

Health, Physical and Creative Arts

Grade 8

Government of Nepal
Ministry of Education, science and Technology
Curriculum Development Centre

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Preface

School education is the foundation for preparing the citizen who are loyal to the nation and nationality, committed to the norms and values of federal democratic republic, self-reliant and respecting the social and cultural diversity. It is also remarkable for developing a good moral character with the practical know-how of the use of ICT along with the application of scientific concept and positive thinking. It is also expected to prepare the citizens who are moral and ethical, disciplined, social and human value sensitive with the consciousness about the environmental conversation and sustainable development. Moreover, it should be helpful for developing the skills for solving the real life problems. This textbook 'Health, Physical and Creative Arts, Grade 4' is fully aligned with the intent carried out by the National Curriculum Framework for School Education, 2076 and is developed fully in accordance with the new Basic Level HPC Curriculum, 2078.

This textbook is initially written by Ms. Sudha Ghimere, Mr. Dev Raj Maharjan, Mr. Shreehari Shrestha, Mr. Shivaraj Poudel and Ms. Suman Silwal. It has been translated by Nim Prakash Singh Ratthour, Mr. Sujan Chitrakar and Mr. Udgam Pariyar. The contribution made by Director General Baikuntha Prasad Aryal, the chair person of subject committee Dr. Ram Krishna Maharjan, member of subject committee Ms. Sarmila B.K and Ms. Renuka Pandey Bhusal, Dr. Shyam Krishna Maharjan, Dr. Lokendra Shrestha and Pradeep Bomjan is remarkable in bringing the book in this form. The language of the book has been edited by Mr. Pashupati Pandya. Art editing of this book was done by Mr. Shreehari Shrestha by making it four colour. The Curriculum Development Centre extends sincere gratitude to all of them.

The textbook is a primary resource for classroom teaching. Considerable efforts have been made to make the book helpful in achieving the expected competencies of the curriculum. Curriculum Development Centre always welcomes constructive feedback for further betterment of its publications.

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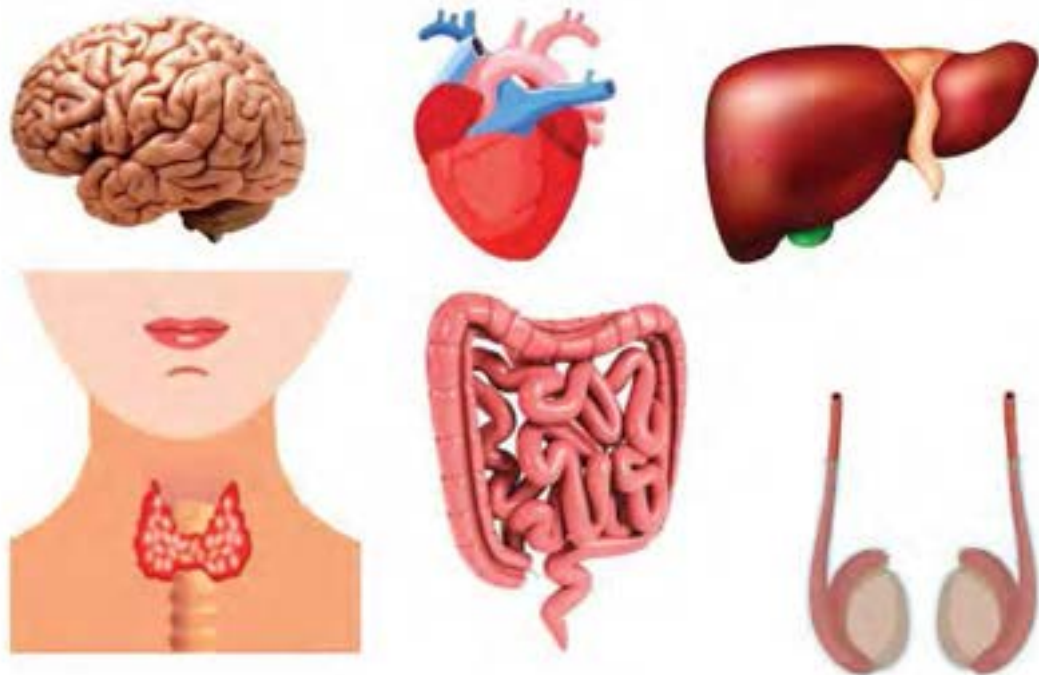
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Human Body

Look at the pictures below and have a discussion based on the given questions.



- Mention the names of organs in the above pictures.
- Which human body systems (organ system) do they belong to?

Human body is composed of cells, tissues and organs. The cell is the basic unit of the human body. Cells make up tissues and a group of tissues makes up an organ; whereas a group of organs forms the human body system (organ system). The organ systems work together in fine-tuned balance for the well-being of an individual. Thus, we need to learn about the composition and functions of organ systems. We are going to study about nervous system, endocrine system and reproductive system in this unit.

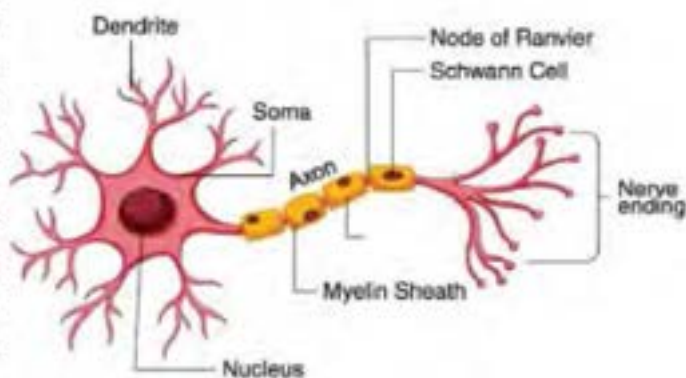
1.1 Nervous System

Look at the picture and discuss.

- What do you see in the picture? What does it do?
- Which organ system controls the functions of sensory organs such as smell, taste, heat, cold, etc.?
- By which organ system are other functions such as respiration, circulation, urination, feeding behaviour, etc. controlled and commanded?



The nervous system is made up of neurons. The basic unit of the nervous system is a nerve cell or neuron. The neuron contains an axon, dendrites and nucleus. The special extensions are axons and dendrites. The



axons are tail-like structures and the dendrites are fibrous roots. The axons are longer than the dendrites. There is a nucleus in the middle of the nerve cell which is enclosed by protoplasm.

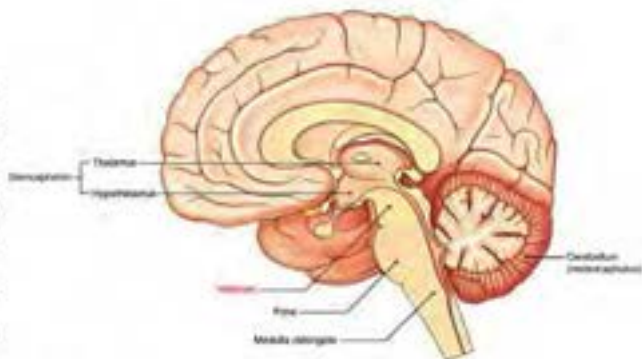
The nervous system controls and coordinates the internal and external activities of the human body. It also gives the necessary command to other organ systems. Therefore, it is also known as 'Master System or Command Centre'. It has three main parts: Central Nervous System, Peripheral Nervous System and Automatic Nervous System.

A. Central Nervous System

The central nervous system (CNS) consists of the brain and spinal cord. The brain controls how we think, learn, move, and feel, whereas the spinal cord carries messages back and forth between the brain and the nerves that run throughout the body. It is known as the centre because it combines information from the entire body and coordinates the activities across the whole organism.

a. Brain

The brain is housed inside the skull. The average weight of the brain of an adult is 1.5 kg. It is made up of soft tissue. It is protected by the thin layer of the membrane which is known as the meninges.



Cerebrum, cerebellum, midbrain, pons varolii and medulla oblongata are the main parts of the brain. Cerebrum is the largest part of the brain which is located at the top of the head. It is divided into two halves; the right hemisphere and the left hemisphere. It enables us to think, remember, and use logic. It also enables us to interpret the situation or events and take the right decision. It manages the functions of senses such as sight, sound, smell, taste and touch. Overall, it commands and coordinates the functions of other organs of the body including the brain.

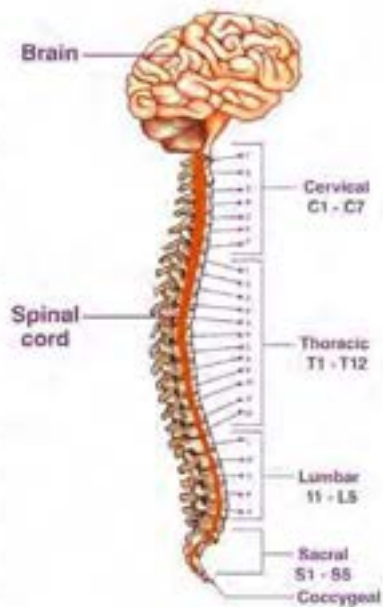
Cerebellum (little brain) is located under the cerebrum and at the back of the pons varolii. Its main function is to control and coordinate muscle movements such as walking, running, eye movement, and other physical activities. It helps to maintain the balance and posture of the body. It sends information and signals it has received to the cerebrum.

Midbrain is located between the cerebrum and pons varolii. It consists of a number of nerve cells and fibres. It works as a bridge for transmitting information between the cerebrum and the spinal cord. It receives information from the spinal cord and sends it to the cerebrum. Likewise, it passes command from the cerebrum to the spinal cord.

Pons varolii works as a bridge between the midbrain and medulla oblongata. Information and command transmit through pons varolii from the cerebrum to the medulla oblongata. The medulla oblongata is the bottom-most part of the brain. It connects the brain to the spinal cord. It regulates and controls circulation and respiration. It also regulates the reflex actions such as quick withdrawal of hands from a hot item, and sudden blinking when an insect comes very close to the eyes.

b. Spinal Cord

Spinal cord is an extension of the central nervous system. It begins at the bottom of the brain stem and ends in the lower back. It is surrounded by the back bones (vertebrae). It is about 45 cm in length and cylindrical in shape. There are 31 pairs of spinal nerves and roots. These spinal nerves emerge from different segments of the spinal cords. It carries nerves signals from the brain and vice versa. It also regulates the reflex action. The damage of spinal cord is called spinal injury. The spinal injury is caused by direct injury to the spinal cord itself or from damage to the tissues and bones that surround it. This injury affects other organs of the body and severe injury can cause disability.



B. Peripheral Nervous System

Peripheral nervous system is composed of 12 pairs of cranial nerves and 31 pairs of spinal nerves that branch out from brain and spinal cord respectively. It establishes communication network between central nervous system and body parts.

C. Automatic Nervous System

Some activities are continuously happening in our body, but we are not conscious about them. The automatic nervous system is an auto-running system. It is divided into the sympathetic nervous system and the parasympathetic nervous system. The sympathetic system speeds up the respiration rate and heartbeat. It also enlarges the pupils, and slows down the rate of digestion. The parasympathetic system, on the other hand, lowers the heartbeat, increases the rate of digestion, contracts the pupils, etc.

Functions of Nervous System

The essential functions of our body are coordinated and controlled by the nervous system. As a result, the balance among the systems of the body is maintained. Major functions of the nervous system are

listed below.

- a. It receives internal and external information of the body.
- b. It sends information to the brain and spinal cord for essential tasks.
- c. It implements the received information into action.
- d. It commands and controls organs and glands to react properly.
- e. It enables us to think, remember and analyze the situation or events.
- f. As a whole, it coordinates and controls the activities of the body.

1.2 Endocrine System

- a. Look at the pictures and discuss about the glands of our body based on the given points.
 - i. Name of glands
 - ii. Hormone of these glands



Endocrine system is also known as gland system. There are different glands in the human body. These glands are secreting different hormones and enzymes. The secreted hormones and enzymes travel throughout the body by ducts and blood. Exocrine glands and endocrine glands are the two types of the endocrine system.

A. Exocrine Glands

Exocrine Glands produce and release essential substances such as sweat, tears, saliva, and digestive juices. These substances are known as hormones and enzymes. The produced hormones and enzymes travel to relative organs through ducts. Sweat glands, lacrimal glands, salivary gland, mammary glands, and liver are the examples of exocrine glands. The functions of exocrine glands are to absorb nutrients, control the body temperature, and protect the inner lining of the body.



B. Endocrine Glands

The glands without ducts or tubes are endocrine glands. The secreted hormones and enzymes by these glands are released directly into the blood and travel to tissues and organs all over the body. The introduction and functions of endocrine glands are given below.

a. Pituitary Gland

Pituitary gland is located in the middle of the brain and just below the cerebrum. The average length and breadth of pituitary gland is 12 millimetres and 8 millimetres respectively. It weighs about 500 milligrams. It is called the master gland because it commands and controls the other endocrine



glands. It plays a vital role in the growth of the body. It activates the mammary glands to produce milk during pregnancy and after child birth. It controls the blood pressure and water retention in the body. It stimulates adrenal glands. It also helps to produce sex hormones.

b. Pineal Gland

The pineal gland is a tiny gland which is located in the middle of the brain. It is shaped like a tiny pea. The function of the pineal gland is to produce melatonin hormone that plays a role in managing our sleep-wake cycle.

c. Thyroid Gland

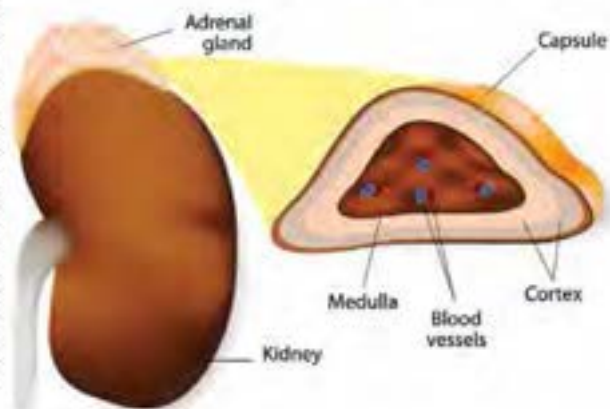
The thyroid gland is located at the base of the neck. It looks like a butterfly in shape. It produces thyroxine hormone. This hormone regulates vital body functions such as breathing, heartbeat, digestion rate, and body temperature. It also controls the growth of the bones and muscles. Similarly, it helps in mental development.

d. Parathyroid Gland

There are four parathyroid glands at the back of the thyroid. It releases parathormone hormone. The main function of this hormone is to control calcium levels in the blood. It also manages the balance in the level of phosphorus and calcium in the body. It has a vital role in the growth and development of bones.

e. Adrenal Gland

The adrenal gland is the triangular-shaped gland located on top of both kidneys. It has two parts. The covering part is a cortex and the inner part is a medulla. The cortex and medulla secrete corticosteroids and adrenaline hormones respectively. These hormones affect digestive activity, heart rate, the amount of oxygen in the blood, and sexual activity.



f. Thymus Gland

The thymus gland is located inside the chest and protected by chest bones. It produces white blood cells called lymphocytes. It develops an antibody in our body that helps our immune system fight the disease and infection.

g. Gonad

Gonad is a sex gland or reproductive gland. The male one is known as the testis and the female one is the ovary. The testis releases the testosterone hormone. It helps to produce sperms. It is also responsible for the development of male characteristics such as growing moustaches, growing hairs under the arms, growing pubic hairs, deep voice, and enlargement of the penis.

The primary function of the ovary is to secrete estrogen and progesterone hormone. Estrogen plays a role in producing ova. It is also responsible for the development of female characteristics such as growing hairs under the arms, growing pubic hairs, and enlargement of breasts. On the other hand, progesterone prepares a suitable environment to implant and grow the fertilized ovum. It supports the fetus to develop and grow in the uterus. It also helps to produce milk after child birth.

h. Pancreas

Pancreas is located below the abdomen which is attached to the duodenum of small intestine. It is called mixed gland because it performs both functions: functions of exocrine and endocrine glands. It releases the digestive juice as the exocrine gland, whereas it produces insulin and glucagon hormone as endocrine glands. These hormones control the sugar level in the blood.

Functions of Endocrine System

- It helps in circulation, respiration and digestion.
- It helps to control the body temperature in the body.
- It absorbs the essential nutrients.
- It plays a vital role in the growth and development of the bones.

- e. It develops the immune system to protect from disease and infection by producing antibodies.
- f. It helps the reproductive process by producing sex hormones.

Activity 1.1

Divide the students into two groups. Prepare eight cut-outs (pieces) of a chart paper in each group. Write the names of endocrine glands on the cutouts by the first group. Similarly, write the functions of these glands on the cutouts by the second group. Show the name of a gland by the first group and show the functions of the relative gland by the second group. Similarly show the functions of a gland by the second group and show the name of the relative gland by the first group.

1.3 Reproductive System

Study these pictures and have a discussion based on the given points.

- a. difference between two pictures
- b. female reproductive organs
- c. male reproductive organs



Living beings produce offspring to ensure the survival of their species. Likewise, human beings give birth to offspring. Fertilization takes place when a sperm and an ovum meet each other during intercourse. They unite and an egg is formed. This fertilized egg is called a fetus that gets implanted in the uterus of the female. This fetus grows and develops as a child. This system of fertilization and producing offspring is known as the reproductive system. In this unit, we will study the female reproductive system and the male reproductive system.

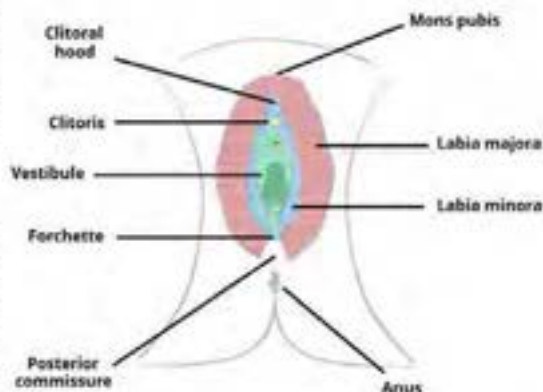
A. Female Reproductive System

The female reproductive system is a group of organs in a female and their functions that contribute to the reproductive process. It produces the essential sex hormones and ova. It makes a favorable environment for the growth and development of a fetus. Finally, the child is born. It can be divided into internal and external parts.

a. External Female Reproductive Organs

The group of external reproductive organs is collectively known as vulva. It includes labia majora, labia minora, clitoris, hymen and vestibules.

Labia majora are skin folds that are situated on both sides of a vagina. They are made up of fibrous and fat tissues. During puberty, hairs grow on the skin of the labia majora. The labia minora are the small folds of thin and delicate skin that lie just inside the labia majora. They surround the opening to the vagina and urethra. Clitoris is located above the vestibules. It is made up of erectile tissues. It is very sensitive. Hymen is a thin piece of tissue that is covering the vaginal opening. It is formed by the fragments of tissues. The area between the labia minora is a vestibule. It contains the opening to the urethra and the vaginal opening.



b. Internal Female Reproductive Organs

The description of internal female reproductive organs is presented here.

1. Vagina

Vagina is a muscular canal that joins the cervix to the outside of the body. It is 7 to 10 cm long and 4 to 7 cm wide. The muscle walls of the vagina are thick and elastic. The basic functions are to provide a passageway for blood from the uterus during menstruation, receive the penis during sexual intercourse, and provide a passageway for a child during delivery. It also connects the internal and the external organs of the female reproductive system.



2. Uterus

Uterus is a hollow, pear-shaped muscular organ. It helps to nourish and house a fetus until the fetus is ready to be delivered. It is also known as a womb. It is about 7.5 cm long and 5 cm wide. Its wall thickness is 2.5 cm on average. The average weight is 60 grams in an adult woman. However, its weight and size increase during pregnancy due to the growth of the fetus. The pelvic floor muscles are supporting it. If the pelvic floor muscles become weak due to injury and even the normal aging process, the uterus can move downwards from its normal position. This condition is known as uterine prolapse. Teenage pregnancy and difficult labour can cause this problem. The Government of Nepal is treating this problem free of cost.

3. Fallopian Tube

Fallopian tubes are the narrow tubes that are attached to the upper part of the uterus. They are 10 to 12 cm long and about 3 cm wide. They serve as pathways for the ovum to travel from the ovaries to the uterus. Fertilization normally occurs in the fallopian tubes. The fertilized egg then moves to the uterus, where it implants into the uterine lining.

4. Ovary

Ovaries are small, oval-shaped glands that are located on either side of the uterus. They are about 2.5 cm long, 1.5 cm wide and 1 cm thick. It weighs 8 to 10 gram. The ovaries produce eggs and hormones. An ovary releases an egg each month. This process of producing egg is called ovulation.

B. Male Reproductive System

The male reproductive system is a group of organs in a male and their functions that contribute to the reproductive process. It produces the essential sex hormones and sperm. It also produces the



protective fluid that helps to transport the sperm. It is made up of internal and external parts.

a. Testes

The men have normally two testes. They lie in the scrotum under the penis. Each testis has 200 to 300 lobules. They produce sperm and testosterone.

b. Epididymis

The epididymis is a long, coiled tube that rests on the backside of each testis. It is formed of seminiferous tubules. It carries and stores sperm cells that are created in the testes. It helps the sperm to pass into the vas deferens. It is also the job of the epididymis to bring the sperm to maturity.

c. Vas Deferens

The vas deferens is a long, muscular tube that extends from the epididymis to the ejaculatory duct. It is about 45 cm in length. The vas deferens helps to transport mature sperms to the urethra for ejaculation. Vasectomy is done by cutting and tying the vas deferens, so sperm cannot travel to the seminal vesicle.

d. Seminal Vesicle

The seminal vesicle is a sac-like pouch that is attached to the vas deferens. It is 4 to 5 cm long. It produces semen and provides nutrition to the sperm.

e. Ejaculatory Duct

The ejaculatory duct is formed by the fusion of the vas deferens and the seminal vesicles. It is 2 cm long. It delivers the semen and sperm into the urethra.

f. Prostate Gland

The prostate gland is located below the urinary bladder. It secretes seminal fluid that protects the sperm. It also provides mobility to the sperm. Some older men should face prostate problems such as a frequent urge to urinate, trouble starting to pee, and painful ejaculation. These problems can be easily cured in health institutions.

g. Urethra

Urethra is a narrow tube that begins at the lower opening of the bladder and extends to the urethral orifice. It is about 18 to 20 cm in length. The main function of the urethra is to expel the urine and the sperm out of the body.

h. Penis

The penis is an external organ of the male reproductive system. It is composed of erectile tissues so that it becomes enlarged, hardened, and erected during sexual stimulation. It returns to its normal position after ejaculation of semen. It is sometimes found erected in the morning at the time of getting up; it is normal. The main function of the penis is to take part in sexual intercourse and deliver the semen into the vagina. It allows for the excretion of urine.

Activity 1.2

Manage the two paper boxes; one for male and the next for female reproductive organs. Ask the students to write their queries related to male and female reproductive organs in separate pieces of paper and drop their queries in the respective boxes. Pick out the queries one by one from the boxes and try to address their queries with the help of friends and the teacher.

Exercise

1. Match the organs with their functions.

Organ	Function
a. cerebrum	i. reflex action
b. medulla oblongata	ii. sperm and testosterone production
c. pineal gland	iii. reasoning
d. pancreas	iv. melatonin production
e. testes	v. insulin production
	vi. maintain the balance of the body

2. Tick the correct answer.

- Which organ coordinates the speed of the muscles in the body?
 - cerebrum
 - cerebellum
 - spinal cord
 - medulla oblongata
- How many pairs of spinal nerves exit from the spinal cord?
 - 11
 - 21
 - 31
 - 41
- Which gland is known as the master gland of the human body?
 - pituitary gland
 - pineal gland
 - thyroid gland
 - gonad
- Which of the following glands secretes the insulin hormone?
 - pancreas
 - thymus gland
 - adrenal gland
 - testes
- Which of the following organs is a female reproductive organ?
 - pancreas
 - testes
 - epididymis
 - uterus

3. Answer these questions.

- What is the nervous system? Write down any two functions of it.
- Why is the brain known as the centre of the nervous system?
- What do you understand by the endocrine system? Write a short description of any three glands.
- Pancreas is known as a mixed gland. Why? Justify it.
- Draw a picture of the internal female reproductive organs and name them.
- Describe the male reproductive organs in brief.
- Write any two differences between the testes and the ovary.

Project Work

Draw pictures of the male reproductive organs and female reproductive organs on chart paper and stick them on the wall of the classroom.

Community Health and Mental Health

2

Observe the posters and discuss them based on the given points.

- Community health and mental health
- Reason for celebrating Female Community Health Volunteers' Day and Mental Health Day



2.1 Community Health

Community health is a practice of individual and collective activities and efforts in the community to identify health problems and solve them. Different components come under community health such as nutrition, cleanliness, health service, mental health, prevention and treatment of disease, awareness and promotion of health, rehabilitation, etc. It is about enhancing and maintaining the health of the entire community in which an individual lives. Therefore, it plays an important role in maintaining an individual's health.

A healthy individual can spend a purposeful life. Healthy persons can easily express and manage their emotions, present their logic, participate in the interaction, and adjust them as per the situation. They can solve their own problem. They are also able to evaluate themselves and identify their own ability.

2.1.1 Community Health Problem

Our community may be facing different health problems such as epidemics, malnutrition, and environmental pollution. Community health problems may differ in each community. Diarrhea, dysentery, and cholera can spread in the community. These epidemics are

caused by a lack of clean and safe drinking water and sanitation. Different criminal activities and social evils occur in the community as a result of alcohol and drug abuse, unemployment problems, smoking, and poverty. People are suffering from asthma, high blood pressure, and cancer due to environmental pollution. The health of mothers and infants is affected by early marriage and lack of reproductive care. Malnutrition is also a burning problem due to a lack of nutritious food and wrong eating habit. HIV AIDS and other sexually transmitted diseases are also increasing now a days.

Common community health problems are listed below:

- a. loss in social harmony and participation in community-based activities
- b. lack of knowledge about community health and environmental issues
- c. lack of health service and facility, and low access to it
- d. lack of proper and sustainable use of locally available resources
- e. negligence in controlling pollution
- f. poverty, hunger and low nutritious food
- g. natural disaster and epidemics
- h. unmanaged settlements and improper sewage management
- i. lack of protection and promotion of historical and cultural heritages
- j. lack of awareness about community health

2.1.2 Solution of Community Health Problem

Various programmes are being implemented in Nepal to promote community health. It demands an active and collective effort from the stakeholders to improve it. Some major measures can be mentioned as follows:

- a. Awareness programmes related to personal and environmental health should be conducted.
- b. Compost manure should be prepared from biodegradable waste and non-biodegradable waste should be reduced, reused and recycled.
- c. Programmes related to nutrition awareness and locally available nutritious food should be launched to reduce malnutrition.

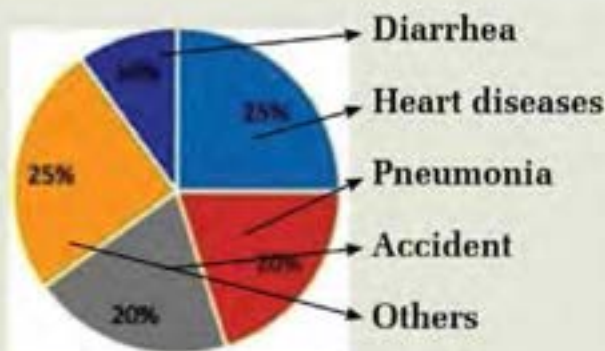
- d. Safe motherhood programme should be implemented to reduce maternal mortality and vaccination to reduce infant and child mortality.
- e. Infectious diseases should be timely controlled from spreading.
- f. Active participation of the community should be increased for the proper management of safe drinking water, public toilet and sewage.
- g. Quality health service should be expanded and it should be gender friendly, child friendly, teenager friendly, and senior citizen friendly.
- h. Health insurance programme should be promoted and expanded.
- i. Active mobilization of stakeholders should be made for the integrated health services.

Community Health Programmes in Nepal

1. Family Planning Programme
2. National Immunization Programme
3. Safe Motherhood Programme
4. Nutrition Programme
5. Female Community Health Programme
6. Non-communicable Disease Prevention Programme
7. Adolescent and Sexual Reproductive Health Programme
8. Communicable Disease Control Programme
9. Epidemic and Outbreak Surveillance Programme
10. Primary Health Care Outreach Programme
11. Safe Abortion Programme
12. Disaster Management Programme

Activity 2.1

Discuss the community health problems based on the given pie-chart. Then prepare a list of your own community health problems.



2.2 Total Sanitation

Total sanitation refers to the condition of all sectors of the community such as tole, settlements, schools having the availability of quality health services and environmental cleanliness. Storage and use of safe drinking water, balanced diets, personal hygiene, domestic and institutional hygiene, menstrual hygiene, proper use of toilets, sewage management and cleanliness, formation of sanitation committee, sanitation plan, etc. come under total sanitation.

We need the integrated efforts of individuals, families and the whole community to maintain total sanitation. The roles and responsibilities of these three aspects are as follows:

A. Roles and Responsibilities of an Individual

- Individuals should regularly brush their teeth, keep the body clean, and have nails and hair cut.
- They should keep their clothes, rooms, and utensils clean.
- They should wash their hands with soap before cooking food, having a meal, feeding the child and after using the toilet, and touching dirt.
- Women should keep their pads and vagina clean during menstruation and dispose the used pad properly.

B. Roles and Responsibilities of a Family

- Rooms, floors, walls, windows, doors, ceilings, and yard of the house should be regularly cleaned.
- Taps and toilets should be maintained and repaired.
- The kitchen waste should be separated into biodegradable and non-biodegradable and decomposable waste should be used to make compost manure.
- Backyard farming, rooftop farming and gardens should be kept neat and clean and managed properly.

