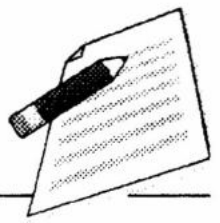


Notes

GENERAL INFORMATION AND INSTRUCTIONS

Why have Practicals?

We all know that practicals are essential for studying Science. Similarly, the study of Home Science is also incomplete without practicals. Some of you may want to know the significance of practicals. You will find that practicals help you to understand different concepts. Also, practicals make your experience more concrete and thereby enable you to learn faster.

Where to do Practicals?

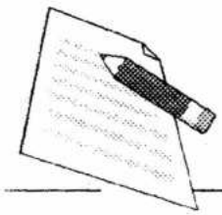
Science practicals are performed in a laboratory. Similarly Home Science practicals are conducted in Home Science laboratories. These laboratories are equipped with everything required for the different practicals. Always remember that proper equipment is a must for good results. Nevertheless, since all students of NIOS do not have access to Home Science laboratories, the student's home will be taken to be a laboratory and the equipment easily available at home will be used for the practicals.

How to do the Practicals?

All the information required for doing the practicals is given in this manual. For the sake of convenience, the practicals have been grouped according to the Modules in the learning materials, such as -

Module 2. Food and Nutrition
Module 3. Resource Management
Module 4. Human Development
Module 5. Textiles and Clothing
Module 6 A. HouseKeeping
Module 6 B. Creative Hand Embroidery

Each Module has three Practicals. **All these practicals are compulsory.** Each practical begins with an aim, after which, in case certain equipments and materials are required for that practical, they are listed so that you can collect them all



Notes

before beginning your work. All the steps of the practical are enlisted under 'Procedure' along with necessary precautions (if any). Whenever some information, answer, comments or conclusions are expected from you, blank space/tables have been provided. At certain places, to help you fill up the table, examples have also been given. At the end of each practical you will have to record your conclusions.

Do read all instructions before starting the practical work.

Try to write with a pen in a neat, legible handwriting since this manual will be your record of all practicals done by you.

Practical Examination

The time allocated for the practical examination is 3 hours and the maximum marks are 20. This examination will not be held with the theory examination but will be conducted separately. The marks will be distributed as follows:-

i) Two practicals from Core Modules (Modules 2 to 5) : 8 marks

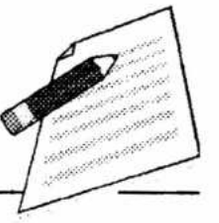
ii) One practical from optional Module (6A or 6B) : 4 marks

iii) Viva Voce: 4 marks

iv) The practical notebook: 4 marks

During the practical examination you will be expected to bear in mind and observe all the instructions and precautions mentioned in this manual. In the viva you will be asked some questions related to any of the practicals. Besides the practical notebook also bring the articles made by you for evaluation during the practical examination.

INSTRUCTIONS FOR WORKING IN A FOODS LABORATORY OR A KITCHEN



Notes

PERSONAL GROOMING

- Always wear a cotton dress.
- Wear a clean white apron over the dress. Avoid wearing a dupatta. In case it is worn, tuck it firmly below the apron.
- Tie up long hair.
- Tie down all hair under a scarf.
- Wear chappals or short heeled sandals only.
- Keep your nails clean and short..
- Wash hands before starting the work.

PURCHASING

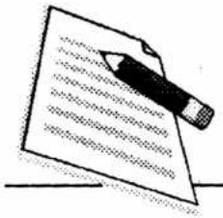
Read the recipes carefully and check whether the ingredients required are available at home in the right quantities. Make a list of items which have to be purchased. Also write down the amounts required. Make your purchases.

COLLECTING SUPPLIES

Collect all the utensils required and check for cleanliness. Bring all supplies on a tray in one trip to the food preparation area taking care to leave the supply area clean. Weigh and measure ingredients accurately.

PREPARATION

1. Organise work so that there is no wastage of time, fuel and energy.
2. Keep the area clean and uncluttered all the time-clean and wash up side by side and put away any utensil or ingredients not required.
3. Keep food covered all the time to protect them from dust and insects.
4. Begin your work with the dish that requires the longest time for preparation.
5. Wash all fruits and vegetables before use.
6. Peel vegetables and fruits as thinly as possible and throw waste material into the dustbin.



Notes

7. Use a pair of tongs for handling hot utensils.
8. Do not put the spoon back into food after tasting the food.
9. Do stay alert. Give attention to each and every work including gas/stove all the time.

CLEANING UP

1. Work from right to left-stack soiled dishes on the right and after cleaning, keep them for draining on the left of the sink.
2. Remove the waste and stack the soiled dishes according to kind and in the order to be washed. Dishes and pans with food adhering should be soaked for some time. Take care to wash the non-greasy dishes first in the following order: glass, cutlery, china and cooking utensils.
3. Let dishes dry and then store them.
4. Remove anything caught in the sink, and leave the sink and work area clean.

STANDARD WEIGHTS AND MEASURES USED IN THE RECIPES

Abbreviations used

t - teaspoon

C - cup

L - litre

T - tablespoon

Equivalent Liquid Measures

1 litre = 1000 ml

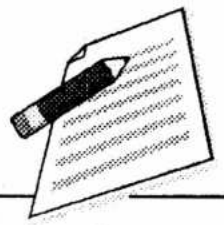
1 C = 225.5 ml

1 t = 5 ml

1 T = 14.8 ml (about 15 ml)

Equivalents to Common Household Measures

3t = 1 T



Notes

PRACTICAL 1

AIM

To preserve seasonal foods.

INTRODUCTION

We have all seen food being preserved at home in the form of pickle, chutney etc. We have also seen preserved food getting spoilt at times. Having read about food preservation in Lesson 9, I am sure you can point out some of the possible reasons for this spoilage.

In this practical you will prepare a pickle/chutney, jam, squash and ketchup in order to learn food preservation. But in order to be successful, you will have to thoroughly read Lesson no. 9 before starting the work.

EQUIPMENTS AND MATERIALS REQUIRED

1. Stainless steel utensils like pots, pans with lids etc. and a rust free knife.
2. Sterilized bottles to store pickle-chutney, jam and ketchup.
3. Cooking stove.
4. Clean overall/apron.
5. A scarf to tie hair.
6. Muslin cloth for straining and covering.
7. A pair of tongs.
9. Ingredients listed in each recipe.

PROCEDURE

1. Given below are some recipes. Select out of these one type of pickle/chutney, one type of jam, one type of squash and the ketchup which you would like to make. Your selection of the recipe should be based on the seasonal availability of ingredients (fruits/vegetables) at the time when you do the preserving.
2. You can either make one item at a time, or you can make two items together within the same time period.
3. Prepare the bottles and jars for storing the preserved foods.
4. Collect all the ingredients and materials required.

5. Follow the method given under each recipe.

6. After the preserve is ready, taste some and record your comments under 'conclusions'. Also keep aside some amount of each item for at least a month in order to check whether it gets spoilt or not.

RECIPES

A. PICKLES AND CHUTNEY

Hints for Pickling

- Clean all masalas and wash containers in boiling hot water. Dry thoroughly.
- Select only crisp, fresh and firm vegetables, free of blemishes.
- Wash and dry the vegetables thoroughly before using.
- Put seasoning at the bottom, in between and also at the top.
- Make sure that metal lids do not come in contact with the pickle. You can put wax paper/aluminium foil between the lid and the contents.
- Store the pickles in a cool and dry place.

MIXED VEGETABLE PICKLE
(turnip, cauliflower and carrots)

Ingredients

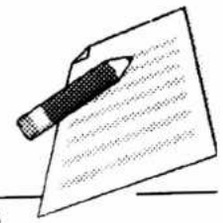
turnips	-1 kg	onion	- 200g
cauliflower	- 1 kg	mustard oil	- 500 ml
carrots	- 1 kg	salt	- 200g
vinegar	- 400 ml	red chilli powder	- 50g
jaggery	- 1 kg	degi mirch	- 50g
ginger	- 200g	cinnamon	- 5g
garlic	- 200g	cloves	- 5g
mustard seeds (rai)	- 150g	black cardamom	- 10g

Method

1. Select fresh, firm vegetables and wash. Scrape carrots and cut all vegetables in pieces.

2. Scald vegetables by immersing them in boiling water for 1-2 minutes. Drain and dry in shade for about 7-8 hours.

3. Boil vinegar and jaggery together and strain.



Notes

4. Pound ginger, garlic, onion coarsely and fry in mustard oil over slow heat till it is well fried.
5. Mix coarsely powdered condiments and seasonings to the above. Also mix the vinegar mixture.
6. Add all vegetables and rub them well. Pack in sterilised containers.
7. Keep in the sun for about a week.

LEMON PICKLE (SWEET)

Ingredients

lemon	-1 kg	cinnamon	- 1 long stick
salt	- 250g	ajwain	- 10g
cloves	- 10-12	black salt (powdered)	- 10g
black pepper corns	- 5g	Sugar	- 250g

Method

1. Wash and dry lemons. Cut/slit into quarters.
2. Mix well with salt, pack in a sterilised jar leaving 5"-6" space at the top. Keep in hot sun for about 2-3 days.
3. Coarsely pound the whole spices and mix with the rest of the ingredients.
4. Mix/stuff the lemons with the above mixture. Pack tightly in the jar and keep again in hot sun for 10-15 days till the lemon peel changes colour and becomes soft.

LEMON-GREEN CHILLI PICKLE

Ingredients

lemon	- 1 kg	ajwain	- 10g
green chillies	- 250g	salt	- 300g

Method

1. Wash lemon and chillies well and dry thoroughly.
2. Cut three-fourth lemons into quarters or eights and properly squeeze the rest for their juice. Remove stems from chillies and cut into halves, if required.
3. Mix all the ingredients together and store well in a dry sterilised jar. Leave in the sun for a week. Remember to shake the jar occasionally.

MANGO PICKLE

Ingredients

raw mangoes *	- 1 kg	aniseed	- 50g
whole red chillies		fenugreek seeds	- 50g
(small)	- 50g	onion seeds	- 30g
salt	- 125g	mustard oil	- 500 ml
red chilli powder	- 60g	turmeric powder	- 60g

Method

1. Select firm, raw mangoes. Wash well and wipe dry. Cut into desired size pieces and discard the seeds. Spread and dry in shade for about 3-4 hours.
2. Mix all spices (if desired, the whole spices maybe pounded coarsely) and a little oil with the mangoes.
3. Pack tightly in dry sterilised containers. Pour the rest of the oil to cover the mango pieces properly.
4. Keep it in hot sun for a week or so.

---

* Small kabuli chanas, logitudinal pieces of tender drumsticks, bitter gourd slices after being salted and squeezed, raw jackfruit pieces etc. may also be added if desired.

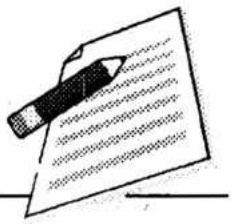
MANGO CHUTNEY

Ingredients

raw hard mangoes	-1 kg	salt	-60g
sugar	-1 kg	garam masala	-30g
garlic	-80g	red chilli powder	-30g
ginger	- 125g	almonds/raisins/dry	
vinegar	- 375 ml	dates (optional)	-50g

Method

1. Wash, peel, and cut mangoes into the sugar.
2. Pound coarsely garlic and ginger.
3. Mix all the ingredients properly.
4. Cook in a heavy bottom pan for 1-1½ hours on a very slow fire. Stir constantly till semi-set.
5. Cool and store in a dry sterilised bottle.



Notes

TOMATO CHUTNEY

Ingredients

tomato	-1 kg	onion	- 100g
sugar	- 1/2 kg	garlic	- 10g
salt	- 30-40g	ginger	- 30g
red chilli powder	-20g	glacial acetic acid	- 6g
garam masala	-30g	sodium benzoate	- 1g
onion seeds	-5g	red colour(optional)	
mustard oil	- 100g		

Method

1. Wash and slice tomatoes into small pieces.
2. Fry onion seeds in mustard oil. Add ground onion, garlic and ginger paste to it. Fry this and add tomatoes.
3. Add sugar and continue boiling. Now add garam masala.
4. Near the end point add the salt. Add some red colour if desired. Stop boiling. Add glacial acetic acid and sodium benzoate.
5. Fill, while still hot in the sterilised bottle.

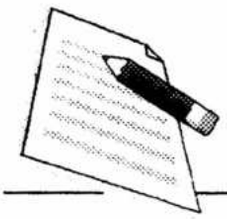
B. JAMS

Jams are spreads made by cooking any edible fruit with sugar until they are soft and jelly-like.

Hints For Making Jams

Slow cooking before addition of sugar and rapid, short cooking afterwards is the best way of making jams.

- Use freshly picked, just ripe fruits (when the pectin content is highest).
- Use a deep pan with a large surface for making jams.
- Simmer fruit slowly with or without water (when fruit is very juicy and pulpy) until fruit is soft.
- Combine pectin deficient fruit with either pectin rich fruit or commercial pectin (0.5 to 1 % level).
- Use the correct proportion of sugar since if too small a quantity of sugar is used the jam does not keep too well, while too large an amount of sugar



Notes

sugar for 1 kg fruit and for those with poor pectin content use ¾ kg sugar for 1 kg fruit.

