Fruits are also pureed to prepare sauces called 'Coulis'.

### Quality Criteria for Selection of Fruits

- The fruits skin should not have blemishes or soft brown spots.
- There should not be any small holes on any side of the surface.
- A shiny appearance and fresh aroma especially from citrus fruits.
- When pressed a little, they should be firm and must hold their shape.
- Check the stem of the fruit if there. A green stem with firm fruit is fresh in early stages of ripening. A brown and Shrivelled stem usually means the fruit has been picked from tree for a long time.
- The fruit should feel heavy for its size.
- For a ripe watermelon, tap the melon with your flat hand. If the sound is deep and thick it's probably a ripe and sweet fruit.

### Nutritional Contribution of Fruits and Vegetables in Diet

- Vegetables and fruits, are low in calories and fats but contain good amounts of vitamins and minerals. All the Green-Yellow-Orange vegetables are rich sources of calcium, magnesium, potassium, iron, beta-carotene, vitamin B-complex, vitamin-C, vitamin-A, and vitamin K.
- Vegetables and fruits are a source of many antioxidants. These health benefitting 'phyto-chemical' compounds help protect the human body from stress, diseases, and cancers, and also help the body develop the capacity to fight against these by boosting immunity. They are classified as 'protective food group' in nutrition.
- Additionally, vegetables and fruits also have soluble and insoluble dietary fiber known as non-starch polysaccharides (NSP) such as cellulose, mucilage, hemi-cellulose, gums, pectin...etc. These substances help to maintain the digestive system of the body and offer protection from conditions like chronic constipation, hemorrhoids, colon cancer, irritable bowel syndrome, and rectal fissures.

## 3.3 Cuts of Vegetables and Fruits

There are a variety of ways in which fruits and vegetables can be cut. Cuts vary as per the final use of the ingredient. They are important as unless and until they are put in a blender and minced or strained and removed, the cuts are visible to the eyes of diner. Hence, it is important that cutting be uniform and enhances the eye appeal of the dish prepared.

Some of the cuts are:

| Sr. No. | Name | Use | Picture |
|---|---|---|---|
| 1. | Slice | Cutting across a vegetable. |  |
| 2. | Wedge | A round vegetable is peeled and cut lengthwise in equal size pieces. |  |
| 3. | Slit | Vegetable is slit and may be kept intact on one side to insert filling. Eg. Stuffed bittergourd, brinjals, ladyfinger etc. |  |
| 4. | Chunks | Whole vegetables are peeled and left in chunks of similar size for preparing vegetable dishes. |  |
| 5. | Chop | Cutting the vegetable in small even size pieces. |  |
| 6. | Baton | Vegetables can be cut in batons such as potatoes in French fries. |  |
| 7. | Dices | Vegetables are cut in dices of various sizes. This method leaves side edges of the vegetables unused. These should be used elsewhere such as in making soups or stocks. |  |
| 8. | Julienne | Thin strips of vegetables often used with noodles. |  |

| Sr. No. | Name | Use | Picture |
|---|---|---|---|
| 9. | Scoop | The vegetables or fruits can be scooped in roundels using an equipment called Parisian scoop. |  |
| 10. | Turned Vegetables | The vegetables are made into barrel shape using a curved edge knife. These vegetables are called turned vegetables. |  |
| 11. | Fancy Shapes | The vegetables and fruits can be cut into fancy shapes using a knife or even a shape cutter to enhance eye appeal of a dish. |  |

## 3.4 Effect of Heat on Vegetables & Fruits

### a) Colour

The colour of the vegetable is dependent on the colour pigment present in the vegetable. Various colour pigments present in vegetables & fruits are:

- **Flavones :** This pigment is present in white or cream coloured vegetables e.g onions, cauliflower, potato etc. This pigment stays white in colour in slightly acidic medium while it turns yellow in alkaline medium. Hence, while cooking these vegetables, a chef can add a little lemon juice to enable the vegetable to retain its colour.