C. Roles and Responsibilities of a Community

- There should be a proper supply of safe drinking water in the community.

- b. There should be regular monitoring, cleaning and maintenance of the sources of water.
- c. All the institutions in the community should keep their surroundings neat and clean.
- d. There should be regular cleaning and maintenance of public places such as streets, parks, temples, pati, pauwa, ghat, stupa, and mosque.
- e. There should be the availability of safe drinking water and public toilets and proper drainage system in public places.
- f. There should be child friendly, gender friendly and disable friendly toilets in the schools.
- g. Menstruation pads should be made available in schools and other offices. These pads should be disposed properly in the proper place.
- h. There should be proper waste management and drainage system.
- i. Hospital wastes are hazardous to health. Therefore, these wastes should be disposed and managed safely in proper places.

2.3. Types of Toilet

Proper management of excreted urine and faeces is essential for total sanitation. There is an important role of the toilet for it. We are going to study about water-seal toilets and eco-santoilets in this unit.

A. Water-seal Toilet

Water-seal toilet is often constructed in house, school, offices, and public places nowadays. This type of toilet is common in town and village areas. It can be flushed easily. Water is poured into the bowl to flush excreta away. After flushing it, a little water is stored there. Therefore, it prevents odours from coming up the pipe. This type of toilet can be constructed in the house or near the house.

It should be cleaned regularly to maintain the



hygiene. After the use of it, sufficient water is needed to move the excreta. We need water, toilet brush, and toilet cleaners such as phenol. Solid wastes such as plastics, rubbers, papers, menstrual pads should not be flushed down the toilet. It should not be constructed near the sources of water. There should be a hand-washing station with soap in close proximity to the toilet.



B. Ecosan Toilet

Look at the picture and have a discussion with your friends.

- Why is this type of toilet considered to be the environment friendly toilet?
- How can we prepare organic manure from it?



Ecosan toilet is an approach in which urine and faeces are collected and disposed separately. The urine and faeces are collected into separate safety tanks. The human excreta is recycled through a natural process to transform it into natural compost and fertilizer. The faeces and urine take 5-6 months and 15-30 days to be completely composed into organic manure. It contains nitrogen, phosphorus, and potassium like the chemical fertilizer. It increases the soil fertility and soil productivity. It also saves money from buying the chemical fertilizer. It also protects the farming from insects and diseases. In ecosan toilet, water is not used for flushing. Therefore, it is useful in the places where there is a scarcity of water.

It is sustainable and environment friendly. It is designed to protect and preserve the environment. In this approach, the human excreta are used as valuable resources, not as waste products. The ecosan has three parts: The shallow in the front for urine collection, the drop hole in the middle for faeces and the shallow part in the rear for self-cleansing. We should use these three parts properly. We should

not mix water into the urine and faeces. We should wash the excreta in the respective part only.

2.4. School Health Screening Test

Study the pictures below and have a discussion based on the given questions.

- What are the people doing in the pictures?
- What are the reasons for doing these activities?



School health screening test is a test that is made to check the physical and health condition of a student such as height, weight, vision, teeth and hearing. It can be run in the school with the participation of teachers, nurses and students. It needs trained and experienced professionals and some equipment. The school administration should keep records of the screening test and inform the parents. The importance of the screening test can be mentioned as follow:

- The health problems can be identified which are not recognized through general observation.
- The health of students can be checked at a minimal cost.
- The students become aware of their health condition.
- By identifying the problems early on, it will be easier to treat them.
- It helps the parents to go to respective health institutions for the treatment of their children.
- The health difficulties in the future to come can be identified early on and treated in time.

Activity 2.2

Step onto the scale (weighing machine) turn by turn and stand still on it with feet even and flat. Then keep the record. For measuring the height, stand facing the wall by your back and ask your friend to place a flat straight object on your head and mark the wall. Measure the height with the help of a measuring tape and keep the records.

2.5 Mental Health

Read about an incident below and discuss about mental health.

An adolescent girl wanted to study Law after getting the result of Grade 12. But, her parents are not in favour of her choice. Some family members forced her to join Chartered Accountancy (CA) Course. So, she joined CA and started her higher education. She could not concentrate on her study. As a result, the result was not satisfactory. She left her study before completing the course. She wanted to study Psychology in higher education. But, nobody supported her. She was sad. She lost her appetite. She had no sound sleep. She started to stay up late. She started showing no interest in her favourite activities. She started to stay alone. She left roaming and playing with her friends. She felt hesitation sharing her feeling and problems with family members and friends. After some days, her condition became worse. She felt hopeless or empty. She suffered from low self-esteem.

The family members and her close friends tried to convince her and make her happy. But, there was no change in her behaviour and activities. Stress and anxiety brought her to the stage of depression. She faced problems in making decisions about her study and other things. She had a low confidence level to express her feelings and opinions. The family members consulted a counselor and psychiatrist and made her treatment under their guidance and advice. She recovered slowly after the treatment. Her parents promised that she could choose her favourite subjects. Now, she is normal. She is actively participating regularly in family and social activities. She is studying Psychology as her choice and getting better results.

Questions for discussion

1. Why did the adolescent girl become the victim of depression?
2. What efforts did that girl and her family members make for stress management?

3. If stress occurs in your life, how do you manage it?

Emotional, psychological and social well-being come under mental health. It leads to the thought, action and feeling of a person. It helps people to manage stress, establish and strengthen their relationships with others, and make the right decision. It plays a vital role in our life.

Mentally healthy people can do their daily tasks in a meaningful way. They can manage their stress themselves. They can express their feelings and opinions with confidence. They can interpret the situation and present their logic. They can find the solutions to the problems. They can make the right decision at the right time. They can easily adjust themselves to the changed context. They can evaluate themselves and identify their own abilities. There are different problems related to mental health. Among them, stress, anxiety and depression are given here.

A. Stress

Stress is a mental pressure. If people cannot solve the problem by utilizing their ability, they face the problem of stress. The problem of relationships with family, relatives, friends, and society causes stress. Being unable to achieve success as expected can also cause stress. The causes of the stress may be different for different people.

B. Anxiety

Anxiety is a feeling of unease that occurs as a reaction to stress. If we are unable to manage our daily activities and stress promptly, it creates this condition. People are often worried about achieving success in life, earning recognition, and improving their financial condition. They also wondered about past mistakes, unexpected past incidents, and death.

C. Depression

People sometimes are affected by small things and they become sad. This condition causes depression. The main cause of depression is feeling weak and empty. There are different causes of depression. Physical and mental abuse causes depression. Physical and mental exploitation are also the causes of depression. Loneliness, family problem, drug addiction, losing a close relative, losing the achieved status, unexpected betrayal from someone, etc. are some causes of depression.

The different effects are seen due to stress, anxiety and depression. People suffer from headache, muscle pain, and insomnia (sleeplessness). They cannot concentrate on their tasks. They show an annoyed mood and irritable behaviour. They are unable to make decisions, remember things, and express feelings and opinions. Similarly, they cannot do self-evaluation and take responsibility. They always feel weak and worthless. They lose their self-confidence. These problems can create physical, mental, social and emotional effects. Therefore, these mental problems should be managed promptly.

2.5.1 Management of Mental Health Problem

Stress and anxiety can be controlled through regular exercise, nutritious food, and a positive mindset. Depression can also be controlled through them. The following measures can be applied for the control and prevention of the mental health problem:

- We should think positively, play games, read books, write something, and do creative work.
- We should be involved in family activities such as interacting with family members, helping each other, and participating in family functions.



- c. We should have enough sleep, nutritious food, and regular exercise.
- d. We should be in contact with neighbours, relatives and friends and interact with them regularly.
- e. We should keep ourselves busy and active in daily activities making a schedule.
- f. We should practise yoga and meditation regularly.
- g. We should utilize social media properly.
- h. We should consult the teacher, psychiatrist or counselor for the treatment in time.

2.6 Conversion Disorder

Have you seen someone showing the symptoms of fainting, body tremor, crying, murmuring, foaming at the mouth, and unusual excitement? What may be the reasons behind it? How can we prevent us from it?

Conversion disorder is a mental health condition that causes physical symptoms. The person with the symptoms of conversion disorder. These problems are caused by different factors such as stressful events, sexual assault, physical abuse, disturbed relationship, and inability to fulfill needs. Sometimes, this conversion disorder can happen in a group or mass, known as mass conversion disorder. The symptoms seem in groups or mass.

The symptoms of conversion disorder are fainting, body tremors, foaming at the mouth, over-excitement, etc. The condition can be worse if it is not treated promptly. Therefore, we should consult the parents and other individuals to identify the real problem and find out the solutions. People suffering from this problem should come forward themselves to manage it. They should share their problems with their friends, teachers, and parents. They should also take help from them. It can be treated promptly with the help of a doctor's advice and counseling.

Activity 2.3

Form small groups. Collect essential information through interviewing seniors and specialists, visiting the library, and surfing the internet. Study them and present the conclusion in the classroom.

2.7 Legal Provision on Drug Abuse

Discuss in a group with the help of the following questions.

- What may be the problems created by drug abuse?
- What is the punishment for those people who are involved in this activity?

Legally banned substances such as cannabis, opium, heroin, morphine, cocaine are the drugs. World Health Organization (WHO) has defined it as a substance that is not essential to be consumed for our healthy body. It affects the functions of the central nervous system. It brings change in the thoughts and feelings of a person. Different physical, emotional, mental and social problems appear in an individual who is using drugs.

The production, use and trading of drugs are illegal activities and these activities are also criminal activities. Narcotic Drugs (Control) Act, 2033 (1976) has listed the narcotic drugs. The use or export and import of these listed drugs are defined as prohibited acts according to Narcotic Drugs (Control) Act. It has also stated the penalty provisions for those people who commit the prohibited acts. According to this act, it is prohibited to cultivate, produce, prepare, purchase, export or import, distribute, store, and consume drugs. Punishment provisions in this act are listed here:

- Anyone who consumes cannabis will be imprisoned for up to one month or fined up to Rs. 2000.
- Anyone who cultivates cannabis shall be punished with an imprisonment for a term up to three years or with a fine up to Rs. 25000.



- c. Anyone who produces, prepares purchases, sells and distributes, exports or imports, traffics, stores cannabis shall be punished with an imprisonment for a term up to 10 years and with a fine upto Rs. 1000000.
- d. Anyone who consumes opium, cocaine and any other narcotic drugs shall be punished with an imprisonment for a term up to one year and with a fine upto Rs. 10000.
- e. Anyone who cultivates opium, cocaine and any other narcotic drugs shall be punished with an imprisonment for a term up to 10 years and with a fine upto Rs. 200000.
- f. The person shall be punished or fined according to the gravity of the offenses.

Exercise

1. Tick the true (✓) statements and cross (x) the false ones.
 - a. Nutrition, immunization, sanitation, and health service are the aspects that come under the community health.
 - b. In ecosan toilet, the urine and faeces are collected into the same tank.
 - c. School health screening test includes weight and height measurement, vision test, hearing test, etc.
 - d. Conversion disorder is not a mental disease.
 - e. Anyone who consumes cannabis shall be punished with an imprisonment for a term up to one month or with a fine upto Rs. 2000.
2. Fill in the blanks with the correct words and complete the sentences.
 - a. Lack of safe drinking water causes the diseases such as

- b. Ecosan is friendly toilet.
- c. A depressed person has frequent thought of
- d. Narcotic Drugs (Control) Act has defined the drugs consuming and its export or import as acts.
- e. The toilet, in which a little water is stored there after flushing, is known as toilet.

3. Answer the following questions.

- a. Write short description of any three health problems which are occurring in your community.
- b. Maternal health, nutrition and health insurance programmes are supporting to promote the community health. How? Justify it with examples.
- c. What is total sanitation? Mention its components.
- d. Differentiate between ecosan toilet and sulabh toilet.
- e. Write the causes of mental health problems and suggest constructive measures of stress management.
- f. Write short notes.
 - a. School health screening test b. Depression
 - c. Conversion disorder d. Water-seal toilet
- g. State the legal provisions made by Narcotic Drugs (Control) Act, 2033.
- h. Nowadays, the number of drug users is increasing. It has been a headache for all. How can we solve this problem? Present your views with suitable examples.

Project Work

- 1. Local government and other local level organizations may have made a concrete plan for the control and prevention of drug abuse. Consult your teachers and other respective representatives and prepare a report. If they have not made such plan, consult the local scholars and practitioners in that field. Then prepare the practical and legal suggestions for them.

2. Read the notice below and discuss the given information with the parents. Use these helplines when you need them.

Dial 1143 for reproductive health services and consultation.

Dial 1145 for necessary information and help in cases of gender-based violence or violence against women.

Call 9851255254 for air rescue services for remote district women in the case of pregnancy and delivery.

Dial 1166 for necessary information about mental health problems and counseling services.

Dial 9851385480 for necessary information and service against drug abuse.

Dial 102 for ambulance service and dial 100 for police service.

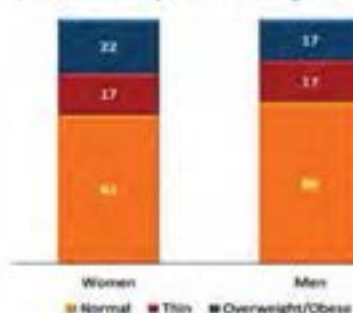
Dial 1098 for necessary information and counseling, referral and other service in the case of children.

Nutrition and Food Security

Study the picture and have a discussion about nutrition and food security.

Adult Nutritional Status

Percent distribution of women and men age 15-49



Food Security

Score 0-100*



Human body needs nutritious food for the development and security. It gets essential nutrients from the food. The nutrients are supporting us for the physical and mental growth. They also protect us from the diseases. Deficiencies or excesses in nutrient intake can cause malnutrition in children, women and others. Therefore, the people of all ages need the balanced diet. It needs proper management system of food security for the easy access and consumption of the balanced diet. Food security is the measure of an individual's ability to access food that is nutritious and sufficient in quantity. It ensures the individuals for the active and healthy lifestyles.

Activity 3.1

Sing a song and have a discussion that is related to nutrition.

शिशुहरू सुक्दै जान्छन्, सुकेनास रोगले

आमाको दुध, पोसिलो चिज खुवाउनु है सबले ।

रक्तअल्पता रोग लाग्छ, रगत कमी भए

रोग भाग्छ, माछा, मासु, कोदो आदि खाए ।

भिटाभिन 'ए' कमी भए, रतन्धो रोग लागछ

सागपात तथा फलफूल खाँदा रोग टाढा भागछ ।

भिटाभिन 'सी' कमी भए, स्कुर्भी रोग लागछ

आँप, अम्बा र कागती खाँदा यो रोग भागछ ।

भिटाभिन 'डी' कमी भए, रिक्केट्स रोग लागछ

घाम तापु, फलफूल खानु, छिट्टै रोग भागछ ।

Guiding questions for the discussion

- What causes anemia? What types of food items should we eat to prevent it?
- Which disease is caused by the deficiency of vitamin A and vitamin D? What types of food items should we eat to prevent it?

3.1 Malnutrition

Malnutrition is a physical condition that is caused by the lack of nutrients or excess in nutrients. We can be malnourished due to an imbalance between nutrients. It affects an individual in the physical, mental and emotional development. We also suffer from diseases. Therefore, we need to consume a balanced diet regularly for a healthy and active life.

3.1.1 Causes of Malnutrition

Study the poster below and discuss.

- a. What problems does a baby face if the baby cannot get enough mother's milk?
- b. Why is mother's milk precious for infants?

Malnutrition is the condition of deficiency or excess of nutrients. There are various reasons behind malnutrition. We are malnourished due to consuming an imbalanced diet and our wrong eating habits. As a result, the diseases can attack us. The problem of malnutrition can be timely addressed by being aware of a balanced diet and adopting a healthy lifestyle. The main causes of malnutrition are as follows:

- i. Malnutrition is caused due to lack of breastfeeding for the first six months of a child and an additional nutritious diet after six months.
- ii. Inadequate nutrients in food and wrong eating habits cause malnutrition
- iii. Limited access to nutritious food causes malnutrition.
- iv. Eating the same types of food items is one of the causes.
- v. It is caused by the dieting practice among teenagers to lose weight.
- vi. It is caused by consuming oily, salty and spicy food items.
- vii. The excess washing, chopping, overcooking, overheating, reheating, and drying lead the nutrient loss. Consuming such food items is also one of the causes.
- viii. Diseases like roundworm, dysentery, diarrhea, and tuberculosis cause malnutrition.
- ix. People have junk food and other processed food items having harmful chemical mixtures due to the effect of attractive advertisements.
- x. Wrong beliefs and misconceptions about food items also tend to malnutrition.
- xi. Food scarcity, lack of food security, and lack of food storage also lead to malnutrition.

3.1.2 Types of Malnutrition and Malnutritional Diseases

Study the case below and have a discussion based on it.

A pregnant mother did not get enough nutrients during her pregnancy. There was no supportive environment for enough nutritious food at home. So, she suffered from the diseases caused due to malnutrition. She gave birth to an underweight child. The baby could not get enough breastfeeding because of the low milk supply from the mother's breast. The baby was underweight and under height according to age. Different problems also appeared in the child such as a thin body, old and wrinkled face, dry and loose skin, and fighting behaviour. The health worker advised the parents to make the treatment of marasmus. They did not take it seriously. As a result, other symptoms appeared in the child such as an enlarged tummy due to excessive water storage, a severe loss of body fat and muscle tissues, diarrhea, and swelling of the face. After that, the child's health was checked and it was treated well. The child recovered gradually.

- Why were the baby and the mother malnourished?
- What malnutrition disease did the child suffer from?
- What are your suggestions to be safe from this problem?

Malnutrition is caused by undernutrition and over-nutrition. They are explained briefly here.

1. Under-nutrition

Under-nutrition is a condition of insufficient nutrients in the body. It occurs when enough essential nutrients are not consumed for a long period of time. As a result, the children face different problems such as not growing and putting on weight at the expected rate, stunting, and wasting. Such under-nutrient deficiencies are given here.

A. Stunting

Stunting is a condition of having low height according to age. It has a negative impact on the physical and mental growth and development of the child. It is normally noticed after the age of two years.

If people are stunted by under-nutrition in childhood, they remain stunted in adulthood.

B. Wasting

Wasting is a condition of having low weight according to the age of the children. Nutrient deficiency for a short period of time can cause wasting. The children lose weight drastically and it can lead to the death of the children. The diseases related to this type of malnutrition are as follows.

a. Marasmus

Marasmus is caused due to the lack of carbohydrates in the body for a long time. It generally occurs in children under the age of five. Feeding inadequate food for a long period of time and lack of a balanced diet are the causes of marasmus. Infectious diseases such as diarrhea, measles, roundworm also cause marasmus. Getting thin, quarreling all the time, appearing old and having a wrinkled face, and dry skin are the symptoms of marasmus.

b. Kwashiorkor

Marasmus is caused due to the lack of protein in the consuming food. The main sign of kwashiorkor is too much fluid in the body's tissues, which causes swelling under the skin. Visible loss of muscle mass, diarrhea, weight loss, enlarged belly, and swollen face are the symptoms of kwashiorkor. It also causes dry hair and easily falls out. The original colour of the hair and skin can be lost. Sometimes, red rashes appear on the skin.

C. Marasmic Kwashiorkor

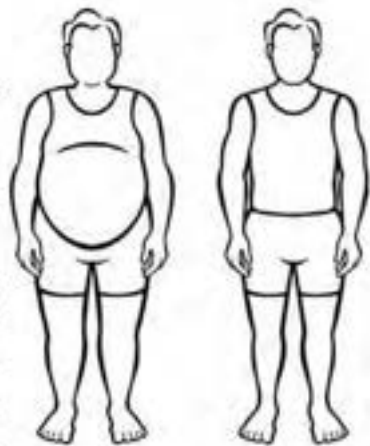
The condition of having signs and symptoms of both diseases, marasmus and kwashiorkor, is known as marasmic kwashiorkor. The swollen body parts and drastic weight loss are the main symptoms of it. The preventive measures of malnutrition diseases are:

- The infant should be given exclusive breastfeeding for the first six months.
- Complementary feedings such as bean soup, meat and fish soup, fruit juice, dalbhat, curry, and super flour (nutritious weaning food) should be given to the infant after six months.

- c. Balanced diet should be consumed regularly.
- d. Iodized salt should be used.
- e. Round worm and other infectious diseases should be treated in time.
- f. Vaccination should be ensured for the child.

2. Over-nutrition

- a. What kind of malnutrition deficiency is shown in the picture?
- b. What may be the causes and preventive measures of this problem?



Over-nutrition is a condition of excessive nutrients in the body. Over-nutrition is also not good for health. It invites different problems such as unwanted weight gain and fat in the body. As a result, it increases the risk of heart, lung, liver and kidney-related problems.

If we consume high-fat and high-sugar foods, our body cannot use all calories. This extra calorie is stored as fat in the body. This condition of storing extra energy is obesity. Obesity is caused by eating too much, but moving too little. Eating junk foods, oily food, fried food items, and sweet food items are also the causes of it.

Obesity causes overweight compared to the average age and height. Breathing problems, high blood pressure, and feeling tired are the effects of obesity. It can be controlled by eating vegetables, fruits, and legumes. It is better to avoid oily and sweet food items as well as processed and packaged foods. It can be addressed by adopting a healthy lifestyle such as regular physical exercise and yoga practice.

Activity 3.2

Measure the weight and height of your friends using a weight machine and measuring tape respectively. Find Body Mass Index (BMI) using the given formula as in the example and ensure their height and weight according to their age.

Formula: BMI is a method of calculating the weight (in kilogram) of the body according to the height (in metre) of a person. It is measured from 18.5 to 24.9. A BMI of more than 25 is overweight and less than 18.5 is underweight. This formula is normally used for adults from 18 to 65 years old. However, it can be applied to teenagers.

If the weight and height of a girl is 34 kg and 1.49 m respectively, then find her BMI.

BMI Formula: $BMI = \frac{kg}{m^2}$

Therefore, BMI of a girl = $34/(1.49)^2$

BMI = 22.81

The girl has BMI between the range of 18.5 and 24.9. So, she has a normal weight.

3.1.3 Micronutrient Deficiency Disorder

Micronutrients are vitamins and minerals needed by the body in very small amounts. However, they are vital to healthy development, disease prevention, and well-being. Micronutrient deficiencies can cause several serious health issues. Night blindness, anemia, and scurvy are the micronutrient deficiencies.

A. Anemia

Anemia is a condition in which the body does not have enough red blood cells. It is caused by the lower-than-normal amount of hemoglobin. Due to the lack of iron and vitamin B and C in the body, red blood cells cannot develop and anemia occurs. There is a high possibility of this disorder among children, teenagers and pregnant women. Anemia sufferers feel dizziness when they stand up. They also feel weak and tired, breathing problems, irregular heartbeats, chest pain and have a headache. The colour of the face, tongue, nails and skin seems pale or yellow.



To prevent anemia, children and pregnant women should have iron-

rich foods such as liver, fish, green vegetables, beans, eggs, fruits, and millet. If the doctor recommends the iron tablet, the pregnant woman can take it. It is necessary to make regular checkups for children and pregnant women. Teenage school girls may take iron tablets with a doctor's recommendation. If there is a heavy bleeding during the period of menstruation, they need to visit health institutions and make checkup. Hookworm can also cause anemia. It should be timely treated.

B. Night Blindness

Night blindness is an eye problem in which a person has poor vision at night or in dim light. This problem is caused by vitamin A deficiency. Vitamin A helps the eye work properly. If people lack it, they cannot see well at night and in poor light. They feel difficulty seeing objects in places with poor light. They also have problems with bright light. They can be struck or fall down while they are walking. The cornea becomes dry and seems blurred and swollen.



One should consume food items regularly which are rich in vitamin A to avoid the risk of night blindness. Green vegetables, yellow fruits, milk, and curds are some examples of vitamin A-rich food items. One should take special care of the eyes to keep them clean. Vitamin A capsules should be supplemented every six months for children of six months to five years. Infectious diseases such as measles, diarrhea, and hookworm should be timely treated. Awareness programmes should be launched in the community.

C. Scurvy

- Which health problem has been shown in the picture?
- Which vitamin deficiency causes this problem?
- What may be the preventive measures of this problem?



Scurvy is a disease caused by a deficiency of vitamin C, characterized by swollen bleeding gums. People of all age groups can suffer from this problem. Swollen and bleeding gums, tooth pain and teeth fall out, no appetite, and feeling tired and weak are the symptoms of scurvy. It causes delayed wound healing. The problem of anemia can be seen in the body.

One should eat vitamin C-rich food items regularly such as lemon, guava, mango, orange, amla, and tomato to prevent him or her from scurvy. One should take special care of the teeth and gums to keep them clean. Scurvy should be treated on time if any symptoms are seen. Awareness programmes should be launched in the community.

D. Rickets

Rickets is caused by vitamin D deficiency. Our body needs an adequate amount of calcium and phosphorus for the growth and development of the bones. Vitamin D absorbs calcium and phosphorus from the food. If vitamin D lacks in the body, the body cannot absorb calcium and phosphorus. We can notice different signs and symptoms of rickets. The legs seem bowed or curved. There is pain in the bones of the knees and spinal cord. It delays the growth and development of the body. The shape of the ribs and breastbone seem unusual. The joints of elbows and wrists become wide.

We can apply different preventive measures to avoid this problem. We should consume food items regularly which are rich in vitamin D. Yellow portions of an egg, milk, fish, butter, beans, and green vegetables are vitamin D-rich food items. We can also get vitamin D from sunlight. Cholesterol in the skin absorbs the radiation and converts it into vitamin D. Therefore, we need to expose a sufficient amount of skin to sunlight. If we notice a problem in the shape and development of the bones, we should consult the doctor and make the treatment.

Activity 3.3

List the malnutrition diseases in the chart paper using the given table and present it in the class.

S. N.	Name of the disease	Causes	Symptoms	Preventive Measures

3.2. Food Security

Study the pictures and have a discussion based on the given questions.



- The right to food is a fundamental right. Why?
- What are the consequences of lack of food availability and access to food?

Everyone has the right to food. Nutritious food is a fundamental human need and obtaining it is also an inherent right of human beings. The right of an individual to have nutritious and safe food is known as the right to food. The concept of food security was developed for the availability and accessibility of food to people at all times. Food security is the state of having unrestricted and reliable access to nutritious food as well as availability and utilization of food. The Constitution of Nepal has included food security as a fundamental right. It has given the right to every citizen to be safe from the state of being in danger of life from the scarcity of food. For its effective implementation, The Right to Food and Food Sovereignty Act has been enacted. It is the duty and responsibility of the state to ensure food security for all citizens. Food security has four components; availability of food, access to food, utilization of food, and stability of food.

A. Availability of Food

Availability of food is a condition of having a sufficient quantity of quality food. Availability of food and a good eating habit are essential for quality and healthy life. The state should provide nutritious food to the citizens through domestic production, food stocks and import capacity. To ensure it, we need to promote agri-

cultural production and its producers. We also protect and promote traditional food items.

B. Access to Food

Easy access to food and availability of food play the important role to avoid hunger. People need physical and economic access to safe and nutritious food. Every citizen should be safe from the state of being in danger of life from the scarcity of food. The state should ensure access to food for all citizens.

C. Utilization of Food

Utilization of food refers to the condition in which individuals can utilize sufficient nutritious food as per their needs. The state must ensure the quality standard of the available foods.

D. Stability of Food

Stability of food refers to the availability and access to adequate food at all times. Individuals should not risk losing access to food as a consequence of sudden shocks. For the food stability, above mentioned three components are to be fulfilled. The state should establish the production, storage and well distribution system for it.

Activity 3.4

Study the reference materials related to food security. Compose a dialogue or song on it and present it to the class.

3.3 Things to Consider for Protecting Consumer's Health

Read the conversation about protecting consumer health between Akanksha and her father on the way to market.

Akanksha : (Pointing to a customer dealing with a salesperson)
Father, someone is checking goods turning side by side. Why is that person paying attention to goods?

Father : Yes, daughter. It is a responsibility of a consumer. Every consumer must be conscious to their health.

Akanksha : We are also the consumers, aren't we? How can we be aware of protecting our health, father?

Father : Good question! We should check different things before buying goods in the shop such as company name, manufacture date, expiry date, and quality. We should collect the necessary information before visiting a clinic or hospital. Low quality goods may be available in the market. Different colours and chemicals are mixed in food items for a taste and attractive look. These food items are harmful for our health.

Akanksha : Father, I have one more question. Why has not the government banned these products that are affecting our health?

Father : I agree with you. Some companies produce such food items for earning more money within a short period and they break the rules related to consumer health for their benefit. Therefore, consumers must be aware and advocate for consumer's health. For the production of quality food and quality service, regular watching and warning is necessary. We have to go for legal action to punish them if the products harm the health, money and other effects.

Akanksha : Interesting! What are the other things that we should be conscious of?

Father : Yes, daughter. There are other things that consumers should be aware of. Consumers should check the standard while buying goods and taking services that are defined by authorized agencies. We should avoid the goods that have negative effects on health. Manufacturing companies should also be responsible for consumer health. They should produce healthy food items.

Daughter one more thing! Different substances are mixed in food items. Different chemicals and pesticides are also mixed in foods. These substances are harmful to our health. Therefore, excessive use of pesticides must be avoided. Consumers should

be also conscious of such food items. The place of food storage should also be clean and safe. If we find such malpractices, we should inform the concerned agencies such as District Administration Office, District Police Office, Local Government, and other consumer health-related agencies.

Akanksha : Thank you, father. I learned many things about consumer health. (She returned home with her father.)

Exercise

1. Put a tick mark (✓) for the right statements and a cross (X) for the false ones.

- All essential nutrients are found in junk food.
- Children under the age of five and pregnant women mostly suffer from malnutrition.
- Anemia is related to teeth and gums.
- Sun bath protects us from rickets.
- We have to check the price, quantity and quality before buying the food.

