

REFERENCE MATERIAL

I. INTRODUCTION TO HOME SCIENCE

Home Science-It is the science applied to home. In other words, it means an art of economically managing the family resources to the maximum satisfaction of all the members.

FIVE AREAS OF HOME SCIENCE

1.HUMAN DEVELOPMENT AND CHILD HOOD STUDIES-This field deals with the principle of development and various domains of development of all stages of life. This knowledge helps to understand the needs of each stage and cope with problems related to various development.

2.FOODS AND NUTRITION-In this field , knowledge about various food groups and nutrients present in each food group and sources are discussed. This helps to plan the balanced meal and guide you to maintain optimum nutritional status.

3.RESOURCE MANAGEMENT AND DESIGN APPLICATION-In this field you all will learn to manage important resources like time, energy, etc. efficiently. Beside this, you will acquire skills of space management, investment in financial institutes, etc.

4.FABRIC APPAREL AND SCIENCE-This field discuss about characteristics of various fibres, finishes given to various fabric, etc. You will also learn how to take care of fabrics properly. Knowledge of right selection of clothes and fabrics according to various factors.

5.COMMUNITY DEVELOPMENT AND EXTENSION-Information on important issues like water safety, hygiene and sanitation, etc. are discussed so that it can be imparted in community.

CAREER OPTIONS AFTER STUDYING HOME SCIENCE

Different areas of Home Science offer various opportunities of wage as well as self employment . Area-wise few options are listed-

1.HUMAN DEVELOPMENT

Child counselor

Work in ICDS/NGO

Open day care centre

Work with NGO in the child care projects

2.FOODS AND NUTRITION

Chef

Dietician

Nutritional consultant

Cooking classes

3.RESOURCE MANAGEMENT AND DESIGN APPLICATION

Consumer activist

Interior decorator

Working as housekeeper

4.FABRIC APPAREL AND SCIENCE

Fashion designer

Fabric Technologist

Opening up tie and die/block printing unit

5.COMMUNITY DEVELOPMENT AND EXTENSION

Social entrepreneur

Work in Government projects

HOME SCIENCE IS IMPORTANT FOR BOTH BOYS AND GIRLS

1.It offers vocational and professional avenues for both boys and girls

2.Both have to apply knowledge in day to living.

3.Both need to manage available resources in proper manner

4.It also helps to increase our standard of living and inculcate the qualities to enhance our lifestyle.

5.Both have to share equal opportunities of day-to-day life.

II.

WATER SAFETY

Importance of potable water-

- Transportation of nutrients
- Elimination of waste products
- Maintaining temperature
- Prevention from water borne diseases

QUALITIES OF DRINKING WATER

PHYSICAL	BIOLOGICAL
Colourless, tasteless, transparent, no suspended particles, no organic matter	No coliform and micro organism

METHODS OF WATER PURIFICATION

1. BOILING

METHOD	ADVANTAGES AND DISADVANTAGES
<ul style="list-style-type: none"> • For muddy water sedimentation and filtration • Boiled at 100 C for 10 minutes • Cooled and stored in clean container 	<p>ADVANTAGES</p> <ul style="list-style-type: none"> • Simple method • Kills coliform <p>DISADVANTAGES</p> <ul style="list-style-type: none"> • Time consuming • Expensive • Cumbersome

2. CHLORINE

METHOD	ADVANTAGES AND DISADVANTAGES
<ul style="list-style-type: none"> • One tea spoon of bleaching powder is mixed in a glass of water • Three teaspoons of this solution in 20 litres of water • Water is left for 30 minutes 	<p>ADVANTAGES</p> <ul style="list-style-type: none"> • For large amount of water • Kills coliform bacteria <p>DISADVANTAGES</p> <ul style="list-style-type: none"> • Smell of chlorine is there

CHLORINE TABLETS

METHOD	ADVANTAGES AND DISADVANTAGES
<ul style="list-style-type: none"> • One tablet of 4 mg in 1 litre of water • Bottle cap is left loose to allow leakage • After 3 minutes bottle is shaken and water is allowed to leak out to rinse the screw bands • Cap of bottle is tightened and left for 10 minutes before consuming • In case of dirty water 2 tablets are used and water should be left for 20 	<p>ADVANTAGES</p> <ul style="list-style-type: none"> • Remove suspended particles • Kills coliform bacteria • Can be used for travel, military, camps <p>DISADVANTAGES</p> <ul style="list-style-type: none"> • Smell of chlorine is there <p>PRECAUTIONS</p> <ul style="list-style-type: none"> • Bottle should be recapped tightly • Tablets should be dry and used

minutes	before expiry date
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3.STORAGE FILTER

METHOD	ADVANTAGES AND DISADVANTAGES
<ul style="list-style-type: none"> • Two containers, one fitted on top of the other • Two or three porcelain candles are fitted at the base of the top container • Water gets filtered and collects in the lower container 	<p>ADVANTAGES</p> <ul style="list-style-type: none"> • Remove suspended particles <p>DISADVANTAGES</p> <ul style="list-style-type: none"> • Does not remove coliform bacteria

ELECTRIC FILTER

METHOD	ADVANTAGES AND DISADVANTAGES
<ul style="list-style-type: none"> • Consists of three chambers • First chamber - porcelain candles to remove suspended particles • Second chamber- activated carbon particles to absorb the dissolved organic impurities • Third chamber - ultra violet rays to inactivates the microscopic bacteria and viruses • The quality of water is monitored by an electronic monitoring system 	<p>ADVANTAGES</p> <ul style="list-style-type: none"> • Safe and cool water is readily available • Saves on gas consumption • Saves time • Kills micro organisms <p>DISADVANTAGES</p> <ul style="list-style-type: none"> • Expensive • Cannot be used incase of electric failure • Does not remove dissolved impurities <p>PRECAUTIONS</p> <ul style="list-style-type: none"> • Continuous water supply • Only cold water should be passed • Candles need to be cleaned once in three months

REVERSE OSMOSIS

METHOD	ADVANTAGES AND DISADVANTAGES
<p>Five stages of water purifying system</p> <ul style="list-style-type: none"> • Sediment filter to remove rust ,sand and other sediments • Activated carbon filter removes chemicals, pesticides, chlorine • Semi permeable membrane removes lead, nitrate, mercury • Activated carbon pre-filter enhances tastes and removes odour • Ultra violet lamp takes care of germicidal impurities like virus ,bacteria 	<p>ADVANTAGES</p> <ul style="list-style-type: none"> • RO membrane can last long • Minimum maintenance of filter • Membranes can be easily cleaned • Water is free of all contaminants <p>DISADVANTAGES</p> <ul style="list-style-type: none"> • Expensive • Water wastage is there • Essential minerals are lost

