



MALUKA IAS

**SYNOPSIS OF NCERT
SCIENCE & ECOLOGY**

VI - XII CLASS



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Content

S NO.	CLASS	PAGE NO.
1.	CLASS- VI	1-24
2.	CLASS- VII	1-37
3.	CLASS- VIII	1-45
4.	ECOLOGY- CLASS- X	1-32

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Class VI (Science)

Chapter- 1

Food: Where Does it Come From?

Table 1.3 Ingredients used to prepare food items and their sources

Food Item	Ingredients	Sources
Idli	Rice	Plant
	Urad dal	
	Salt	
	Water	
Chicken curry	Chicken	Animal
	Spices	
	Oil/ghee	Plants/ Animals
	Water	
Kheer	Milk	Animal
	Rice	Plant
	Sugar	

Herbivore

An animal that eats almost only plants.



Carnivore

An animal that eats almost only meat.



Omnivore

An animal that eats plants and meat.



Chapter- 2
Components of Food

Table 2.1 Some common meals of different regions/states

Region/State	Item of grain	Item of dal/meat	Vegetables	Others
Punjab	Makki (corn) roti	Rajma (Kidney beans)	Sarson saag (Mustard leaf curry)	Curd, ghee
Andhra Pradesh	Rice	Tuar dal and rasam (charu)	Kunduru (dondakai)	Buttermilk, ghee, pickle (aavakai)

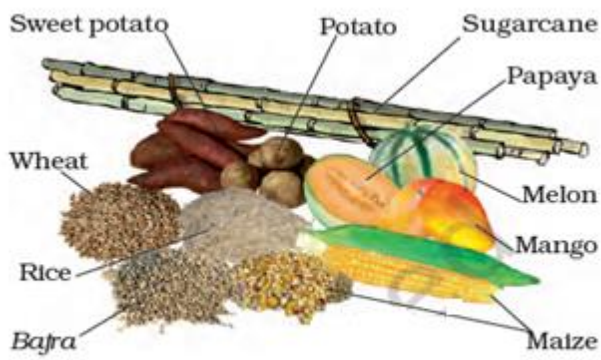


Fig. 2.3 Some sources of carbohydrates

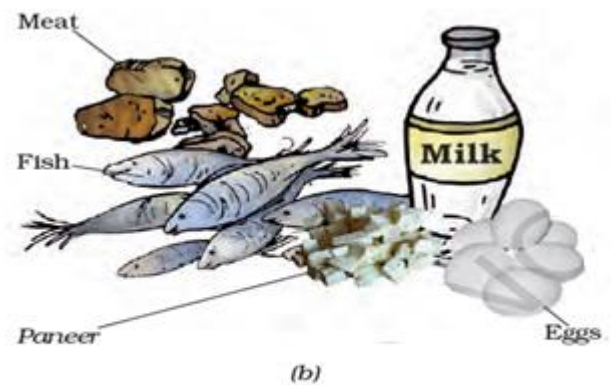


Fig. 2.5 Some sources of proteins: (a) plant sources and (b) animal sources

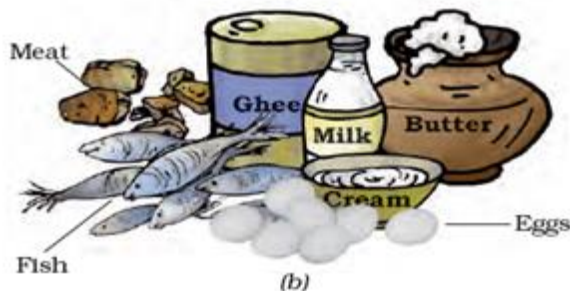
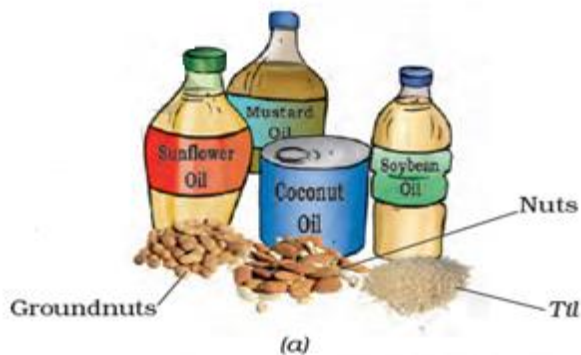