- Let sugar dissolve completely over low heat before beginning to boil.
- Boil jam briskly and steadily. Stir occasionally. Jam quickly cooked has a better colour and flavour
- Remove the scum only when the jam is ready. To begin to skim too early is wasteful as more rises to the surface.
- Jam has reached setting point when
  (a) if a little is put on a saucer and cooled it wrinkles when pushed with a finger (cold plate test).
  (b) it breaks off in sheets from the spoon (sheet test).
- Fill the sterilized jars to within ¼" of the top only.
- Pour jam into jars.
- Seal the jars by dipping in molten wax and then store them in a cool, dry and well ventilated place.

APPLE JAM

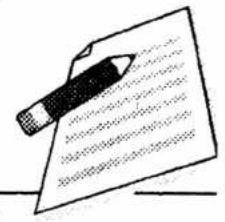
Ingredients

cooking apples *	- 1 kg	sugar*	- 1 kg
water	- 60 ml	colour	- a few drops (optional)
citric acid	- 10g		
of lemons	- 2		

* Jams may be made from pineapple, plums, peaches, grapes, raspberries, apricots, pears, papaya, mango, carissa (Karaunda) and mixed fruit. For sweet fruits decrease the amount of sugar to ¾ kg to a kilogram of fruit. Commercial pectin may be added (5g/Kg) in low pectin fruits like grapes, plums, peaches, apricots, raspberries.

Method

1. Select just ripe apples with care. Wash and cut them into pieces without coring or peeling.
2. Place in a pressure cooker with water and acid/lemons.



3. Cook for 5 minutes and rub through a sieve.
4. Add sugar, stir until dissolved. Now bring to boil with constant stirring in a deep pan.
5. Test for a good gel using the cold plate test or a sheet test.
6 Remove when done. Add colour (if desired) and bottle in sterilised bottles.
7. Seal the jar with molten paraffin wax and screw the top. Label it.

C. SQUASHES

Sugar, citric acid and chemical preservatives like potassium metabisulphite (KMS) or sodium benzoate are the preservatives used in squash making. Sodium benzoate is used for coloured products, for better retention of colour and acid foods. Sugar and citric acid are dissolved in hot water and filtered through a muslin cloth. The syrup is mixed with fruit juice and the permitted colour and preservatives added. The squashes are then filled in clean, sterilized bottles and sealed.

Ingredients

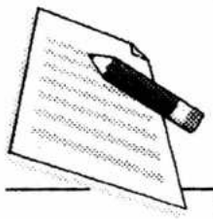
As given in table below:

Ingredients	Lemon	Mango	Plum	Lichi	Pineapple	Orange
Fruit juice (litre)	1	1	1	1	1	1
Sugar (kg)	2	1	2	2	2	2
Water (litre)	1	1	1	1	1	1
KMS	½ t	½ t	-	¼ t	½ t	½ t
Essence	few drops	lt	lt	lt	lt	lt
Citric acid (g)	-	30	20-30	30	30-40	30
Sodium Benzoate	-	-	½ t	¼ t	-	-

Add a few drops of colour, if desired.

Method

1. Take water, sugar and citric acid in a pan and heat till all the sugar dissolves.
2. Strain through a muslin cloth and cool.
3. Add fruit juice, essence, colour and KMS/sodium benzoate. Stir well.
4. Pour in sterilised bottles. Screw the cap and label.



Notes

D.KETCHUP

TOMATO KETCHUP

Ingredients

Tomato	- 1 kg	pepper corns	- 10
Onion	- 100g	cumin seeds	- ½ t
Cloves	- 5	sugar	- 30g
Garlic	- 10 cloves	salt	- 2 t
black cardamom	- 2	chilli powder	- ½ t
cinnamon	- a small stick	vinegar	- 50 ml
sodium benzoate	- 1g		

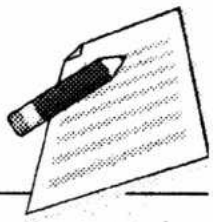
Method

1. Select fully ripe, bright red tomatoes.
2. Wash and chop tomatoes, onion and garlic. Cook for about 20 minutes till tomatoes are soft and pulpy.
3. Rub the pulp through a strainer or blend in a blender and then strain. Return the puree to the rinsed pan.
4. Tie the whole spices in a muslin cloth and add to the tomato puree. Cook the puree till it is quite thick.
5. Remove the muslin cloth with spices. Add salt, sugar, chilli powder and vinegar and boil till sauce-like consistency is obtained.
6. Dissolve sodium benzoate in a little ketchup and then mix this into rest of the ketchup.
7. Pour into sterilised bottles, label and store.

CONCLUSIONS

1. Give your evaluation of each product in the table below:

Food item prepared	*Appearance & colour (good/average/poor)*	*Taste (good/average/poor)*	*Your comments about the recipe*



Notes

2. Did any of the items get spoilt on keeping for a month? If yes, mention them and analyse why. A product gets spoilt for various reasons. Some of these are:

   (i) Ingredients are not accurately weighed.

   (ii) Cooking (in case it is done) is incomplete.

   (iii) Moisture in the food is not taken care of.

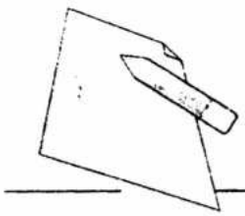
   (iv) Bottle is not sterilized.

Do you know?

What are HIV and AIDS?

HIV is:	AIDS is:
Human	**Acquired**
Immunodeficiency	**Immunodeficiency**
Virus	**Syndrome**

HIV weakens the body's immune system. AIDS is the late stage of HIV infection, when the immune system of the infected person has been completely destroyed and when the person contracts a variety of diseases and infections. AIDS is thus not one particular isolated disease but a syndrome, which means that it shows a variety of symptoms related to different disorders and diseases. AIDS may develop as early as 6 months after HIV infection in a severe case or as late as 8–10 years after infection.



Notes

PRACTICAL 2

AIM

(i) To prepare dishes using the following methods of food enrichment:

A) Combination

B) Fermentation

C) Germination

(ii) To evaluate the product.

INTRODUCTION

You have already learnt that the food that you eat provides your body the energy to do work. It also provides all the nutrients required by your body to keep healthy and fit.

Do you also remember how you help the body to achieve this? Yes you are right, you achieve it by

(i) right selection of food items in your daily meals.

(ii) using the right procedures in preparation of this food. Germination, fermentation and combination are methods which help in increasing the nutritive value of the food. We have already discussed them in the Lesson.

In this practical you will learn to prepare dishes using the methods of food enrichment. You will also evaluate the products you make.

PROCEDURE

Given below are some recipes using the combination, fermentation and germination method of food enrichment. **Prepare any two recipes using each method.**

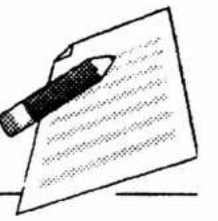
RECIPES

A. COMBINATION METHOD

BAJRA LADOO

Ingredients

bajra flour	-50g	til	-5g
besan	-25g	groundnuts	-5g
jaggery	-30g	fat	-5g



Notes

Method

1. Make a one thread syrup with jaggery.
2. Roast bajra flour and besan in fat.
3. Roast nuts separately.
4. Mix together all ingredients and form into small balls while still hot.

WHEAT BESAN LADOO

Ingredients

wheat flour (atta)/rice flour*	- 50g	besan	- 50g
castor sugar	- 100g	fat	- 40g

Method

1 Roast atta and besan separately.
2. Mix atta and besan and fry for 10 minutes in the fat.
3. Remove from fire. Add powdered sugar and form into ladoos.

*For rice besan ladoos, clean the rice, roast and grind to a fine powder before mixing with besan.

BAJRA MATHRI

Ingredients

bajra atta	- 25g	salt	- ¼ t
besan	- 12g	fat	- 8g plus some for frying

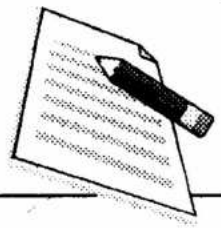
Method

1. Sift together the bajra atta, besan and salt.
2. Rub in the fat.
3. Knead into a stiff dough with water.
4. Make small balls and roll each into 1 cm. thick rounds(2½) cm in diameter).
5. Deep fry in fat till golden brown.

POSHTIK NAMAK PARAS

Ingredients

wheat flour	- 100g	til seeds	- 15g
spinach	- 50g	fat	- 30g



Notes

besan	- 50g	ajwain	- ¼ t
groundnuts (roasted)	- 30g	salt	- to taste

Method

1. Wash and boil spinach (keep aside the water used for boiling).
2. Grind groundnuts after roasting and removing the skin.
3. Mix all the dry ingredients.
4. Mix in fat and spinach.
5. Make a stiff dough with water (use water kept aside in step one).
6. Roll the dough (0.1 inch thick).
7. Cut into small rectangular pieces.
8. Deep fry.

Same mixture can be used for mathris.

BESAN-BATHUA CHEELA

Ingredients

Atta	- 20g	fat	- 10g
Besan	- 20g	salt	- to taste
bathua leaves*	- 10g		

Method

1. Wash bathua leaves and cut them finely.
2. Mix atta, besan and bathua leaves. Add salt and make a batter with water.
3. Heat tava, smear it with fat. Pour a ladleful of batter on the tava and spread it with the help of the ladle.
4. Fry on both sides and serve.

*Any green leafy vegetable can be used instead of bathua leaves.

B. GERMINATION METHOD

The techniques given below can be used to sprout a variety of whole pulses:

Put the pulse into a bowl, cover with sufficient water and leave to soak overnight. Do not use too much water as some nutrients will be drained when the surplus water is discarded. With some practice it is possible to use just enough water so that all of it is absorbed. Green gram and cowpeas require about ½ their volume of water for complete swelling and bengal gram requires about three-fourth its volume. Sprouting is facilitated by using warm water (40-45°C) for soaking,

particularly in winter and in the case of hard grains like bengal gram. Drain the pulses, for if they are allowed to remain in the water long after maximum swelling has taken place, they will acquire a foul odour.

After soaking, the seeds need sufficient warmth and aeration for the sprouts to grow. For this use anyone of the following methods for germination:

1. Tie loosely in a piece of muslin cloth and keep on a plate. Cover the plate with a pan placed upside down.
2. Put into a colander (a utensil with small holes on the base) and cover with a wet cloth. Place colander on a pan partially filled with water. Let the ends of the wet cloth dip in this water. This will keep the cloth moist. Cover colander loosely with a lid. This kit can be covered with an inverted pan in winter.

Depending upon the pulse, sprouts will appear after 12-18 hours. The weight of the sprouted pulse is approximately double the weight of the raw pulse.

SPROUTED GREEN GRAM RAITA

Ingredients

sprouted green gram - 20g (raw dal - 10g)
curd - 100g
finely chopped onion - 25g (½ small)
green chilli (chopped) - ½ (optional)
coriander leaves - a few
salt - 1/3 t
red chilli powder - to taste
roasted and ground cumin seeds - ¼ t

Method

1. Beat the curd well, making it of a pouring consistency (by adding water if required).
2. Mix sprouted dal, onion, chilli, coriander leaves and salt.
3. Garnish with cumin powder and a few coriander leaves. Chill and serve.

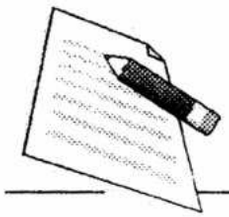
STUFFED TOMATOES

Ingredients

tomato	- 2 firm	salt	- ½ t
onions	- 10g	red chilli powder	- ¼ t
sprouted pulse	- 90g	garam masala	- ¼ t
fat	- 15g (1T)	chopped coriander leaves	- a sprig

Method

1. Cut off a thin slice of tomato from top and keep it aside. Scoop out the



Notes

pulp and keep it aside. Drain off tomatoes and sprinkle a little salt into the cavaties.

2. Chop onions fine. Heat fat and fry onions lightly. Add tomato pulp, sprouted dal and seasoning. Cook till well mixed and a little dry. Add coriander leaves and remove from fire.

3. Fill the tomato shells with this mixture. Replace the caps.

4. Saute in a little fat in a closed pan for about 5 minutes, till they are a little tender but quite firm.

Stuffed capsicums can also be made in exactly the same manner.

DALMOTH CHAAT

Ingredients

sprouted green gram	- 50g	salt	- to taste
sprouted bengal gram	- 50g	tumeric powder	- a pinch
green chillies	- ½	cucumber	- ½
lime	- 1		

Method

1. Lightly cook the dals with a pinch of turmeric, salt and water till dry.

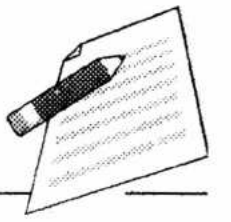
2. Cool and pour lime juice over it. Serve garnished with slices of cucumber and green chillies.

(C) Fermentation method

Idli and dosa in South India and Khaman Dhokla in Gujarat are some of the commonly made fermented foods in our country.

The pulse/rice combinations are soaked for 5-10 hours and then ground. The batter is then left to ferment overnight at room temperature. Better fermentation takes place if the batter is beaten with a rotary motion with either the hand or an egg beater (especially if the stone mortar is used for grinding). The process of fermentation can be speeded up, particularly in winter by adding a little curd and/ or keeping the batter in a basin of warm water for 15-30 minutes and then keeping it covered by inverting a large pan over it. The fermented batter appears effervescent. This batter should not be stirred unnecessarily, otherwise the gas escapes and the product is not porous.