- **Chlorophyll :** This pigment is present in green coloured vegetables e.g. French beans, Spinach, Mustard leaves etc. This pigment turns yellow in acidic medium and remains bright green in alkaline medium. However, addition of soda to create alkaline medium destroys the cell structure of vegetable and makes it mushy. Hence, they should be cooked for short periods uncovered so as to enable volatile acids to evaporate and neutral pH is maintained.

- **Carotenoids :** This pigment is present in yellow, orange and some red coloured vegetables e.g. Carrot, Corns, Sweet Potato, Tomato, Mango, Pumpkin etc. It is relatively stable and is not affected significantly by acidic or alkaline medium of cooking. It is fat soluble and leaches in cooking oils.

- **Anthocyanin** : This pigment is present as the red-purple colour of grapes, berries, raspberries and cranberries etc. This appears red to blue depending on the pH value. In acidic medium it turns red and in alkaline medium it turns blue.

- **Betalains** : This pigment is responsible for the deep red color of beets. It is water soluble and leaches out in the cooking liquid. Beets should be cooked whole without cutting in water and little vinegar or lemon added to create a slightly acidic medium to retain maximum colour. It should be cooked, peeled and then cut.

b) **Texture**

The structure and shape of vegetables and fruits is because of cellulose and pectin fibres. These fibres are softened with application of heat. The more the heat is applied, softer the fibres become and the vegetable loses its firm shape. There are vegetables with less fibres such as spinach which loses its shape in boiling water quickly or with more fibres such as carrots or potatoes which retain their shape for several minutes.

The mild acidic medium which can be created by adding lemon juice or vinegar in boiling water make the fibre firmer and increase the cooking time. Sugar too strengthens the fibres and help the vegetable or fruit to retain its shape. On the other hand, alkaline medium which can be created by adding baking soda makes the vegetables soften quickly.

The above knowledge is applied by a chef while cooking vegetables and fruits. Sugar or acidic medium can be used to cook fruits and vegetables when apart from cooking, retaining shape is important. Alkaline medium is usually not used as the vegetables and fruits get mushy and loose shape and appearance completely. Most vegetables should be cooked to still retain their shape and be tender enough to eat.

c) **Flavour**

Flavour and nutrients are leached out in cooking liquid specially if cooked for long time. Hence, to control flavour loss, cook for shorter durations in less liquids or steam. Adding salt in boiling water also helps to reduction in loss of flavour in cooking liquid.

## 3.5 Tips for Preservation of Nutrients while Processing Fruits and Vegetables

There are some basic factors to be kept in mind while pre-preparation and cooking of fruits and vegetables. All vegetables and fruits are good source of vitamins, minerals and fibre. Two vitamins B complex and Vitamin C are water soluble. Hence they are lost while washing, cooking in lot of water or even leaving the fruit or vegetable in water for long hours. Even oxidation can cause loss of nutrients. Vitamins A, D, E and K are fat soluble. These vitamins are lost in the fat content of the cooking medium or other ingredients.

Food preparation techniques such as peeling, chopping and cooking make an impact on the nutritional value of fruits and vegetables. As a general rule, keep cooking time, temperature, and the amount of liquid to a minimum. How foods are cooked can have a big impact on their nutrient content. That's because many vitamins are sensitive to heat and air exposure (vitamin C, the B vitamins, and folate in particular). Loss of nutrients increases as cooking time increases and with higher temperatures.

Cooking methods that minimize the time, temperature, and amount of water needed, help to preserve nutrients. Steaming is a good way to cook vegetables quickly and retain valuable nutrients. Stir frying is another way to quickly cook a variety of vegetables.