Fig. 2.4 Some sources of fats: (a) plant sources and (b) animal sources



Fig. 2.6 Some sources of Vitamin A



Fig. 2.7 Some sources of Vitamin B



Fig. 2.8 Some sources of Vitamin C

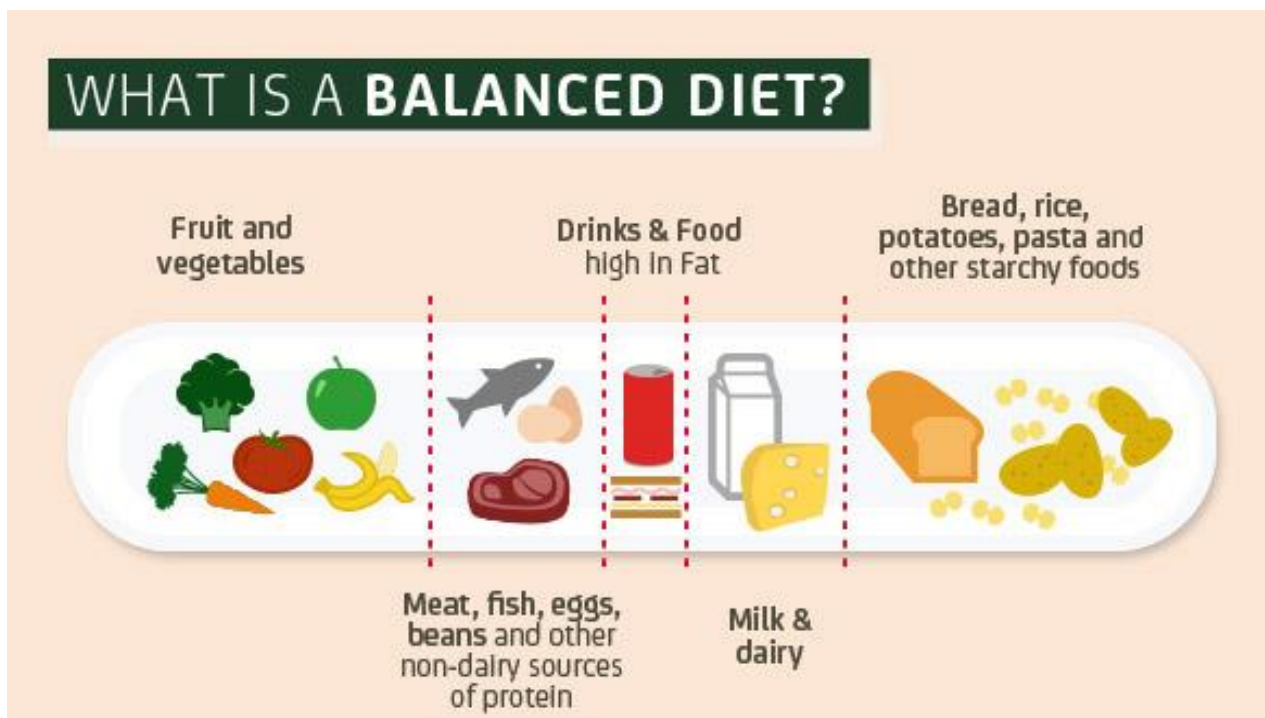


Fig. 2.9 Some sources of Vitamin D



Nutrient	Sources	Function(s)
Carbohydrates	Pasta, sugar, rice	Provide energy.
Lipids (fats and oils)	Butter, oily fish	Provide energy, act as energy store, provide insulation.
Proteins	Meat, fish.	Needed for tissue growth and repair, can provide energy in emergencies.
Vitamin A	Liver	Helps improve vision. Keeps skin/hair healthy.
Vitamin C	Oranges (Vitamin C also made by body when exposed to sunlight but oranges = food source.)	Prevents scurvy.
Vitamin D.	Eggs	Needed for calcium absorption.
Calcium (a mineral ion)	Milk, cheese, yogurt.	Need to make bones and teeth.
Iron (a mineral ion)	Red meat.	Makes haemoglobin, for healthy blood.
Water	All food and drink	Needed for essentially every bodily function. Water we lose through urinating, breathing and sweating must be replaced by water we eat/drink.
Dietary fibre	Wholemeal bread	Aids movement of food through the gut (helps in digestive process.)