Fermentation increases the digestibility and the quality of nutrients present in the food. Also, the amount of vitamin B and C present in foods increases as a result of fermentation.



Notes

IDLI

Ingredients

rice*	- 225g	fenugreek seeds	- ¼ t
split black gram	- 115g	salt	- to taste

Method

1. Wash and soak the rice for about 30 minutes. Strain and dry.
2. Grind coarsely.
3. Soak gram for one hour and grind with fenugreek seeds till it is light and frothy.
4. Mix ground rice and ground gram and a little water and keep it overnight.
5. Add a pinch of salt and steam it by pouring the batter with a ladle over a moist cheese cloth in an idli steamer.

---

*i) If parboiled (sela) rice is used the proportion of black gram to rice can be 1 : 3.

ii) Serve it with coconut chutney.

COCONUT CHUTNEY

Ingredients

coconut	- 1	onions	- 115g
red chillies	- 5g	tamarind	- 10g
ginger	- 10g	salt	- to taste

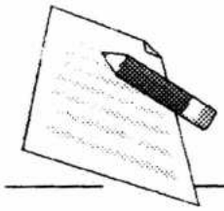
Method

1. Grate the coconut and grind all ingredients together. Add a little water if the chutney is too thick. If desired this chutney may be tempered with mustard seeds and curry leaves (this is done by heating a small quantity of fat and adding mustard seeds to it. Curry leaves are added when the mustard seeds start spluttering).

DOSA

Ingredients

rice	- 300g	salt	- to taste
split black gram	- 100g	oil	- 30g



Notes

Method

1. Soak rice and gram separately.
2. Grind rice coarsely and gram to a smooth and fluffy consistency.
3. Mix together. Leave to ferment overnight.
4. Add salt and lukewarm water to form a pouring consistency.
5. Heat gridle.
6. Grease lightly with oil (a cut onion may be used to wipe surface of gridle if batter is inclined to stick).
7. Pour spoonsful of mixture. Spread to form a round about 13-15 cm. (5-6") in diameter.
8. Cook for 2 minutes. Turn over. Cook for another minute or two.
9. Serve hot with coconut chutney.

OOTHAPPAM

Ingredients

parboiled (sela) rice	- 125g	green chillies	- a few
split black gram	- 60g	ginger	- a small piece
salt	- to taste	coriander leaves	- ½ bunch
onions	- 2	fat	- to cook

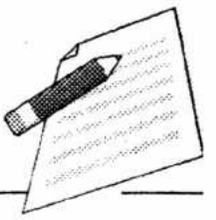
Method

1. Soak rice and gram separately overnight.
2. Grind them separately, then mix the two. Allow to ferment for at least 24 hours.
3. Add onions, green chillies, ginger, coriander leaves, all chopped fine. Add salt and make batter into a pouring consistency.
4. Cook as for dosa.

KHAMAN DHOKLA (12 pieces)

Ingredients

split bengal gram	- 1 C	ginger	- 1 cm piece
soda bicarbonate	- ¼ t	mustard seeds	- a pinch
oil	- 30 ml (2T)	curry leaves	- a sprig
salt	- to taste	grated coconut	- ¼ cup



Notes

asafoetida	- a pinch	coriander leaves	- 2 sprigs
green chillies	- 2		

Method

1. Soak the gram overnight. Grind, but not too fine.
2. Beat with a circular motion to incorporate air. Leave to ferment till evening.
3. After it is fermented, add half the oil, salt, asafoetida, ground paste of green chillies and ginger, and soda bicarbonate mixed with a little water. Beat again.
4. Grease a utensil or pyrex pie dish about 5 cm (2") deep with a little oil. Spread the mixture on it about 2.5 cm (1") thick.
5. Place the utensil in a pressure cooker containing some boiling water. Close this cooker with the lid. **Do not put the pressure weight on the lid.** Cook for 8 minutes on high flame.
6. Remove from fire. Allow to cool slightly. To the remaining oil, add mustard seeds. When they crackle, add curry leaves and pour over dhokla.
7. Serve garnished with grated coconut and chopped coriander leaves.

Note:

1. One table spoon of buttermilk may be added along with spices and soda bicarbonate.
2. Dhokla may be served with coriander leaves chutney.

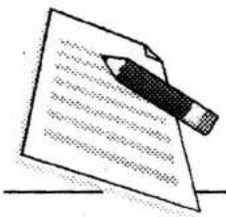
FERMENTED BENGAL GRAM VADA

Ingredients

bengal gram	- 30g	spinach	- 20g
black gram(urad)	- 30g	oil	– for frying
onion	- 10g		

Method

1. Soak the pulses overnight
2. Grind and ferment them for 12-15 hours.
3. Add the chopped spinach.
4. Form into vadas and deep fry in oil.



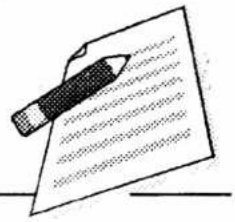
Notes

CONCLUSION

Conclude by evaluating the dishes prepared by you in the table below. Grade the appearance and taste of each dish as Poor/Average/Good/Excellent. Under the column 'Remarks' enter your comment about the dish. For example you can mention that the dish had too much salt or was over/under cooked or it was perfectly cooked etc.

Dishes Prepared	*Appearance*	*Taste*	*Remarks*
A. Combination Method			
1)			
2)			
B. Germination Method			
1)			
2)			
C. Fermentation Method			
1)			
2)			

2. If you have a recipe which has one, two or all three procedures of enrichment discussed above write it down in the space provided below:



Notes

PRACTICAL 3

AIM

To collect different food items that are available at home and categorize them under various food groups.

INTRODUCTION

A balanced diet is one that contains different types of food in such quantities and proportions that the need for calories, minerals, vitamins and other nutrients is adequately met. These foods are divided into various groups as follows:

Group I	:	Cereals, grains and products
Group II	:	Pulses and legumes
Group III	:	Milk and meat products
Group IV	:	Fruits and vegetables
Group V	:	Fat and sugars

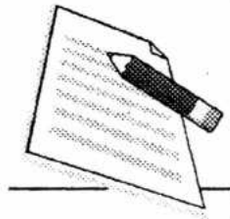
It is important to include food items from each food group in one's diet to make it balanced. Hence it is important to identify the food items in each of these food groups.

Material Required

1. Pen
2. Paper
3. 20 - 30 food items

Procedure

1. Collect 20 - 30 food items which are available at home.
2. Make sure that you collect food items which are commonly consumed in moderate and large quantities at home and not to collect food items which are used in small quantities like spices etc.
3. Identify the characteristics of the different food items and categorise and list them into the following food groups:
   - Cereals, grains and products



Notes

- Pulses and legumes
- Milk and meat products
- Fruits and vegetables
- Fats and sugars

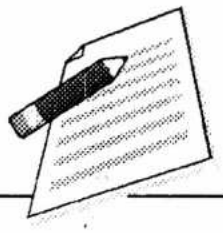
4. The table for doing this practical can be made in the following manner:

S.No.	FOOD ITEM	MAJOR NUTRIENT	FOOD GROUP

CONCLUSION

Based on the list made by you, answer the following questions -

1. Name the food group whose consumption is the largest.
2. Name the food group whose consumption is the smallest.
3. Which food items should be consumed to increase the share of this food group in your family's diet?



Notes

PRACTICAL 4

AIM

To identify sources of pollution in one's area and to suggest remedial measures.

INTRODUCTION

You have all read about environmental pollution in Lesson 15. Besides, newspapers, magazines and television also feature a number of items on the topic. Do you have this problem in your area? Have you ever stopped to think about the various sources of pollution in your area? Have you ever tried to think of some ways of preventing this pollution? If not, this assignment will help you to become aware of pollution in your area. It will also enable you to work out certain remedial measures in order to tackle the problem.

PROCEDURE

1. You can start this assignment by giving some general information about your area below:

Type of area	:	urban/semiurban/rural
Your residential address	:	
Type of houses (in the area)	:	pucca/kuccha
Type of lanes	.	pucca/brick lined/kuccha
Type of drainage in the lanes	:	open/closed
Garbage disposal in the locality	:	(i) open/enclosed
		(ii) within locality/out side locality
Source of drinking water	:	Municipal supply/handpump/pond water

Is there any lake/pond/nullah/river in the area? If yes, specify the ones which are there.

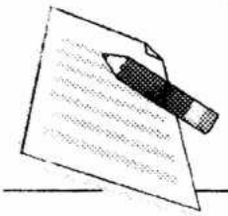
How distant is your area from major roads?

What type of vehicular traffic is seen in your area?

Are there any factories in your area? If yes, specify how many. Also mention the products which are manufactured by them.

Is there a power house in your area? Yes/No

What is used to produce electricity?



Notes

What are the wastes coming out of this unit?

How are these dealt with ?

2. Now fill in the information about sources of pollution in your area along with your suggestions regarding remedial measures in Table 4.1

Table 4.1 Sources of pollution in the area

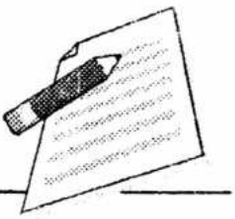
Air Pollution	*Water Pollution*	*Soil Pollution*	*Sound Pollution*

CONCLUSION

1. Based on your observations, comment about the level of air, water, soil and noise pollution in your area:

Pollution	Air	Water	Soil	Noise
Mild/little				
Moderate				
High				

2. What will you, as a resident, do in order to reduce the pollution in your area?



Notes

PRACTICAL 5

AIM

To take one's own family as an example and

a) list the household and related tasks performed by each member,

b) analyse the work patterns according to age and gender differences in responsibility and,

c) comment on this division of tasks.

INTRODUCTION

Most of us live or have lived with our families. In any household there is a wide variety of tasks which have to be performed. Mostly these tasks are assigned to different members of the family. Can you think of a few such tasks which you yourself perform for your family? These tasks may be small ones like helping with household cleaning or others like doing household repairs. Some of them may require working within the house and some others may involve going outside the house.

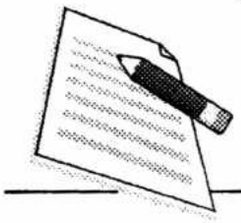
If you think about the various household and related tasks performed in your family and the members who generally perform them, you will realise that there is a difference in the number and kind of tasks given to each member. In this assignment you will identify the household and related tasks of your family and study these differences, if there are any.

PROCEDURE

Enter the background information about your family in Table 5.1. If you live in a large joint family, you can give only information pertaining to the nuclear family (within the joint family), to which you belong.

Table 5.1 Background Information

Name of the head of the household	:	
Type of family	:	Nuclear/Joint
Number of family members	:	
Number of males in the family	:	
Number of females in the family	:	
Family income	:	
Address	:	



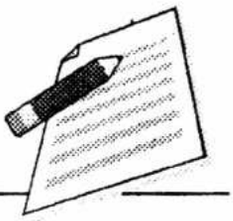
Notes

S.No.	Name of members	Sex	Age	Relation with the head of the household

2. List out the household and related tasks performed by the family members under the two categories mentioned in Table 5.2. A few tasks are mentioned as examples. You can cancel them in case they do not apply to your family

Table 5.2 : All household and related tasks.

TASKS	
Within the house	Outside the house
1. Cooking	1. Buying fruits and vegetables
2. Doing household repair	2. Buying milk
3.	3. Paying bills
4.	4. Operating the bank account
5.	5. .....
6.	6. .....
7.	7. .....
8.	8. .....
9.	9. .....
10.	10. .....



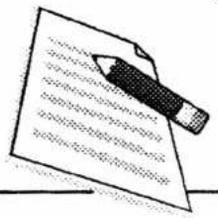
Notes

3. Enter the tasks performed by each member separately in table 5.3 :

Table 5.3 : Tasks performed by each family member

Name	List of tasks	The kind of tasks	
		Within the house	Outside the house
1.	1. ..... 2. ..... 3.	√/x	√/x
Total			
2.	1. ..... 2. ..... 3.		
Total			

Name	List of tasks	The kind of tasks	
		Within the house	Outside the house



Notes

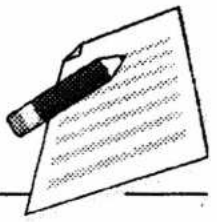
4. Now you have to analyse the information gathered above in terms of the differences in the tasks performed by (a) members of different sex and (b) members of different ages.

For convenience in studying the differences in the tasks performed by members of different ages, we can group the members in different age groups as in Table 5.4. All members who are between 10 to 15 years of age will fall in the age group 10-15 years while someone who is 15 years and I month old will fall in the group 15-20 years.

In column II of the table below enter the names of the family members falling under each age group and in column III enter, their sex. Refer back to Table 5.3 and enter the information about the kind of tasks performed by each member against his/her name (i.e. the total number of tasks within the house and the total number of tasks outside the house).

Table 5.4 : Analysis based on age and sex

Column I Age group (In years)	Column II Names	Column III Sex	Column IV The kind of tasks	
			within the house	outside the house
Less than 10	1. 2. 3.			
	Total			
10 - 15	1. 2. 3.			
	Total			



Column I	Column II	Column III	Column IV	
			within the house	outside the house
15 - 20	1. 2. 3.			
	Total			
20-50	1. 2. 3.			
	Total			
Above 50	1. 2. 3.			
	Total			

CONCLUSION

Now you can answer the following questions on the basis of table 5.4:

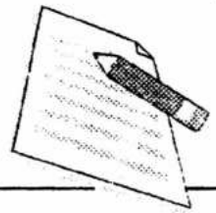
1) Is there a difference in the total number of tasks performed by males and females? If yes, what is the difference?