### Follow these Tips to Preserve Nutrients in Kitchen

1. **Use Fresh Vegetables and Fruits which are in Season** : Fresh, ripe produce in-season will usually be highest in nutrients. Nutrients are lost with the process of freezing the seasonal produce. Hence, as far as possible, use fresh ingredients.
2. **Judicious Use of Water** : Up to 50 percent of vitamin C, thiamin, vitamin B6 and folate content in food can be lost to the water it's cooked in. In order to retain water-soluble nutrients, use cooking methods like steaming or stir-frying that use less water. Use less water in steaming and boiling, and reuse cooking water in soups, sauces, making dough or juices to capture escaped nutrients.
3. **Short Cooking Durations** : As a rule of thumb, the longer foods are exposed to heat, the more nutrients are lost. To reduce cooking times, cover the pot to retain heat and avoid evaporation; place vegetables in already boiling water, and learn to enjoy most vegetables with a crunchier texture (not mashy or overcooked, still with little rawness left).
4. **Cut in Bigger Pieces** : Chopping foods into smaller pieces increases the surface area exposed to light, heat and water – three factors that degrade nutrients. One exception is garlic and others in the allium family (onions, leeks, shallots.) Chopping these foods and keeping them for about 10 minutes before cooking increases their active components.
5. **Correct Storage** : Nutrient loss in many fruits and vegetables can be decreased with cooler temperatures, high humidity and less air contact. Store produce in airtight containers in the fridge.

6. **Rinse Fresh Vegetables Well Just Before Using** : Even those with skins need to be washed to remove bacteria, insects, and as much pesticide as possible. Do not soak vegetables, as that can remove key nutrients, like vitamin C.
7. **Wash Whole Fruits and Vegetables** : Washing vegetables or fruits after cutting leads to more nutrients being leached out in water. Wash whole and then cut.

Eat fruits and vegetables raw whenever possible in salads and smoothies or as whole fruits and vegetables everyday for a balanced diet.

## Summary

Vegetables and fruits are an important part of daily diet. Vegetables can be classified as roots, tubers, fruits, flowers, bulbs, pods, stem, leaves and fungi depending on the part of plant that is being used as vegetable. A good chef must be able to check the freshness of fruits and vegetables. Fruits are classified as simple fruits where one flower yields one fruit, aggregate where one flower yields multiple fruits and multiple where many flowers make one fruit.

Both vegetables and fruits are very good source of calcium, magnesium, potassium, iron, beta-carotene, vitamin B-complex, vitamin-C, vitamin-A, vitamin K and other nutrients essential for a healthy body. They are grouped as protective foods i.e. they help in keeping the body healthy and make our immune system stronger.

Vegetables and fruits can be cut in various ways depending on the final usage – dices, slices, slit, wedge, baton, julienne etc. However, they should be used with care so as to prevent nutrient loss while processing. Hence, they should be washed before cutting, cut in bigger pieces and cooked in minimum amount of liquid till just cooked to minimize nutrient loss. Cooking also affects the colour, flavour and texture of vegetables and fruits. A good chef must understand these effects and apply most suitable method of cooking them.

## Review Questions

I. **State true or false and correct the false statements:**

1. Waxy potatoes are suitable for mashing.
2. Garlic should be kept for about ten minutes before cooking.
3. All the small flowerets of a fresh cauliflower should be away from each other.
4. It is important to wash vegetables after cutting to remove dirt.
5. A vegetable tends to retain its shape if boiled with little lemon juice.
6. Beetroot should be boiled in water with some vinegar after peeling and cutting in slices.
7. Mulberry is an example of multiple fruit.

8. Anthocyanins are responsible for white colour of the vegetables.
9. Mushrooms should be stored in paper bags.
10. Eating most vegetables crunchy rather than mashy is a healthy habit.

II. **Answer the following questions:**

1. Describe the effect of heat on various colour pigments in vegetables & fruits.
2. Classify vegetables giving suitable examples.
3. What is it important to include vegetables and fruits in our daily diet?
4. With the help of neat diagram, explain any five different cuts of vegetables?

III. **Discuss in class:**

It is important to eat a healthy diet each day. Our body requires different types of nutrients provided by our food ingredients. However, loss of nutrients occurs due to various factors while cutting or cooking the food. Discuss the importance and ways of preserving nutrients while processing vegetables and fruits to minimize nutrient loss.