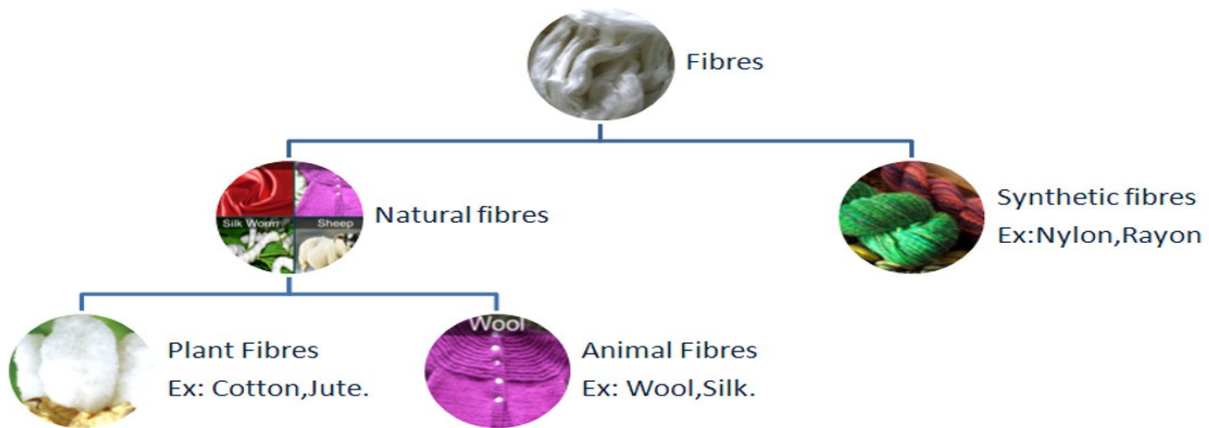
WHAT IS A BALANCED DIET?



Some diseases/ disorders caused by deficiency of Vitamins and Minerals

Vitamin/mineral	Deficiency disease/disorder	Symptoms
Vitamin A	Loss of vision	Poor vision, loss of vision in darkness (night), sometimes complete loss of vision
Vitamin B1	Beri-beri	Weak muscles and very little energy to work
Vitamin C	Scurvy	Bleeding gums, wounds take longer time to heal
Vitamin D	Rickets	Bones become soft and bend easily
Calcium	Bone and tooth decay	Weak bones, tooth decay
Iodine	Goitre	Glands in the neck appear swollen, mental disability in children
Iron	Anaemia	Weakness

Chapter- 3 Fibre to Fabric



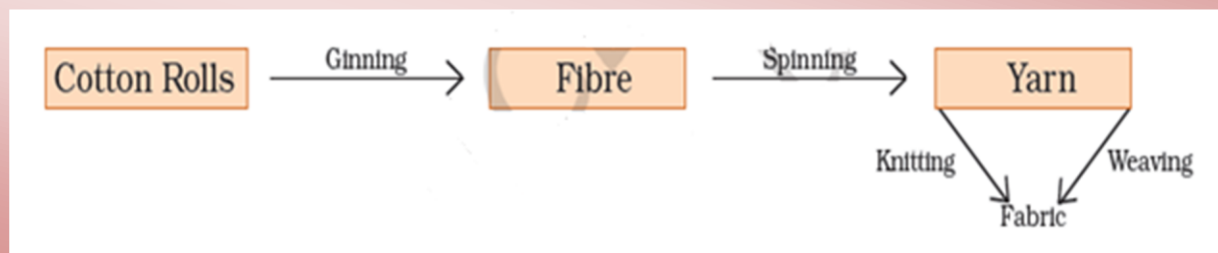
Chapter- 4

Sorting Materials into Groups

PROPERTIES OF MATERIALS-

- Hardness or Softness
- Soluble or Insoluble
- Transparency
- The materials through which objects can be seen, but not clearly, are known as translucent
- Some materials such as glass are transparent and some others such as wood and metals are opaque.
- Shiny or rough