2. Choose the correct answer.

- Which disease has the symptom of having a pale colour of palm?
 - Night blindness
 - Anemia
 - Wasting
 - Scurvy
- Which vitamin deficiency causes night blindness?
 - Vitamin D
 - Vitamin C
 - Vitamin B
 - Vitamin A
- What types of food items should we have?
 - spicy
 - fatty
 - balanced
 - sweet and salty

- d. Which of the followings is caused due to micronutrient deficiency?
 - i. Marasmus
 - ii. Stunting
 - iii. Wasting
 - iv. Anemia
- e. Which of the following things should the consumers be aware of?
 - i. debating with the seller
 - ii. escaping from the responsibility showing the government
 - iii. being conscious and aware of oneself
 - iv. being unresponsive

3. Answer these questions.

- a. What is malnutrition? Write its four symptoms.
- b. Write the preventive and controlling measures for malnutrition.
- c. Suggest any four measures to your friend to be safe from night blindness?
- d. Write any four things that the consumers should consider while buying goods.
- e. What is food security? Describe its four components briefly.
- f. "Obesity is the result of unhealthy lifestyle and wrong eating habits." Justify this statement.

Project Work

Form small groups and assign each group to collect the packaged food items that are available in the local market. Ask them to prepare a description of those items in the chart paper using the given table.

Name of Food Item	
Name of Manufacturing Company	
Manufacturing Date	
Expiry Date	
Weight	
Nutrient Label	

Disease, Safety and First Aid

Read the following statements and have a discussion.

Every human being is the creator of his own health or disease.

(Gautam Buddha)

Work with safety measures and enjoy the safety life.

(Gautam Buddha)

First aid is all about giving life another chance.

(Gautam Buddha)

People pay money for their treatment, but they remember the doctor's warm behaviour forever.

a. Disease and treatment

b. Risk and Safety

c. First aid

Our daily activities are hampered by physical and mental illness. This state of disorder is known as an illness or a disease. The diseases are caused by different internal and external factors. The symptoms and preventive measures differ according to the disease. We will study sexually transmitted diseases and non-communicable diseases in this unit.

4.1. Sexually Transmitted Infection

Read the conversation between Shushila and her mother with action and have a discussion.

Shushila : Mother, what happened to neighbour aunt? She is in bad mood all day. She likes to stay alone. I also saw her walking with difficulty.

Mother : You're right, daughter. She is ill.

Shushila : What disease does she suffer from?

Mother : Your aunt is suffering from a sexually transmitted infection. Uncle took her to the hospital last week for a checkup. No need to be worried. She is getting treatment as per the doctor's advice. She will be well after the treatment according to the doctor.

Shushila : What type of disease is a sexually transmitted infection? Could you tell me something about it?

Mother : Why not. A sexually transmitted disease (STD) is an infection transmitted from an infected person to an uninfected person through sexual contact. AIDS, Syphilis, Human Papillomavirus, gonorrhea, etc. are some examples of STDs.

Shushila : How do these STDs spread, mother?

Mother : There are various ways, daughter. If a person has sexual intercourse with the infected person, it can be transmitted to that person. It can also pass to the uninfected through a non-sterile syringe used by the infected ones. It can spread through sharing the toilets used by the infected persons. Blood transmission, sharing sheets, towels, clothes and used razors are the mediums of STD transmission.

Shushila : Can't these diseases be treated, mother?

Mother : Treatment is available for all sexually transmitted infections (STIs), but a cure is not possible for all. Some STDs can be cured with medicines. Although there is no cure for HIV (Human Immune Deficiency Virus) and AIDs (Acquired Immune Deficiency Syndrome), medicine is available free of cost in health institutions to reduce their effect.

Shushila : What is the main cause of AIDS, mother? What are its symptoms?

Mother : HIV is the main cause of it. When it enters into the body, it damages the body's immune system. As a result, the

person suffers from different diseases. The late stage of HIV infection is known as AIDS. There are no any symptoms in the early stage. But, the symptoms can be noticed gradually. HIV-infected people can spend normal life if they get proper care and treatment.

Shushila : So, what are the preventive measures for these sexually transmitted infections?

Mother : There are some measures, daughter. Avoiding unsafe sexual intercourse, using condoms, getting tested on time, and using only sterile syringes are some preventive measures for STIs.

Shushila : Thank you, mother. I'll be careful about these things and try to make other people aware of them.

Mother : (patting the back of the daughter) I'm happy, daughter.

Activity 4.1

Discuss the causes of transmission and preventive measures for STDs with your friends and complete the given table.

Causes of Transmission	Preventive Measures
Unsafe sexual intercourse	Avoiding unsafe sexual intercourse

4.2 Non-communicable Disease

Have a discussion based on the following questions.

- Can asthma and high blood pressure transmit from one person to another?
- What are the causes of these diseases? How can we be safe from these diseases?

Non-communicable diseases refer to diseases that cannot transmit from one person to another. Cardiovascular diseases, cancer, diabetes, and chronic lung illness are non-communicable diseases. Wrong eating habits, poor diet, smoking, alcohol consumption, envi-

ronmental pollution, genetic factor, and lack of exercise cause these diseases. The treatment of these diseases is difficult and expensive. A healthy lifestyle during childhood and adolescence can protect us from these problems. These diseases can be cured if they are diagnosed and treated in the early stage. We will learn about some non-communicable diseases in this unit.

A. Heart Diseases

The diseases related to the heart and blood vessels are known as heart diseases. Eating habits, lack of exercise, accidents, and other factors can cause heart disease.

a. High Blood Pressure

The heart supplies oxygen and nutrients to the whole body through the blood. The contraction and expansion of the heart create pressure on the heart and blood vessels. This is known as blood pressure. Ideal blood pressure is considered to be 120/80 mmHg. Obesity, stress, excessive amount of oil and salt, smoking and alcohol consumption, and lack of exercise are the risk factors of high blood pressure. Some people may suffer from age and genetic factors.



b. Coronary Heart Disease

Coronary heart disease is a type of heart disease where the arteries of the heart cannot deliver enough oxygen-rich blood to the heart. It is caused by a buildup of fatty material in the wall of the arteries. Smoking, alcohol consumption, high blood pressure, high cholesterol, and lack of regular exercise are the risk factors for this disease. Diabetes patients are also at high risk. It can lead to a heart attack if not controlled in time.

Symptoms and Preventive Measures of Heart Diseases

Heart disease patients feel headache, chest pain, tiredness, and dizziness. They become weak. There is sweating in the body. The heartbeat becomes irregular. To be safe from heart diseases, smoking

and alcohol consumption must be avoided. We should also avoid oily, spicy, salty, fried and packaged food items. We should maintain the weight of the body according to our height. We have to do regular exercise. Regular checkup is also essential. We should pay attention to stress management in time. We should promote the habit of eating green vegetables and fruits.

B. Rheumatic Fever

Rheumatic fever is more common in school-age children, 5 to 15 years old. It is caused by bacteria called Group A Streptococcus. The bacteria make infection in the throat. The body develops the immune system to fight against the infection. Rheumatic fever is an immune response to an early infection. As a result, it starts to affect the different parts of the body. Later it affects the joints, heart, brain, and skin. If it is not treated timely, it weakens the valves and the heart cannot work properly. It requires heart surgery and it can lead to death. This condition is known as severe rheumatic heart disease. In the beginning, there is a tickling sensation and pain in the throat. There is pain in joints, especially in the knees, ankles, and wrists. The patients feel heart murmur and chest pain. They also suffer from fever, headache, and sweating on the body. We should keep the patients away from moisture, cold and dirty places. The foods and cold drinks kept in the fridge should be avoided. If the patients have a sore throat, see a doctor. It should be treated promptly as per the doctor's advice.

C. Diabetes

Diabetes is a condition of having too high blood glucose. It is also known as sugar disease. The function of the pancreas gland is to produce the insulin. The insulin helps glucose from food get into your cells to be used for energy. Sometimes our body doesn't secrete enough insulin and glucose then stays in our blood and doesn't reach our cells. As a result, the amount of glucose increases in the blood. Unhealthy eating hab-



its, obesity, and stress cause diabetes. Lack of physical exercise and genetic factors are also the causes of diabetes.

The symptoms and preventive measures of diabetes

Diabetes patients feel very thirsty and hungry. They urinate a lot, often at night. They also feel very tired and sleepy. They lose weight. They have blurry vision and dry skin. They have numbing and tingling hands and feet. The wounds take a long time to recover. To be safe from diabetes, we should avoid fatty and salty food items. We should take enough rest and sleep time. We should do regular exercise. Stress should be managed timely. We should follow regular checkups and treatment as per the doctor's advice.

D. Asthma

Asthma is a major non-communicable disease, affecting both children and adults. The air passages in the lungs become narrow due to inflammation and tightening of the muscles around the small airways. The inflammation and narrowing of the small airways in the lungs cause asthma. As a result, the lungs cannot inhale sufficient oxygen. The most common factors of asthma are having a parent with asthma, having a viral respiratory infection, having an allergic condition, and being exposed to air pollution, and industrial smoke and dust. Smoking and obesity are also the factors of it.

The symptoms and preventive measures of asthma

Asthma patients suffer from breathing difficulty. They face the problems of wheezing, coughing and chest tightness. They feel a fast heartbeat and breathe faster. The body becomes blue due to the lack of oxygen. To protect ourselves from this problem, we should save our body from the cold. During the cold season, we should wear warm clothes. We should have timely checkup and identify the allergy factor. We should keep us away from allergy factor. We should treat the common cold, pneumonia, tuberculosis in time. We should avoid smoking, alcohol consumption and drugs. We should escape the smoky and dirty places. It is better to wear mask while we are staying or working in such places.

E. Cancer

Cancer is a disease in which some of the body's cells grow uncontrollably and spread to other parts of the body. It is caused by unhealthy eating habit and lifestyle, smoking, alcohol consumption, drug consumption, harmful chemicals or pesticides, and genetic factor. Human papillomavirus causes cervical cancer and helicobacter pylori causes stomach cancer. People of all ages can be affected by this disease. Cancer can start anywhere in the body. Some common cancers are neck, mouth, breast and lung cancers.

There are different types of cancers and they have different signs and symptoms. There are some common symptoms. Unusual lumps seem on the body. New moles appear and the colour and size of the moles change. People suffer from coughing for long periods of time and sometimes coughing up blood. There is a sore throat and hoarseness in the voice. It takes time for the wound to be cured. There is unexplained weight loss. There may be bleeding from the urethra and anus.

We have to eat fresh and healthy food to prevent ourselves from cancer. We should avoid the food items in which chemicals and pesticides are used. We should not consume alcoholic drinks and drugs. We should avoid smoking. If unusual lumps and moles appear, we should have a medical checkup. Cancers can be cured if detected early and treated effectively. Therefore, awareness is necessary.

Activity 4.2

Form small groups. Search the causes and preventive measures of cancer with the help of websites or other reference materials and present your conclusion in the class.

4.3 School Safety

Children spend 6 – 8 hours in school. Therefore, it is essential to ensure a safe and healthy environment in school for children, teachers and other staff members. School safety is a creating safe environment for children, starting from the homes to their school and back. It includes physical,



social, emotional and cyber safety and emergency preparedness. It is necessary to build mutual relationship between students, teachers and student-teacher as well as safe and secured environment.



School safety also includes safety from any kind of abuse, violence, and psycho-social issue as well as disasters. School disaster risks can be mitigated through identifying the risks earlier and applying appropriate ways of management.

4.3.1 Identification of School Hazards and its Mapping

We can identify the possible school hazards (inside and surrounding the school) through the interaction and participation of stakeholders. These hazards can be mapped. The school should prepare a school safety plan with the help of identified and mapped hazards. By implementing the plan, the disaster risks can be minimized. School disaster risk reduction measures should be displayed in the appropriate place so that people can read them easily. Different awareness programmes such as interaction, interviewing, lecturing by experts, dramatization, etc. should be launched from time to time. Therefore, it is necessary to prepare the school safety plan and implement it effectively.

Activity 4.3

Draw the map of school premises and identify the risky and safe areas. Mark the risky areas with a red signal and safe areas with green signals. Then discuss the reasons for red zones being unsafe, safety measures and the ways of management and present the summary.

4.4 School and Playground Safety Measures

A safe and secure environment is an essential requirement for effective teaching and learning. Therefore, schools were declared as a zone of peace. For school safety, the school buildings and playgrounds need to be safe and secured. Some safety measures for schools and playground are as follow:

- There should be windows and doors to allow enough air and light to pass in the classrooms.

- b. There should be different types of play materials in lower classes according to the ages of the students.
- c. The play materials should be managed well in proper places. The damaged materials should be repaired in time.
- d. The playground should be kept smooth and the holes are to be filled.
- e. The outdoor games should be played in an open and safe ground. The doobo grass should be planted on the ground.
- f. Dangers on the playground such as stones, bricks, bottles, and other sharp objects should be managed properly.
- g. The compound wall of the school needs to be strong and safe.
- h. First aid should be available for general injuries and accidents in the school.
- h. There should be a friendly environment between students and teachers.
- i. Extra-curricular activities and other regular activities should be promoted in the schools.

4.5 Safety Measures During Disaster

Have a discussion with your friends using the given guiding questions.

- a. What do you do if a fire, hurricane or earthquake occurs during the school hour?
- b. What should safety precautions be applied before, during and after a disaster?



Disaster is a serious disruption to the functioning of a community that is caused by natural, manmade or technological factors. Fire, hurricanes, floods, landslides, earthquakes, etc. are examples of disasters. The disaster risks can be reduced through systematic efforts before the disaster, during the disaster and after the disaster phases. We will learn the ways of keeping safe from the fire before the fire, during the fire period and after the fire.

Fire is often caused by human errors. Fire hazard is caused in Nepal by cooking, and organizing picnic and gathering in open places, and preparing clay pots in an oven. Fire hazards can be controlled by turning off the regulator of the gas cylinder after the task is over, turning the oven off after cooking, and keeping matches and lighters far from the access of the children. There should be proper management of road infrastructure for the arrival of a fire brigade, ambulances, etc. Fire extinguishers should be installed in the public buildings. Skilled and well-equipped human resources and necessary equipment should be ready for twenty-four hours.

If there is a fire outbreak in the community, we should timely inform to respective institutions and persons. We should take a shelter in safe place at first. If there is a fire outbreak in the house, we try to go out safely from the house. We must try our best to rescue all the family members safely. We should first priority to get out of the house. Let domestic animals get free. We should control fire outbreaks anyhow even by damaging a portion of a house. We should make a combined effort for controlling it. We should dial 101 for necessary information and help. We should manage first aid and take injured people to the health institution for treatment. For people who lose their houses and whole property, we should help them with their shelter, food and clothes.

Activity 4.4

Write the preventive measures for a storm on chart paper with the help of teachers and present it to the class.

4.5 Methods and Ways of First Aid

Have a discussion based on the following questions.

- Have you seen minor accidents such as getting an object stuck in the eye, bleeding from the nose, or injury by falling down in the school?
- When these accidents occur in the school, what methods and ways of first aid are applied?



We may have seen or faced the problems such as foreign body in nose, ear or throat, burns, heat stroke, and altitude sickness. Such accidents can occur during travelling, playing, working in various places. We need to be conscious of these accidents while working or playing in home, school and other places. The methods that are applied to save the life from the accidents are known as safety measures. Sometimes we have to face different accidents even though we are aware of them. At first, we should give the injured persons first aid at the spot before being taken to hospital. We will learn about the methods and ways of first aid here.

First aid is an immediate care given to an injured or ill person by utilizing local means and resources until full medical treatment is available. First aid care may be enough for minor condition. For serious problems, it should be continued until medical care becomes available. It prevents the situation from getting worse and saves a person's life. It helps the injured person for quick recovery. Some severe cases, the injured person can die if first aid is not administered immediately. Therefore, first aid is all about giving life another chance.

First aid includes activities from simple dressing to the treatment of minor conditions. Help to get the patient feel comfortable, relieve the pain, take immediate care of fainted patient come under first aid. ABC is a popular method of first aid in which A stands for Airway, B for Breathing and C for Circulation. At first, we should open the airways, next check the breathing and then check the circulation. We should immediately remove blockages and clear the airways. We should loosen the tight clothing. In this way, we try to regulate the breathing and circulation.

A. Cardio-pulmonary Resuscitation (CPR)

Cardio-pulmonary Resuscitation (CPR) is a temporary method that is applied to restore blood circulation and respiration to save the life of someone who is in cardiac arrest. It has main two stages; chest compression and rescue breathing which are mentioned here.

1. Chest Compression

The following steps are administered for chest compression:

- Lay the person on their back and open their airway. Kneel beside their chest. Place the palm of one hand on the middle of the chest. Then place your other hand on top of your bottom hand and grasp your wrist or interlock your fingers.
- Keep your arms straight and press down on their chest with your fingers or palm and release (but ensure that your palm is touching the chest), pushing down 2 inches each time. Let the chest rise fully between compressions.
- Repeat the cycle of 30 chest compressions until the person starts breathing. It helps to restore blood circulation.

2. Rescue Breathing

The following steps are administered for chest compression:

- Remove any blockage (vomit, blood, other objects) from the mouth, throat or nose and clear the airways. Then close the nose and pinch the nose with your thumb and fingers.
- Then place the other hand on their chin and tilt the head back a little.



- c. Take a deep breath. Then place your mouth fully over theirs and blow steadily for about one second, watching for the chest to rise and open their nostrils. Ensure that the chest is going up and down.
- d. Remove your mouth from theirs and take a deep breath. Again, repeat the activity a, b and c. Continue to give 30 chest compressions, followed by 2 breaths. Repeat it five times. It is useful to restore breathing.

Activity 4.5

Form different groups and sit in the classroom or on the ground. Demonstrate the Cardio-pulmonary Resuscitation method with the help of the teacher.

4.6 First Aid during Accident and Injury

We have to do different activities during disasters at home, school and other places. We may meet accidents, we may be injured or face other health problems even if we are cautious. In such a situation, we have to provide first aid and admit the injured person to the nearest health institution as soon as possible. Here are some accidents and health problems.

A. Foreign Body in Eye

An object or something is stuck inside the eye is known as a foreign body in the eye such as a small piece of dust, a wood chip, a metal shaving, an insect, etc. If there is a foreign body in the eye, we feel sharp pain, burning, and irritation in the eye. The eyes become watery and red. It can cause blindness if it is not treated promptly. We should not rub our eyes with our fingers in this situation. First of all, we should wash our hands with soap and water, and then we should touch our eyes. We should flush the eyes with clean water. We should help the person to seat comfortably. If there is any major injury in the eye, we should cover it with a clean soft cloth or pad.

B. Foreign Bodies in Nose and Ear

Sometimes, an object or something can be stuck in the nose and ear. It can cause pain and infection inside the nose and ear. We keep the

person in a well-lighted area and try to remove the foreign body. We never try to remove the foreign body forcefully. If it is not possible to remove it easily, we should take a person to the nearest health institution.

C. Foreign Body in Throat

Sometimes, an object or something can get stuck inside the throat during swallowing meals. The children can take an object or something while they are playing. It causes choking, hiccup, and a person feels difficulty in speaking. If an object gets stuck in the airway, it needs immediate attention. We try to remove it to save the life. We help the person to throw out an object by coughing. If a person is facing a problem in speaking due to choking, wrap your arms around the waist and tip the person slightly forward. We should also wrap with one arm and hit on the back just above the waist with one arm. If the foreign body is removed through this attempt, give abdominal thrust just above the navel. If the person becomes unconscious, lower the person onto the floor. If it is not possible to remove it easily, we should take a person to the nearest health institution.

D. Tooth Fracture

Sometimes, teeth can get cracked due to different causes such as biting hard food items, playing sports, road and other accidents. We should help a person to sit comfortably in a suitable place. If teeth get fractured by falling down, we should clear the mouth through gurgling. In the case of a total teeth fracture, we should wrap the bleeding area with cotton or cloth. We should take a person to the nearest health institution for additional treatment.

E. Heat Stroke

As temperature increases, a heat wave starts to blow in the Terai region. The temperature rises over 40 °C. Dry and heat wave sweeps from May to August. As a result, heat-related illness is caused which is called heat stroke. Heat stroke patients feel thirsty, have headaches, and are restless. They have flushed and pale faces. They suffer from vomiting and fainting problem. The body temperature can reach 104 °F. We should keep them in a cool and fresh place and a well-ventilated environment. We should apply ice packs or wet cotton or cloth on the forehead, arms, and feet. We should

encourage them to drink more liquids such as water, fruit juice, and soup. We should keep them indoors during the daytime.

F. Altitude Sickness

The respiratory problem that is caused by low oxygen levels in the air at high altitudes is called altitude sickness. Mountain climbers are at high risk. Headache, tiredness, dizziness, vomiting, loss of appetite, difficulty in walking, and shortness of breath are symptoms of altitude sickness. The skin and nails become blue due to a lack of oxygen. We should descend immediately from the place. We should provide them with more liquids. In severe conditions, we should see a doctor for treatment. We should pack all necessary first aid items before going to high altitude.

G. Snow Bite

Snow bite is an injury caused by exposure to cold weather condition. The skin and underlying tissues get frozen due to cold temperature. Mountain climbers are at high risk. It is most common on the fingers, toes, nose, ears, cheeks and chin. The affected parts look pale. These organs become numb. Fluid-filled blisters may appear. We should immediately take the affected person to the safe and warm place. We should keep the affected fingers or feet in water from 20-30 minutes. We should provide them more liquids. We should give them warm blanket or quilt to keep their body warm. Depending on severity of the condition, we should take them to the nearest health institution for treatment.



Exercise

1. Choose the correct answer.

- a. Which one is the preventive measure for sexually transmitted infection?
 - i. balanced diet
 - ii. regular physical exercise
 - iii. use of medicine
 - iv. safe sexual intercourse
- b. Which of the followings is a non-communicable disease?
 - i. AIDS
 - ii. COVID
 - iii. Cancer
 - iv. Dengue
- c. Which one should we follow during a disaster?
 - i. We should run away as soon as possible.
 - ii. We should stay in a safe place patiently.
 - iii. We should not move from that place.
 - iv. We should neglect the disaster.
- d. Which one of the followings does not come under ABC Method?
 - i. airway
 - ii. breathing
 - iii. circulation
 - iv. bandage
- e. Which one of the followings is an accident?
 - i. foreign body in throat
 - ii. diabetes
 - iii. cancer
 - iv. high blood pressure

2. Answer the following questions.

- a. What is a sexually transmitted infection? Write any four preventive and controlling measures.
- b. How do you help your family members to be safe from cancer? Write your suggestions.

- c. Heart disease can be controlled through a healthy lifestyle. Justify this statement with suitable reasons.
- d. Mention the methods of first aid.
- e. What methods and ways do you apply to save her/his life, if your friend suffers from altitude sickness?
- f. List down the ways to be safe from minor accidents on the school playground.
- g. What can you do to save yourself and your family members during a fire? Present them point-wise.

Project Work

Perform a drama during Extra-curricular Week in the school in front of the parents and school family.

For this task, form three groups of your classmates. The first group will write a script about the preventive ways of preparation before the earthquake, the second group about the ways to be safe during the earthquake and the third group about the ways of recovery after the earthquake with the help of your teachers. Also, rehearse before the performance. And then perform on the stage.

Sexual and reproductive health

Study the picture and discuss about sexual and reproductive health and sexual and reproductive health services:

Safe Maternity Services

Maternity Services

Newborn Baby Care Services

Family Planning Services

Safe Abortion Services

Reproductive Health Services



Sexuality is the collective form of sexual value, recognition, expression and management. Reproductive health is the state in which every human being has physical, mental, emotional and social health in the structure of the reproductive system, reproductive function and reproductive process. Sex, sexuality, sexual roles, sexual rights, as well as gender identity, gender, reproduction, etc. are various dimensions of sexuality. As sexuality and reproduction are also human rights issues, people with different sexual and gender identities and orientations should be respected equally.

5.1. Sexual Curiosity in Adolescents and Patience

A. Read and discuss the conversation below with gestures.

Teacher : Dear children, we are going to discuss about sexual curiosity in adolescencetoday. Feel free to inquire. I will try my best to address your curiosity.

All the students: (all happily) Ok teacher.

Ratia : Teacher, why are teenagers so curious about their physical, mental and emotional changes?

Teacher : Yes, physical, mental and emotional development takes place very quickly during this period. Accordingly, the social roles they perform also change. They are often curious about emotional aspects and various aspects of sexuality. You're probably around the same age, aren't you? Well, tell me without being ashamed. What kind of feelings and curiosity arise more in the mind at this age?



Ramesh : There is a curiosity to know what, how and why regarding sexuality, teacher.

Budhi : Some are attracted to the opposite sex. They make peer groups according to their interest, gender identity and sexuality.

Teacher : It is normal to be attracted to the opposite sex in adolescence, that is, to be interested in one's own identity and to be sexually attracted. As sexual maturity is attained, sexuality develops rapidly during this period. Teenagers become victims of physical and mental violence because they are still afraid or hesitant to discuss the matters of sexuality.

Anuja : One feels that they also like to express that they are different from others, teacher.

Ravi : The boy's voice becomes hoarse. In addition, the size of the genitals increases, and nocturnal emission starts.

Shashi : Menstruation starts in girls. In addition, the size of the breast and vagina increases. Thighs start to become soli-

shaped and buttocks (buttocks) start to widen gradually.

Teacher : Yes, there are physical, mental and emotional developments and changes during adolescence. As a result, you may want to know experience and think about sexuality. However, in this situation, it is necessary to be disciplined and self-restrained as far as possible. It is necessary to manage your sexual curiosity and other curiosity properly with healthy behavior in a practical manner. One should keep oneself busy by reading books, participating in sports, doing manual labour, singing, playing music or involving in creative works. Also, one should get involved in social work, set the goal of one's life and dedicate oneself to it.

Nisha : There is also nightfall in adolescence, isn't there, teacher?

Teacher : Yes, spontaneous ejaculation in adolescence due to dreaming of engaging in sexual intercourse or activity or sexual excitement is called nightfall. It is not a problem but a natural physiological reaction. In this situation, masturbation is also a common thing. But at this age, if you are tempted or pressured by someone to make a sexual proposal, you should say 'no..., no, no...'.

You can take the help of a parent or a teacher or friend. In case of any incident, legal treatment should be taken. Adolescence is not the ideal age to get pregnant, as the reproductive organs are not fully developed at this age. If you get pregnant at this age, the life of both the mother and the child is at risk.

All students: Teacher, today we got a chance to understand and learn a lot about sexuality.

Teacher : It's Ok. I hope you will be aware and safe. Also, you will teach others to remain restrained and safe in this regard.

B. Read the given material about sexual curiosity, excitement and ways of dealing with it in adolescence and have a discussion.

Adolescent sexual curiosity

There is a curiosity to know about their sexual organs, physical and emotional development.

The desire for sex and sexuality increases.

One likes to express that he or she is different from others.

Nightfall starts.

They may also want to masturbate.

The ways to be restrained and solve the sexual curiosity of teenagers

We should talk openly with friends and parents.

We should participate in programmes related to sexual health.

If a sexual proposal comes under temptation or pressure, it should be rejected.

If someone tries to force you to have sexual intercourse, you should run away, scream or fight.

If someone touches you with bad intentions, you should immediately tell your teacher, parent, friend or elder.

Legal assistance should be taken with the help of teachers or parents in case of need.

Thoughts and feelings related to sexuality should not be suppressed.

If there is any problem, the necessary service should be taken from the nearest Adolescent Care and Service Centre.

Keep yourself busy with yoga, meditation, sports and creative work.

Activity 5.1

Compile questions about sexual curiosity in adolescence. Prepare the answers to the questions with the help of a teacher or a friend and exchange them with one another.

5.2 Intended and Unintended Pregnancy, and Safe Abortion

5.2.1 Intended and Unintended Pregnancy

Read the case below and answer the following questions:

A teenage girl became pregnant. At first, she did not tell anyone about this. Her best friend suspected that she might have some problem and asked, "Why didn't you talk to anyone yesterday?" She was shocked by her friend's words. At first she tried to deny that nothing had happened. Her friend was not satisfied with her answer. After repeated requests from her friend, she told everything. One day, when she was alone at home, a man forcibly assaulted her. Even when she tried to plead, he forcibly raped her. She was afraid and did not tell anyone about this. She has not had her period for two months. When she had not had menstruation in the first month, she waited for the next month. Even after the second month, she did not have periods, she was worried.

After hearing everything from the girl, the friend told her that there was a woman in the village who would do an abortion for unwanted pregnancy. The next day they met the woman and requested her to abort the pregnancy. The woman pressed the teenager's stomach and fed her illegal drugs. Then she bled a lot. Small lumps of flesh also fell along with the clots of blood. Her bleeding did not stop. After some time she fainted. Seeing this, the woman was also scared. The friend immediately called her mother and took the girl to the village health post. The doctor treated the girl free of cost and confidentially.

The girl expressed her concern to the doctor that she would not be able to get pregnant or become infertile after this incident. The doctor explained that infertility can be caused by unsafe abortion as well as other reasons. This problem can be caused not only by women but also by men. He also said that infertility can be cured if treated on time. The doctor also advised that if someone is infertile, they should start the treatment process after consulting a doctor. After resting for a few days, the girl felt better. After that, she started going to school regularly. With the help of the school and parents, the man who raped was punished according to the law.

Questions for discussion:

- (a) Why could the girl not tell anyone that she was raped?
- (b) Why was the method used by the woman to abort the teenage girl not correct?
- (c) Where should one go for safe abortion in case of unwanted pregnancy?
- (d) What did the doctor say about the causes and treatment of infertility?