## Practical

1. Collect different samples of various types of fruits and vegetables and differentiate between fresh and stale ones. Note the observations which help to identify the fresher once.

# UNIT 4

## SOUPS

### Objectives

1. Definition of soup and its importance in diet.
2. Classification of soups.
3. Recipes to prepare cream of vegetables soup, sweet corn soup and tamatar shorba.

### 4.1 Soups

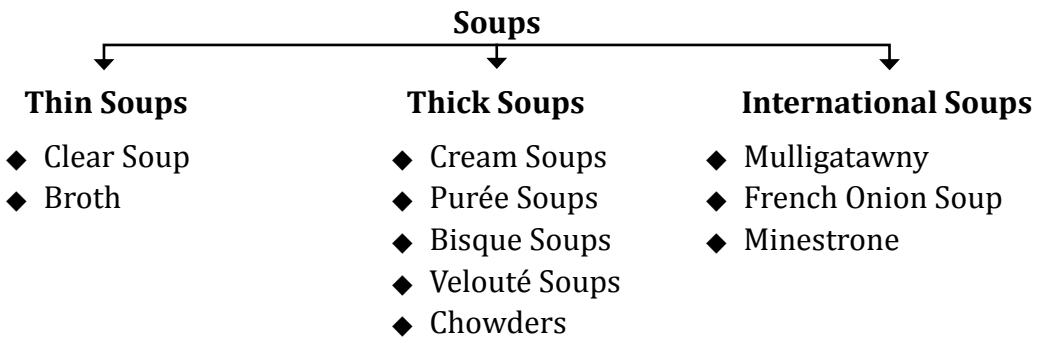
Soups are a form of liquid food that is prepared by cooking meat, fish, poultry, vegetables etc. They are flavoured with numerous spices such as bay leaf, cloves, pepper corns and herbs such as coriander, thyme, basil to name a few. Soups are served at the beginning of the meal.

Soups are considered healthy food as they are easy to digest, provide nutrients and sufficient amount of fluids to the body. A bowl full of soup usually provides a good amount of carbohydrates, proteins, vitamins and minerals. Soups are served with breads (toast, sticks, rolls etc).

### 4.2 Types of Soups

Depending on the consistency of soup, there may be thin or thick soups. Thin soups have a consistency of water or little thicker because of the starch ingredients present in soup. On the other hand thick soups are thickened purposely be adding starch in some form.

It is interesting to note that not all soups are served hot. There are cold soups too. These include soups like jellied consommé, gazpacho, vichyssoise, Sarki from India and many more that are served cold and are a refreshing treat in extreme summers.



## Thin Soups

a) **Clear Soup** : These soups are also known by the French name 'Consommé'. These are prepared by cooking left over bones and vegetables to prepare a thin liquid 'stock' and then clearing the stock with the help of meat and eggs. They are transparent when poured in soup bowl, light and very nutritious with a strong meaty flavour.

b) **Broth** : These are simple thin soups that can be prepared with meats, vegetables or both. They are wholesome, nutritious and usually have small pieces or meat or vegetables or both in it along with the cooking liquid.

## Thick Soups

These soups are opaque and consistency is thicker. This is because usually there is an add-on thickening in the form of a starch ingredient that is added in little quantities to thicken it.

a) **Cream Soups** : These soups are made of chicken, meat or any vegetable and are know by the same name e.g. cream of chicken, cream of cauliflower, cream of peas etc. Thus the soup takes the colour & taste of main ingredient even though there might be other ingredients in small quantities. Milk or cream is always added.

b) **Purée Soups** : These soups are made of dry legumes or fresh starchy vegetables. Hence once cooked and pureed, the starch from the main ingredient itself thickens the soup. They may or may not contain little cream. E.g. Purée of potatoes, Purée of lentils, Purée of pumpkin etc.

c) **Bisque Soups** : These are soups made with shell fish and are usually thickened with rice.

d) **Velouté Soups** : These are made with meat or vegetable stock thickened with flour cooked to a light brown colour. A mixture of egg yolk and cream is added to it. E.g. Chicken velouté.

e) **Chowders** : Chowder is a seafood or vegetable stew, often served with milk or cream and mostly eaten with saltine crackers.