HISTORY OF CLOTHING MATERIAL



Chapter- 5 Separation of Substances

METHODS OF SEPARATION

Handpicking



Fig. 5.3 Handpicking stones from grain

Threshing



Fig. 5.4 Threshing

Winnowing

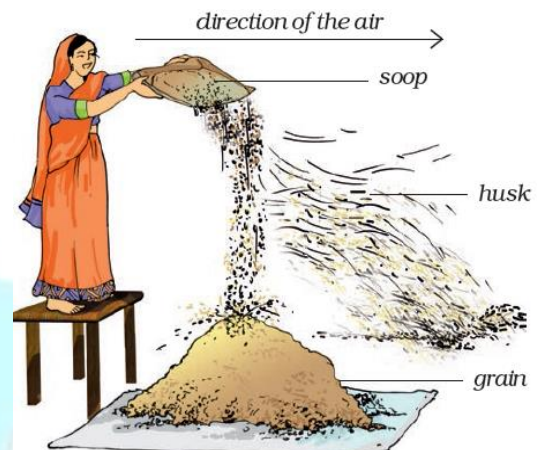


Fig. 5.5 Winnowing

Sieving

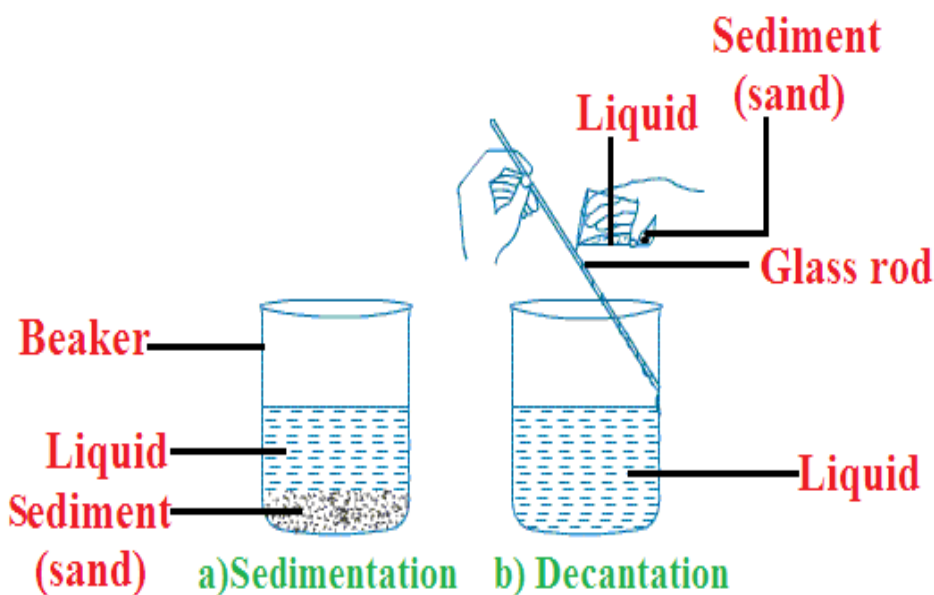


Fig. 5.7 Pebbles and stones are removed from sand by sieving

Sedimentation, Decantation and Filtration

- When the heavier component in a mixture settles after water is added to it, the process is called sedimentation.
- When the water (along with the dust) is removed, the process is called decantation

- Filtration- Filtration is any of various mechanical, physical or biological operations that separate solids from fluids by adding a medium through which only the fluid can pass.



- Evaporation- The process of conversion of water into its vapour is called evaporation (ex. Common salt)
- Condensation- The process of conversion of water vapour into its liquid form is called condensation.

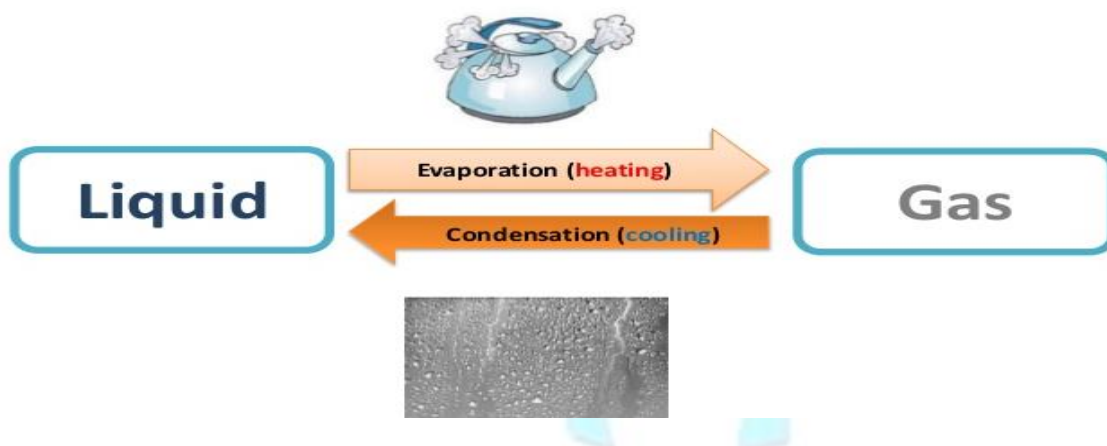


Table 5.1 Why do we separate substances?

Separation process	Purpose for which we do the separation	What do we do with the separated components?
1) Separate stones from rice	a) To separate two different, but useful components.	i) We throw away the soild component.
2) Churning milk to obtain butter	b) To remove non-useful components.	ii) We throw away the impurities.
3) Separate tea leaves	c) To remove impurities or harmful components.	iii) We use both the components.