Unintended Pregnancy	Intended Pregnancy
unwanted pregnancy means: <ul style="list-style-type: none">a. A pregnancy carried on without any discussion or consultation between the couple.b. Mistimed pregnancy despite the couple's desire to conceive.c. A pregnancy caused by rape or incest relations against the woman's will.d. Pregnancy before marriage or at a young age. Unwanted pregnancy affects the physical and mental health of women. It violates women's reproductive rights.	intended pregnancy means: <ul style="list-style-type: none">a. A pregnancy that lasted for a period desired by the couple.b. Pregnancy after the discussion/counseling between the couple and pregnancy after the proper use of necessary family planning.c. Pregnancy under counseling by an adult couple

5.2.2 Safe Abortion

Abortion performed in a recognized institution by a health worker as per law with the consent of a pregnant woman is called a safe abortion. Safe abortion is a reproductive right of women. As mentioned in the Safe Abortion Service Process, if the doctor advises that the life of the pregnant woman concerned will be in danger, the woman's health will deteriorate physically and mentally, and the child will be born with a disability, the pregnancy can be aborted. Similarly, the law has recognized the use of equipment for safe abortion of pregnancies up to 12 weeks. In addition, there is a provision

to abort a pregnancy up to 18 weeks in case of rape and incest. Abortion can only be done with the woman's consent, but if the woman is unconscious or under 16 years of age, parental consent is required.

The law prohibits abortion without the consent of the pregnant woman after identifying the gender and after 12 weeks. Abortion within 3 months is very safe. Therefore, delaying abortion brings high risk. Abortion is not a means of family planning but it is a forced choice. Provisions of various punishments have been made in the law to convey this message. It is considered a legal offense if someone aborts, except in cases where abortion is necessary. If an abortion is carried out with the intention of abortion or by doing something knowing that the pregnancy may be aborted. The person who aborts will be punished according to the law. There is the provision of up to one-year imprisonment in the case of pregnancy up to 12 weeks, three years imprisonment in the case of pregnancy up to 25 weeks, and imprisonment up to five years in the case of more than 25 weeks.

5.3. Family Planning Methods and there Classification

Observe the picture and discuss the given questions:



- Which family planning method is shown in the picture?
- Under what circumstances is temporary family planning done?
- For whom is the method of family planning in the second picture, women or men?

The embryo develops in the uterus after the union of the male sperm and the female ovum. That's the pregnancy. Thus, this process of fertil-

ization is called pregnancy. The act of preventing or stopping pregnancy is called contraception. Contraception can be done through natural and artificial methods. These methods prevent pregnancy by preventing the union of sperm and ovum or preventing the release of the ova. These services are provided free of charge in health institutions. There are two types of means and methods of contraception that can be used by both men and women, they are temporary and permanent.

5.3.1 Temporary Devices of Family Planning

Contraceptive devices used for a fixed period are called temporary devices. They are as follows:

A. Condoms

A condom is a contraceptive device that is applied to a man's penis before sexual intercourse. Since the ejaculated semen remains inside it, when a condom is used during sexual intercourse, sperm and egg cannot meet and pregnancy does not occur. It prevents conception as well as transmission of sexually transmitted diseases. Users should use a new condom every time during sexual intercourse. A condom that has been used once cannot be used again. Women also can use condoms just like men.



B. Contraceptive Pills

Tablets taken by women for birth control are called pills. This is a pill mixed with hormones. This pill should be taken regularly at the same time every day. If a couple wants to have a child, they can conceive within a few days after stopping its use.



C. Dipoprovera Injection

Dipoprovera is also known as the three-month injection. This needle is inserted into a woman's arm or buttock. If you want to prevent pregnancy, this injection should be administered within seven days of menstruation. A single injection prevents pregnancy for three months.



D. Implant

The implant is a hormonal method of contraception. In this method, a small, human-friendly rubber rod that looks like two sewing needles is inserted into the skin of the woman's arm by a trained health worker. It should be kept within the first seven days of menstruation. It acts as a contraceptive for five years. If a woman with an implant wants to become pregnant, it can be removed at any time with the help of a trained health worker.



E. Copper T/IUCD



Copper T is a T-shaped contraceptive device made of plastic. It is wrapped with fine copper wire. It is placed inside the woman's uterus by a trained health worker. It prevents pregnancy for 12 years. It deactivates the sperms that come with the man's semen during intercourse and prevent conception. A woman who wants to prevent pregnancy should have copper T placed inside her uterus within 12 days of her period.

F. Emergency Contraceptive Pill (ECP)

If you have sex without any other means or method of contraception, or if a condom breaks or if you have unsafe sexual intercourse, you can prevent pregnancy by using emergency contraceptive pills. This pill should be taken within 120 hours of intercourse. The sooner you take the ECP, the better it will work. It should not be used as a means of regular family planning.



Activity 5.2

Complete the table below with a description of the temporary means of contraception and present it to the class.

S.N.	Name of contraceptive device	Time to use	How to use	Working period
1.	Depoprovera	Within seven days of menstruation	Worn on a woman's arm or buttocks	three months
2.				
3.				

5.3.2. Permanent Methods of Family Planning.

A permanent method of contraception is a method used to prevent pregnancy in the future. This method is also called sterilization. Permanent methods of contraception are as follows:

A. Vasectomy

Vasectomy is a method of permanent male sterilization. During a vasectomy, the vas deferens is cut and tied through a small hole in a man's scrotum. Due to this, the sperm cannot come out and the ovum does not get fertilized and the pregnancy does not occur.



B. Minilap

Minilap is a method of permanent female sterilization. In this method, the fallopian tube of the woman is cut and tied. By doing this, the ovum is not allowed to come out and go to the uterus so the sperm cannot get the ovum and prevent pregnancy. A woman should complete a minilap within 45 days of delivery or within seven days of menstruation.



5.3.3. Natural Method of Family Planning

Contraception can also be done through natural methods, but natural methods are not so reliable. This includes the breastfeeding method, vaginal ejaculation method, safe period intercourse schedule, temperature measurement method, etc.

5.4. Menstrual Cycle

Menstruation is the natural bleeding from a woman's vagina once a month. It is a regular biological process caused by hormones. The age at which menstruation begins for the first time, the interval between menstruation in each month and the time when menstruation stops may vary from woman to woman.



Most girls get their first period between the ages of 12 and 14. But some teenage girl can have menstruation sooner or later than this age. This is also considered normal. If the period is much later than the normal age, you should consult a doctor. Generally, in healthy women, menstruation repeats after 28 days. This process is called the menstrual cycle. This cycle continues regularly until conception. In the early years of menstruation, some people may have irregular menstrual cycles. There are three stages of the menstrual cycle.

Pre-ovulatory Phase

The pre-ovulation state is also known as the proliferative or estrogen phase. In this state, the egg/ovum matures due to the effect of follicle-stimulating hormone. Towards the middle of this phase, estrogen levels increase and this prepares for ovulation. Due to estrogen, the inner part of the uterus begins to thicken.

Ovulatory Phase

This phase begins after the egg/ovum is expelled from the ovary. After the ovum is released from the ovary, the corpus luteum releases

es a large amount of progesterone and estrogen hormones. The effect of these hormones creates a suitable environment for the reception of the fertilized egg/ovum in the inner layer of the uterus. If there is a pregnancy in this condition, nutrients are obtained from the uterus for the growth and development of the fetus.

Menstrual Bleeding Phase

If the egg/ovais not fertilized during ovulation, the amount of progesterone and estrogen starts to decrease. As a result, the amount of oxygen in the wall of the uterus is low and the blood vessels of the uterus begin to burst. In this way, bleeding occurs when the inner lining of the uterus ruptures and bleeds. This period usually lasts from three to six days.

5.5. Menstrual Hygiene Management

A. Read the case below and discuss.

Even before I got my period, my mother taught me a lot about menstruation. She also said that there was no need to be afraid during menstruation. We use sanitary pads available in the market during our period. Shealso taught me how to use such pads. I learned so much from the internet and TV. My mother taught me about changing the pad after it gets wet and throwing the used pad in a suitable place.

One day I had my period in school. There was no place to keep pads in the toilet. I flushed the pad down the toilet. After a few days, the toilet got blocked. After knowing this I was very scared. I thought the toilet was blocked because of the pad I had thrown away. Come on! I was worried about what I would do if someone found out about it. After that, while cleaning the toilet, many pads came out. Like me, other friends had been throwing pads in the toilet in the same way. From that day on, we never flushed a pad down the toilet. At present, our school has a provision of bins to dispose the used pads.

Questions for discussion

1. How should you manage the pads you use if you had period at school?

2. Why should we manage used pads during menstruation?

Clean clothes or pads should be used for menstrual hygiene and sanitation. After using it, it should be managed properly. If a cloth pad is used, it should be washed with soap and water, and dried in the sun. After this, it should be kept in a safe and clean place for next time use. The heat of the sun destroys the germs in the clothes. The fabric of homemade pads should be soft and made of cotton. Nylon and polyester cloth should not be used for making pads. Clothes worn during menstruation should also be washed and cleaned.

At present, sanitary pads have been arranged in schools. After using it, it should be wrapped in paper and thrown in a suitable place. During menstruation, the vagina should be washed regularly with clean water. A sufficient amount of nutritious food, soups, and fresh fruit juice should be taken. Management of menstrual hygiene is the arrangement of pads during menstruation, changing of pads from time to time, arrangement of water in the toilet and the adoption of necessary hygiene measures.

Activity 5.3

Read the reference below and discuss the cost of menstrual pads.

Today, the teacher taught profit and loss in the math class. I was calculating my monthly expenses. While calculating, I found that my monthly expense to buy pads was Rs. 150. In this way, my yearly expense would be Rs. 1,800. According to this calculation, 9,000 will be spent in five years. My mother and two sisters are also in my house. When I remembered the expenses on everyone's pad, I was surprised.

a. How much rupees did you spend on buying pads?

b. How can this money be saved?

Let's know

Nowadays, menstrual cups are also used that are made of silicone. It is used by inserting it into the vagina. This cup is attached to the vaginal wall below the uterus and blood is collected in this cup. It can be washed thoroughly and reused. It is also environment-friendly and economical.

B. Reusable Homemade Pad

We can use home-made pads or cloth pads available in the market during menstruation. These pads are eco-friendly, affordable, accessible and reusable. The sanitary pads are also available in the market. Plastic materials and chemicals may be used in those pads. If these pads are not properly managed, the environment gets polluted. Purchasing these pads costs money.

Activity: 5.4

Now, with the help of a teacher or an experienced person, we are going to prepare home-made pads. Collect the necessary materials and do the activity of making a pad of household cloth that can be reused.

Necessary materials: scale, thick paper that can be folded, pen, marker, scissors, sewing thread, cotton cloth (new/old), buttons

Method of Making Home-made Pads

1. Cut the paper so that it is 30 cm in length and 20 cm in width.
2. Fold the cut paper in such a way that it doubles lengthwise and again fold it in the middle so that it is equal in width. Place it on the table with the closed part on the right and the wide open part outside.
3. With the help of a scale, mark 5 cm from the inner part of the length to the outside and mark 10 cm from the same point towards the width. Cut the part beyond the line made in the middle of the width and throw it away and open the rest.
4. Take the pattern made in this way inside out, double it and put it on the folded cloth and mark it with a pen. Cut the marked part with scissors and sew with thread to join the two parts.
5. Cut 4 cm lengthwise so that it falls between the length and width and make the shell of the pad smooth. Align the corners with the tip of the scissors.



6. To make the fabric smooth, leave a little corner to sew and make the fabric smooth from there.
7. After making it accurate, join the other fabric lengthwise to make a pocket. After sewing it, make the pad flat and put a stitch on the side.
8. Now, the shell of the pad is prepared. As the pad is stitched from side to side, it is attached to the panty and the pad does not move anywhere. Now, take the cloth you use, sew it squarely and fold it so that it is long, put it in the pocket of the pad shell and stick it to the panty with a stitch.

The pad should be washed well with soapy water. It should be dried in the sun and then it can be used again.

Exercise:

1. Put a tick (✓) on the correct answer:

- a. What is nightfall?

i. being scared in a dream	ii. crying in a dream
iii. ejaculation in dreams	iv. walking in sleep
- b. Legally, for how long can an abortion be performed?

i. 12 weeks	ii. 28 weeks
iii. 27 weeks	iv. 20 weeks
- c. Which of the following contraceptives also prevents the transmission of sexually infectious diseases like AIDS?

i. Copper T	ii. Companion Needle
iii. Implant	iv. Condom
- d. Where should the cloth pad used during menstruation be dried?

i. in the sun	ii. in a damp place
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- iii. in a dark room iv. in a secret place
- e. In which one of the following stages does the ovum release?
 - i. proliferative phase ii. bleeding phase
 - iii. ovulatory phase iv. estrogen phase

2. Complete the following sentences by using the correct words in the blanks.

- a. According to the World Health Organization, it is considered an abortion if the pregnancy is lost within weeks.
- b. Minilap and are permanent methods of contraception.
- c. Sperm can survive for hours after reaching the uterus.
- d. The use of emergency contraceptive pills should be taken within hours of sexual intercourse.
- e. Household pads should be washed with and dried in the sun.

3. Write short answers to the following questions.

- a. 'Sexual curiosity in adolescence can be managed in a controlled manner.' Justify this statement with examples.
- b. Under what conditions can a safe abortion be performed? Write in four points.
- c. Write a short note on:
 - (i) Condom (ii) Copper-T (iii) Minilap
- d. Write any four advantages of using domestic pads.
- e. Introduce the menstrual cycle and briefly describe its stages.

Project Work

Conduct a survey on abortion cases in your community. Talk with them about the reasons for the abortion, if possible. Prepare a short report and present it in the class.

Physical Exercise and Drill

The physical activities done to keep the parts of the body strong and fit are known as physical training (PT). Drills are a type of group activity. Different tasks of drills are practised as per the commands given by the team leader. Drills are done for physical balance and discipline.

6.1 Physical Exercise

Observe the picture below and discuss in the group.



- Is physical exercise like the one in the picture conducted in your school?
- Have you participated in such an activity? What are the benefits of such activities?

The above picture shows the physical exercise performed by the students. Such activities are done in groups in accordance with the count. We must pay attention to the different aspects like age, physical condition, time for doing physical exercise, types of physical exercise, materials needed for physical exercise, balanced diet, training, etc.

A. Exercise of Neck

Have you ever practised moving your head around and turning it? If you have done it, it is the exercise of the neck. Regular exercise makes the neck strong and flexible, making it easy to turn the head. For this, please practise the activities of PT given in 6.1 and 6.2 below.



a. The Initial Position

Be at a stand-at-ease position keeping the hands on the armpits for the exercise of the neck.







b. Position of the Body during Exercise

1. On count 1, turn your head to the left and try to touch the shoulder with the ear.
2. On count 2, keep the head straight.
3. On count 3, turn your head to the right and try to touch the right shoulder with the ear.
4. On count 4, keep the head straight.
5. On count 5, try to touch the chest with the chin.
6. On count 6, keep the head straight.
7. On count 7, look up to the sky raising the chin up.
8. Finally, on count 8, keep the head straight.
9. From count 9 to 16, repeat the activities from count 1 to 8.

This exercise can be done again up to count 16, turning the head left, keeping it straight, turning it to the right, keeping straight, bowing forward, keeping straight, bowing backward, and keeping it straight.

c. The Final Position

On completion of this exercise be ready for the next exercise by keeping both hands on the armpits.



PT Activity 6.2

a. The Initial Position

Be at a stand-at-ease position keeping the hands on the armpits for the exercise of the neck.





b. Position of the Body during Exercise

1. On count 1, lift the right hand above the head, and bend the body to the left so that the left ear touches the left shoulder.
2. On count 2, keep the head straight again.
3. On count 3, do as in count 1 but to the right.
4. On count 4, keep the head straight again.
5. From count 5 to 8, repeat the same procedure as in count 1 to 4.
6. From count 9 to 16, repeat the same procedure from count 1 to 8.

c. The final position

On completion of this exercise, be ready for the next exercise.



B. Exercise of Chest, Trunk, Abdomen and Hand

Study the question below and discuss.

- a. What activities should be done to keep our chest, trunk, and abdomen strong and healthy?

The exercise of the chest, trunk, and abdomen is helpful for lifting the load, hanging, jumping, and doing other physical activities. The exercise of these organs is necessary even in demonstrating the skills while playing the games. Let's practise the activities given in 6.3.

PT Activity 6.3

a. The Initial Position

Be at a stand-at-ease position keeping the hands on the armpits for the exercise of the neck.

b. Position of the Body during Exercise





1. On counts 1, 2, and 3 bend your body and head forward and try to touch the ground with the fingers of both hands on each count.
2. Keep the body straight on count 4 only.
3. On counts 5, 6, and 7, put the hands on the back of the waist and bend the body backward on each count.
4. Keep the body straight on count 8 only.
5. On counts 9 to 16, repeat the activities from counts 1 to 8.

c. The Final Position

On completion of this exercise, be in the attention position keeping the hands on the armpits.



C. Exercise of Hands, Arms, and Shoulders

Do you want to make your hands, arms, and shoulders strong and flexible? How is that possible? Think for a while. For this, we need the regular exercise of these organs. Now, practise the PT activities in 6.4.

PT Activity 6.4

a. The Initial Position

Be in an attention position keeping both hands on the armpits.







b. The Position of the Body during Exercise

1. On count 1, keep the left leg front and stand on the toes supported by the toes of the right leg. Similarly, keep both hands straight in front at the level of the shoulder. Keep the thumbs up.
2. On count 2, keep both hands up keeping the legs in the same position.
3. On count 3, stretch both hands sideways at the level of the shoulders. The palms should face the ground.

4. On count 4, keep the stretched hands on the armpits and be in the attention position.
5. In the same way, from count 5 to 8, put the right leg in the front and repeat the above activities.
6. On count from 9 to 16, repeat the activities from count 1 to 8.

c. The Final Position

On completion of this exercise, be in the attention position keeping the hands on the armpits.

6.2 Drill

Observe the picture below and discuss.

- a. Is physical exercise like the one in the picture conducted in your school?
- b. Why do you think these activities are conducted in the school?



In the picture above, the students are performing drills in a group. There are three stages in the drills: information, command, and action. These activities are practised time and again as per the commands of the team leader. We can give rhythm to drills through different means like count, drums, madal, whistle and music.

6.2.1 Practice of Drills

For the practice of drills, organize the class with the help of the teacher. All of you need to stay together in rows and columns. The team leaders should stand in the middle of the teams at an equal distance from the left and right so that everyone can see and hear them. While doing roll calling, count 1, 2, 3, 4 from right to left. During the roll call, the team leaders will observe and examine the attention position. Let's practise the drills below turn by turn.

Drill Activity 6.1: Attention

Each activity in drill practice begins from the attention position. To practise this command, straighten your body, puff your chest out, and hang your hands at your sides with loose fists. Similarly, bring your heels together at 30-45 degree angle keeping your toes apart.



Drill Activity 6.2: Stand at Ease

Stand at ease comes along with the attention position while practicing drills. While following this command, keep your head and the chest in the attention position as shown in the picture. Move your arms behind your back, place your right hand on your left hand, and interlock your thumbs. At the same time, lift your left foot up to the level of your thigh and place it one foot apart on the floor.



Drill Activity 6.3: Right Turn

The right turn is a command given during drills to turn the team to the right. When you get the command, you will be in the attention position. As in the given picture, as soon as you get the command, you will lift the left foot on counts of 1 and 2 with the help of the right heel and the left toes, and then you will come to the attention position again adjusting the left foot with the right one.



Drill Activity 6.4: Left Turn

The left turn is a command given to the team to turn them left during the drill. As in the given picture, in this command, you will lift the right foot on counts of 1 and 2 with the help of the left heel and the right toes, and then you will come to the attention position again adjusting the right foot with the left one.

Drill Activity 6.5: Mark Time

On the command of mark time, lift the left foot quickly and place it on the ground. Then, on the count of 1 raise the right foot, and on the count of 2, place it on the ground. Continue raising your left and right feet and placing them on the ground in the same way until you get the command 'halt'.



Drill Activity 6.6: Halt

The command of halt is given during mark time. This command is given to stop the drill of mark time. On this command, the team stops marking with the check on the right foot, the count of 1 on the left foot, and the count of 2 on the right foot.

Drill Activity 6.7

Write the related commands in the blanks below as no. 1.

S. N.	Given command	Related commands
1.	Attention	Stand at ease
2.	Right turn
3.	Mark time
4.	Eyes right

Drill Activity 6.8

Look at the pictures and identify the commands. Write the names of the commands below the pictures as captions.



Drill Activity 6.9

Practise drills together with friends turn by turn in the rhythm of the drum or the madal.

S.N.	Drill commands	Beats/Rhythm of the drum or madal
1.	Attention, stand at ease	Beat once for a single rhythm
2.	Right turn, left turn, about turn, raise the flag	Beat three times; two for quick rhythm and one for the slow rhythm
3.	Mark time, forward march	Beat continuously in the rhythm of (1, 2, 3), (1, 2, 3), (1, 2, 3, 4, 5, 6, 7)
4.	Halt	Beat in the rhythm of (1 – 2), (1 – 2), and finally (1, 2, 3)
5.	Eyes right, eyes straight	Beat in the rhythm of the movement of the feet.

Drill Activity 6.10: Disperse and Dismiss



Do the practice of disperse and dismiss activities considering the following things as soon as you get this command.

1. Move a step ahead and greet as soon as you get the command to disperse. Then, turn right, move three steps ahead, and go back to your own place.
2. As soon as you get the command to dismiss, move a step and salute and then turn right, move three steps ahead, and end the drills.

Things to Consider during Disperse and Dismiss

Dismiss and disperse are similar activities in drills. But, the activities done on these commands are a little different. The command of disperse is given to give the rest to the participants for a short time. The participants have to rejoin the drills after a certain time on this command. The command of dismiss is given when the drill performance is over which indicates that the task has been completed. This command is given when the participants do not need to perform drills for a long period of time.

Drill Activity 6.11

Stand in three columns. Have a roll call from the right side of the groups. The teacher or the team leader stands at the place so that all the participants can see her or him. The teacher or the team leader gives the command of disperse first and then the command of dismiss. Let's practise this activity.

Drill Activity 6.12

Practise drills in groups during Morning Prayer in school or during the class of physical education in the rhythm of the madal, drum, or music. Observe it and discuss it in groups.

- Is the command given by the team leader clear?
- Does the drill performance match with the rhythm of the music or the drum?
- Is the practice of attention, stand at ease, and mark time enough?
- How many times did you practise, disperse and dismiss in groups?

Exercise

1. Answer the following questions.
 - a. Make a list of the different commands of drills.
 - b. How does the practice of drill develop collective emotion and cooperation?
 - c. Write any two differences between physical exercise and drills?
 - d. Write any two ways of doing the exercise of shoulders.
 - e. Write any two benefits of the exercise of the abdomen.
 - f. Write any two ways of doing the exercise of the abdomen and trunk.
 - g. For which game is the exercise of hands and arms suitable? Why?
 - h. Write any two differences between disperse and dismiss?
 - i. "The habit of doing regular exercise helps us to be healthy." Clarify this statement.
 - j. Explain the importance of drills and PT.

Athletics and Adventurous Activities

Observe the pictures and discuss the questions given below.



- Are the activities like walking, running, and throwing as shown in the pictures conducted in your school?
- What are such activities called? In which of these activities do you take part?

7.1 Athletics

Athletics is the combination of different activities like walking, running, throwing and jumping. This is also called track and field. Athletics can be taken as the basic sports activity for any game. Walking and running in athletics are track events and, throwing and jumping are field events. In this unit, we will practise the skills of 3,000 metres race, a relay race with batons, long jump, high jump and shotput.

7.1.1 3,000 m Race

A 3,000 m race is a long race. It belongs to the track event. This is also known as the 3K run. To complete a 3,000 m race, the athletes need to run 7.5 laps around a 400 m track or 15 laps around a 200

m track. We should do light jogging before we start running. Jogging works as a warm-up activity. Warm-up activities can prevent players from injuries. Speed, energy and patience are quite necessary for a long race. Only continuous training and practice can give success in a long race. The practice of short and middle-distance running is necessary for the preparation of a long race.

Activity 7.1

Do light jogging to make the body warm to be ready for the long race. Then do the exercises below as shown in the pictures one by one. Do each exercise for 30 seconds or do them turn by turn as per the counts.



Activity 7.2

Measure the distance covered in one lap around the playground available in your school. Convert the distance you need to cover into laps. Provide the number cards according to the laps to be made to cover the distance. For a long race practising, run around the ground. After completing each lap, give the number card to your teacher. Take a rest if you find it difficult to complete the laps.

7.1.2 Relay Race



A relay race is a group event. As per the rule of the game, there are 4 x 100 and 4 x 400; 400 m and 1600m relay races are in practice. There are four players in each group. The players pass the baton while running in the track. The players begin the match from crouch, and pass the baton to the next player after covering a certain distance.



In a relay race, a baton can be passed by looking or without looking backward as in the pictures. When a baton is passed by looking, it is called the visual pass technique. When the baton is passed without looking, it is a non-visual pass technique. Batons can also be passed in two different ways; down-sweep and up-sweep. In a down-sweep pass, the baton should be given in a way that can be patted on the hand of the friend. In an up-sweep pass, the baton should be passed from down to up in such a way that the friend can catch it.

Activity 7.3

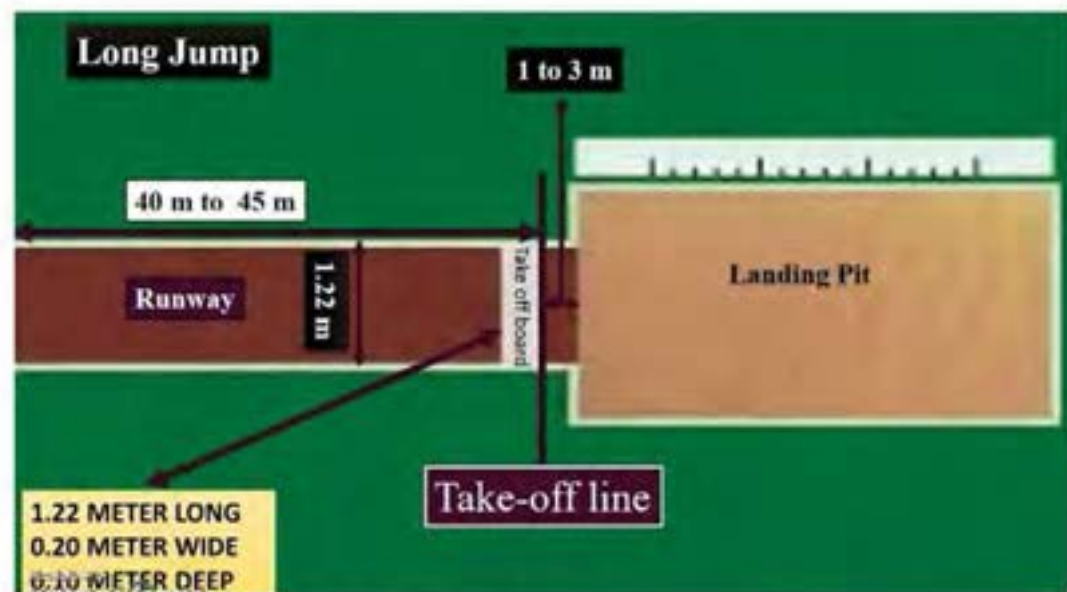
Choose a partner for a baton pass relay race. Make a baton exchange zone of 10-10 meters on your lane so that it becomes 20 metres. The friend who is going to take the pass stands 10 m away and the one who is giving the pass begins to run 4-5 metres ahead from the exchange zone. When you reach the exchange zone, practise the passing the baton 10-10 times. Practise both visual and non-visual techniques. Similarly, practise down-sweep and up-sweep baton passes among friends taking turns.

Simple Rules of Relay Race

1. In a 4 x 100 m relay race, the players need to run in their own lane.
2. In a 4 x 400 m relay race, only the first players need to be in their own lanes.
3. The player running after passing the baton can enter any lane after reaching the break line. Similarly, the third and the fourth players can run on any lane after taking the baton pass.
4. The player must carry the baton in hand and must pass it into the friend's hand.
5. If the baton falls from the hand of the player during the race, the same player must pick it up.
6. During the race a player should not pull or push the other players.
7. Baton should be passed within the specified zone.

7.1.3 Long Jump

Prepare a sand pit with the help of the teacher to practise the long jump. Use fine sand to fill the pit to make it safe to avoid accidents.



Practise jumping from a height of 2-3 feet for the practice of the flight. Similarly, practise landing on the surface of the sand. Practise broad jump in the beginning. Now, practise different steps of long jump turn by turn.

Step 1: Approach

Draw a beginning and the ending line for the practice of approach. Now, run from the beginning line to the ending line at a high speed as much as you can.

Step 2: Take Off

Take-off begins at the last stage of the approach. Practise take-off as shown in the picture after running on the track. Similarly, take 10-15 long steps raising the knees high on the track.



Step 3: Flight

Take-off helps to lift the body in the air and to fly to a long distance with the help of the speed of the race. In this situation, push the stomach forward with the help of the hands and the legs.

Step 4: Landing

In this step, land the body pushed forward on the sandpit as far as possible from the take-off board with the help of the heels.

For the practise of landing in the long jump, practise the broad jump on the sand pit. Similarly, to strengthen the skill of landing, raise both legs and try to touch the abdomen. Do this exercise for 5-10 times. Similarly, take 5-7 long steps either using the right or the left leg.

Activity 7.4

Observe the picture given below and discuss it. Practise the skills of the long jump turn by turn working together with your friends.