## International Soups

There are many soups that are known from their region of origin. These soups are separately classified as International soups. Some popular examples are:

- **Mulligatawny (India)** : The soup consists of a broth from chicken and lamb, fried onions and spiced with curry powder. Often, vegetables, nuts, apple and rice are added.
- **French Onion Soup (France)** : It is a type of soup usually based on meat stock and onions, and often served gratinated with croutons and cheese on top.
- **Minestrone (Italy)** : Minestrone is a thick soup made with vegetables, often with the addition of pasta or rice. Common ingredients include beans, onions, celery, carrots, stock, and tomatoes.

## 4.3 Cream of Vegetable Soup

**Serves – 4 people**

| Sr. No. | Ingredient | Quantity |
|---|---|---|
| 1 | Onion | 25 gms |
| 2 | Carrot | 25 gms |
| 3 | Garlic | 2 small cloves |
| 4 | Peas | 25 gms |
| 5 | Cauliflower | 50 gms |
| 6 | French beans | 20 gms |
| 7 | Potato | 50 gms |
| 8 | Mushroom | 20 gms |
| 9 | Refined flour | 20 gms |
| 10 | Milk | 200 ml |
| 11 | Butter | 20 gms |
| 12 | Salt | To taste |
| 13 | Pepper corns | A tea spoon |
| 14 | Bay leaf | 2-3 nos |
| 15 | Parsley stem | 1 no |
| 16 | Celery stem | 2” piece |

**Method**

- Wash all the vegetables.
- Peel onion, garlic and carrots.
- Chop onion, garlic, carrot, celery stem, parsley stem, cauliflower (Remove the thick stem at base), carrots, mushrooms, potato and beans.
- Shell peas.
- Melt butter in a pot.
- Add chopped onion, garlic, bay leaf & crushed pepper corns.
- Sauté to a light colour on medium flame.
- Add all the vegetables, salt and again cook for few minutes.
- Add refined flour and cook for a minute.
- Add milk and half a litre of water and cook vegetables.

- Cool and Blend in a mixer.
- Strain the blended mix and keep the liquid (soup).
- Reheat. Adjust the consistency (thickness) and salt & pepper.
- Decorate with little cream.

***Note:*** *There can be many variations to this soup. You could add more vegetables like broccoli, asparagus etc. Also, one can add herb such as a pinch of dried thyme to the soup.*

## 4.4 Sweet Corn Soup

**Serves – 4 people**

| Sr. No. | Ingredient | Quantity |
|---|---|---|
| 1 | Sweet corns | 60 gms |
| 2 | Carrot | 50 gms |
| 3 | French beans | 50 gms |
| 4 | Onion | 25 gms |
| 5 | Cabbage | 25 gms |
| 6 | Ginger | 10 gms |
| 7 | Garlic | 2 cloves |
| 6 | Salt | To Taste |
| 7 | White pepper powder | To Taste |
| 8 | Corn flour | 40 gms |
| 9 | Butter | 10 gms |
| 10 | Soya sauce | Few drops |
| 11 | Vinegar | Few drops |

**Method**

- Dissolve corn flour in 750 ml water and keep aside.
- Wash all the vegetables.
- Peel carrot, onion, ginger and garlic.
- Boil corns and partially crush them. Let some remain whole.
- Finely chop onion, carrot, french beans, ginger, garlic and cabbage.
- Melt butter in a pot. Add onion, ginger and garlic.
- Sauté on medium flame to a light colour while stirring.
- Add carrot and beans. Cook for a minute.
- Stir the mixture of corn flour and water and add in the pot.