2) Is there a difference in the kind of tasks performed by males and females? If yes, then what is the difference?

3) Do you think that there should be a difference in the number and kind of tasks performed by males and females. Why?

4) Is there a difference in the number and kind of tasks performed by members in different age groups? If yes, what is the difference?

5) Do you think the difference is desirable? If your answer is no, then what changes would you like to bring about?



Notes

PRACTICAL 6

AIM

i) To record the expenditure for one's own family for a month.

ii) To evaluate the family's pattern of expenditure and on the basis of the evaluation prepare a spending plan for the family.

INTRODUCTION

You have already read about family budgets and record-keeping in Lesson 13. Have you started preparing a spending plan for your family and keeping a record of expenditure? If not, this assignment will help you to develop this skill!

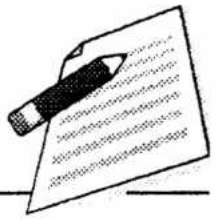
PROCEDURE

1. Fill in the information about your family in Table 6.1

Table 6.1 : Details of the family

Residential Address:

S.No.	*Name of Members*	*Age*	*Occupation*



Notes

2. Enter the details of your family's income in Table 6.2:

Table 6.2 : Family's Income

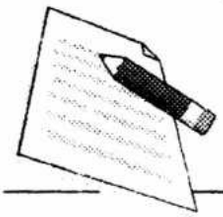
Sources of Income	Income
i) ii) iii) iv)	
Total Income	Rs.

3. Now you have to record the family's expenditure for a month in Table 6.3. First of all, mention the month and year of recording the expenditure on top of the table. Then list in column 1 the items of expenditure in your family under various headings. The heading 'Food' and some of the items under it have been given as examples. You can add more to the list, if required.
   In a notebook record the daily expenditure. At the end of each week enter this information in Column II.
4. Add the expenditure on each item for all 4 weeks and enter the total in Column III.
5. Calculate the total amount spent on each heading and enter it in Column IV.
6. Immediately after the table calculate the total expenditure and the savings.

Table 6.3 : Record of Expenditure

Month: **Year:**

Column I	**Column II**				**Column III**	**Column IV**
Items	1st Week	2nd Week	3rd Week	4th Week	Total	Monthly Total
Food						
Cereals						
Pulses						
Vegetables						
Fruits						
Ghee/oil						
Milk & Milk - products						
Spices						



Notes

Column I	Column II				Column III	Column IV
Items	1st Week	2nd Week	3rd Week	4th Week	Total	Monthly Total

Total expenditure of the month :

Balance left :

7. In order to evaluate the pattern of expenditure recorded, answer the following questions:

   i) Was the total expenditure greater than/less than/equal to the monthly income?

   ii) How much was the difference between them?

   iii) Your comments on the difference:

   iv) How much money was kept aside as 'savings' ?

   v) If the total expenditure was greater than the income, where did the extra money come from? Was it from money left over from the previous month/borrowed from saving of the family?

   vi) Were the needs of all members met? If not, then explain why.

   vii) Can you mention certain expenditures which could have been avoided? Give reasons.

   viii) Can you mention any important item/ items for which there was no money left to be spent?

Notes

8. You can now make a spending plan for your family for the next month by suitably modifying the pattern of expenditure recorded. Record the items of expenditure (only the headings) and the amount allocated for each heading in Table 6.4.

Table 6.4 : Spending plan (Month ..... Year.....)

Items of Expenditure	Amount in rupees
1. Food	
2.	
3.	
4.	
5.	
6.	
7.	
8.	
9.	
10.	
Total	

Notes

PRACTICAL 7

AIM

To observe children in the age group of 1½ - 3 years for their language achievement.

INTRODUCTION

We all know that as children grow older, their language improves. We have also dealt with the process of language development in lesson 18.

In this assignment you will get the opportunity to study the difference in the language used by children of different ages.

PROCEDURE

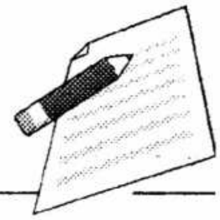
1. Identify from your neighbourhood/family/any other place, two children-one about 1½ and the other about 3 years of age.

2. Visit both the children once or twice before doing the actual formal observations so that they become familiar with you and learn to accept you.

3. Observe one child at a time, for about 20 minutes and record your observations in Tables 7.1 and 7.2. Repeat the process on two other days.

   Use separate tables for each child. Record the date and timing in the first column of the tables. Note down each word/sentence spoken by the children in the second column for all three days.

4. Fill up the other columns after the period of observation is over. Two examples of words/sentences have been worked out in the table.



Notes

Table 7.1 : Observation of child I

Name................. Years................. Months   Address..............................

	Record of Words/ Sentences		Language Analysis				
Date and Time	S.No.	Words/ Sentence	No. of words	Simple Sentence	Complex Sentence	Complete Sentence	Incomplete Sentence
4.11.07	1.	Ball	1	√	-	-	√
10-10.20 A.M	2.	Bird come	2	√	-	√	-
Total	☐		☐	☐	☐	☐	☐

Table 7.2 : Observation of child II

Name................. Years................. Months   Address..............................

	Record of Words/ Sentences		Language Analysis				
Date and Time	S.No.	Words/ Sentence	No. of words in a sentence	Simple Sentence	Complex Sentence	Complete Sentence	Incomplete Sentence
Total	☐		☐	☐	☐	☐	☐

5. Calculate the following in order to analyse the language spoken by the two children:

S.No.	Formula	Calculation	
		Child I	Child II
1.	Percentage of Simple Sentences = $\frac{\text{No. of Simple Sentences}}{\text{Total no. of Sentences}} \times 100$		
2.	Percentage of Complex Sentences = $\frac{\text{No. of Complex Sentences}}{\text{Total no. of Sentences}} \times 100$		
3.	Percentage of incomplete Sentences = $\frac{\text{No. of Incomplete Sentences}}{\text{Total no. of Sentences}} \times 100$		

CONCLUSION

On the basis of calculations done, answer the following questions:

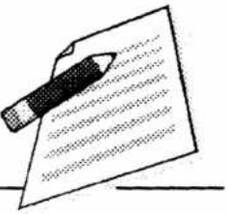
1. Is there a difference in the vocabulary of the one year old and the three year old? If yes, what is the difference?
2. What is the nature of sentences generally used by the two?

Do you know?

What are life skills?

Skills are the abilities that enable people to carry out specific actions.

Life skills are the abilities that enable individuals to deal effectively with the demands and challenges of everyday life. These abilities are associated with adaptive and positive behaviour. Adaptive behaviour means that a person is able to adjust to changing situations and circumstances. Positive behaviour means that a person has a healthy attitude towards life and even in adverse conditions can solve problems and face the situation well.



Notes

PRACTICAL 8

AIM

(i) To observe a child in the age group of 1-2 years and record how he/she expresses (a) anger and (b) fear.

(ii) To visit a nearby nursery school and observe any 3 children for their social behaviour.

INTRODUCTION

Have you ever seen a young child (1-2 years of age) getting angry or being afraid? How is it that we get to know when a child is angry or afraid? Yes, the child expresses the emotions through different behaviours which makes it possible to determine the emotion.

Anger is generally expressed by

(a) hitting

(b) pushing

(c) kicking

(d) holding another against his will

(e) taking another child's toy

(f) crying

(g) shouting

(h) using bad language

(i) raising the voice

(j) biting

Fear is usually expressed by

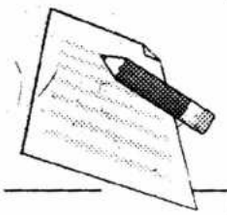
(a) crying

(b) physical contact with another person/object or by clinging to some person / object

(c) getting startled

(d) running away

(e) hiding



Notes

(f) putting the head in one's own lap

(g) closing the ears with the fingers

Besides the behaviours mentioned above, each child may use some other ways of expressing anger and fear. In doing part I of this assignment you will observe a child in the age group of 1-2 years in order to study how he/she expresses anger and fear.

For part II of this assignment you will visit a nursery school nearby and observe any 3 children in the age group of 3-5 years for their social behaviour. You have already read about social development during preschool years in Lesson 18.

PROCEDURE (Part I)

1. Identify a child in the 1-2 years age group.

2. Talk to the child's guardian/parents explain to them your reasons for observing their child for one hour.

3. Record the following information:

   Name of the child :

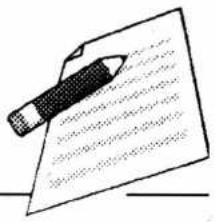
   Age :

   Sex : Male/Female

   Place of observation :

   Time period :

4. Given below are two tables, Table 8.1 to record angry behaviour and Table 8.2 to record the expression of fear. As and when the child shows either of the emotions, record the event or situation leading upto it and the child's way of expressing it.



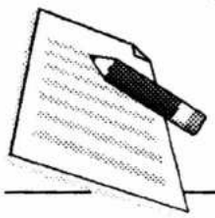
Notes

Table 8.1 Record of Anger

S.No.	Events	Cause of anger	Type of behaviour	Intensity		
				Mild	Moderate	High

Table 8.2 Record of Fear

S.No.	Events	Cause of fear	Type of behaviour	Intensity	
				Mild	Severe



Notes

5. In both the tables analyse each of the events and the type of behaviour exhibited in each situation and classify the intensity of the emotion. Anger can be classified as either mild, moderate or high based on the following:

   (a) **Mild form of anger** is when the child raises the voice or makes an angry face.

   (b) **Moderate form of anger** is when the child uses bad language or shouts.

   (c) **High form of anger** is when he kicks, bites, hits etc.

   Classify fear as mild or severe based on the following:

   (a) **In mild form of fear** the child stops the activity or hugs a known adult with a feeling of fear.

   (b) **In severe form of fear** the child starts screaming or howling after facing a fear situation.

CONCLUSION

Conclude by answering the following questions:

(1) Were anger and fear in the situation justified?

(2) Could these have been avoided? If yes, how?

(3) How would you classify the child on that particular day?

Happy /Irritable/ Aggressive/Withdrawn

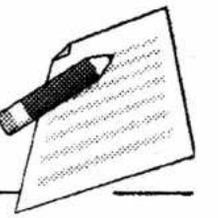
PROCEDURE (Part II)

1. Visit a nursery school and explain the purpose of your visit to the Principal and seek permission to observe any 3 children (age group 3-5 years).

2. Identify the 3 children and note down their particulars in Table 8.3.

Table 8.3 Particulars of the Children

Name	Age	Sex
Child I		
Child II		
Child III		



3. Observe one child at a time for a period of 30 minutes each. Fill up Table 8.4 by making a tick mark against the behaviour exhibited by the children.

Table 8.4: Observation Table

	Social Behaviour	Child I	Child II	Child III
1.	Plays with another child.			
2.	Speaks to another child.			
3.	Occasionally makes social contact by touching or pushing a child.			
4.	Imitates other children's actions.			
5.	Imitates children's words.			
6.	Imitates children's laughter.			
7.	Starts new play activity with another child.			
8.	Joins group of children in play.			
9.	Seeks another child's approval.			
10.	Asks another child for help/play materials.			
11.	Gives up toys at fair request.			
12.	Awaits turn.			
13.	Tries to help others.			
14.	Stops and helps another child.			
15.	Comforts another in distress.			
16.	Offers to share materials with others.			
17.	Willingly shows own toys (brought from home to school).			
18.	Voluntarily passes things to others at the table.			
19.	Initiates group activities.			
20.	Tries to make a new child one of the group.			
21.	Speaks appreciatively of another child.			
22.	Repeats a child's remarks with or without modification.			
23.	Apologises to child for accidents or mistakes.			

4. In order to compare the behaviour of all the three children fill up the following table by counting the total number of tick marks for each child. Give the details below:

	Total number of tick marks
Child I	
Child II	
Child II	

CONCLUSION

Conclude by answering the following questions:

1. What were the similarities and differences in the social behaviour of the these children?
2. Is any particular behaviour shown a number of times by all three or two children? If yes, comment on the behaviour.
3. In the given table classify the children observed as either of the following:
   a) Socially well adjusted
   b) With mild problems
   c) With severe problems

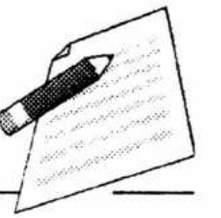
   Justify your classification for each child.

	Classification	Justification
Child I		
Child II		
Child II		

Do you know?

Can a person get AIDS from a dentist?

There is some risk of getting HIV from a dentists instruments as these are frequently contaminated with blood. However, if you visit a good, reputable dentist who uses properly sterilized or disposable instruments, the risk is minimal. So always choose a dentist who follows high levels of hygiene and sterilization.



Notes

PRACTICAL 9

AIM

To interview a teenager about the physical changes and the social and emotional problems faced during adolescence.

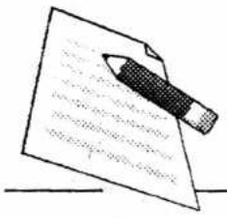
INTRODUCTION

You have read about adolescence and the associated physical, social and emotional changes in Lesson 20. You will now learn to actually interview a teenager to find out about the changes which he/she is undergoing. .