Simple Rules of Long Jump

1. If there are eight or more than eight players, each player gets the chance of three jumps. If there are fewer than eight players, each player gets the chance of six jumps.
2. The players can practise the jumps until the competition begins but cannot practise during it.
3. The track for running should be at least 40 m long.
4. To take the measurement of the jump of each player, the distance from the take-off board to the landing is measured.
5. None of the gymnastics or turning the body in the air or twirling in the long jump are invalid.
6. The player must jump within a minute after entering the running track.
7. Among the successful jumps the best jumps of the players are declared first, second and so on.

7.1.4 High jump

You might have jumped as high as you could over a rope, wood or the fence after a run. Such activity is the high jump. Scissors Style, Western Roll, Eastern Roll, Straddle and Fosbury Flop are the types

of high jump. The landing technique is different in different high jumps. In Western Roll, the player should land using the same leg which is used during take-off whereas it is completely opposite in Belly Roll. Landing is done using the back of the body in Fosbury Flop. Now manage a mat or a foam for the high jump practice. Now practise different steps of straddle high jump as shown in the picture.



Step 1: Approach

The high jump begins with the approach run. The approach is done either from the right or the left of the clearance bar. Take 5 to 7 steps in a half circle for the approach run. Practise the approach run which is done before take-off.

Step 2: Take off

We leave the ground during take-off. After the approach run, practise a quick take-off with a leg. Those who use the right hand more, take off from the left leg and those who use the left hand more take off from the right hand. Repeat the activity of leaving the ground at least five or six times as practice.

Step 3: Clearance

Clearance is the activity done after take-off. In this step, we try to jump over the clearing bar with the whole body along with the legs. During the high jump, after crossing the head, body and legs over the crossing bar, try to turn the body down toward the ground. At that time, try to raise your hip a little so that the buttock does not touch the bar.

Step 4: Landing

After clearing the bar, the activity of landing is done in the fourth step. In this method, landing is done on the shoulders. After crossing the

bar, twist the body still more and turn on the mat from the buttock. Make the landing area safe for this.

Caution: If there is no high jump mat, use scissors-style jump instead of this method.

Simple Rules of High Jump

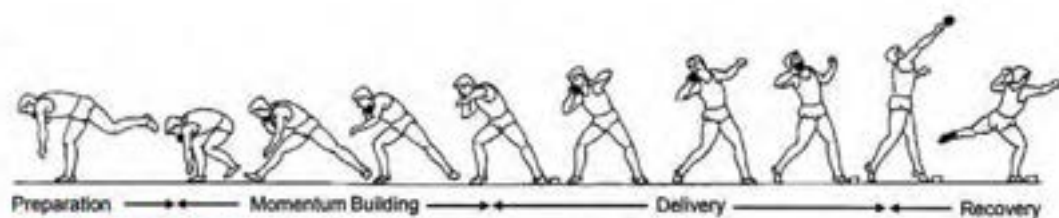
1. The high jumper should be informed about the height to be jumped beforehand.
2. The height to be jumped should be increased by 2cm after each round.
3. You cannot use both legs during take-off.
4. The distance between the two poles should be 4 metres.
5. The crossbar should not fall while crossing the crossbar.

7.1.5 Shotput

In the picture below an iron ball of a certain weight is tried to be thrown as far as possible within the prescribed area from a certain circle. What activity of athletics is it?



Now practise holding, stance, shifting or gliding, throwing and reverse stepwise for shotput.



Step 1: Holding

The skill of holding the shot correctly is grip. Hold the ball placing it on the joints of the palm where all five fingers are knotted using the index finger, the thumb and the middle finger. Practise gripping the available ball turn by turn. While practising this, use both hands turn by turn. Along with grip, keep the shot above the shoulder as shown in the picture, then, leave the shot at the centre of the circle and give the turn to the other.



Step 2: Stance

When you learn to hold the ball with a good grip, carry it above the shoulder near the year. Make a mental plan to throw as far as you can. Put the load of the body on the leg that is in the opposite direction you throw the shot.

Step 3: Gliding

After you are physically ready carrying the shot, you need to be able to shift or glide the body in the way you are going to throw the shot. During glide, shift the leg at once from the centre to the board toward the direction you are going to throw the ball.

Step 4: Throwing and Reverse

The next step after gliding is throwing and reverse. In this step throw the shot as far as you can from your hand and rotate the body in a circle toward the centre.



Activity 7.5

All the students stand in the queue and practise throwing the shot (a light object) toward the target. While deciding the target, practise in two steps; the distance and the height as shown in the picture.

7.2 Adventurous Activities

Adventurous activities are recreational activities that are different from normal activities. We need high morale to do such activities. So, it is quite necessary to follow security protocols while doing such activities. Paragliding, rafting on the rivers, mountain climbing and bungee jumping are popular adventurous activities in Nepal. Nepal is famous in the world for adventurous tourism. Adventurous activities can be done in the air, on snow or on the land. Here we will discuss bungee jumping, paragliding and parachute done in the air, and ice climbing and skating done on the snow.

A. Bungee Jumping

Bungee jumping is a fun activity done in the air calculating the height as shown in the picture. This game helps to reduce the fear in a person. It develops the quality of being fearless. This game is not for all, it is only for courageous people. We cannot enjoy bungee jumping until we are physically and mentally ready for this.

The bungee jumping over Bhotekoshi River in Nepal is one of the longest jumps in the world. It is the third highest bungee jumping in Asia with a height of total 160 metres. Besides this, bungee jumping is also available in Pokhara and Kusma in Nepal. The bungee jumping

in Kusma is at the highest altitude in Nepal and the second highest in the world.

Before playing such games, we need to be careful about injuries in the legs, and trunk, fractures of bones and, the diseases like epilepsy. As blood pressure highly increases during this game,

people with high blood pressure and heart problems and pregnant women should not do bungee jumping.



B. Paragliding



Paragliding is an interesting game played in the air. The pilots should carry parachutes weighing about 15 kg and take off by running on the slope area at a high speed. We need the tools like a wing, ropes, harness, helmet, sunglass, etc. for this. Interested people weighing less than 100 kg are suitable for paragliding. We must compulsorily wear a helmet during paragliding. We should also be careful whether the wind is in speed or not and whether there are trees or other obstructions or not in the flying area. We must manage a first aid box

as far as possible. Pregnant women and people with asthma, heart disease, and epilepsy should not do this activity.

C. Parachuting

The act of flying in the sky or diving as shown in the picture is parachuting. A parachute is a tool that is used to reduce the speed of the fall of an object from a height. In the beginning, parachuting was done using a hot air balloon. In the modern age, it is done jumping from an aeroplane. We can turn the parachute in the direction we want only after the parachute we are carrying opens. We need to be more careful to avoid injuries while landing during parachuting.



D. Ice Skating and Ice Climbing

The activity done on the snow or ice using wearing ice skates on feet is ice skating. Similarly, if we climb up the ice formation, it is ice climbing. Ice skating and ice climbing are taken as interesting adventurous activities not only in Nepal but in the world. These games can be played indoors or outdoors but they will be more interesting if we can play on ice or snow in a natural place.

As these are adventurous games, we need to follow health protocols while playing these games. For example, the use of ice-skating shoes and helmets is compulsory. There is a high probability of sports tourism with the help of such adventurous activities in Nepal as



the eight highest peaks in the world lie in Nepal. Therefore, we can develop and promote sports tourism in Nepal by means of adventurous games.

Exercise

1. Answer the following questions.

- a. What is athletics?
- b. Introduce the ways of passing the baton in brief.
- c. Differentiate between the high jump and the long jump.
- d. Write the things that are to be considered while throwing the shotput.
- e. What is the difference between paragliding and parachuting? Write.
- f. Mention any two things we need to pay attention to before doing bungee jumping.
- g. There is a high probability of adventurous games and sports tourism in Nepal. Justify this statement with your logics.

Project Work

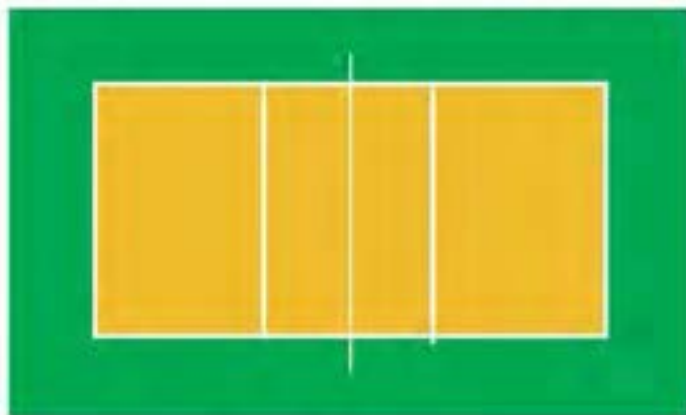
Visit the place near your school where there is a possibility of adventurous games, observe the place, and share the report with the class. Or, watch a video related to adventurous games and interact with your friends.

Introduction to Games

A game is an activity that is done with or without any material for the development of physical and mental health, recreation and utilization of the leisure time. There are many types of games based on their nature and purpose. Some games are played outdoors while some are played indoors. Some games are played in groups whereas some others are played based on individual competition. Similarly, some games are played in local levels, within the specific geography in varieties of rules. On the other hand, some games are played in uniformed rules and criteria with global identity. Volleyball, Basketball, Football, Cricket, etc. are the examples of some major games played in the global level.

8.1 Volleyball

Volleyball is a sport played between two teams of six players each, competing against each other. Currently, this sport is a national game of Nepal. This sport can be played in any region of Nepal, including the hills, plains, and the mountains. If played obeying the rules of the game and using the basic skills, this game can be a lot of fun. In this game, we also practise other skills such as spiking and blocking.



A. Digging

The technique of digging is generally carried out while lifting a weight, like the one shown in the picture. For its practice, the knees should be slightly bent and kept apart and the torso should be in a bent forward position. Keep the wrists of the bent arms together, extend the arm straight while hitting the ball. In this action, the hand should be lifted when the ball falls between the two wrists.

Activity 8.1



To practice good digging, all players should stay in a circular formation as shown in the picture. The coach can give players the opportunity to dig from inside the circle. While practicing this way, students should remain in a position of readiness to hit the ball with both legs split open. Before hitting the ball, practise connecting the wrists by placing the left hand above the right hand. Digging can also be practised in a semi-circular formation.

Activity 8.2

Stand in two rows facing each other as in the picture. Take turns digging and passing.



Activity 8.3

Two student-athletes should stand facing each other at a distance of 2.5 to 3 metres. Pass the ball to the teammate facing you below her/his waist for digging. When the ball is received by the teammate, move to the back of the row to get ready to make your own digging. In this way, practise digging in a row with each other.

B. Volleying

The skill of volleying is used when we need to play a ball that comes above our waist. For volleying, bow the body and keep the knees slightly back and forth. Spread your fingers above the forehead as shown in the picture. Then raise the ball with the help of the fingers. Keep your teammates in rows and circular or semi-circular positions while practising it.



Activity 8.4

Take turns for ten times each to pass the ball overhand within a two-meter semi-circle.

Activity 8.5

Pass the ball on a flat wall from a distance of at least one meter. Besides that, practise overhand passing in a pair in a distance of about 4-5 meters.

C. Service

Volleyball game starts with service. The act of delivering the ball from the service area to the opponent's court, crossing over the net with one handed-shot is called service. Among different methods of service we will practise underhand and overhead ones.

a. Underhand Service

As shown in the picture, the act of pushing the ball to the opponent's court with open one-handed shot from under the waist is called underhand service.



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b. Overhand service

As in the picture, overhand service is the act of pushing the ball past the net with one handed balanced shot with the palm by throwing the ball straight up in the air just above the head and bringing it straight from the back.

Activity 8.6

Have four players line up on one side of the volleyball court and four other players stand in the next consecutive row of the court. The players of one side should kneel with one leg and attempt to pick the ball up with the hand on the same side as knelt leg. After each player has tried this for four or five times, do an overhand service with the other hand kneeling down the other leg. This type of ball falls into a hanging bounces back to the player. In the next round, practise overhand service in the kneeling position. Practise in such a way that the players on the other side of the net can catch the ball and pass it back from under the net. This way, everyone practise in turns.

D. Spiking

The skill of any side of players jumping over the net and pushing the ball into the opponent's court is called spiking.

Activity 8.7

Divide the players into two equal groups. Then make them stand on the right and left end lines of the court and take turns hitting the ball hard with one hand. Practice hitting the court and passing it over the net to the opponent's court.

Activity 8.8

Practise spiking, in turn, by hitting the ball on fixed the net. After your turn, go back again and wait your turn.

Activity 8.9

For better spiking, have a friend toss the ball setting over the net and decide the turn of spikers. Then practise hitting the ball hard by combining steps like approach step, takeoff, spike and landing

E. Blocking

As in the picture, the skill of stopping the spiked ball coming directly over the net to your court is called blocking. This skill is considered an important defensive skill. Blocking is done with one hand, two hands or by two or three players at the same time.



Activity 8.10

Lower the height of the net on the volleyball court at first. Line up three to six players on either side of the net in face-to-face pairs and stay ready. When the sports coach or teacher signals for blocking by whistling or clapping, try to jump and touch or shake hands at the same time. Perform this exercise three to six times, one player at a time. Then one person of the group should toss the ball and hit the ball hard so that it passes over the net. Three people on the other side should try to block by jumping with two spread hands as shown in the picture. To practice this action, rehearse hitting and blocking the ball alternately from the end line of the court.

Activity 8.10

Watch a volleyball match. Note down the rules of the game and present them.

Simple Rule of Volleyball Game

1. Volleyball court should be 18 x 9 m and rectangular in size.
2. A 3 meter parallel offensive line should be placed on both sides of the court from the center line.
3. The height of the net should be 2.43 meters for men and 2.24 meters for women.
4. A team has a maximum of 12 players.
5. A team needs one libero player who wears a different colored jersey.

6. Out of the 6 players, three should be in the attacking zone and three should be in the back zone.
7. The game should be started with a service from behind the end line of the court every time.
8. In the case of a service change rotation should be made in clockwise direction each time.
9. No player should touch the net while the game is going on.
10. The team that scores 25 points first with a difference of at least two points wins the set.
11. If there is a tie between 24-24, the game continues until there is a difference of 2 points.
12. The interval between all sets is three minutes.

Exercise

1 Answer these questions:

- a. What is the length and width of the volleyball court? Write in metres.
- b. Name any two basic skills used in volleyball.
- c. When is the underhand service used in volleyball?
- d. Mention any four rules of volleyball.
- e. Draw a neat picture of a volleyball court including the net.

8.2 Football

Look at the given picture. How is the ball played in such a playground? How is win or loss decided? Have a discussion with a friend.



Football is a popular game. It is also called soccer. This game is popular in all countries and among all ages. This game starts from the kickoff. Football is played with an attempt to score a goal within the specified time. After each goal, the ball is restarted from the center with the kickoff.

A football game usually lasts for 90 minutes with a 15-minute interval in the middle. If the winner is not decided in the specified time, and goes to knockout the match is played for 15-15 minutes of additional time, and if the game still ends in a tie, both teams are given the opportunity of five penalties each and the winner is decided with a tiebreaker. If there is a tie in the league competition, both teams are awarded one point each. Three points are awarded to the winner and zero points to the loser.

8.2.1 Basic Skills of Football

Now, everyone take turns to practice the basic skills of football.

A. Kicking

The art of hitting a football with the foot like in the picture is called kicking. Kicking skills are used for passing and scoring. Now, practise the skills of rolling kick and high kick.



Activity 8.12

Rolling kick is the art of hitting the ball so that it rolls on the ground. To throw the ball, sit face to face in a distance of two or three meters. Keep the ball fixed in front of you and roll the ball alternately hitting the center of the ball. Use the variety of kicking style each time you hit the ball.

Activity 8.13

High-kick is the art of hitting the ball so that it flies off the ground. To throw the ball, sit face to face in a distance of nine to ten meters. Hold the ball in front of you in a fixed position and hit the bottom of the ball alternately and pass it to your partner so that the ball flies off the ground. Alternate the inside-kick and front-kick every time you throw the ball.

B. Dribbling

As shown in the picture, dribbling is the act of moving forward with the ball under your control. Dribbling can be done in two ways: short dribbling and long dribbling. In short dribbling, the ball is pushed forward by passing a short distance while hitting the ball from the inside of the leg. In long dribbling, the ball is passed forward over a long distance.



Activity 8.14

Stand in two lines facing each other at the distance of 10 to 15 metres. The players of one line start short dribbling from one side and reach the end of the line. Then pass the ball to the players of next line and wait the ball. In the same way, the players of next line pass back the ball when they reach the end of the line. Practise it turn by turn. Use the right and left leg while dribbling. At the end use both legs together.

C. Trapping

As demonstrated in the picture, trapping is the act of controlling the ball coming towards you with a part of the body. This task can be done with feet, knees, thighs, stomach, head and chest. The ball is trapped with the appropriate part based on the direction, height and speed of the ball.



Activity 8.15

As shown in the given picture, have one person pass the ball with one hand and everyone take turns to trap the ball. While trying trapping, first, practise sole trapping, and then gradually thigh trapping and chest trapping as well.



D. Heading

As shown in the picture, heading is a basic skill in football that is made by hitting a football by the head. This skill is used for controlling and passing the ball as well as scoring.

Activity 8.16

As shown in the figure below, take turns throwing the ball over the head of a partner who is practising heading and passing the ball in the other direction through heading. Do this at least five times and give your friend a turn. While heading, the head should be turned to the direction in which the ball is to be sent.





E. Goal Keeping

The defensive or attacking skill adopted by the player to prevent the ball from hitting the goal post is called goal keeping. The person who performs this task is called the goalkeeper. Blocking the ball, hitting it, catching it, etc. are the skills of goal keeping.



Activity 8.17

Practise goal keeping by one person taking turns kicking the ball and the other catching the ball as it rolls on the ground. Similarly, practise goal keeping, which involves catching the ball as it flies towards the waist.

F. Throw In

Throw In is used to bring the ball back to the field when it becomes dead by going beyond the sideline during the game. While throwing the ball in, the ball should be kept above the head without raising the legs.



Activity 8.18

To practise throw in, form groups of six to seven players and have everyone take turns throwing the ball to a friend in a semi-circle. Hold the ball with both hands and throw it over your partner's head without raising your knees.

G. Passing

As in the picture, sending the ball by kicking it or heading it to your friend's catch is passing. For passing, you should be able to guess long distance or short distance and kicking with proper power. Now everyone take turns practicing this skill.



Simple Rules of Football Game

1. To start the game, a lucky draw is done in front of the team leaders of both sides.
2. The side that wins the lucky draw is given to choose between goalpost side or kick off.
3. After each goal, the ball must be played from the centre.
4. The game is started by kicking the ball sent from the goal line by the opposition into the goal area.
5. The player is not allowed to use any kind of shock, splash or lethal object while playing the game. Doing so is considered a foul.
6. The duration of the game is 90 minutes and 15 minutes is allowed for the interval.

7. The ball inside the playing field cannot be touched with hands except by the goalkeeper.
8. Players cannot raise their legs while doing the throw in.
9. The goalkeeper cannot catch the ball outside the penalty area.

Exercise

1. Answer the following questions.
 - a. What is the number of players in a football team?
 - b. When is the trapping skill used in a football game?
 - c. Why is offensive skill used in football games?
 - d. What is dribbling in football?
 - e. Write the points to be considered while doing goal keeping.
 - f. Describe the main skills used in the game of football.
 - g. Explain with examples why football is a popular sport.

8.3 Basketball

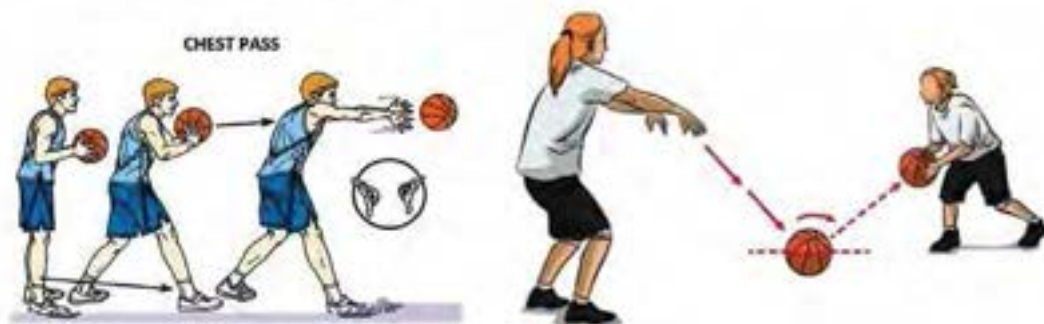
Basketball is a game played in groups. Agility, speed and endurance are required to play this game. This game engages children's hand and eye coordination, and provides entertainment. Now we will practise the skills of basketball game along with their information.

A. Ball Catching and Passing

There are different ways of passing in basketball. Now practice chest pass, push pass, bounce pass and overhead pass among those skills.

a. Chest Pass

As in the picture, practise the throwing the ball from the chest towards the teammates by extending the arms out and using both hands. This type of passing the ball is known as chest pass. This technique is useful to pass the ball to teammate where there is not an opponent between them. Let's practise it in turn.



b. Bounce Pass

In bounce pass, the ball is hit on the ground and passed to a friend as in the picture. This pass is also used a lot in basketball games. Especially tall players use the bounce pass while passing balls to their teammates. Now everyone take turns to practice the bounce pass.

c. Overhead Pass

An overhead pass is used to pass the ball to a teammate above the opponent player. Moreover, this pass is used to quickly deliver the ball from one end to the other end. In this type of pass, the ball is passed from a height so that the opponent player cannot touch it.

Now, hold the ball with both hands and practise throwing the ball away from the head.



Line up in a distance of three to four meters and get in a ready position with one group in one part of the field and another group in the other part. Practise catching the ball thrown by a player of one group with one hand and return the ball to the other side passing it overhead to the other side.

B. Dribbling

Dribbling is the art of keeping the ball under control. Line up five chairs or cones on a basketball court about one metre apart. Keep the players aligned on both sides of the chair and stay ready. One person signals for dribbling the ball from one direction. Then cross all the five cones or obstacles as fast as possible while keeping the ball under control. Then go to the back of the row and stand and everyone take turns practicing this skill.



C. Shooting

The art of throwing the basketball towards the basket to score points is called shooting. There is a chance of the more shooting, the more baskets and points to win. Here we will practise shooting layup shot and jump shot skills.

a. Layup Shot

Going close to the basket and taking two steps to reach it and dropping the ball directly is called a layup shot. Layup shot is the most used skill to score a basket in basketball. Now everyone take turns hitting the ball against the wall as shown in the picture.



b. Jump Shot

A popular shot used to shoot when the opponent is ahead of you is the jump shot. Now, to hit this type of shot, hold the ball with one hand and try to push it towards the ring with the other hand. Release the ball only when the jump reaches the best point in this shot. Control the body with the help of ankle gloves while hitting the ground.



Activity 8.19

Practice of Counting Miss-shootings

To practice counting miss-shooting, mark the target area by drawing a line on a wall. Choose the first shooting turn from coin toss. If you win the turn, try shooting. The rest of the players also try to shoot. Make a rule that if someone succeeds in shooting, the other opponent should also succeed in shooting the target. Otherwise, record one out

of three missed shootings for caution. In this way, gradually remove the player who misses three times in a row and finally make the remaining one the winner.

Simple Rules of Basketball

1. The length of the playing court should be 28 metres and the width should be 15 metres.
2. The center of the court should be 1.8 metres.
3. A 40-minute game should be played in four innings of 10 minutes each.
4. The game begins by throwing the ball in the air in the center.
5. There are only five players in a team.
6. Attacking player is not allowed to stay inside the restricted area with the ball for more than three seconds.
7. A player cannot hold the ball for more than five seconds.
8. Do not dribble again after stopping the dribbled ball.
9. In the course of the game, the opponent player should not be touched in a way that is unnecessary and harmful.

Exercise

1. Answer these questions.
 - a. Write about bounce pass in basketball.
 - b. Why is dribbling done in a basketball game?
 - c. What is ball shooting?
 - d. How is winner or loser decided in basketball game?
 - f. How long does the basketball game last?
 - g. What is the number of players in a basketball game?

8.4 Cricket

Discuss these questions with a friend.

- Have you ever played cricket with your friends?
- What materials and how many players are required to play this game?
- What are the basic skills of this game?
- How is win or loss decided in this game?

Cricket game started from England. Before the Second World War, this game was played a lot in British colonies. The International Cricket Council was established in 1989 to conduct this game systematically. There is a trend of Test Match, One Day and Twenty-Twenty in cricket competition. The game of cricket is played by bowling and batting in groups of 11-11 players. There are three stumps on both sides of the pitch and two balls on top of them. Two batsmen bat from the batting side. When one of the players is out, another person is substituted to continue it. An innings is over if 10 out of 11 players are out or the allotted overs are completed. Then the batting of the other group starts. Whichever team scores the most runs, wins the match.

8.4.1 Basic Skills of Cricket

Now, we will discuss and practise the basic skills of cricket; batting, bowling, fielding, catching, wicket keeping etc.

A. Batting

The essential skills for batting are grip, stance, back lift, stroke, drive, hook-shot, cut-shot etc.

Activity 8.20

Practise the skills below with the help of a teacher or an experienced player.

a. Grip

In cricket, the skill of holding the bat or the ball is called grip. It depends on the way you hold the bat while batting. Grip the ball and the bat as shown in the figure and practice in turn.



b. Stance

Stance is also a skill of batsmen. Batsmen make their stance based on the bowler.

c. Back Lift

While lifting the back, the batsman's eyes should always be towards the bowler and his shoulders and elbows should also be facing him.

d. Stroke

The skill of hitting the ball is stroke. Sometimes the stroke is played defensively and sometimes it is played aggressively.



e. Drive

Aggressive batting is always exciting for the audience. A forward drive is taking a step forward and covering a greater distance outside the popping crease.

f. Hook Shot

In order to hit a hook shot in cricket, a player needs skill. The player has many challenges in this kind of stroke. A hook shot is played when the bowler's short pitched ball bounces away from the batsman. While hitting the hook shot, the batsman should also be able to swing the bat quickly in the air along with turning his arms and legs fast.

g. Cut Shot

A stroke cut shot is played by the batsman on a short pitched ball by the bowler.

B. Bowling

Bowling is the action of a bowler throwing the ball towards the stumps on a wicket pitch. Bowling skill is used to prevent the batsmen from scoring too many runs. Now, Practise some bowling skills.



a. Run-up

Bowling requires a bowler to run at a certain pace. In order to run up well, the speed of the run must be managed.

b. Delivery

While bowling, the bowlers have to balance their body weight as well as the landing of the leg and the look on the batsmen during the delivery. After this, the bowlers should follow through and move straight ahead in the direction of the pitch.



Activity 8.21

Make two lines of players at a distance of about 10 meters. Aim at a mark from one side and take turns for bowling. After bowling, go to the end of the other line and wait for your turn. In the same way, go to the bowler's side on the turn of the wicket-keeper's side. After everyone's turn, repeat the bowling practice.

C. Fielding and Catching

Fielding is the act of stopping the ball thrown by the batsmen. Fielding stops the number of runs of the opposition team by trying to block the boundary. On the other hand, the act of catching the ball thrown by the batsman without touching the ground is catching. It plays an important role in winning and losing the game. A good cricketer should practise to become a good fielder.



Activity 8.22

Make a line in the ground and wait for your turn. Practice catching the ball thrown in your turn. Ask a friend to throw the ball. While

throwing the ball for the first time, the thrower should say right or left loudly, and throw the ball so that it rolls. When you throw the ball for the second time, throw it so that it reaches the waist. While throwing the ball for the third time, throw it so that it lands on the fielder's head. Remember that the player who will be a fielder should be able to catch the ball by running, diving and catching the ball from the place where he is standing, just like in goalkeeping. The bowler should take care of the timing of the fielder's movements.

D. Wicket Keeping

It is generally said that a wicket keeper is born but cannot be made. A wicket keeper is a player who wears safe clothes and waits for the ball like a batsman. In this practice, the entire weight of the body is transferred to both legs and the eyes are kept close to the wicket while looking at the ball. Practise this skill with the help of a teacher or team leader.



Simple Rules of Cricket Game

1. The team that wins the toss is allowed to choose either batting or fielding.
2. The playing pitch is 20.12 meters long and 3.04 meters wide.
3. There are 11 players in a team.
4. There are six balls in an over.
5. A catch out is given if the ball batted by the batsmen is caught by the fielder before it touches the ground.
6. Batsmen can score runs by running into the popping crease when the ball is still active.

7. When the ball hit by the batsmen crosses the boundary by running, it gets a four (4 runs); and a six (6 runs) if it flies across the boundary.
8. If the bowlers throw the ball against the rules, it is a no ball.
9. The batsman is out if the batting ball or the bat drops the balls on the stumps.
10. The pitch cannot be changed without the consent of the captain of both teams and the approval of the umpire.

Exercise

1. Answer the following questions.
 - (a) How many players does a team have in the cricket match?
 - (b) In which situation does an innings end?
 - (c) Mention the situations in which batsmen are out.
 - (d) Mention the importance of bowling.
 - (e) What is the length of a cricket pitch?
 - (f) Why is the attraction of young people increasing towards the cricket?