- Add salt & pepper powder and bring to boil.
- Simmer for four to five minutes. Add soya sauce, vinegar, corns and cabbage.
- Stir. Adjust consistency, salt and pepper.
- Serve hot.

***Note:*** *More vegetables can be added such as celery stem, cauliflower etc. One should offer chopped green chillies kept in vinegar and soya sauce along with the soup.*

## 4.5 Tamatar ka Shorba

**Serves – 4 people**

| Sr. No. | Ingredient | Quantity |
|---|---|---|
| 1 | Tomato (ripe and red) | 400 gms |
| 2 | Onion | 50 gms |
| 3 | Carrot | 50 gms |
| 4 | Salt | To Taste |
| 5 | Black pepper corns | 2-3 no. |
| 6 | Bay leaf | 2 no. |
| 7 | Green coriander | 20 gms |
| 8 | Sugar | 25 gms |
| 9 | Green chillies | 1 no. |

**Method**

- Cut tomatoes roughly in about eight pieces.
- Cut onions and carrots in slices. Slit green chilly.
- In a pot, add tomatoes, onions, carrots, green chilly, bay leaf, salt, crushed pepper corns, cloves and a litre of water.
- Bring to boil and simmer till all vegetables are just cooked.
- Add one inch pieces of coriander stem. Cook for few minutes.
- Cool. Blend in a mixer and strain. Keep the soup.
- Reheat. In case it is too sour, add little sugar (optional). Adjust the consistency, salt and pepper.
- Serve hot and decorate with chopped green coriander leaves.

***Note:*** *Shorba is an Indian version of thin soup. Hence, this soup does not have any added starch thickening. One can also sauté the onions a little in very little oil to make it more fragrant. The soup can also be flavoured with more coriander, mint or basil.*

## Summary

Soups are liquid foods made with vegetables or meats and flavoured with herbs and spices. They are a healthy start to a meal as they are light, easily digestible and full of nutrients. Soups can be classified as thick or thin soups. Apart from this there are international soups that are identified by the place of their origin such as mulligatawny, minestrone etc. Even though most soups are served hot, there are many popular soups that are served cold such as Gazpacho.

## Review Questions

I. **Answer the following questions:**

1. What is a 'Consommé'?
2. What are various thickening agents used in soups?
3. Classify and describe thick soups with suitable examples.

II. **Discuss in class:**

Soups can be a wholesome meal. Discuss how soups play an important role in providing nutrition to our body.

## Practical

1. Prepare the three soups – Cream of vegetable, sweet corn and tamatar shorba using the recipes in the chapter.

# UNIT 5

## SALADS

### Objectives

1. To know about the salads.
2. To be aware of the different parts of salads.
3. To know about the types of salads.

### Introduction to Salads

In the kitchen, all the types of food is prepared in which salad plays a very important role. A salad can be defined as a combination of raw and cooked ingredients, which is served generally cold with any dressing. Freshness and variety of ingredients is required for a nice salad.

### Definition

A salad can be defined as a cold dish prepared of various mixtures of raw or cooked vegetables and other food items, usually seasoned with oil, vinegar, or other dressing and sometimes accompanied by meat, fish, or other ingredients.

### 5.1 Classification of Salads

The salads can be widely classified as following types:

1. Vegetable salad
2. Fruit salad
3. Pasta salad
4. Protein salad

1. **Vegetable Salad** : It is the salad which has the crunchy vegetables used and its used as the appetiser in the meal. The vegetables used can be cooked or raw. Few examples of vegetable salads are-tossed salad, coleslaw salad.

2. **Fruit Salad** : It is the salad which consists of fresh fruits, cut and served as a dessert and as an appetiser too. The canned fruits can also be used in making of these types of salads fresh fruit with honey lemon dressing.

3. **Pasta Salad** : It is the salad made up with boiled fancy pasta and some vegetables with dressing into it. Fancy boiled pastas, fruits and vegetables are used in this salad.