PROCEDURE

1. Identify a teenager (13-19 years of age) for interviewing.
2. Introduce yourself to the teenager and chat informally with him/her once or twice in order to become friendly. Try to make the teenager comfortable with you. This process is called **building of rapport** (pronounced as rappo).
3. Tell the teenager about the assignment which you have to do and fix a time suitable for the interview. Select such a place to conduct the interview where there are no disturbances or chances of being heard by others.
4. Before going to conduct the interview, make sure that you are absolutely familiar with the questions to be asked. These questions have been listed in the form of an interview schedule which you can consult while interviewing.

   Even though the interview schedule has been divided into 4 parts, the entire interview should be conducted in one sitting. **Part III of the schedule is different for female and male interviewees.** Remember only female leaners will use Part III A to interview a girl and only male learners will use Part III B to interview a boy. In order to avoid embarassment, do not attempt to interview a teenager of the opposite sex.
5. Note down the answers and comments made by the teenager in response to your questions in the space provided in the schedule. Convince the interviewee (in this case, the teenager) that the answers will be treated as confidential, in case there is hesitaion to answer some questions.
6. Take care not to talk excessively yourself while interviewing. Instead allow the interviewee to express his/her own views, opinions and answers without giving any suggestion, as to what the answer should be.



Notes

INTERVIEW SCHEDULE

Date :

Time:

Place:

PART I: GENERAL INFORMATION

1. Name of the interviewee :
2. Age :
3. Sex :
4. Educational Qualifications :
5. a) If studying, the name of the School :
   Class :
   b) If working, the occupation :
6. Educational Qualifications :

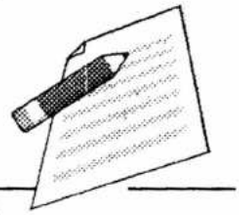
Mother's	Father's

7. Occupation :

Mother's	Father's

8. Approximate family income :
9. Type of family : Nuclear/Joint
10. Number of
    a) brothers :
    b) sisters :
11. Birth order of the interviewee:

Eldest / Youngest / Second / Third



PART II

1. Now that you have entered your teens do you think you are any different from what you were before?
2. How much height have you gained?
3. Have your body proportions also changed? If yes, in what ways?
4. Have a lot of friends/relatives started commenting about your physical appearance? If yes, what comments do they generally make?
5. Have you observed any changes in the way you are treated by
   a) your family: Yes/No
   b) other adults: Yes/No
   c) your friends: Yes/No
   d) your siblings: Yes/No

   (ii) Can you describe these changes :

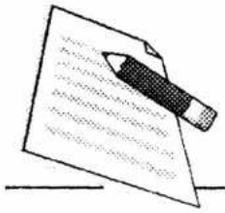
   (iii) Do you like these changes:

6) Do you find any change in your attitude towards the opposite sex? If yes, can you describe the change.

PART III- A TO BE USED BY FEMALES TO INTERVIEW A GIRL

1) Has your menstruation cycle started? If yes, at what age did it start?
2) Were you aware of the menstruation cycle before it started? If yes, since which age have you known about it?
3) How did you learn about it for the first time?
4) What were your reactions when the first menstruation occurred?
5) (i) Were any restrictions imposed on you since the onset of menstruation? Yes/No

   (ii) If yes, describe the restrictions in terms of :
   a) type of clothes worn:
   b) going out:
   c) interacting with members of opposite sex:
   d) any other:



Notes

PART III - B TO BE USED BY MALES TO INTERVIEW A BOY

1) (i) At what age did you first notice the occurrence of facial hair and thicker body hair?

(ii) What was your reaction?

(iii) What was the reaction of your

a) friends:

b) parents :

c) siblings:

(iv) Did you like their reaction?

2) (i) When did your voice begin to change?

(ii) What was other people's reaction to it?

(iii) How did you feel about the change and the people's reaction?

3) (i) At what age did you have the first nocturnal emission?

(ii) Did you know about it before? If yes, then since when?

(iii) How did you learn about it for the first time?

(iv) What were your reactions when it occurred for the first time?

4) Do you think there is a difference in the amount of freedom you enjoy now and the amount you had before teenage? If yes, describe how.

PART IV

1) If you face any emotional problem, who do you turn to for help?

2) What change do you feel in your role as you are growing up?

3) Do you think you are ready to take up all the responsibilities of an adult?

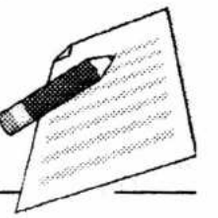
CONCLUSION

1) Was the interviewee an early/late or normal maturer?

2) What physical changes had the interviewee undergone since entering teenage?

3) What emotional problems, if any, was the interviewee facing?

4) How do you think you could help the interviewee tackle any of the problems related to the changes taking place in the body?



PRACTICAL 10

AIM

To identify various types of fibres (cotton, wool, silk and polyester), by doing

i) Visual test

ii) Burning test

INTRODUCTION

You have already read about clasification of fibres, and about their identification in lesson 22. In this practical you will actually carry out these tests which will give you the knowledge of the fibre content of the fabric, which is necessary to know its suitability, use and care. Also it will protect you as a consumer in not being cheated by an imitation fibre.

The visual test, that is inspection of fibre for its appearance and hand, is always the first step in fibre identification. The following should be considered while inspecting a fabric-

i) **Body lustre:** See whether the fabric is bright, dull, shining etc., (cotton is dull, polyester is shiny).

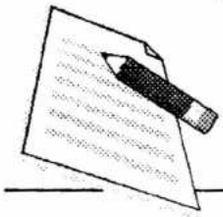
ii) **Body texture:** See if the fabric is soft, hard, rough, smooth, warm, slippery, cool, stiff, flexible, resilient etc , like cotton is rough, silk is soft and wool is rough, and slippery, etc.

iii) Also see the fabric weight, whether it is light, medium or heavy weight, while nylon is light weight and cotton is a medium weight fabric

iv) Next thing, which you should see in the **fabric**, is the **length** of the fibre. As you have studied in the classification of fibres, natural fibres have small length and manmade fibres have long length. From the fabric swatch pull out a yarn, untwist it and see the length. Natural fibres like cotton, wool are small and manmade fibres are long.

After visual test, burning test is a test which gives valuable information related to care. It helps in identification of the groups to which fibre belongs such as proteins, cellulose or manmade (regenerated and synthethics). While doing the burning test we observe following characteristics-

- Fabric approaching the filame
- In the flame



Notes

- Away fromt the flame - odour and residue

Material required

- Small swatches of fabric (3cmx3cm) of cotton, wool, silk and polyester
- Forceps
- Candle
- Match sticks

NOTE: Take only pure fabrics (it should not be a blend). Also instead of fabrics you can take their yarns, silk thread etc. You will get the fabrics as well as yarns easily in the market or you can go to the tailor's shop and collect the cut pieces of various fabrics types. You can even use some leftover fabric pieces or yarns at your home.

PROCEDURE

VISUAL TEST: Take the cut fabric swatches and look for the properties mentioned above and note down the observations in the table given below.

Table 10.1: Visual Test

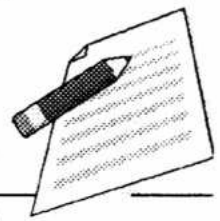
Fabric Sample	Length of fibre	Lustre	Texture	Fabric weight
Cotton				
Wool				
Silk				
Polyester				

Burning Test

For doing burning test follow the procedure given below:

i) Take the fabric swatch 3cmx3cm/yarn 3 to 4cm in length.

ii) Light the candle.



Notes

iii) Hold the fabric/yarn tip in a forcep, feed them slowly into the edge of the flame.

iv) Observe the behaviour as they approach the flame.

v) Move into the flame and observe its characteristics; do the same while pulling it away fromt the flame.

vi) Notice the odour given off and the ash or residue formed.

NOTE: Note down all the observations in the observation table.

Table 10.2: Characteristics of fibre after burning

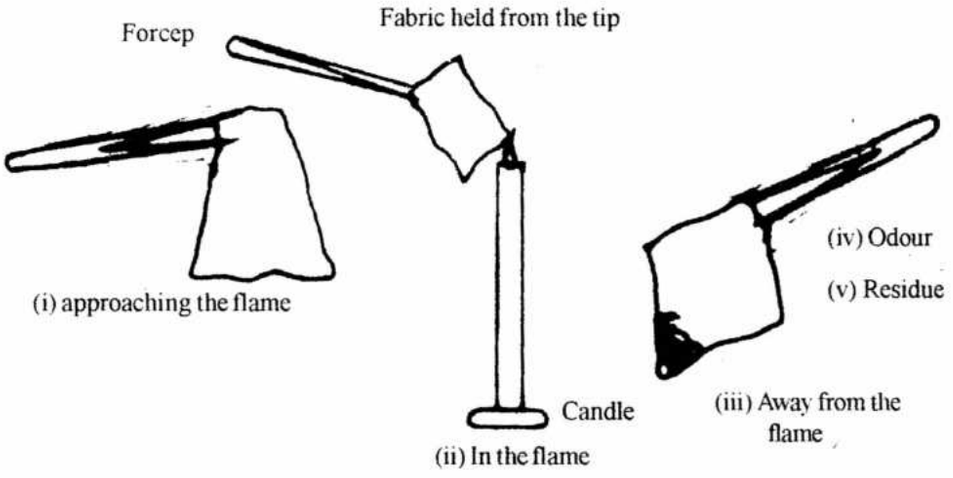
Fabric/yarn	Approaching the flame	In flame	Away from flame	Odour	Residue	Conclusion
Cotton						
Wool						
Silk						
Polyester						

CONCLUSION

On the basis of the visual and burning test performed by you, draw your conclusions by answering the following questions:

1. When you get the odour of burning hair, which fibres are likely to be present?
2. The presence of which fibres is shown by i) melting of fabric while approaching the flame ii) burning of the fabric while in the flame?

3. The presence of which fibre is indicated by i) soft, feathery ash ii) hard, brittle beads?



Do you know?

How can we enhance our life skills?

- Understand and feel good about yourself. Understand your own strengths and weaknesses.
- Be ready to learn from experiences even if they are not pleasant.
- In difficult situations, try to identify the cause of problem.
- Share your concerns with others and seeking timely help when needed.
- Have a healthy lifestyle and make responsible decisions.
- Seek reliable information and make informed choices and decisions.
- Think of the consequences of your decisions and actions.
- Manage your stress by sharing your concerns and seeking help from persons like parents, teachers, friends and counsellors.

PRACTICAL 11

AIM

i) To weave plain and twill weaves using strips of paper.

ii) To collect 6 samples each of fabrics made by these two weaves.

INTRODUCTION

You have already read about plain and twill weaves in Lesson 24.

In this assignment you will learn how to weave these two weaves using strips of paper. You will also learn to identify these weaves in the process of collecting samples.

EQUIPMENTS AND MATERIALS REQUIRED

1. Chart paper or any other thick paper
2. A pair of scissors
3 Gum

PROCEDURE

1. From the chart paper cut out 25-28 strips 0.5 cms wide and about 15 cms long.
2. Place 6 strips vertically on the table. These will represent the warp yarns.
3. Pick up another strip, and interlace it with the vertically placed strips so that one warp comes on top and next below it as shown in figure 11.1.

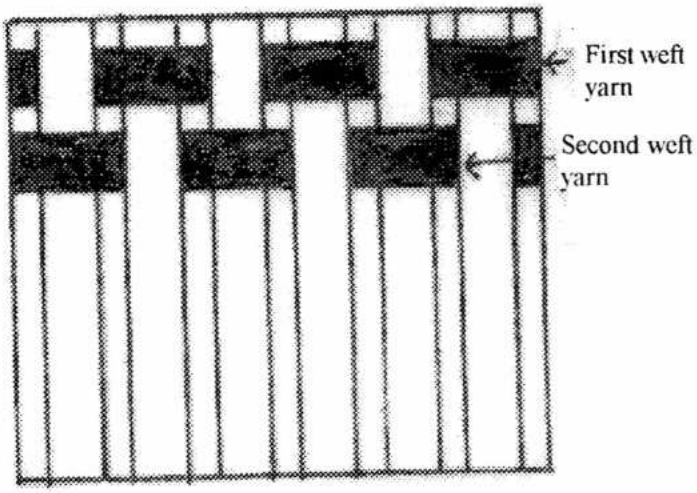


Figure 11.1

4. Do the same with 5 other strips, but the interlacing should be done such that if in the previous row warp is showing on top, then in the next row it will be under and vice versa. The finished pattern has been shown in figure 11.2.

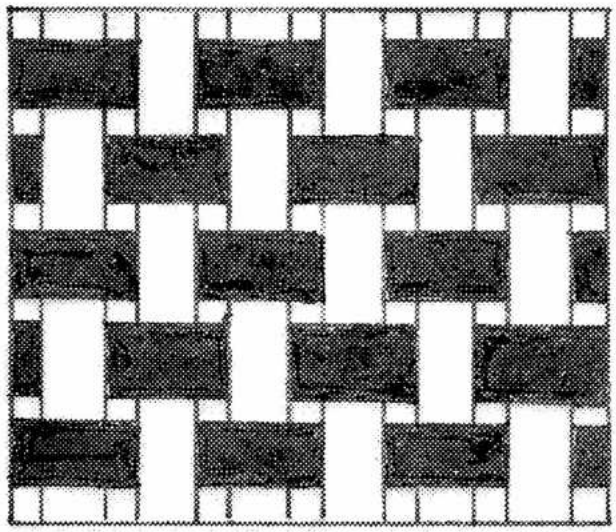


Figure 11.2

5. Attach the sample prepared to this page.

6. Collect 6 samples (3x3 cms in size) of plain weave. You will find that poplin, matty, voile, rubia, muslin, print cloth, organdy etc. are woven with plain weave.