8.5 Kabaddi

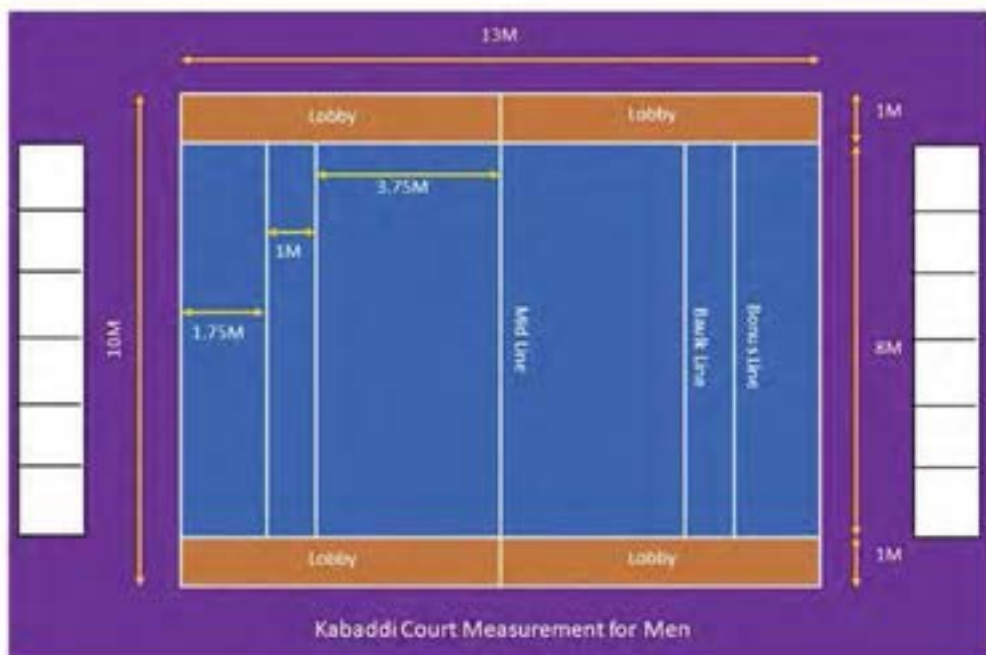
- Have you ever practised, demonstrated or observed a Kabaddi game?
- If yes, what skills and rules have you used there?



Kabaddi is an old and popular game in Asia. In the past, this game was played with different names in different places, and there was no fixed rule. Currently, the standard rules have been made at the international level for this game. This game is mainly played in three categories based on the weight: male, female and junior.

Standard Size of Kabaddi Court

	For males	For females and juniors	For Sub-juniors
Length	13m.	12 m.	11
Breadth	10m.	8m.	8m.
Mid line	10m.	8m.	8m.
Baulklinemidline	3.75m.	3 m.	3m.
Bonusline	1m.	1m.	1m.
Lobby	1 m.	1 m.	1 m.



Strategy and Basic Skills of Kabaddi Game

To play the game of Kabaddi, players need to learn basic skills. There are two types of skills in this game; offensive and defensive.

Defensive Strategy and Skill

As shown in the picture, the art of avoiding the opponent is a defensive skill of Kabaddi. In order to avoid the raiders, you have to hold different parts of the raiders' body or create a situation where they cannot run away. For example: holding the ankle, holding the heel, holding the waist, holding the wrist, etc. Similarly, chain trapping and blocking are the defensive skills.



Activity 8.23

Practise chain trapping as shown in the picture. Play by making three chains of pairs or two chains of three players.

Offensive Strategy and Skill

In Kabaddi game, raiding is mostly done by using offensive skills. A raider should do cant while raiding. Cant is the action of the raider making a noise on the opponent's court by saying kabaddi kabaddi while raiding. Hand touch, foot touch, back kick, mule kick, side kick, chain break i.e. jumping, etc. are the offensive skills.

Activity 8.24

Form two groups and take turns playing the role of raider and anti-raider as shown in the picture.



Simple Rules of Kabaddi Game

1. The team which has its turn has to do raiding within five seconds.
2. The duration of raid is only 30 seconds.
3. Only one person should raid at a time.
4. The raider is automatically out if the raider returns to his field without clearing the baulkline or without touching any other player.
5. Baulkline should be at a distance of 3.75 or 3 metres from the centre line of the court and a parallel to it.

6. There should be a bonus line one metre away from the end line.
7. The playing time consists of two halves of 20 minutes for men and two halves of 15 minutes for women.
8. If a player is dismissed by a raider, one point is awarded for each dismissal.
9. Raiding should be done only on your own time.
10. The team that gets more points in the specified time is declared the winner.
11. If both teams have equal points, they are given a chance to make five raids each, and at this time only the baulkline is recognized as the bonus line.
12. If there is a tie in the extra game, a golden raid is given. At this point, the first raiding chance is given to the team which has started raiding at the beginning. In this condition, if the raid is successful, the same team wins, if it is caught, the raid team is considered defeated.

Exercise

1. Write the answers to the following questions.
 - a. Write a name of any one of the various names of Kabaddi.
 - b. How many players are there in a Kabaddi team?
 - c. How long is men's Kabaddi game played for?
 - d. What is cant in Kabaddi?
 - e. Write any four rules of Kabaddi game.
 - f. Mention the method of catching in Kabaddi.

8.6 Kho Kho

- Have you and a friend ever practised, demonstrated or observed the game of “Kho Kho” before?
- What skills and rules did you use to play this game?



The word 'Kho' means 'go and seek'. The name of this game is 'Kho-Kho' because it is played between two sides. This game is important to develop physical fitness, strength, flexibility, agility and quick decision-making qualities in a person. There should be 12 players in each group with extra players for 'Kho Kho' game. There must be nine people in a group. Eight passive chasers, including one chaser, take turns chasing the runner. During the game, the runners must leave the playing field as soon as they are ready. One group plays as chasers in one turn and runners in another. At the end, when the scores of both innings are added, the side with the higher score wins.

A. Method of Sitting in a Box

The method of sitting with both knees and both hands parallel is called parallel toe method and the method of sitting with one leg forward and the other knee behind is called bullet toe method.

Activity 8.25



Get the players to sit inside each sitting box on the center line of the Kho Kho ground using the parallel glove method or the bullet toe method. Make eight lines on one side about one meter near the line. The teacher or a player should give Kho and blow the whistle to get them to sit. Practise sitting inside the seating box with the front row players using the parallel glove method and the bullet toe method. All the players who have got Kho should leave the field through the respective cross lane and wait for their turn again. After everyone's turn, practise sitting on the other side in the same way.

B. Method of Giving Kho

The two methods of giving Kho in Kho Kho are cross step method and proximal method. In cross step method, Kho is given by tapping one of teammates who is sitting facing the other direction. In the proximal method, it is done with the help of the same knee and the same hand, regardless of whether it goes to the right or the left.

There are also different methods of giving 'Kho' such as simple Kho, late Kho, fake Kho, early Kho. Simple Kho is giving Kho with one hand or both hands. Giving 'Kho' by keeping one foot in the lane is a late kick even when the body is in front. Similarly, giving 'Kho' before reaching the lane with one hand from the front is an early Kho. The method of pretending of giving 'Kho' is called fake Kho.

Activity 8.26

Divide the players into two groups; active chasers and passive chasers. A group sits in a passive chaser seating box. Active chasers should sit towards the pole of the field getting ready give 'Kho'. As soon as you get the signal from the whistle, start giving 'Kho' to the nearest

passive chaser through various ways. In the same manner, keep giving 'Kho'. The final 'Kho' receiver should go round the pole and stand at the back of the line.

C. Running Skill

The skill of running away from the active chasers by avoiding them while they come to touch is called running skill. In this kind of skill, runners can run anywhere in the field but cannot obstruct or push the passive chasers. Running skill is a kind of defensive skill.

Activity 8.27

Ask the players to run towards one of the poles on the Kho Kho field. Take turns running straight towards the other pole on the signal of the whistle and keep a record of the time until you cross the post line towards your own pole.

Activity 8.28

Place eight passive chasers on the Kho Kho field. Have the rest of the players run in a zigzag from pole to pole. Encourage them to run in the shortest possible time and record each participant's running time.

Simple Rules of Kho Kho Game

1. Before the start of the game, the referee should divide the players into the runner or chaser through a lucky draw.
2. Nine players from both groups must be present on the playing field.
3. Out of nine players, active chaser should be in the pole and the remaining eight should be passive chasers.
4. The captain of the runner group should divide them into three groups with three players and enter the field in turn.
5. If the active chaser commits a foul, he should go in the direction opposite to the direction in which he is going to chase.
6. Each group should have three additional players.
7. The chaser team scores 1 point each time they touch the runner.

Exercise

1. Answer the following questions.

- (a) What is the number of players in a team of Kho Kho?
- (b) What is the role of the active chaser in the Kho Kho game?
- (c) In what condition is fake Kho given?
- (d) Briefly describe the skills of the game of Kho Kho?
- (e) Write what cross lane means.
- (f) Write the method of giving Kho in Kho Kho game.
- (g.) Mention the points to observe while using escape skills in Kho Kho game.

Project Work

Watch the tournament of Kho Kho game. Note down the rules of the game and collect pictures from various books and newspapers showing the skills of the Kho Kho game. Prepare a file and present the report.

Yoga

Look at the pictures and discuss the given questions.

- Which activity is the girl doing in the picture?
- Do you also participate in such activities?
- Why are these activities carried out?



The word yoga is derived from Sanskrit word yuj. It means to join or become one. The body and mind can be kept healthy and the thoughts pure by practising the yamas, niyamas, asanas, pranayama, dhyana etc. of yoga. Yoga connects the body and the mind. This is self-discipline. Practising yoga helps raise our level of consciousness.

Yoga is also a medical method. It is the science and art of organizing life for healthy people. Maharishi Patanjali brought yoga to common people. The eight limbs of yoga are yama, niyama, asana, pranayama, pratyahara, dharana, dhyana and samadhi.

9.1 Introduction to Folds of Yoga

In Maharishi Patanjali's Yoga Sutras, the eight paths of yoga are described, which are also called the limbs of yoga. A brief introduction

to dhyana marga (meditation path) and dharana marga (perception path) is given here.

A. Dhyana Path

In this method, the process of controlling the mind through meditation is adopted. As a result, attention tends to focus on a higher level. Dhyana path is the way to go to samadhi by perceiving a form by seeing a picture in the mind.

B. Dharana Path

In this method, high development and control of the senses is carried out under the guidance of a guru or teacher. Dharana is the way to concentrate on a single subject. The idea is to make the consciousness in such a way that the picture comes to your memory again and again in the mind.

9.2 Practice of Sukshma Kriya

Sukshma kriya is short and simple yaga activity. It can be practised easily in any place.

Do sukshma kriya exercises for the head and face as given below:

1. Massage the head with both hands.
2. Gently pull the eyelids of both eyes five to six times with the help of the index finger and the thumb.
3. Roll your eyes clockwise and anticlockwise five to six times.
4. Close the eyes tightly 10-12 times and open them wide.
5. Pull and release the earlobe for 10-15 seconds.
6. Pinch the cheek, pull it and release with the help of thumb and index finger.
7. In the same way, hold the skin of the jaw under the cheek and repeat it until the chin.
8. Open your mouth wide and caress your cheek with your hand.

9. Rotate the head clockwise and anticlockwise five to six times.
10. Finally, shake both hands and knees for two minutes.

9.3 Bhramani and Vastrika Pranayama

Pranayama is the act of moving, spreading and controlling the movement of breath. Prana refers to various types of life force including breath, while aayam refers to the operation and control of those life forces.

A. Bhramani Pranayama

Activity 9.1

1. Sit comfortably in Padmasana or Sidhasana for meditation yoga as shown in the picture.
2. Straighten your back while sitting.
3. Inhale and exhale keeping the body in a relaxed position.
4. Do not clench your teeth with your mouth closed.
5. Close your eyes by putting your index fingers in both ears. If necessary, you can cover your eyes with your fingers.
6. Take a deep breath, inflate your lungs and make a deep Bhun.....sound from your throat for ten to 15 seconds to vibrate in your brain.
7. In this way, repeat it five times with the sound of Bhun....., like the sound of a bee.



Practising Bhramari Pranayama helps to reduce stress, anxiety, anger and depression. It also helps to reduce blood pressure and remove throat diseases.

B. Vastrika Pranayama

Activity 9.2

1. Sit in Bajrasana or Sukhasana as in the picture.
2. Straighten your back while sitting.
3. Bend the arms of both hands and bring the fists towards the shoulders.
4. Straighten your arms and take a deep breath.
5. Drop the abdomen and chest down quickly and exhale abruptly.
6. Repeat this action for about 20 times.
7. Put your hands on your knees and breathe in a relaxed state.



Bhastrika Pranayama is a yoga practice of inhaling and exhaling without moving the head and only moving the stomach and chest. Its practice provides easy supply of oxygen to the body and increases lung capacity and helps remove contaminants from the body. It also prevents respiratory diseases.

9.4 Practice of Setubandasana, Makarasana and Halasana

A. Setubandasana

1. As in the picture, first sleep on a mat.
2. Lift your hip with the help of the leg while exhaling.
3. With the help of the head and shoulders, lift the other part of the body in the air while leaning against the mat.
4. Slowly lift the head with the help of your hands.
5. Stay in this position for five to 10 seconds.



The practice of Setubandasana strengthens the back of the knees, chest and neck. Besides, it relieves stress and relaxes the whole body. It also helps to improve our digestive power.

B. Makarasana

Activity 9.4

1. In the first step, sit in Bajrasana, then lie down with your stomach on the floor.
2. After that, slowly bring the right hand forward and place it on the left shoulder. Similarly, bring the left hand forward and place it on the right shoulder. Do it in a way that is easy to rest your chin while crossing the other hand with one hand. Similarly, spread the toes of both feet outwards for about a foot. Close your eyes while doing sadhana.



3. In the second step, relax the whole body and feel the deep relaxation.
4. In the third step, lock both hands behind the head and try to lift the head by supporting the neck and try to balance the body on the support of the stomach by lifting both knees.
5. In the fourth step, keep the head and knees on the ground and come back to the previous position with the help of both elbows, place the chin between the palms and give support. At rest, bend both knees and slowly move them up and down.

Makarasan helps to remove stomach disorders. It also relieves high blood pressure, stress and sleeplessness.

C. Halasana

Activity 9.5

Practise Halasana as shown in the pictures.



1. In the first step, lie on your back. Place both hands side by side with palms facing down. Slowly lift both knees off the ground while inhaling. Support the hips with both hands and straighten the knees 90 degrees from the ground.

2. In the second step, try to touch the ground with the palms while moving the ankle further behind the head. Do this exercise for a short time as it will be difficult at first. When you get used to it, try increasing the time.
3. In the third step, while bringing the ankles to the ground, follow the exact reverse of the previous one and come to the starting position.

Yogasana in which the body is shaped like a plow is called Halasana. Do not push the body while doing Halasana. Sarvangasana can also be practised before practicing this asana. Halasana helps to reduce fatigue and stress, strengthens neck, shoulder and spine muscles. It improves the flexibility of the ankle. Its practice also helps people suffering from diseases like diabetes, heart disease and constipation.

Exercise

1. Answer the following questions.
 - a. What is yoga?
 - b. Write any two importance of Yoga.
 - c. Why is sukshmasana yoga necessary?
 - d. Point out the positive effects of the practice of Setubandasana.
 - e. For what purpose is Makrasana done?
 - f. Write any two advantages of Halasana.
 - g. Present the two stages of Makrasana in two sentences.
 - h. 'Yoga is the basis of a healthy life.' Explain with examples.

Introduction to Arts, Line art and Colour

Unit

10

10.1 Introduction to art

Fine art is creating something that expresses a person emotions through images or sounds. "Art" refers to creative things that individuals make, such as paintings, sculptures, music, performing art, and architecture. Art is a way to show emotions, thoughts, and feelings through different art forms. Various methods are utilized to convey emotions. If a person uses terms such as stories, poems, and essays to share their sentiments, it is considered literature. When someone expresses their feelings by singing, playing music, dancing, or acting, it is known as performing art. When someone creates shapes, forms, and dimensions and adds colors to a surface to express their imagination, it is known as either sculpture or painting. Architecture is also considered as fine art.



Wall painting of Altamira and Lucas Cave

During the Stone Age, people thought that art was magic and the people who made it were magicians. The Egyptians, on the other hand, used art to make their lives after death glorious. The

Romans utilized art to display their cultural magnificence and love for their country. In Asia, people thought that art was a way to share religious ideas and show religious stories in a symbolic way. Therefore, meaning, purpose and function of art can change based on when, where, and why it is made.



Art from ancient Greece



Greek art

The significance of art changes depending on when and where it was made. Art can show the victory over enemies, as well as good actions and sometimes reflect the power and grandeur of a nation. Art does not belong to a specific period only but it can



inspire people of many generations, thus, being timeless. The temples, sculptures, and beautiful carvings that we see are some of the fine examples of art.

Nepali Art

The earliest examples of Nepali art date back to the Licchavi period (430-879 CE). We have many examples of Nepali art in paintings, sculptures, and architecture. However, we have only sculptures available from ancient times. Art historians believe there was sculpture practice in Nepal before the Common Era (BCE).

Though we have dated artifacts from the Licchavi period, we still need evidence of the art of Kirats, who ruled Nepal before the Licchavis. Hence, we have no artifacts to claim as Kiratis to date. The terracotta and stone figurines excavated from Lumbini and Tilaurakot are some examples of ancient Nepali sculptures. These figurines are of Yaksha, the sun god, mother goddess, and Nandi.



Statue of Birupaksha



God Bishnu in Budhanilkantha

Some scholars believe that the statue of Virupakshya from PashupatiAryaghat is the oldest sculpture and claim it to be of the Kirat period.

We have many examples of sculptures of the Licchavi period.

A few of the remarkable examples of the Licchavi sculptures are Vishnuvikrant from Lazimpat and Pashupati Tilaganga, Jalsayan Vishnu from Budhanilkantha,

Varaha of Dhumbarahi, Vishworupa of Pashupati,



Peacock window

Garuda Narayan of Changunarayan and Mayadevi of Deopatan.



Metal sculpture is the most celebrated in Nepali art. Metal sculpture reached its excellence during the 13th century. During this period, Araniko led his troupe to Tibet and China to build various temples and create artwork.

During the Malla period, Nepali metal sculptures flourished as well. Wood carving also has special importance in Nepali sculpture.

The most beautiful and unique aspect of the architecture of the Malla period is the exquisite woodcarving. There are vivid examples of delicate Nepali woodcarvings richly decorated on the walls, doors, windows, temples, viharas, palaces, houses, etc.

Even though there are high-quality sculptures of the Licchavi period, there is no evidence of paintings of that time, maybe due to the fragile materials used.

Manuscripts reflect the most important roles in terms of painting. Manuscripts were written and copied in Buddhist viharas of the Kathmandu Valley. Palm leaves were used to paint manuscripts. Usually, they were twelve to eighteen inches long and three or four inches wide. The religious texts were



Manuscript art

written on both sides of the sheet. Various mages and patterns were painted on the middle or side of each sheet. Then each sheet was perforated to tie the bundle with a strong string. Two wooden planks of the same size of sheets served as the cover of a manuscript. The cover of a manuscript was painted with meticulous details. One of Nepal's oldest and most important palm-leaf manuscripts of Nepal is *Astasahasrika Prajnaparamita* (The Perfection of Wisdom), which is now housed in the Cambridge Museum in the United Kingdom. *Patachitra*, or painting on cloth, is special in Nepali art. This form of painting is called *Paubha*. Nepali *Paubhas* have distinct features owing to their subjects and styles.



*Portrait of Junga Bahadur Rana
(Bhajuman Chitrakar)*

With the rise of Jung Bahadur Rana, Nepali art embraced Western influences. Artists such as Rajman Singh Chitrakar (b. 1789

CE), Bhajuman Chitrakar (b. 1817 CE), Purnaman Chitrakar (b. 1864-1939 CE), Bakhatman Chitrakar (b. 1871-1943 CE), Dhingaman Chitrakar (b. 1876-1950 CE) were the pioneers who introduced western style paintings in Nepali art. Chandra Man Singh Maskey and Tej Bahadur Chitrakar were the first artists to receive academic training.



They graduated in fine arts from the Government College of Arts and Crafts in Calcutta in 1928 CE. In 1945 CE, Keshav Duwadi returned to Nepal after graduating from Sir J. J. School of Arts in Bombay.

The first art school was established in 1934 CE under the leadership of Chatur Ratna Udas. This art school was later named Juddha Kala Pathshala in 1938 CE. Jeev Ratna Shakya, Kalidas Shrestha, Karna Narsingh Rana, and Chandra Bahadur Manandhar were the first batch of artists to graduate from this school. Then there was a gradual increment of artists trained in Nepal and abroad. With the arrival of Lain Singh Bangdel in 1961 CE, he brought modern art to Nepal after his education in Paris. The artists who studied in Nepal and abroad brought home various other Western art styles.

In addition to the artists who continue to practice traditional Nepali art, there is a large presence of artists who also practice modern and post-modern arts.

10.3 Fundamentals of Art

To complete a task, we must follow certain rules. Any practice that follows the rules ensures success. Creating artwork also requires following certain rules. These are called fundamentals of art. Composition, harmony, balance, rhythm, proportion, perspective, and foreshortening are some of these fundamentals. Understanding these fundamentals allows one to achieve effective and attractive works of art. Among these fundamentals, we shall study balance, proportion, and composition.

Balance

One of the fundamental principles in art is balance. The painting seems stable and gives a feeling of correctness. When there is an imbalance, it can make the viewer feel uncomfortable. Balance means how line, shape, color, form, and texture are related in the composition to create a visual balance by their visual weight. It means that one side does not appear to be weightier than the other. Artists need to depend on the visual weight of the elements in the composition to decide if a piece is balanced.

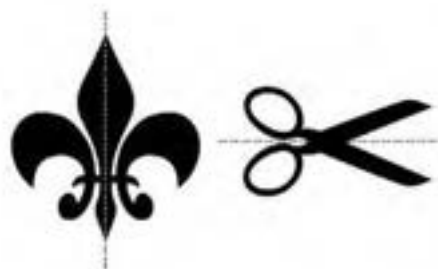
There are two types of balance in arts.

- Formal or symmetrical balance
- Informal or asymmetrical balance

a. Formal or symmetrical balance



Formal balance is when both sides of a composition have the



same elements in the same position, just like a mirror image or the two sides of a face. Formal balance is a technique commonly employed in traditional paintings and patterns. Architectural things like windows and doors also use formal balance.



Line art of Vitruvian Man by world famous artist
Leonardo da Vinci

b. Informal or asymmetrical balance



Informal balance means that a picture is balanced because of the difference between the different parts of the image. One way to balance a composition is by placing a big circle on one side and a small square on the other. Artists like to make artwork using informal balance because it gives them more freedom.

Proportion

Proportion is mostly concerned with how big one thing is compared to another. When making a realistic drawing or painting, it is important to pay attention to proportion. The final image will appear less real or distorted if the



Van Gogh, *The Starry Night*

sizes are wrong. On the other hand, artists have the option to utilize proportion to create an impression.

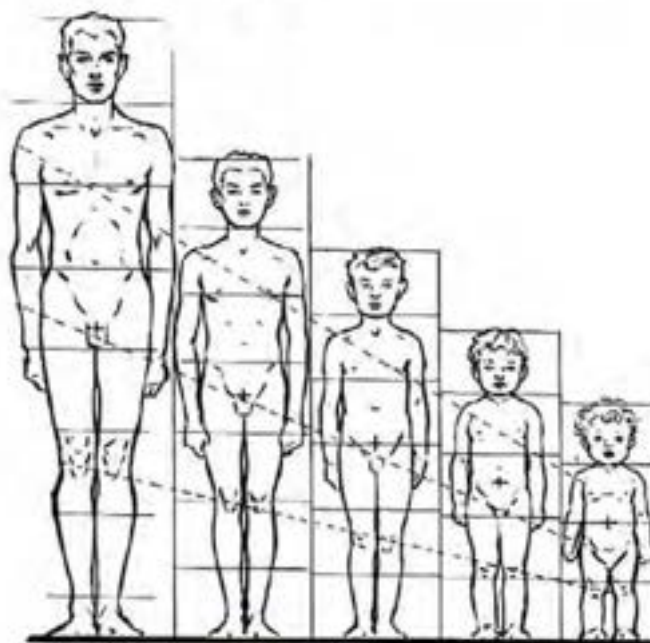
By changing the size of different parts, the artist can create various effects on the subject's appearance, such as making it appear powerful, weak, humorous, mysterious, and so on. We can make things look bigger or smaller to show what's important in the picture. An artist who creates caricatures changes the size of different parts of the subject's body to make a unique and exaggerated image.

Proportion is not about how big something is, and it's about how it compares to other things. In art, the size of an element is known as scale. An elephant and a human are not the same size, but they can be drawn to look the same size to show how far apart they are from each other.

Activities 10.1

Collect various materials around the house or school and keep them in one place. Observe the relationship between the sizes of those materials. After observing, draw one or more objects so that their proportion matches.

When drawing a picture of a person, it is believed that the total length of an adult figure is equal to 7.5 parts of the head. Similarly, the age and the ratio of children can be different. Below are sample ratios. Observe them:



Ratio of Adult and Child according to age

Composition

Composition in art means how the different parts of a picture are put together. This means the main subject of the artwork and how they are positioned to one another. How we express is important because it affects how people see and feel about our work. In case you are a musician, you must be aware that musical pieces can also be called "compositions". A song has a specific arrangement. Every musician plays "his or her part". The melody becomes disorganized when a musician performs at a wrong moment or plays the wrong notes. Every part should be placed well to create a quality song. Like a song, every artwork we make has a composition.

When we make art, we plan how it will look and then make it. It can become quite messy if we don't plan the elements such

as line, shape, form, color, and texture that we use in our art. Regarding art, composition refers to how the different elements are arranged within the picture space (or, in the case of a sculpture, within the three-dimensional space). How we place and organize things in our work can change how people engage. We shall examine the composition of paintings created by some of the most renowned artists in the world.



Diagonal Composition



Tringular Composition



Central Composition



Open Composition

10.4 Drawing one or more objects with drapery

Artists use cloth or drapery to provide attractive forms, express or gesture. It dramatizes light and shade, and adds force, rhythm and more colours. Drapery also provides interesting background for the subject.

Let's observe the following stages of drawing drapery:

1. Hang a cloth or handkerchief on the wall or any other surface. Draw contour or outline of the drapery.



2. Once you have drawn the contour, observe folding of the drapery and draw with soft lines.



3. Observe the light and shade on the drapery. Start shading your drawing. Lighter part will require softer shading while shadow part will need darker shading. You can use cross-

hatching technique for shading.



4. Continue from lighter part to the darker shade.
5. If you require highlights, you can erase the unnecessary shading.

Here are some examples of drapery drawings.



Still lifes with drapery

While drawing still lifes, drapery provides attractive background. Drapery can be arranged to add light and shadow in the composition. The drawing will look realistic and attractive if the effect of light and shadow is well observed. Observe still lifes done in watercolour and oil painting.



Activities 10.2

Collect chalk, duster, bricks, pebbles, apples, oranges, cups, glasses etc. Choose one or two of those items and place them on the table along with a cloth. The arranged objects can be viewed from different angles. Choose the best view and draw a still life.

10.5 Drawing the human figure

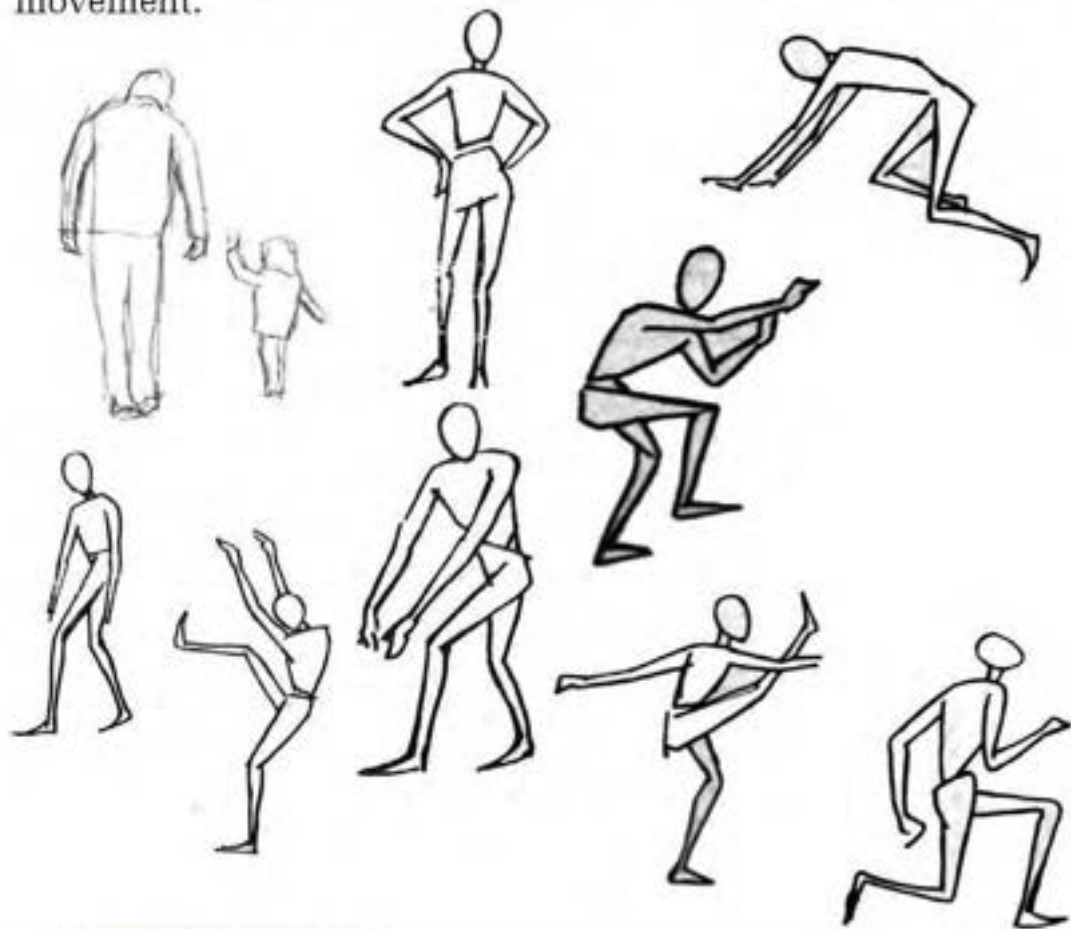
Because we are human, we understand the expressions of the human well. Thus, in art, we desire to draw or paint human figures. However, drawing human figures is one of the most difficult skills in art, and it needs continuous practice. First, we can do quick sketches of the gestures and postures of human figures by observing them. As mentioned in the early chapter, the proportion of the head should be considered while drawing a human figure. Ideally, an adult is equal to seven and half of the size of the head, while children have around four times their head. We know that not all humans have the same features in height, weight, volume, etc. Some samples of quick sketches are provided below. One can also practice by drawing eyes, ears, nose, and limbs separately to understand the detail of human figures.