4. **Protein Salad** : It is a salad made up of chicken, ham, beef , cut vegetables and fruits along with some dressing. Its generally served as the main course. Ham and chicken salad, chef's salad.

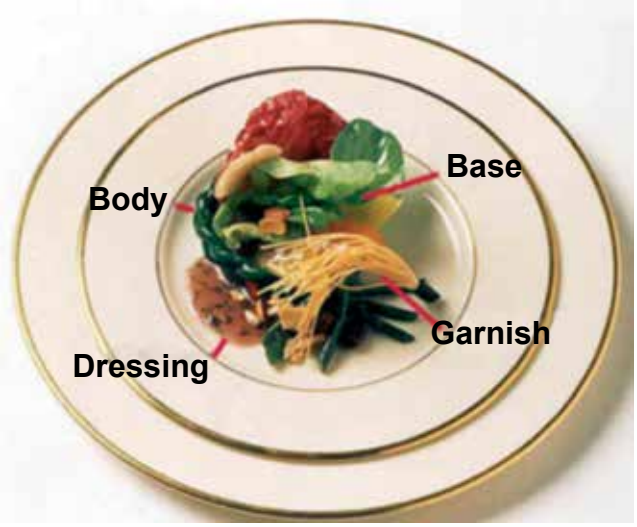
**The Salad can also be classified into:**

1. Simple Salads
2. Compound Salads

1. **Simple Salads** : Usually consists of one type of vegetable along with the dressing.
2. **Compound Salads** : They are more elaborated salads with more than one ingredient.

## 5.2 Parts of Salads

1. Base
2. Body
3. Dressing
4. Garnish




**Base** : The base of a salad is generally made up of leafy greens. The leafy greens help to cover the base of the platter, which gives contrast in colour too. The base bound the salad and the salad looks more appealing when made with the base or under liner. The lettuces used are- red leaf, radicchio, iceberg, arugula, frisee etc.


**Body** : This is the main part of the salad . It gives the body to the salad. It will give the name to the salad and the main taste is dependent on the body of the salad. For the body ingredients used are chicken, fruits, vegetables etc.

**Dressing** : It is a kind of sauce which has to be served on the salad or with the salad. It is very necessary part of the salad which develops the taste in the salad. We can say that without the dressing the salad is not complete. It provides tartness, spiciness, moistness and flavour. Some famous dressings are- vinaigrette, thousand island, mayonnaise etc.

**Garnish** : It is the optional part of the salad which when added enhances the value of salad. The main purpose of adding the dressing is to add the eye appeal. It can be simple or composite too. If the garnish is elaborated than it will dominate the salad. Few garnishes used are cherry, mint sprigs, coriander green sprigs, lemon wedges etc.

## Summary

The students will come to know about the different types of salads prepared in the kitchen. They will also learn the different parts of the salad.

## Review Questions

I. **Assignment**

1. Prepare a list of the important part of the salads and their types too and draw a chart of it.
   - ◆ Submit the chart to your teacher for assessment.

II. **Assessment**

A. **Fill in the blanks:**

1. The garnish on the salad should be _____ .
2. The base of the salad is usually _____ .
3. Protein salads should have _____ as an ingredient.

B. **State whether true or false:**

1. The garnish in salad should be heavier than the body.
2. The dressing in salad works as taste enhancer.
3. Green salads should have chicken in it.

## Practical

1. The different parts of salads and different types of salads can be discussed one by one. The students can be asked to prepare a chart or draw different parts of the salad on a chart paper.

# UNIT 6

## SANDWICHES

### Objectives

1. To learn about the sandwiches.
2. To understand the sandwiches.
3. To learn the parts of sandwiches.
4. To know about types of sandwiches.
5. To understand about the canapés.