7. Stick the samples in the space provided below and name the cloth.

i) ii)

iii) iv)

v) vi)

8. In order to make twill weave place 6-8 strips vertically on the table.

9. Pick up one weft strip and interlace it so that it is above one warp strip, then under two warp and again 1 up and 2 down till all warps are interlaced in one row.

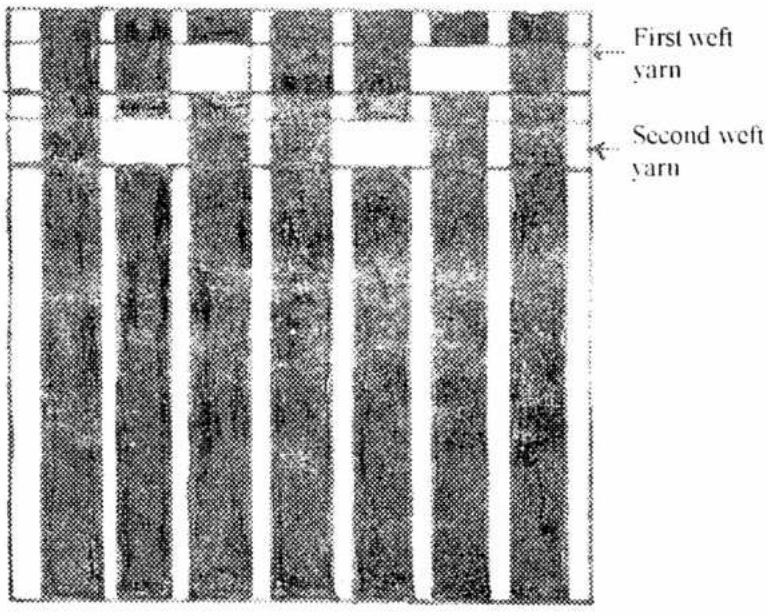


Figure 11.3

10. Now take the second strip and place it under 2 warp strips, above the next one and in same way 2 down and 1 up, interlace the second row.

11. So, for every succeeding weft strip, interlacing starts in the progression of one. Similarly do with other strips. Finished pattern is as shown figure 11.4.

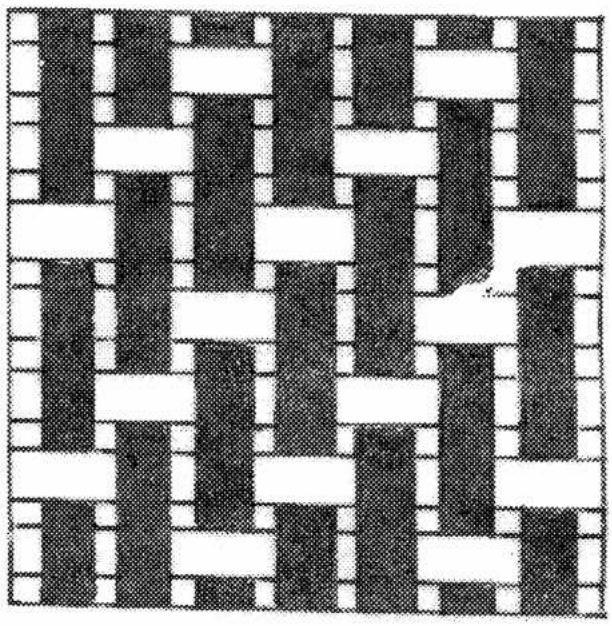


Figure 11.4

12. Attach the paper sample prepared by you to this page

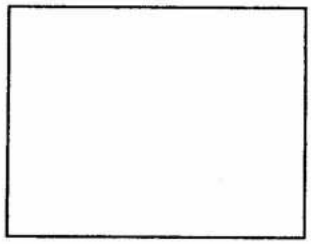
13. Collect 6 samples (3x 3 cms in size) of twill weave. You will find that some suiting and shirting materials which show diagonal lines on the surface, denims and khaki, jean materials and other materials with a zigzag woven pattern are all twills.

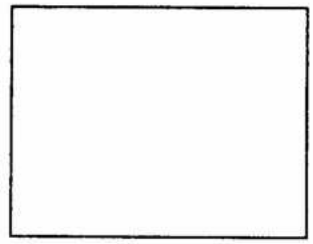
14. Stick the twill weave samples here and name each cloth.

i) ii)

iii) iv)

v) vi)





CONCLUSIONS

1. Do you find any difference in the fabrics made by plain and twill weaves? If yes, what is the difference?

- Blue + violet
- Yellow + green
- Yellow + orange

CONCLUSION

After making a colour wheel answer the following questions:

1. Name the three primary colours.
2. Name the three secondary colours.
3. Fill in the blanks

Red + blue ⟶ _____

Red + _____ ⟶ orange

Orange + yellow ⟶ _____

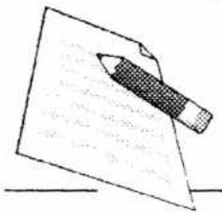
Violet + red ⟶ _____

_____ + green ⟶ bluegreen

Do you know?

What is substance abuse?

Substance abuse is 'the use of illicit drugs or the abuse of prescription or over-the-counter drugs for purposes other than those for which they are indicated or in a manner or in quantities other than directed.



Notes

PRACTICAL 12

AIM

To remove the following stains from white cotton fabric

i) Curry stain

ii) blood stain

iii) mud stain

iv) ink stain

v) tea/coffee stain

INTRODUCTION

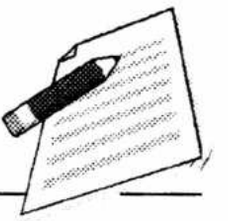
You have read about stain removal in lesson 27. In this assignment, you will carry out the procedures for stain removal yourself.

EQUIPMENTS AND MATERIALS REQUIRED

1. White cotton cloth (30 x 30 cms in size).
2. Water
3. Glycerine
4. Soap
5. Salt
6. Talcum powder
7. Sour butter milk (lassi)
8. Lime juice
9. Scissors

PROCEDURE

1. Cut the cotton cloth into 10 square pieces, 3x3 cms in size.
2. Stain 2 square pieces with one stain, i.e. 2 with curry, 2 with blood, 2 with mud and similarly 2 with ink and tea/coffee.



Notes

3. Stick one sample of each stain in column II of Table 12.1. Remove the stain on the other sample by following the procedure given in your lesson and stick it in column IV.

4. Record the procedure followed for stain removal in column III.

Table 12.1 : Before and after stain removal

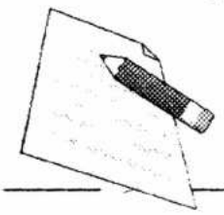
I Stain	II Before Cleaning	III Procedure followed	IV After stain removal
1. Curry			
2. Blood			
3. Mud			
4. Ink			
5. Tea/Coffee			

CONCLUSION

1. Were you able to remove all the stains? Yes/No.

2. Did you face difficulty in some cases ?

   If yes, which were these stains?



Notes

PRACTICAL 13

AIM

To practice changing the following (to be done under adult supervision only)

- An electric fuse
- 3 pin plug of an electric iron

INTRODUCTION

There are numerous situations when you may be required to call an electrician for carrying out even minor repairs at home. But with a little bit of practice, you can very well do them yourself and save a lot of time and expense in calling a trained dietician. But it is important to remember that electricity can be dangerous. Hence one must be extremely contions while attempting repairs.

The practical activity given here is to be strictly practiced under adult supervision only.

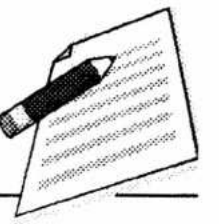
MATERIAL REQUIRED

1. Electric fuse
2. Pliers
3. Soft fuse wire
4. Screw driver
5. Screws
6. Three-pin plug
7. Sharp knife

PROCEDURE

I Electric fuse

1. Put the main switch off.
2. Identify the faulty appliance, switch it off and remove it.
3. Take out the fuse cut-out and examine it. You will see the melted wire or its remains. Remove this wire and clean the cut-out/ carrier.



Notes

4. Replace with a new wire. The new wire should pass through the hole if one is provided.
5. Replace the fuse cut-out, close the box and put the main switch on.

II 3 Pin Plug

1. Unscrew the main screw placed in the middle of the plug.
2. Unscrew the small screws on each of the three wires and pull them out.
3. If needed, expose the inside wires by scraping the outer plastic coating with a blade or a sharp knife.
4. Replace with a new plug, put the positive wire in one screw band and the negative wire in another screw band, parallel to it. Tighten the screws. Make sure the two do not touch each other.
5. Put the neutral wire in the lower screw band and tighten the screw.
6. Put the cover and tighten the main screw.

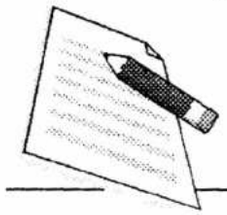
Precautions

1. Do the experiment under adult supervision only.
2. Wear rubber slippers while doing the experiment.
3. Be careful that your hands are not wet.
4. Make sure that the main switch is switched off.
5. Make very sure that the appliance has been unplugged from the socket.

Do you know?

Why don't animals get HIV?

If you look at the full form of HIV, you will see that it is 'HUMAN' Immunodeficiency Virus. It is very specific to humans. Studies have shown that HIV does not survive in any animal other than human beings.



Notes

PRACTICAL 14

AIM

To learn how to care for, maintain and clean the following items:

a) Wood

b) Floor

c) Brass

d) Aluminium

e) Silver

f) Plastic

INTRODUCTION

We use a variety of different materials to meet our various requirements at home. Plastic is used in the form of buckets, toys, plates etc. and brass in the form of utensils, decorative articles, taps etc. Similarly a large number of other materials like silver, wood, aluminium etc. find a lot of uses in our homes.

You may have noticed that with use and with the passage of time most of the materials lose their new look. But this new look can be maintained with a little care. Do you remember that different materials have different properties? This is the reason that each one of these needs to be used, cleaned and looked after in a different way. Nevertheless, some of the equipment and materials required for cleaning these is common. You can prepare a cleaning kit for yourself before starting the work. This kit should contain the following:

i) Old newspapers to spread on the table/any other area, where you place your equipments, reagents etc and do work.

ii) Any cleaning powder (such as vim or surf).

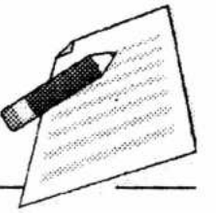
iii) An old tooth brush and a nylon net scrubber.

v) Small pieces of white cotton cloth

vi) Dusters

vii) Polishing cloth (soft flannel cloth generally used to clean spectacles)

While cleaning different materials you will also need some other reagents. These



Notes

will be mentioned along with the procedure.

Let us now take up each material separately.

(A) WOOD

You will find mainly two types of wooden articles at home. One type which are plain, for example wooden chopping boards, rolling boards, rolling pins (Chakla and belan) etc. and the other type which are finished by either polishing, painting or varnishing. Can you identify some articles which are made of finished wood in your house?

The procedure for cleaning different types of wood and woods with different finishes is different. However, some precautions to be taken while using and cleaning wood are as follows:

- Only wipe the polished articles with a dry cloth or a wet cloth. Wash only if necessary.
- Work along the grain. These are the natural lines in the wood.
- Do not keep wet or hot glasses/cups on the polished surface directly. Use coasters and hot pads.
- Avoid staining wood. Stains may be difficult to remove.
- Do not leave wood in water for a long time.

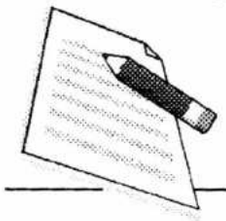
PROCEDURE

Plain Wood

1. Clean it with dry cloth immediately after use.
2. If required, wash with lukewarm water and soap. Wipe with dry cloth immediately.

Polished Wood

1. Clean with soft dry cloth everyday to remove dust.
2. Any stain can be removed by using a wet cloth. Paint marks can be removed by rubbing with turpentine or kerosene. Water rings formed by keeping wet glasses on wooden tables can be removed by rubbing with a little spirit.
3. Check to see if the articles have any minor cracks. If they do, then fill them up with a paste made by mixing 1 part of cornflour or powdered chalk, 1 part of linseed oil and half part of turpentine. Let the paste dry before proceeding to the next step.
4. Once in a while polish the surface with a polish made by mixing equal parts



Notes

of turpentine and linseed oil. Apply the polish, a little at a time with a piece of cloth and rub well in the direction of the grain. Complete the polishing by repeating the process. Make sure that no area is left unpolished. Now use a polishing cloth to rub the entire surface well in the direction of the grain.

Varnished Wood

1. Wipe dry with a dry, soft cloth.
2. Remove any stain with a wet cloth.
3. Once in a while apply a thin layer of clear varnish with a brush. Use long, straight strokes.

Painted Wood

Wood painted with emulsion paints is very easy to clean and maintain.

1. Dust with a dry and soft cloth.
2. Wipe out stains with wet cloth.
3. Once in a while rub and scrub gently with vim/surf and water. Wash and wipe with a dry cloth.