Quick Sketch

To quickly draw human figures is called quick sketching which capture the gesture of human being. Quick sketching develops confidence and develops drawing skills. The best place to do

quick sketching would be a market place where you will find many people in different positions and gestures. You should observe people in different positions and quickly draw in your sketchbooks. At first you will feel nervous but as you continue practice for a long time, your sketches will start getting better. To start with do quick sketches of people sitting or with minimum movement.



Activities 10.3

Make a pair of two students. In pairs, take turns sitting in different postures. Draw an outline of your friend sitting in different positions.

Go to a market or a place where people gather and draw quick sketches of people.

Exercise

1. What is art? Which aspects are included in art?
2. Mention the characteristics of Nepali art.
3. Nepali art has gained fame in the international arena. Explain this statement with justifications.
4. Briefly explain the basic rules of art.
5. Why are balance and proportion considered important aspects in art?
6. Make a drawing of an object using the basic rules of art.
7. Draw a human figure.
8. Paint a picture that expresses human emotions and apply suitable colours.

11.1 Printmaking

Printmaking is making art by printing it on paper or other surfaces. There exist various techniques for creating prints. In the past, people used to put colors on regular wooden blocks to make prints. Nowadays, there are various printing methods that use advanced technologies. These new technologies can do security printing and embossing too. This book is an example of modern printing technology. The latest technologies can print on surfaces that are not flat. Even surfaces that are uneven, like patterns on ceramic dishes, can be printed on.



One can create prints by carving various designs or letters onto a piece of softwood. You can select wood that is soft and simple to carve, yet maintains the details. In case wood is not available, there are different choices accessible in the market like linoleum, cardboard, and so on. Even though we have the option to utilize various kinds of wood, it is advisable to inspect for wood that is soft for the purpose of carving. Firstly, commence by sketching letters, shapes, or designs. You can create the illustration on a slim piece of paper and then stick it onto

the timber exterior. Starting with basic shapes would be a simple task. To remove extra parts of the wood, you must use carving tools. Once you finish carving, you must take away the leftover paper too. After you have cleaned the wooden surface, you may apply a thin layer of printing ink and print on paper by rubbing with a spoon or baren.

You can use this method for carving wood to make prints:

1. To make prints, choose a type of wood that is not very hard. Make sure the wood is cleaned and dried. Make the surface smoother, but make sure to keep the wood fibers.
2. Make some creative designs, shapes, or letters on paper and stick them on the wood. The printmaking will give you the opposite of what you drew.
3. Use carving tools to remove extra parts. Don't forget that the surface that has been carved out won't be able to hold ink, so it won't be printed.
4. After you have made your carving, make sure to clean the surface well. Next, use a roller to put ink on the wood surface.
5. Once you apply ink on the wood, put a piece of paper on top and softly rub the paper with a spoon or a baren.
6. You can verify the ink by gradually lifting a portion of the paper. If you believe that the ink has been properly transferred onto the paper, then you may take away the paper.
7. Making prints is a very enjoyable activity. You can show your printmaking to your friends by putting them up in the school.



1.



2.

Here is an example of how to make a print.



1.



2.



3.



4.



5.

Activities 11.1

Check out different feels of different wood pieces you can see nearby. Talk to your friends about the kinds of surfaces you saw in various pieces of timber.

Print the outside of various kinds of wood to learn about their textures. You can print on a suitable surface by following the process mentioned above.

11.2 Clay work

Clay is one of the most popular materials to make objects for daily use. Clay can be burned to make utensils, ceramics, and sculptures as well. Clay is a versatile medium hence we can make various things with coiling, pinching, additive or subtractive methods. Clay is not only used for smaller objects but we can build monumental structures out of it.



Once a desired object is made out of clay, firing the clay is important to make it strong and durable. These objects can be polished as well. But not all clay products go through the firing process. Many people use clay to make initial objects, then cast them in plaster, fiberglass, or even metal. The sculptures and other details in monuments were mostly made of clay and then cast with various other materials.

Stone, marble and wood are also used in sculptures but they are tough mediums. Clay is the easiest material for making sculptures. It allows you to make mistakes and you can rework.

Here is a process of making clay sculptures.

1. To start with, pick soft and clean clay. Remove unnecessary particles from the lump. Add water to knead the lump of clay. Readymade clay is also available in the market.



2. Decide what you want to create. Start with simple forms. Try pots or jewellery so you can use them as well.



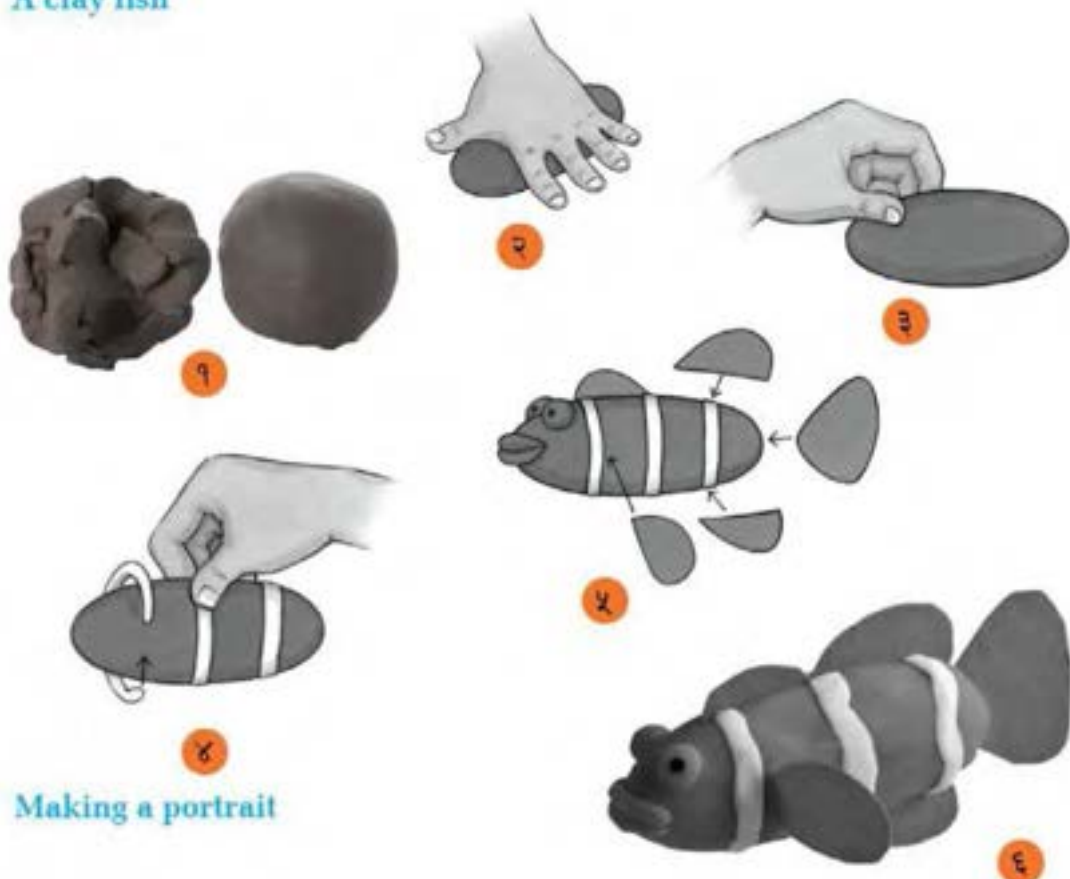
3. Do some research to explore your interest. If you find suitable inspiration, start making it.
4. There are various methods of making clay sculptures. You can choose pinching, coiling or any other method suitable for you.



5. Additive and subtractive process can be used.

Here is a process of clay work.

A clay fish



Making a portrait





Activities 11.2

Prepare a model of fish, human or your favourite object from clay. Once you are done, display in the class.

11.3 Collage

Collage is an artwork made by pasting various different materials such as photographs, fabric, newspaper, pieces of paper or fabric onto a surface. Collage comes from the French word 'Papier colle' which means pasted paper. Collage is an interesting medium and many artists have used in their artworks. Artists like Pablo Picasso, and George Braque have used collage to express their feelings through collage.



Different types of collage

A collage can be made by simply pasting or sticking photographs. A collage made by combining photographs in this way is called a photo montage. A collage made by sticking items like cloth, jute, sack etc. is called fabric collage. Along with the development in



science and technology, there are also new forms of collage. With the use of computers and the use of information and technology, artists have started creating digital collages as well.

Activities 11.3

See if collages have been done on items such as calendars, posters, and hoarding board cloths around the school or home. If a collage is made, discuss with your friends what materials are used in that collage.

A collage can be constructed in the following steps:

1. Select the material on which the collage will be made, such as paper, canvas, hardboard, wooden boards, etc.



Canvas



Cardboard



Hardboard



Nepali lokta paper

2. To make a photomontage collage, collect materials such as different types of photographs, gum and fabric collages, cloths, threads, jute etc. if you are making a collage.



Paper



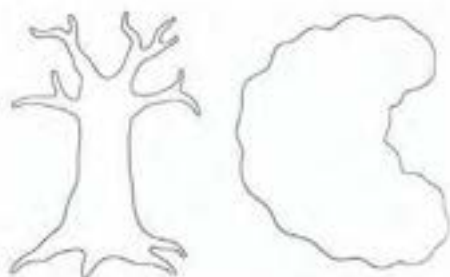
Clothes



Photographs

3. Choose your favourite theme. Select the photographs according to the shape, colour and feeling according to the subject matter.

4. The subject should be kept according to the picture. Cut out the torn edges of the picture or paste the gum or model by mixing the shape.



Sketch



Cut the rag paper according to the line drawing



The cut paper is usually torn



Cut the rest of the paper as needed



A finished collage

5. Apply your favourite colour on the background as needed. Do not use too much colour. Use the colour only where necessary.

6. Let it dry for a while. When drying, it should be dried in a place without sunlight.
7. After making the collage, put it on the wall and observe. Collage can be completed by pasting or writing some letters at the required place.
8. Display the prepared collage in class. Share your experience with your friends about the materials you have experienced and used during the demonstration. Ask for feedback from friends.



Activities 11.4

Make a map of Nepal and make a collage showing the geographical situation of Nepal by using different photographs and colour within that map.

Collect the unnecessary clothes, sacks, threads etc. at home and make a collage related to different costumes of Nepal. Name those costumes as needed.

Collect various types of photographs, worn-out newspapers, and torn pieces from used books to use for collage. Make a poster based on school cleanliness.

11.4 Construction

Different types of materials such as wood, wire, rope, cardboard, metal, hardboard etc. are used in construction work. Construction work is three-dimensional where we can see its length, width and depth. We can make construction works from different junk materials. We all have different ways of looking at an object. Depending on our angle of viewing even the same object, the shape of the object can look different. Since the whole part of the object is studied during the construction work, it gives a hint of newness in the student's perspective. It is not necessary to make things as they look. One can make small items. If you like, you can make something that expresses your feelings. These kinds of works can also be attractive and interesting.



Some examples of construction works

Construction with paper and Cardboard

You can make various shapes and forms with paper and cardboard. For this, you can use paper, cardboard or packaging box, egg trays, wasted newspapers, etc. Before construction, you should decide what kind of artwork you wish to create.

Then accordingly to the need, you can collect materials. You can join these materials using tape, stapler pins, thread, glue etc. Paint your construction if you wish to. You can either buy or make your own paint as well. Poster paint would be ideal for these kinds of works. Here are some examples of construction works.



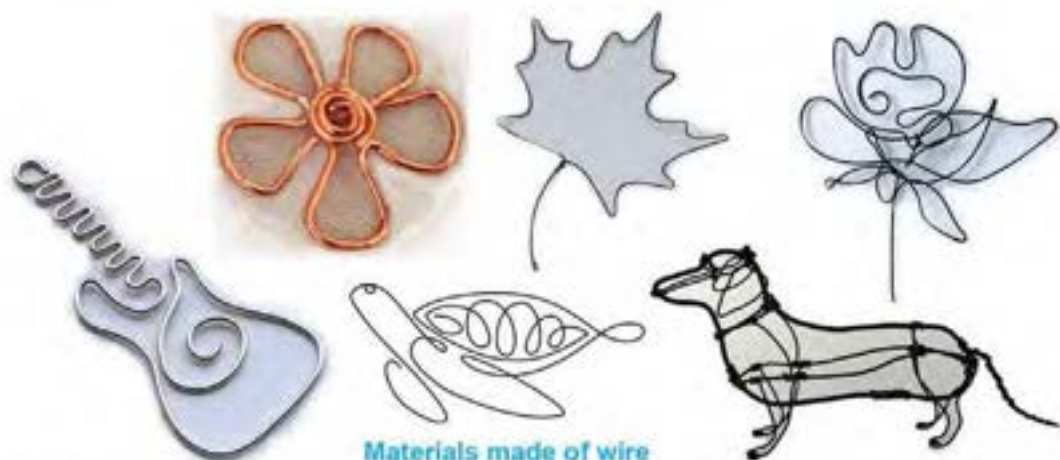
Activities 11.5

Collect the different types of paper boxes. Open them and study how they are made. Create a new box with paper. You can explore various techniques to create your artwork by folding, cutting pasting etc.

Create construction work with various materials you have collected such as cardboard, threads, fabric etc.

Construction with wire

You will see various items made with wires in the market. While creating artwork with wire, you will have to understand lines, shapes, forms and movement. Wire can be made straight, twisted, or curved as required. It is easy to make shapes out of wire.



Materials made of wire

Choose flexible wire for wire sculpture. Electrical wire and other metal wire would be suitable for this. Hard wire can also be used if need be. In addition to wire, rope, thread, small pieces of wood, cloth, etc. can also be used for wire sculptures.



Wire sculptures do not need to be painted. After you are done creating wire sculptures, you can display them. Be careful while handling wires. They have sharp edges and you may get injured. Here are few examples of wire sculptures.



तारबाट बनेका Richard Stainthorp
का मूर्तिहरू

Activities 11.6

Collect pictures of different items made of wire. Share these images with your friends and discuss the process.

Collect various types of wires and create a sculpture. Show it to your friends and receive feedback. You can also give feedback to your friends as well.

Exercise

1. What is printmaking?
2. What is carving?
3. Write various methods of carving to create images.
4. Write the benefits of carving in daily life.
5. How can printing be done from locally available materials? Explain the method.
6. Write a simple method of making a clay sculpture.
7. What is a collage?
8. How can you create a collage with locally available materials?
9. What is construction work?
10. How can different items be made from the wasted items?
11. Collage and construction work helps us to be creative. Justify this statement with arguments.

Singing and Playing Instrument 12

Singing and Playing Instrument

The art of presenting one's feelings through words, melody, and rhythm is called singing. Similarly, the art of playing various musical instruments in tune and rhythm is called playing. A person who has the art of singing is called a singer, while a person who has the art of playing an instrument is called a musician. It is possible to sing with simply one's voice or with the accompaniment of various musical instruments. One can sing or play solo or in a group.

Generally, the art of singing involves using melody and rhythm to express the emotions of a song in a sweet tone. This is called singing, while the art of playing instruments in tune with the melody and rhythm is called playing. In this unit, we will learn about the importance of music in human life, the definitions of musical terms, practice singing class/grade songs and various local songs, and learn about and practice playing various musical instruments.

12.1 Importance of Music in Human Life

Music has been an integral part of human life for centuries. Humans often express their experiences and feelings of joy, sorrow, laughter, happiness, meeting, separation, love and tragedy through various art forms. Five arts, namely music, poetry, literature, painting, sculpture and architecture, have been placed in the category of fine arts. Among them, the art of music is such a fine art in which we can easily express our emotions through the medium of tone, rhythm, and dance. When the three art forms of singing, playing, and dancing are performed together, music achieves perfection. Music has been used in all rituals from birth to death. No celebration in human life is complete without music. It is not limited to any one language, religion, gender, region or political geography. The scope of music is global.

Music is considered a useful medium to change the lifestyle and behavior of a person and is helpful in achieving peace and happiness. The importance of music in human life can be mentioned as follows:

(a) Physical benefits

Music is a powerful medium for physical and mental happiness in human life. With its use, different types of patients can be treated by involving them in various musical activities according to their interests. This is called music therapy. Since ancient times, various diseases have been treated with the use of music. At present, its use is increasing widely. Music is also effective in improving memory and bringing good sleep. Listening to music brings comfort to people who are going through unbearable pain. Psychiatrists say that music therapy is useful for health. According to them, the use of music is important in increasing immunity and reducing hormones that increase stress.

(b) Psychological benefits

Music helps to overcome fear, anger, anxiety, and grief, and increases self-esteem and self-confidence. It is like an effective treatment method for mental anxiety and stress. Therefore, music is also considered helpful for peace of mind. When the mind that is wandering elsewhere is attracted by the sound of music, the rhythm and the feeling of the words; the mind automatically starts to feel stability and joy. Singing, playing, and dancing help to activate both the right and left sides of the brain and increase happiness, memory, and learning ability.

(c) Social Benefits

Music promotes the awareness of positive social integration. It enhances friendly relationships between individuals and communities. Through songs and music, it helps to awaken people's consciousness, removing social distortions and disparities, and promoting social harmony. It plays an important role in cultivating a sense of national unity. When people come together to celebrate different cultural festivals, mutual love and affection grow. The development of collective feelings, where individuals feel a sense of "ours" rather than just "mine" or "yours," is fostered.

(d) Spiritual benefits

It is considered very useful for students as listening to their favorite music keeps the mind stable and focused on their goals. In the Gurukul education system, there is also a tradition of making students recite Vedic mantras in the tone and rhythm of music. Correct chanting of such mantras will have a positive effect on the environment, improve clarity in pronunciation, increase memory power, and the mind will remain serene and calm. Therefore, music also plays an important role in entering the path of spiritual meditation.

Activity 12.1

Collect some information about the physical, mental, social, and spiritual benefits of music from parents, music lovers, or the Internet. Prepare a chart in PowerPoint slides or write down some bullet points in copy and present it in the classroom.

12.2 Introduction to the terminology of music

There are different types of terminology in music. The information of which facilitates the learning and practice of music. Some of the terms used in music are presented below:

(a) Octave

An octave is a series of eight notes in a musical scale. There are seven different consecutive notes of the musical scale, and the eighth note is the repetition of the first or root note which is double the frequency of the first or root note. In Western musical system it is called octave but in Nepali Classical music it is called "Saptak". "Sapta" in Sanskrit means seven, and since there are seven different named notes, it is called Saptak. Harmoniums usually have 37 to 42 keys to play those notes; while grand pianos have up to 88 frets in which there are 52 white and 36 black keys. To gain information about the octaves, first focus on the white keys and play them on your instrument as described in the activity below.

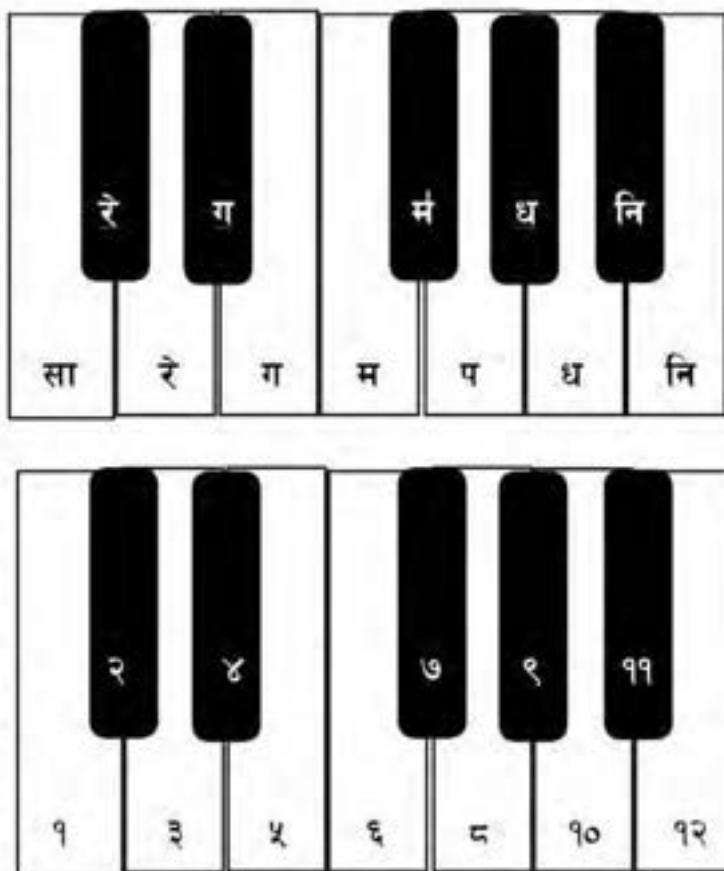
Activity 12.2

Keep writing the sequence of white keys from left to right as follows, like:
C0 D0 E0 F0 G0 A0
B0 C1 D2 E2.....
Keep writing like this.

If you play C1 after C0, you will find that C1 has a higher pitch than C0 because C1 is exactly one octave higher than C0. It is the same note but the frequencies between the two keys are different. The ratio between the frequencies of C1 and C0 is 2:1.

The seven natural tones from C0 to C1, which are represented by the white keys, are within an octave. The other five accidental notes, namely Db, Eb, F#, Ab, and Bb, represented by black keys are also within the octave. Including these, there are a total of twelve tones in one octave. Thus, in an octave there are a total of twelve different notes.

As mentioned above, the black keys numbered 2, 4, 7, 9, and 11 in the picture are accidental notes, while the white keys numbered 1, 3, 5, 6, 8, 10 and 12 are natural notes. Identify them and practice on your harmonium or keyboard. The average human vocal range is about three octaves. Therefore, the use of the low, middle, and high octaves is more common in singing and playing instruments. The low octave





is used for a deep or hoarse voice. The middle octave is used for a normal voice. The high octave is used for a sharp voice. When writing in musical notation, dots are placed below the notes of the low octave, such as Sa, Re, Ga, Ma. For the notes of the middle octave, no dots are used, only the names of the notes are written. For the notes of the high octave, dots are placed above, such as Sa, Re, Ga, Ma.

(b) Thaata

Thaata refers to a structured group of seven notes that form the basis of ragas. Thaata is not sung, but it is used to organize and systematize ragas. Various methods have been developed and evolved since ancient times to organize and systematize ragas. In modern times, scholars have created ten such groups of notes, from which all ragas are said to have been derived, with some exceptions. The table below shows the details of the notes used in different Thaats.

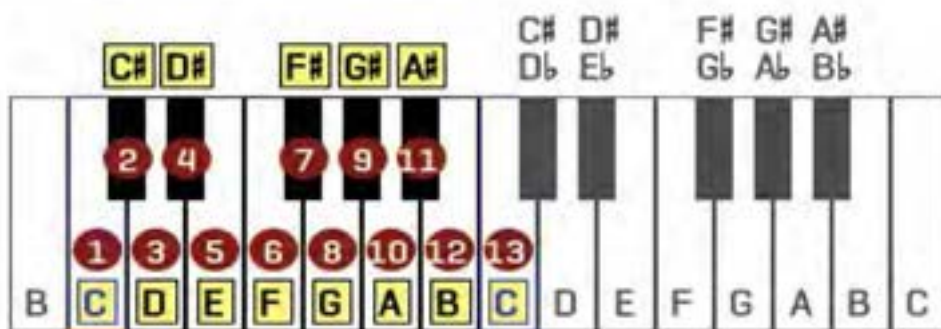
क्र.स.	थाट	प्रयोग हुने स्वरहरू
१.	विलावल	सा रे ग म प ध नि सा (सवै स्वर शुद्ध)
२.	कल्याण	सा रे ग म प ध नि सा (मं तीव्र बाँकी सवै स्वर शुद्ध)
३.	खमाज	सा रे ग म प ध नि सा (नि कोमल बाँकी सवै स्वर शुद्ध)
४.	काफी	सा रे ग म प ध नि सा (ग र नि कोमल बाँकी सवै स्वर शुद्ध)
५.	भैरव	सा रे ग म प ध नि सा (रे र ध्र कोमल बाँकी सवै स्वर शुद्ध)
६.	आशावरी	सा रे ग म प ध नि सा (ग, ध्र र नि कोमल बाँकी सवै स्वर शुद्ध)
७.	मारवा	सा रे ग म प ध नि सा (रे कोमल र मं तीव्र बाँकी सवै स्वर शुद्ध)
८.	तोड़ी	सा रे ग म प ध नि सा (रे, ग, ध्र कोमल र मं तीव्र बाँकी सवै स्वर शुद्ध)
९.	पूर्वी	सा रे ग म प ध नि सा (रे र ध्र कोमल र मं तीव्र बाँकी सवै स्वर शुद्ध)
१०.	भैरवी	सा रे ग म प ध नि सा (रे, ग, ध्र र नि कोमल बाँकी सवै स्वर शुद्ध)

(c) Scale

A scale is a set of musical notes ordered by fundamental frequencies or pitches based on the principles of music theory. If the scale starts with the note which has the lowest pitch and goes up to the note with the highest pitch, the scale is called ascending. If the scale starts with the note which has the highest pitch and goes down to the note with the lowest pitch, the scale is called descending. Songs are composed based on scales. Scales are the building blocks of any musical composition. The scale of the song is determined by examining the nature of the song and the singer. These scales can be major, minor, chromatic, etc. In one octave, there are 12 major, minor, and chromatic scales. When a song is created based on a certain scale, the notes of that song follow that scale. There are two processes to identify the notes in the scale:

First process:

The first process is to move in one interval at a time. An interval is the distance between two notes. For example, moving from Sa to Komal Re or from Komal Re to Shuddha Re, etc. This interval is called a half step or semitone. The chromatic scale can be derived from this process. In the picture below, when all the keys are played from 1 to 12, the notes of the chromatic scale are played. You can try this on your own musical instrument as well.

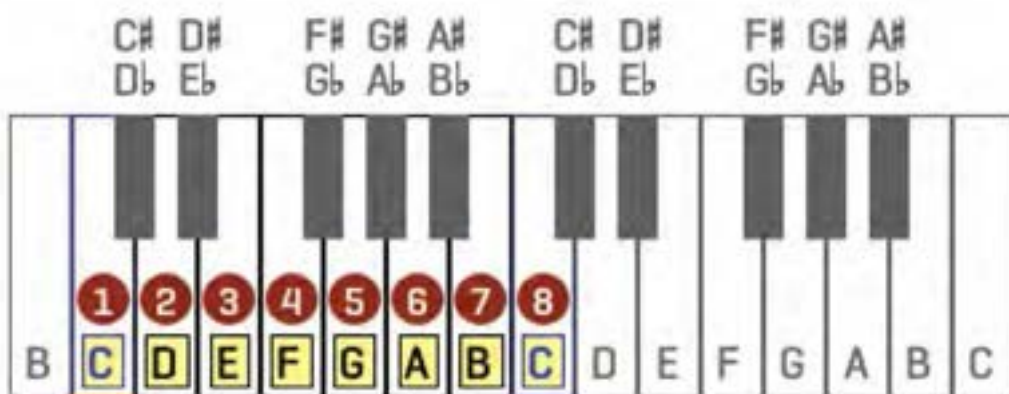


Second process:

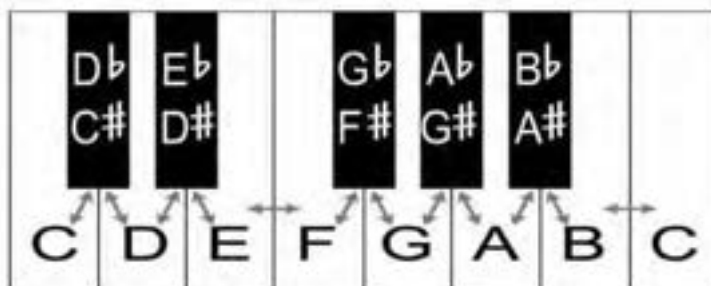
In the second process, one note is skipped and the next note is played. For example, skipping Komal Re from Sa and playing Shuddha Re, is called a whole step. This process helps to identify the notes of the major and minor scales.

Major scale

The C major scale is easy to play on the harmonium or keyboard because it does not use black keys. It is easy to practice playing this scale with your fingers in the beginning. The process of learning music generally starts with this scale. The notes of the C major scale are played when all the keys from 1 to 8 in the image are played. Try it on your instrument too.



Activity 12.3

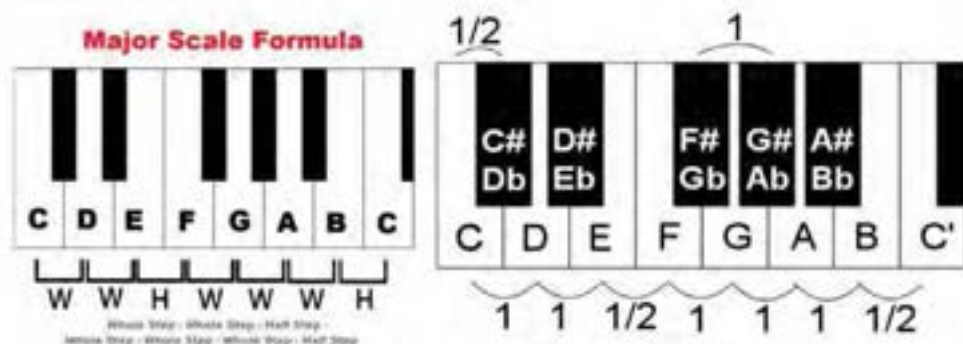


The major scale consists of seven notes. Take the C major scale for example.