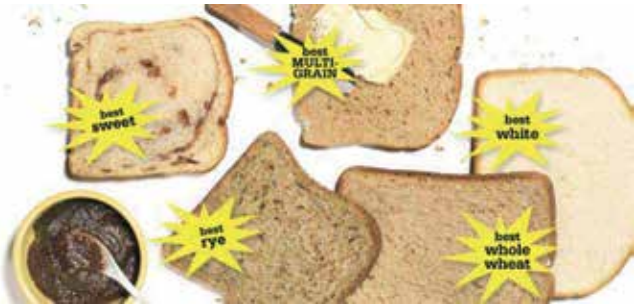
### Introduction

A sandwich can be defined as a type of food placed between the slices of bread. In the case of sandwich the breads work as a wrapper to some of food too. Many variations of sandwiches are available worldwide.

We can say that the sandwich is a perfect balance of temperature, texture, flavour and appearance too. So a sandwich can be hot and cold, crunchy and chewy, simple and correct etc.

### 6.1 Parts of a Sandwich

a) **Bread**




The various type of breads are used in making of sandwich. Some examples of breads are: French bread, pita bread, focaccia bread, panini bread, whole wheat bread, rye bread etc. The bread used for sandwich making should be not more than 12 hours old. Very fresh bread will be soggy. The bread used for sandwich making should be stored at room temperature but away from heat.

b) **Spread**

The spread is very important part of the sandwich. It will act as a sealing material for the sandwich to avoid it from becoming soggy. It adds flavour to the bread and also act as a moistening agent in sandwiches. Some of the essentials of the spreads

are- it should be soft, spreadable, with rich mouth feel etc. They should be stored properly. Types of spreads are- butter, jam, marmalades, mayonnaise, chutneys too etc.

c) **Filling**

The purpose of the filling is to provide- flavour, body, moisture, nutrients, completeness in the sandwiches. Different types of fillings can be used as beef, pork, lamb, fish, eggs, fruits, vegetables, duck, turkey etc. The filling has to be 1/3rd of the sandwich contribution. The filling will be always full of flavours and no meat with bone can be used in the sandwich.

## 6.2 Types of Sandwiches

The different types of sandwiches are followings:

1. Cold Open Sandwich
2. Cold Close Sandwich

1. **Cold Open Sandwich :** Cold open sandwich can be made from the single slice of bread which can be applied with the dressing and then topped with the topping or filling on it.

2. **Cold Close Sandwich** : Cold close sandwich can be made with two or more than two slices of bread. It can be simple or with combinations too.

### Few Examples of Closed Sandwiches are:

1. Conventional, lunch box sandwich
2. Tea sandwich
3. Buffet sandwich
4. Double decker sandwich
5. Club sandwich
6. Fancy sandwich
7. Hot sandwich

## 6.3 Canapes

The canapés are not sandwiches but they are the one bite size piece of the decorated bread slice. In the canapés the base has to be crispy toast or similar item. A piece of biscuit can be used for the base of canapés also. It is often served during cocktail hours. A canapé can have the topping of fish, chicken, ham, fruits, vegetables also.

The canapés are generally served on a canapé salver and eaten from a small canapé plate.

## Summary

This chapter will help to learn about the sandwich, the different parts of the sandwich. The students will be able to understand the different types of sandwich and also about the canapés.

## Review Questions

I. **Assessment**

1. Prepare a chart on different variety of sandwiches.
2. Submit the chart to your teacher for assessment.

II. **Assessment**

A. **Fill in the blanks:**

1. The base used for canapés is generally of _____ .
2. The _____ is used to sandwich any food in between.
3. The sealing material in sandwich is _____ .

B. **State whether true or false:**

1. The sandwich can be consumed in one bite.
2. The canapés are small form of sandwiches.
3. Filling will decide about the sandwich type.

## Practical

1. The students can be demonstrated about the different sandwich making process. They can be asked to prepare some charts related to this.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Shiksha Kendra, 2, Community Centre, Preet Vihar, Delhi-110092
Tel: 011-22527183 • Fax: 011-22526580
E-mail: voc.cbse@gmail.com • Website: www.cbse.nic.in