(B) FLOORS

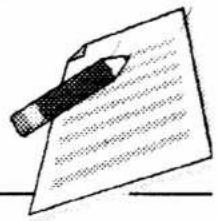
A large number of materials are used to make floors. We find floors made of stone and cement, bricks, tiles, marble and wood (mainly in hilly areas).

The treatment given to each material differs as explained below. Identify the material used for the floor in your house and clean it accordingly.

PROCEDURE

Wooden Floors

1. Sweep the floor with a broom.
2. If the floor is very dirty, make a solution of 4 litre water, ½ C ammonia ½C detergent powder. Dip a rag in this and wipe the floor. This method also removes old polish from the wood. The old polish can also be removed by rubbing steel wool dipped in a cleaning powder.
3. Lemon juice stains, if any, can be removed with a piece of cucumber or pumpkin.
4. Dissolve some wax in turpentine. Dip a rag in this and apply a thin coat on the surface.
5. Allow it to harden.



Notes

6. Polish by rubbing with a rag till the floor shines.

b) Other Floors: The procedure for cleaning all other types of floors is basically the same. However, some tips to be borne in mind while cleaning different types of floors are as follows:

- **Stone, cement and tiled floors:** Washing soda can be added to the soap solution while cleaning these floors. Nylon net, steelwool or coconut fibre can be used for scrubbing the marks on these floors.
- **Marble floors:** Marble can be rubbed with lemon juice or tamarind occasionally to keep it white and stain free. This should be washed thoroughly immediately afterwards to prevent the surface from getting spoilt. Use only a nylon net scrubber for scrubbing

The common steps in cleaning are as follows:

1. Sweep the floor with a broom.
2. If the floor is not very dirty, mop it. Otherwise, wash it. For extremely dirty and greasy floors use a soap solution for washing.
3. Remove stains. Turpentine can be used to remove paint marks. Tea and coffee marks can be scrubbed with a rag/brush dipped in hot soapy water.
4. Wash thoroughly with water if a soapy solution has been used.
5. Dry with a mop.

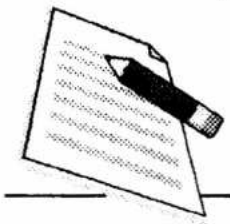
(C) BRASS

Brass is a golden yellow metal used extensively at homes in the form of utensils, taps, decorative plates, vases, ash trays etc. You may have noticed that some metals, especially brass and silver tend to look darkened and dull after some time. Why is this so? What is this dark and dull film which forms on its surface? This is called a metal tarnish and is formed when the metal reacts with air or water. This is formed more readily in polluted air.

Have you ever wondered why brass utensils are lined with a tin lining? This tinning is done to prevent the brass from coming in contact with the acids in the foodstuffs being cooked or stored in the utensil. You may have noticed that when brass comes in contact with tomato juice, tamarind, lemon juice etc. a greenish-blue substance is formed. This is poisonous and should not be consumed.

PROCEDURE

1. Spread sheets of newspaper to protect the work surface.
2. Wash the articles with a cleaning powder. If the article is greasy, use hot water.



Notes

3. Rub the article with a piece of lemon or tamarind dipped in salt.
4. Scrub well with coconut fibre using a mixture of fine brick powder and soap powder.
5. Rinse the article.
6. Repeat steps 3,4 and 5 if the article is not yet clean.
7. Wipe the article with a soft cloth. **Ensure that it is thoroughly dry before proceeding to the next step.**
8. If the article is a utensil, rub with a polishing cloth. If it is a decorative item use anyone of the following methods for polishing:

   i) Brasso-this is a polish available in the market in a liquid form and also as a paste. Apply a little brasso on the article with a piece of cloth and leave it for 2-3 minutes. Do not apply too much polish because it will spoil the appearance of the article. Rub well with small pieces of white cotton cloth - one small area at a time. Discard the cloth as it gets dirty and use a fresh one. Finally rub with a polishing cloth till the article starts shining.

   ii) Rub the article with a small amount of turmeric mixed in mustard oil (with a piece of cloth). Polish the article with a polishing cloth.

   iii) Sprinkle finely powdered chalk on the article and rub it on every part of the article with a cloth. Polish it with a polishing cloth till it sparkles.

(D) ALUMINIUM

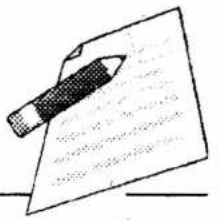
It is a silvery white metal which is light in weight. Can you mention some of the items made of aluminium? At home aluminium is found in the form of saucepans, kettles, tiffin boxes, masala boxes, pots, etc. It is a soft metal and gets scratched and dented easily. These days a number of utensils made of 'Hindalium' are in the market. Hindalium is an alloy of aluminium.

Salts and alkalies (such as soda and washing powders) are very harmful to aluminium. That is why only a solution of washing powder in water is applied to clean them instead of dry powders.

Sometimes the aluminium utensils become black inside. This black layer can be removed by boiling water with vinegar/tamarind/lemon/tomatoes in the utensil for about 10 minutes.

PROCEDURE

1. Cover the work surface with a sheet of newspaper.
2. Wash the aluminium article with hot soapy water.



Notes

3. Using coconut fiber or nylon net scrubber, rub fine brick powder on the article.

4. Rinse thoroughly and dry the article completely.

5. Rub steel wool along the grain of the metal.

Or

Mix a little powdered chalk with a little cold water. Rub on the article with a rag and allow to dry. Rub off with a dry cloth.

6. Rub with polishing cloth.

(E) SILVER

Silver is a precious metal, white in colour. It is used to make jewellery, coins, plates, spoons etc. Silver plated articles (in which silver is deposited as a layer on a (base of another metal) are also fairly common.

Have you noticed that silver turns grayish-black in colour when it is left unattended in foggy and humid conditions and when it comes in contact with egg? This is due to the formation of tarnish on the metal which can be removed by periodic cleaning. If silver is used for table utensils, for everyday cleaning they should be washed in hot soapy water, rinsed in hot water and wiped at once with a dry cloth. Silver should always be treated gently since it is a soft metal which scratches easily.

If silver items are to be stored these should be cleaned and covered with tissue paper or cotton wool.

PROCEDURE

1. In an aluminium pan, make a solution containing 1 teaspoon baking soda and 1 teaspoon salt for every litre of water. Let it come to a boil. Place the silver article in this pan. Cover it and simmer for about 30 minutes or till the tarnish is removed. Remove the article and wash with vim/surf.

2. Rinse and dry thoroughly with a soft cloth.

3. If it is ornamental, polish the article with silver polish 'Silvo'. The procedure for this is similar to that of applying 'Brasso' on brass articles. Remember that silver utensils and cutlery are not polished with Silvo.

(F) PLASTIC

Plastic products have now become an essential part of daily life. You wake up and clean your teeth with a plastic toothbrush, use a plastic mug and bucket for a bath, cut vegetables with a plastic handle knife, spread a lacy plastic cloth on a table- the list is endless.

Notes

Plastics are light in weight, yet strong, flexible, easy to mould in desired shapes and come in a wide range of colours. Just take a look around you and you will see a variety of plastic products-mugs, tubs, buckets, lunchboxes, baskets, crockery, toys, pipes, table-mats and sheets, even plastic flowers and leaves. These are easy to maintain but need occasional care. Take care to wash plastic crockery immediately after use or else the turmeric in food tends to leave a stain.

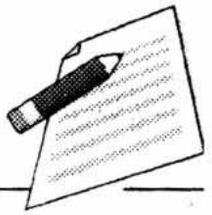
PROCEDURE

1. Wash the article with surf and lukewarm water.
2. Rinse.
3. Remove stains, if any. You can successfully use vinegar for removing some stains.

   To clean plastic mugs and buckets, apply kerosene with a rag and leave for 10 minutes. Some stains can be removed by soaking the article in washing soda solution for 30 minutes. Plastic water bottles can be cleaned by filling them with water to which some lemon juice has been added and leaving them overnight Melmoware tea cups often have tea stains. Use a sponge to clean them after rubbing with salt and detergent.
4. Wash with lukewarm soapy water. Rinse and dry the article.
5. If the article looks dry, apply a little mustard oil and rub well with a rag to give it a shine.

CONCLUSION

1. Amongst the different materials cleaned, the most satisfactory results were obtained in the case of: Wood/Floor/ Brass/Aluminium/Silver/plastic.
2. Mention the difficulties faced, if any, in the cleaning of
   a) Wood
   b) Floor
   c) Brass
   d) Aluminium
   e) Silver
   f) Plastic



Notes

PRACTICAL 15

AIM

To use waste materials for preparing a useful household article.

INTRODUCTION

When you buy sweets etc. from the market, you get them in a box. After consuming the sweets, you think of disposing this box. Similarly, after cutting and stitching a dress, you find small pieces of cloth. You may throw away these pieces because you do not find any use for them. If you use a little bit of imagination, you can prepare a beautiful jewellery box with these materials which might otherwise be thrown away as waste. By using these materials, you not only convert the waste materials into a useful article, but you are also able to save some money. If you are to buy a jewellery box from the market you will have to spend some amount of money. Likewise, you will find many such materials which you can utilize to prepare beautiful articles for use at home. You can also sell some of them and earn some money for yourself.

In this practical you will learn how to prepare a jewellery cum bangle box from waste materials. Some additional ideas for making other items too have been given. You can make any one of these or use your imagination and prepare any other article of your choice with the waste materials you have.

MATERIALS REQUIRED

For preparing a jewellery-cum-bangle box you will require:

1. A cardboard box with a lid on top, suitable in size for storing jewellery and hanging bangles.
2. Cloth (enough to cover the entire box).
3. Lace/gota/fancy string/any other material for covering the edges of the box.
4. A sturdy wooden/plastic/any other material rod to be used for hanging bangles.
5. Hard cover of an old notebook or any other hard cardboard.
6. Fevicol or any other adhesive.
7. A pair of scissors and a measuring tape.

PROCEDURE

1. Clean the box and lid by brushing and rubbing, if required with a damp cloth.

2. Measure the dimensions of the box and the lid (Fig. 15. 1) and cut pieces of cloth accordingly. It is preferable to line the inner part of the box with a soft material (for e.g. velvet, flannel or cotswool). Make sure that the material is not too thick otherwise the lid will not fit the box. Cut the cloth in such a way that you can cover both the inner as well as outer side of the box and the lid. Keep the pieces which you have cut carefully.

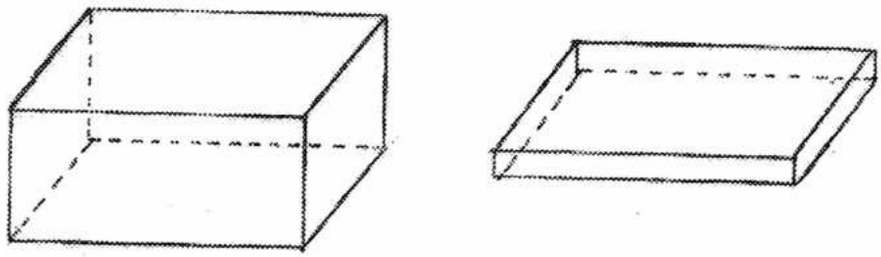


Figure 15.1

3. Cut the notebook cover to make one or two partitions in the box as shown in Figure 15.2.

4. Cut and stick cloth on these partitions and stick them in the box.

5. Make two neat holes facing each other in one compartment of the box (denoted by number 3 and 4 in figure 15.2)

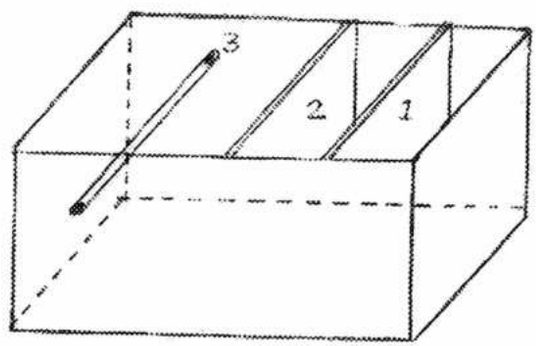


Figure 15.2

6. Cover the rod with cloth.

7. Fix the rod in the holes. Check to see that bangles can be hung on this rod.

8 Use fevicol or any other adhesive to stick the neatly cut pieces of cloth (from step 2) to the box and its lid.

9. Check to see that all the edges of the box are neat. You may have to cover all the edges of the box with lace/gota/fancy string etc. in order to give a neat look to the box.

10. Decorate the lid of the box, if required.

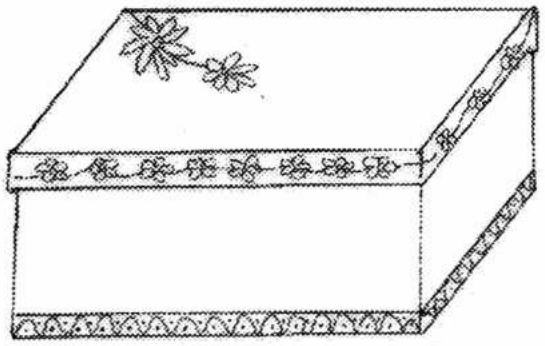


Figure 15.3

ADDITIONAL IDEAS

Similarly you can prepare a number of household items from various other waste/ leftover materials. Given below are some ideas:

1. If only a part of a dress like a frock, kameez or a saree is turn, the remaining part of the material can successfully be used for making a number of articles like a magazine holder, apron, pillow case, spectacle case, foot mat/table mat etc.

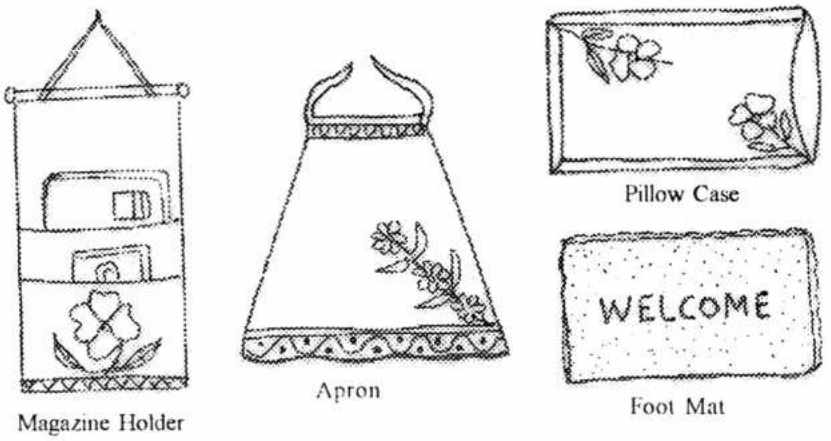


Figure 15.4

2. Some other articles along with their description are shown, in figure 15.5.

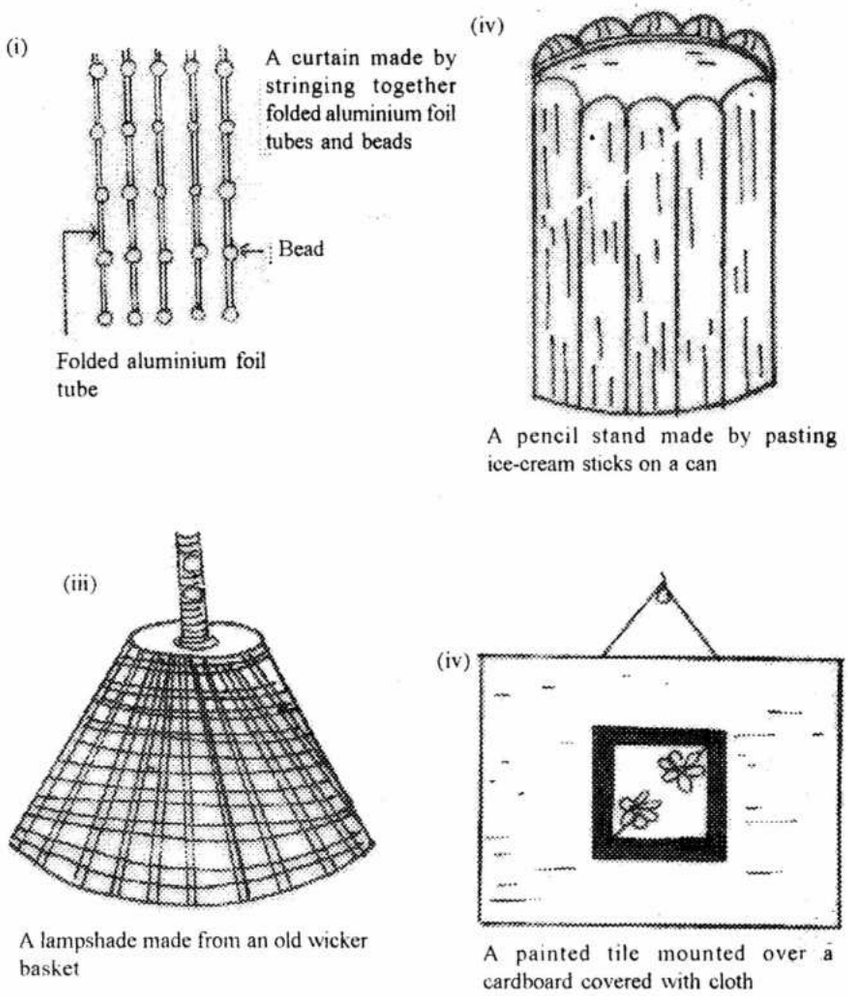


Figure 15.5

CONCLUSION

Conclude by filling in the information about the article you have made below:

1) The article:

2) Materials used:

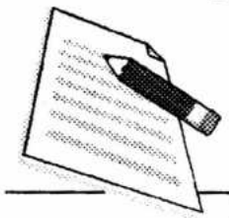
3) Your comments about the article's appearance and usefulness:

4) Your suggestions for improvement, if any:

Do you know?

Do mosquitoes and other insects spread HIV?

No. The evidence clearly shows that HIV is not spread by mosquitoes and other insects. The malaria parasite lives in the body of the mosquito and enters the human body when the mosquito bites. HIV lives in some cells of the human body, but it does not live in the cells of insects. Therefore, mosquitoes and other insects cannot transmit HIV. For example, bedbugs, lice, and fleas in the household of persons living with HIV/AIDS do not spread the virus among other members of the household.



Notes

ASSIGNMENT NO. 16

AIM

To make a colour wheel

INTRODUCTION

According to Prang colours are divided mainly into three type. Red, yellow and blue are the primary colours which can be mixed form all the other colours but which can not themselves be made by mixing any other colours. In a colur wheel, yellow is placed at the top, red on the left lower side, and blue on the right lower side of the wheel. When two adjacent primary colours are mixed in equal amounts a different hue will result. This new hue is called secondary colour. When a primary and a neighbouring secondary are mixed an intermediate hue results. It is half way between the two colours. The total number of colours in a colour wheel are 12.

Material Reqired

1. Poster colours of red, yellow, blue
2. Painting brush
3. Water
4. Colour plate
5. Cartridge sheet

Procedure

1 Draw a colour wheel on the cartridge sheet as shown in Figure 16.1.

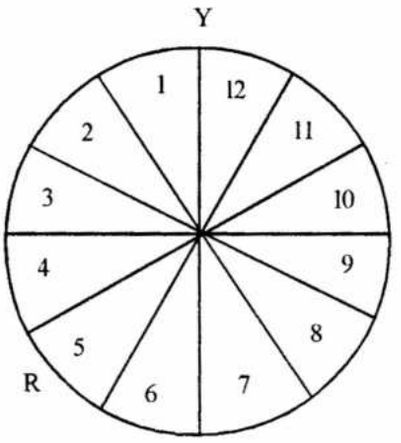
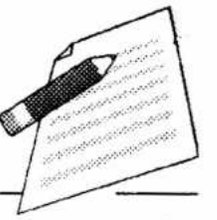


Fig. 16.1 : Colour wheel

1. Yellow
2. Yellow, Orange
3. Orange
4. Red, Orange
5. Red
6. Red, Purple
7. Purple
8. Blue, Purple
9. Blue
10. Blue Green
11. Green
12. Green



Notes

2. Take three primary colurs of poster colour red, blue, yellow.
3. On a colour plate, using a brush, rut red colour, add water and paint it on colour wheel.
4. Follow the same procedure for blue and yellow colours.
5. Now, on the colour plate, put equal amounts of the following two primary colours to get the secondary colour:
   - Red + blue ⟶ Violet
   - Blue + yellow ⟶ Green
   - Red + yellow ⟶ orange

   Paint the secondary colours on the colour wheel
6. On the colour plate, mix the following colours to get the tertiary colours and then paint them on the colour wheel:
   - Red + violet
   - Blue + green
   - Red + orange
   - Blue + violet
   - Yellow + green
   - Yellow + orange

CONCLUSION

After making a colour wheel answer the following questions:

1. Name the three primary colours.
2. Name the three secondary colours.
3. Fill in the blanks

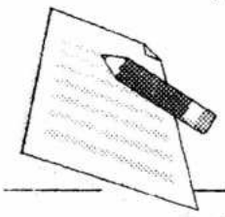
   Red + blue ⟶ _____

   Red + _____ ⟶ orange

   Orange + yellow ⟶ _____

   Violet + red ⟶ _____

   _____ + green ⟶ bluegreen



Notes

PRACTICAL 17

AIM

To demonstrate the correct procedure of starting and finishing an embroidery as well as executing ten basic stitches of embroidery.

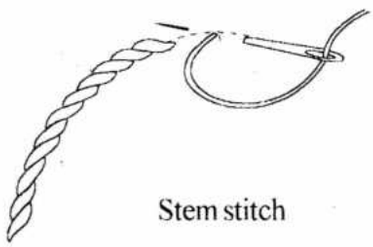
INTRODUCTION

Most of you must have seen beautiful embroidery on clothes, bags, bed covers, cushion covers, etc. Embroidery is a unique way of adding beauty to an articles. A variety of embroidery stitches, threads and colours can be used creativily to achieve beautiful and interesting results.

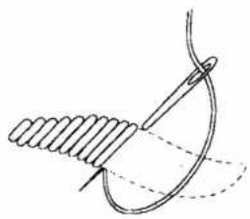
You have to remember that planning is extremely important for successful completion of any task. So you will have to apply all your knowledge of fabrics, threads, colours and colour schemes while practicing executing the ten basic embroidery stitches to create your sampler.

PROCEDURE

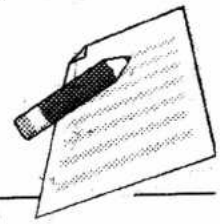
1. You can start this assignment by following the simple steps outlined here:-
   - wash and wipe your hands before starting the embroidery
   - start your embroidery with a back stitch
   - clip any extra thread at the starting point
   - take a casement cloth (white or any light colour) and draw straight lines on it using a light pencil.
2. Select appropriate embroidery threads in suitable colours and embroider the ten basic stitches as shown in the figure.



Stem stitch



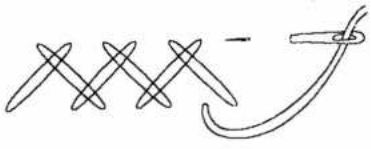
Satin stitch



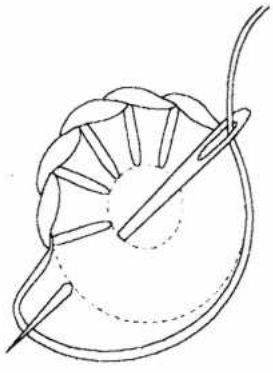
Notes

Long and short stitch

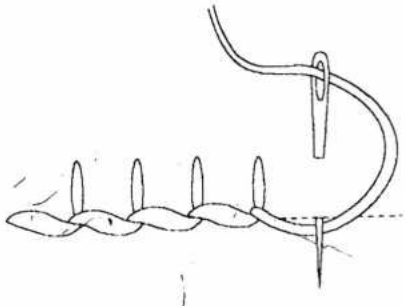
Chain stitch



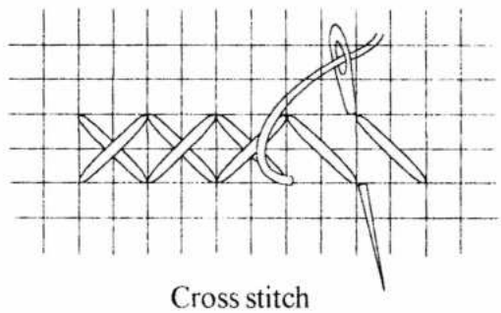
Herringbone stitch



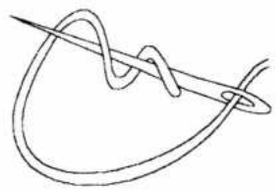
Button hole stitch



Blanket stitch



Cross stitch



French knot

Fig. 17.1 Basic emboridery stitches

CONCLUSION

On the basis of the sample developed by you, try and draw conclusions by answering the following questions:

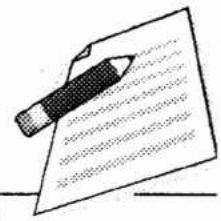
1. Which emboridery stitch will you use for filling a space like a leaf, petals, etc.?
2. Why is it important to match the embroidery thread to the fabric being em-

Do you know?

What is drug abuse?

When drugs are taken for medical reasons to treat or cure disease both physical and mental, they are called *medications or therapeutic* drugs.

Drug abuse occurs when drugs are taken without medical reasons and without medical supervision, especially when they are taken in an amount, strength, frequency, or manner that damages the physical and mental functioning of the individual Cough syrups, pain killers, and tranquillizers are some common medicines that are often abused.



Notes

PRACTICAL 18

AIM

To enlarge and reduce a motif

INTRODUCTION

You have already read in your lesson about the need and importance of reducing and/or enlarging a design for its appropriate use on different articles. Here you will get an opportunity to practice your skills in enlarging or reducing a design.

PROCEDURE

(I) ENLARGEMENT

1. Make a stylized motif on paper in a block of 2" X 2".
2. Draw a grid of lines on the motif.
3. Enlarge the squares (2 or 3 times the size) and using the squares as a guide, draw the motif again.
4. Trace the enlarged motif on a tracing paper.

(II) REDUCTION

1. Create a naturalized motif on paper in a block of 6" X 6".
2. Draw a grid of lines on the motif.
3. Reduce the size of squares (1/2 or 1/3) and using the squares as a guide, draw the motif again.
4. Trace the reduced motif on a tracing paper.

CONCLUSION

On the basis of the enlargement and reduction done by you, draw conclusions by answering the following questions:-

1. Why do you need to enlarge or reduce a given motif?
2. What precautions will you take while enlarging/reducing a motif?

INTER RELATIONSHIP IN CONCEPTS IN HOME SCIENCE