- The first note is Sa (C), which is also called Root.
- Leave the Komal Re (Db) and move one note up to Re (D).
- Similarly leave the Komal Ga (Eb) and move one note up to C (E).
- Now for the next note Ma (F) move up a half-step to Shuddha Ma (F) from Ga (E).

(Note: Since there is a gap of only half-steps between E and F as well as between B and C, there are no other notes between these two notes, there is no way to omit notes here.)

- (e) Now skip the Tivra Ma (F#) and move one note up to Pa (G).
- (f) Leave the Komal Dha (Ab) and move one note up to ShuddhaDha (A).
- (g) Leave the Komal Ni (Bb) and move one note up to ShuddhaNi (B).
- (h) Since there is no other note between Ni (B) and Sa (C), move directly up to Sa (C).

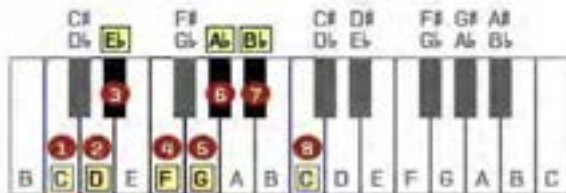


Playing the major scale "Sa Re Ga Ma PaDha Ni Sa1" or "C D E F G A B C1" requires playing the root note first and then Tone, Tone, Semitone, Tone, Tone, Tone, and Semitone respectively. It is also called the pattern of whole step, whole step, half step, whole step, whole step, whole step, half step (WWHWWWH). This is more clearly shown in the given picture.

Minor Scale

The minor scale also includes seven notes. For example

Take the Cm scale. When playing sequentially the keys marked 1 to 8 in the picture, the notes of the C minor scale are played.



In the picture, the fingers of the right hand and the fingers of the left hand are also given respectively. Observe them and practice them on your instrument as well.

Activity 12.4

- Take the first note Sa (C) which is the Root of the scale.
- Leave the Komal Re (Db) and move up to the note Re (D).
- Since C minor scale has Komal Ga (Eb), move half-step up to Komal Ga (Eb) from Re(D).
- Now move one tone up to Shuddha Ma (F).

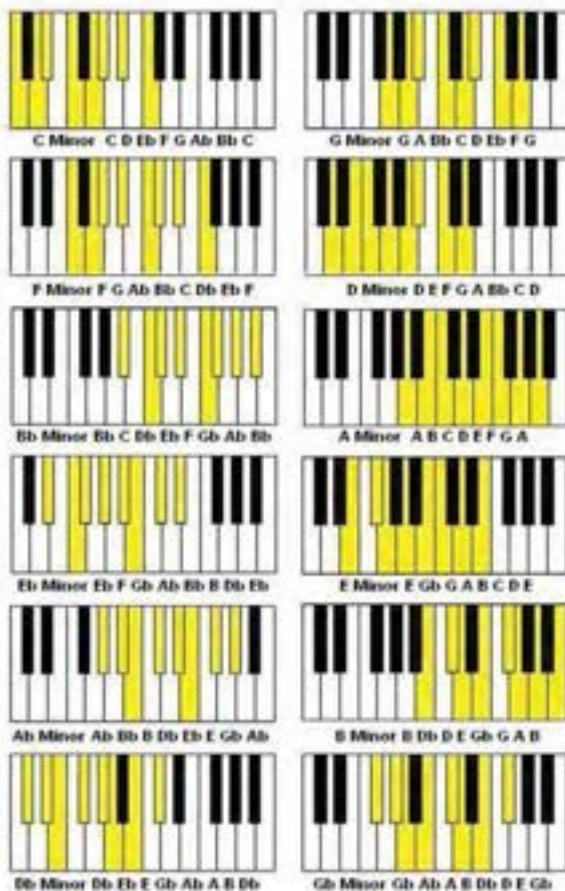
(Note: In the minor scale, there is only a half-step interval between Re and Komal Ga, Pa and KomalDha, so no other notes are played between these tones.)

- Similarly leave the Tivra Ma (F#) and move one tone up to Pa (G).
- Then move to KomalDha (Ab) and to a Komal Ni (Bb) and finally move to Sa1 (C1).

The formula for playing the minor scale "C D Eb F G Ab Bb C1" from the above activity is as follows:

It is understood that the root note should be taken first and then move up Tone, Semitone, Tone, Tone, Semitone, Tone, and Tone respectively. It is also written as whole step, half step, whole step, whole step, half step, whole step, and whole step (WHWWHWW). This can be shown in the figure as follows:

If you have a harmonium or keyboard, choose the root note and follow the formula above to find the notes of the minor scale.



After some practice, you will become familiar with the sounds yourself. For easy reference, the keys of the minor scales are colored in the picture. Students can practice these scales by pressing or playing the corresponding keys on their instruments.

d) Raga (Raag)

Raga is a melodic framework or a musical mode consisting of a set of notes arranged in a specific sequence, often associated with a particular mood or emotion. Ragas are not fixed compositions but rather a set of guidelines that provide a framework for improvisation. Raga has its own characteristics. Except for some exceptions, a raga should have at least 5 swaras or notes, and at most, it should have 7 swaras or musical notes. A raga using 5 notes is called audava, a raga using 6 notes is called a shadava, and a raga using 7 notes is called a raga of sampoorana. Each raga is based on a particular thaat. Based on the importance of their usage, the notes are named vadi, samvadi, anuvadi, vivadi, varjya, etc. The singing times of ragas are also different. Alhaiya Vilaval, Yaman, Bhupali, Durga, Kafi, Bhairav, Bhairavi, Khamaj, Ashawari, Marwa, Purvi, Todi, etc., are some of the most prominent ragas.

Except for a few exceptions, all the ragas use the swaras according to the thaats mentioned above. For example, in the activity below, the notes of Alap are given with a small introduction to Raga Yaman. Try to sing and understand with the help of the teacher.

Activity 12.5

- On the harmonium or keyboard, play the two notes 'Sa' and 'Pa' continuously without breaking in between.
- Now take a deep breath and sing Sa, Pa in exact harmony with the tune of the harmonium.
- Practice singing some embellishments after vowels in Sa and Pa.
- You can also play the harmonium while singing.
- Similarly, try to sing the Aaroh, Avaroh and Alapswaras of the Raga Yaman given below.

Aroh (ascent): Ni Re Ga Ma Dha Ni Sa'

Avroh (descent): Sa' Ni Dha Pa Ma Ga Re Sa

Pakad: Ni Re Ga Re, Ni Re Sa, Pa Ma Ga Re Ni Re Sa

(e) Sthayi

A song usually has two sections, namely Sthayi and Antara. There is only one Sthayi in a song, while there may be two, three, four, or even more Antaras. The starting two lines or couplet at the beginning of any song is called the Sthayi of the song. It usually consists of two lines. In some songs, there are Sthayis having one, two or three lines. The sthayi is the main section of the song, which establishes the melody and is usually repeated multiple times throughout the song. It is often the first section of the song, and it sets the tone and mood for the entire piece. The following is an example of a Sthayi taken from the class/grade song.

One or both of these lines may be repeated even after the Antara depending on the situation. It is called Sthayi because it repeats continuously. It carries the feeling, sweetness, and beauty of the entire song.

(f) Antara

The Antara is a contrasting section that follows the sthayi. It typically has a different melody or rhythm and provides a variation or contrast to the sthayi. The Antara can be thought of as a bridge between different parts of the song and is often used to build tension or excitement leading up to the return of the sthayi. Antara can have two, three, four, or more lines. Here, the following four lines in the class song are the Antara of the song, while the repetition at the end is Sthayi.

स्वावलम्बी पाइला हाम्रा जागरिला हात

सिर्जनाको विउ छर्त हुन्छन् एकै साथ ।

नेपाली हो नाम हाम्रो इमान हो धन

प्रकृतिको गौरवले स्वाभिमानी मन ।

टेक्ने धर्ती बस्ने ओत मिठो हावा पानी

Both Sthayi and Antara are important parts of a song, and they are often used in many traditional songs and compositions. Modern songs have two, three, or up to four antaras while folk songs and dohori songs may contain several antaras.

(g) Shastriya Sangeet

Music based on scriptures is called ShastriyaSangeet. The artist should adhere to the rules of the scriptures. One should use the tone and intonation instructed by the scriptures when singing or playing any swara. For example: Raga Yaman is originated from Kalyan That, thus, TivraMadhyam (F#) note should be used while rendering Raga Yaman. ShuddhaMadhyam cannot be used even if it feels pleasing to the ears. Artists are free to add emotion and sweetness to the song, but they cannot use voices contrary to the scriptures. It is called ShastriyaSangeet because it literally follows the rules of traditional singing and playing style determined by scriptures. In ShastriyaSangeet, the practical and theoretical aspects of raga singing and playing are studied according to the methods prescribed in the text. One should train and study ShastriyaSangeetin the proper guidance of a qualified teacher. Raga singing ability can be developed only after constant perseverance, effort and hard work.

(h) Folk songs

Folk songs are simple, easy, and accessible songs of common people. Folk music does not adhere to any form of rigid guidelines. Folk songs are very simple, very natural and emotional. Folk songs are sung by folk artists for folk entertainment. A folk song is one that was created by or for the general public. Folk songs have unidentified creators, and they are traditionally passed down from one generation to the next. Folk songs play a vital role in every auspicious occasion of folk life. For instance, wedding songs, birthday songs, religious songs, agricultural songs etc. Folk music is performed by singing, playing and dancing in a group. The main purpose of folk songs is to entertain people. Folk music depicts the story of human life. Human emotions such as happiness, sorrow, passion, compassion, and more are expressed in it.

(i) Modern songs

The songs that are composed embracing modernity according to the demands and needs of modern times are called modern songs. Words and expressions are the major parts of modern songs. Modern songs are influenced by the words and expressions of traditional and folk songs. The initial

form of Nepali songs has always been the folk songs, but with the passage of time they became modernized by the influence of new styles and started to be called modern songs.

Activity 12.6

Identify the names of artists in classical, folk, and modern music and discuss the creations they sang, played or composed.

12.3. Class song

The class song is sung after entering the classroom following the daily morning prayer in the school. A class song is a song prepared for a particular class keeping in mind the age and level of the students. The class song contains the story of patriotism, respect, unity and bravery. Study the melody, words, and rhythm used in the song and try to sing with high respect by looking at the notation given below.

Stahyi (Chorus)

टेक्ने धर्ती बस्ने ओत मिठो हावा पानी - २
यही माटामा फुल्छ फल्छ हाम्रो जिन्दगानी - २
टेक्ने धर्ती बस्ने ओत मिठो हावा पानी - १

First Antara (verse)

स्वावलम्बी पाइला हाम्रा जागरिला हात - २
सिर्जनाको बिउ छर्न हुन्छन् एकै साथ - २
नेपाली हो नाम हाम्रो इमान हो धन - २
प्रकृतिको गौरवले स्वाभिमानी मन - २
टेक्ने धर्ती बस्ने ओत मिठो हावा पानी - १
सा रे ग सा रे सा ध ध प प प ध ध ध प
ग प प ग प प रे ग रे सा रे - ग प प रे ग रे सा

Second Antara (Verse)

आँट गरे नसकिने केही काम हुन्न - २

कर्मशील बन्थौ भने अप्ठ्याराले छुन्न - २

कुना कुना जगाएर चेतनाको गीत - २

सवैतिर फैलाउछौं हामी आफ्नो सिप - २

टेक्ने धर्ती बस्ने ओत मिठो हावा पानी - १

ताल - भ्याउरे (६/८)

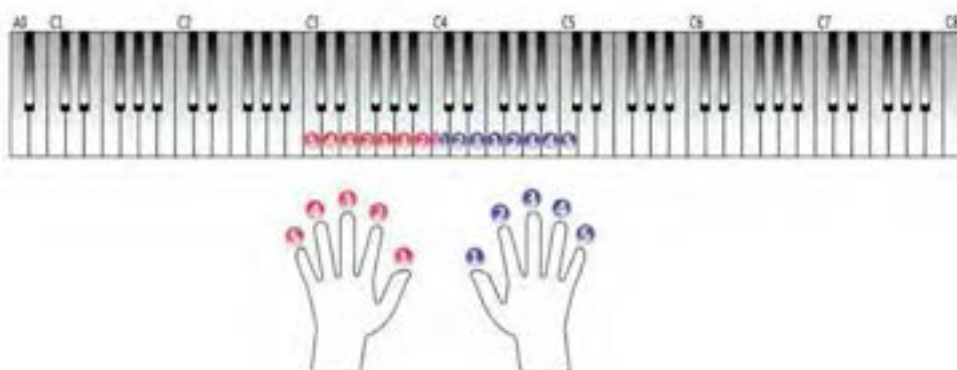
स्वरलिपि-कक्षागत गीत

स्थायी						
स्वर	प - ग	रे - सा	ध - सा	प - प	प - ध	सा - म
शब्द	टे S के	ध S ती	व S स्ने	ओ S त	मि S टो	हा S वा
स्वर	ग - म	म ध प	म - ग	रे - म	ग - सा	रे - ध
शब्द	वै S मा	टा S मा	फु S छ	फु S छ	हा S घो	जि S व
	अन्तरा					
स्वर	ग - म	प - ध	प - म	ग - रे	ग - म	प - ध
शब्द	स्वा S व	ल S थौ	पा S सा	हा S मा	जा S ग	रि S ला
स्वर	ध - म	म - म	प - म	ग - रे	सा - म	ग - रे
शब्द	सु S ज	ना S को	बि S उ	छ S न	हु S छन	ए S कै

Sing the rest of the song in the same way following the notation.

12.4 Practising playing songs learned on the keyboard or harmonium.

Before playing any song, it is very important to have a general knowledge of the harmonium or keyboard. We have already studied this in the previous lessons. Now look at the picture below and practice using one or both hands to move the fingers correctly on the keys of the harmonium or keyboard. After warming up for some time, practice looking at the given notation. Pay close attention to which fingers fall on which keys and play accordingly. Take the teacher's help when necessary.



ताल - भूयाउरे (६/८)

हार्मोनियम/किबोर्डमा राष्ट्रिय गान वादनको अभ्यास

मात्रा	१ २ ३ ४ ५ ६	१ २ ३ ४ ५ ६	१ २ ३ ४ ५ ६	१ २ ३ ४ ५ ६
बोल	धि-ती नाघिना	धि-ती नाघिना	धि-ती नाघिना	धि-ती नाघिना
घिन्ना	X	X	X	X
औला	३ - २ १ २ १	२ - ३ ४ - ५	३ - २ १ २ १	३ - २ १ - -
स्वर	गु - रे सा रे नि	सा - गु म - प	गु - रे सा रे नि	सा - नि प - -
शब्द	स s यौ थ s गा	फुल का हा s मी	ए उ टै मा s ला	ने s पा ली s s
औला	२ - १ २ - १	२ - ३ ४ - ५	३ - २ १ २ १	२ - २ २ - -
स्वर	गु - म प - नि	सा - गु म - प	गु - रे सा रे नि	सा - - सा - -
शब्द	सा s वं भीम भै	फै s लि ए s का	मे s ची म s हा	का s s ली s s

12.5 Practise major and minor scales in the songs you learn

If the notes used in a song are all natural, then the song is in the major scale. If the song has komal ga, komal dha and komal ni (Eb, Ab and Bb) notes and remaining notes are natural then it is a minor scale song. The notes used i

There are three types of notes that make up a song, which we have already studied as Shuddha (Natural), Komal (Flat) and Tivra (Sharp) notes. A song that uses only natural notes like Sa Re Ga Ma Pa Dha Ni is in the major scale. Similarly, if the ga, dha and ni notes are Komal, then the scale used is minor. The major scale is denoted by English letters from A to G, such as: G/A/C, while the minor scale is denoted by putting an English small letter behind these letters, such as: Gm/Am/Cm and so on. This is also denoted by writing Thaath or sargam in Nepali. For example, in our national anthem of Nepal "Sayaun Thunga Phulka Hami" Komal ga and komal ni notes are used, so we should understand it as a minor scale song. It can be understood more clearly from the notation given below in which Komal ga and Komal ni notes are used.

स्केल - Gm

ताल - भ्याउरे (६/८)

माइनर स्केलको स्वरलिपि अनुसार अभ्यास

स्वर	गु - रे सा रे नि	सा - गु म - प	गु - रे सा रे नि	सा - नि प - -
शब्द	स s री र्थ s रा	फूल का हा s मी	ए उ टै मा s रा	ने s पा ली s s
स्वर	गु - म प - नि	सा - गु म - प	गु - रे सा रे नि	सा - - सा - -
शब्द	सा s र्थ भीम र्थ	फै s लि ए s का	मे s थी म s हा	का s s ली s s
स्वर	प - प सा - सा	नि सा नि प - प	सा - सा प - म	गु - सा म - -
शब्द	प्र s क ति s का	को s टि को s टि	सम् s प दा s को	आ s व ल s s
स्वर	प म गु म गु सा	गु सा नि सा नि प	सा - प म - सा	गु - गु गु - -
शब्द	बी र ह रु s का	र s ग ल s ले	स्व s तन प्र s र	अ s ट ल s s

Remaining lines from “Gyanabhumi.... till sanskritichhanvishal should be sung and played in accordance with the notation above and the last line “agragamirashtrahamrojayaajaya Nepal” should be sung and played in accordance with the notation given below.

स्वर	प म गु म गु सा	गु सा नि सा नि प	सा - सा प - प	म - - गु - सा
शब्द	अ S य गा S मी	रा S ष्ट हा S मो	ज S य ज S य	ने S S पा S S
स्वर	गु - - - -	- - - - -		
शब्द	ल S S S S S	S S S S S S S		

Therefore, it should be understood that the basis for distinguishing the major or minor scale in the songs is the natural and flat notes used in them.

12.6 Percussion practice in Songs or Tunes (Dadra, Kaharwa, Rupak and Jhaptal)

Before playing the rhythm in the song, one should be familiar with the instrument and the method of playing it. Dadra, Kaharwa, Rupak, and Jhaptal are especially played on tabla. Tabla is a popular percussion instrument used in classical and soft music. It is very popular in South Asian countries including Nepal, India, Pakistan, Bangladesh, and Sri Lanka. The origin of the name Tabla is believed to be from the Arabic Persian root word Tabl.

Activity 12.7

Tabla can be played on the floor, on a table, or on a stand; for this, see the picture below and practice at different stages:

- First Step: Arrange the way to sit to play the tabla as shown in the picture.
- Second step: Practice producing the sounds from the tabla as per the instructions given below for the syllables (bols) used in Kaharwa taal.

- i) Play the dhabol on the tabla producing 'Na' sound with the right hand on the right side and 'ge' sound with the left hand on the left side simultaneously as shown in the picture. Practice playing this repeatedly in slow and fast tempo.



- ii) Play the 'Ge' bol with the left hand on the left side with the help of the curved fingers as shown in the picture. Practice playing this repeatedly at slow and fast speeds.



- iii) Play the syllable "Na" as shown in the picture with the index finger of the right hand making it resonate on the edge of the right side. Practice playing this repeatedly at slow and fast speeds.



- iv) Play the syllable 'Ti' as shown in the picture with the index finger of the right hand on the field (maidan) of the right side creating resonant sound. Practice playing this repeatedly at slow and fast speeds.



- v) Play the syllable 'Ka' as shown in the picture with the left hand covering all the fingers on the left side in a resonant manner. Practice playing this syllable(bol) repeatedly at slow and fast speeds.



- vi) Play the bol 'Dhi' as shown in the picture on the tabla with the right hand on the right part playing 'Ti' and the left hand on the left part playing 'Ge' syllables resonating together. Practice playing this song repeatedly at slow and fast speeds.



Thus, as per the instructions and rules given above, practice the following syllables(bols) repeatedly as long as the instrument is available.

१. धा धा धा धा । गे गे गे गे । ना ना ना ना । ति ति ति ति ।
२. न न न न । क क क क । धी धी धी धी । ना ना ना ना ।
३. धा धा । गे गे । ना ना । ति ति । न न । क क । धी धी । ना ना ।
४. धा गे ना ति । न क धी ना ।

(a) KaharwaTaal

This is one of the most popular Taals. It is made up of eight beats. It has 2 parts known as vibhags. It has 1 Tali and 1 khali. Many folk and modern songs as well as ghazals have been composed in this Tal. Some examples of such songs are: Euta Mancheko Mayale Kati, Gaunchha Geet Nepali Jyotiko Pankha Uchali, Ratora Chandra Surya, Paschim Kohi Poorva Ghar, etc.

८ मात्रा	१	२	३	४	५	६	७	८
तबलाको ठेका / बोल	धा	गे	ना	ती	न	क	धि	ना
ताली, खाली चिह्न	X				0			

Activity 12.8

Practise KaharwaTaal by playing the following ornament or any song of your choice.

- आरोह । सारेगम । रेगमप । गमपध । मपधनि । पधनिसा ।
 अवरोह । सांनिधप । निधपम । धपमग । पमगरे । मगरेसा ।
 आरोह । सारेमग । रेगपम । गमधप । मपनिध । पधसांनि ।
 अवरोह । सांनिपध । निधमप । धपगम । पमरेग । मगसारे ।

(b) Dadra Taal

Another most popular Tal is Dadra Tal. This Tal is made up of 6 beats. It has 2 vibhags. It has 1 Tali and 1 Khali. Many folk songs, modern songs and ghazals have been composed in this Tal. Some examples include: बिहान उठ्ने बित्तिकै हिमाल देख्न पाइयोस, देशले रगत मागे, बनेको छ पहर ले आदि ।

६ मात्रा	१	२	३	४	५	६
तबलाको ठेका / बोल	धा	धि	ना	धा	तु	ना
ताली, खाली चिह्न	X			0		

Activity 12.9

Practise DadraTaal by playing the following ornament or any song of your choice.

आरोह । सारेग । रेगम । गमप । मपध । पधनि । धनिसा ।

अवरोह । सानिध । निधप । धपम । पमग । मगरे । गरेसा ।

आरोह । सागरे । रेमग । गपम । मधप । पनिध । धसानि ।

अवरोह । साधनि । निपध । धमप । पमग । मरेग । गसारे ।

(c) Rupak Taal

Rupak is another popular Taal. This Taal has 7 beats. It has 3 vibhags. It has 1 Tali and 2 Khali. Especially classical, modern songs and ghazals are composed in this Taal. Some examples are: Timro Jasto Mutu Mero Pani, Ma Mare Pani Malai Mero Deshko Maya Chha, Kun Mandirma Janchhau Yatri, etc.

७ मात्रा	१	२	३	४	५	६	७
तबलाको ठेका / बोल	ति	ति	ना	धि	ना	धि	ना
ताली, खाली चिह्न	x (0)			२		३	

In this Tal, Sam falls on the Khali, so as an exception, the sign of Khali is also placed in the place of Sam.

Activity 12.10

Practise Rupak Taal by playing the following ornament or any song:

आरोह: । सारेग । सारे । गम । रेगम । रेग । मप । गमप । गम । पध । मपध । मप । धनि । पधनि । पध । निसा ।

अवरोह: । सानिध । सानि । धप । निधप । निध । पम । धपम । धप । मग । पमग । पम । गरे । मगरे । मग । रेसा ।

(d) Jhap Taal

Jhap Taal is another popular Taal. This Taal has 10 beats.

There are 4 vibhags in this Taal. It has 3 Tali and 1 Khali. In

this Taal especially classical, modern and ghazals are composed. Some examples are: Lau Suna Ma Bhanchhu Mero Ram Kahani, Birsera Feri Malai Nahera, etc.

१० मात्रा	१ २	३ ४ ५	६ ७	८ ९ १०
तबलाको ठंका/बोल	धि ना	धि धि ना	ति ना	धि धि ना
ताली, खाली चिह्न	x	२	०	३

Activity 12.11

Practise JhapTaal by playing the following ornament or any song:

आरोहः । सारे । सारेग । रेग । रेगम । गम । गमप । मप । मपध । पध । पधनि । धनि । धनिसां ।
अवरोहः । सानि । सानिध । निध । निधप । धप । धपम । पम । पमग । मग । मगरे ।
गरे । गरेसा ।

Activity 12.12

We have already studied above that the rhythm used in the tune of the national anthem and class song presented below is Dadra or Jhyaure rhythm of 6 beats. Practise playing the tabla or madal on the given rhythm based on the notes given below along with singing.

ताल - झ्याउरे (६/८)

कक्षागत गीतमा सूर वा ताल वादन

मात्रा	१ २ ३ ४ ५ ६	१ २ ३ ४ ५ ६	१ २ ३ ४ ५ ६	१ २ ३ ४ ५ ६
बोल	धि-ती नाधिना	धि-ती नाधिना	धि-ती नाधिना	धि-ती नाधिना
चिह्न	X	X	X	X
स्वर	प - ग रे - सा	ध - सा प - प	प - ध सा - म	ग - ग ग - -
शब्द	टे s को ध s ती	व s को ओ s त	मि s छे हा s वा	पा s स नी s स
स्वर	ग - म म ध प	म - ग रे - म	ग - सा रे - ध	सा - - सा - -
शब्द	वै s मा टा s मा	फु ल छ फ ल छ	हा s मो जि न द	गा s स नी s स

12.7 Introduction and Practice of Rhythm (Jhyaure, Khyali, Samhala, and Selo)

The relation between Sur and Taal (melody and rhythm) is indispensable. They are incomplete without each other. Melody, tunes played on a musical instrument, singing, and dance are all guided by the rhythm. Therefore, rhythm has a vital role in music. The method or medium of measuring the time used in singing and playing is known as Taal. A Taal is a composition made by combining different bols or syllables coming out of a musical instrument having a certain number of beats, division, Tali, and Khali. Different names and types of Taals are created based on beats, division, and syllables. Jhyaure, Khyali, Samhala, Selo, Kaharwa, Dadra, Rupak, Jhaptal, Tin Tal, etc. have been used in music. In this lesson, we will study some of these rhythms that are popular in music, and we will also practice playing them in different stages.

(a) Jhyaure Taal

It is called Jhyaure rhythm because it is the rhythm played in Jhyaure song in folk music. The bols of the Tal vary according to the song. The 6 beats of this Tal are divided into 2 equal parts. This beat is used a lot in folk music. Another such tala, which is made by keeping the tabla's bols is called dadra. This rhythm is also played in the national anthem of Nepal.

ताल - भ्याउरे (६/८)

राष्ट्र गानमा सुर वा ताल बाने

मात्रा	१ २ ३ ४ ५ ६	१ २ ३ ४ ५ ६	१ २ ३ ४ ५ ६	१ २ ३ ४ ५ ६
बोल	धि-ती नाधिना	धि-ती नाधिना	धि-ती नाधिना	धि-ती नाधिना
चिन्ह	X	X	X	X
स्वर	ग - रे सा रे नि	सा - ग म - प	ग - रे सा रे नि	सा - नि प - -
शब्द	स s ची बू s गा	फू ल का हा s भी	ए उ टै मा s ला	मे s पा ली s s
स्वर	ग - म प - नि	सा - ग म - प	ग - रे सा रे नि	सा - - सा - -
शब्द	सा s बं भीमू भै	फै s लि ए s का	मे s ची म s हा	का s s ली s s

This rhythm is used in popular songs such as: Panko Paat Maya Timlai Samjhanchhu Dinko Raat, Balla Paryo Nirmaya Makuri Jaalaima, Charile Kafal Tipyo Khanalai Ho Ki Khwauna, Yo Nepali Shir Uchali etc.

मात्रा	१	२	३	४	५	६
बोल	घि	-	ती	ना	घि	ना

(b) Khyali Taal

In folk music, the 8 beats rhythm played in Khyali songs or dances is called Khyali Taal. The 8 beats of this Taal are divided into 2 divisions of 4 beats each. Another such Taal using the bols of tabla is called Kaharwa Taal. Even though they have the same beats, the bols and playing styles of tabla and madal are different, so both these taals sound different. This is one of the most popular taals. A lot of folk and traditional songs have been composed in this Taal, such as Gaunchha Geet Nepali, Resam Firiri, Simsime Panima, Sasuralima Khyal Khyalmai Dil Basyo etc.

मात्रा	१	२	३	४	५	६	७	८
बोल	घि	-	न	ती	न	क	घि	ना

(c) Samhala Taal

Another rhythm used in folk music that has the same beats as the Khyali is Samhala. This Taal belongs to the group of Khyali Taal. The 8 beats of this Taal are also divided into 2 divisions of 4 beats each. Even though Khyali and Samhala have the same number of beats, there are some differences between them due to the different styles of playing. While playing the Samhala taal, the bols are played in an open manner on a larger Madal. Its use is found in many folk and traditional songs, such as: Maruni Geet, Akashaima Heraun Ta Ho Kalo Mailo Badal, Lahanale Jurayo Ki etc.

मात्रा	१	२	३	४	५	६	७	८
बोल	ताइ	-	-	ती	ताइ	-	घिइ	ताइ

(d) Selo Taal

Selo is another rhythm used in folk music having the same number of beats as Khyali and

Samhala. This Taal also falls under the group of Khyali Taal. The 8 beats of this Taal are also divided into 2 divisions of 4 beats each. Although Khyali, Samhala, and Selo have the same number of beats, they differ from each other due to their different playing styles. Damphu is an instrument played on the Selo. It is widely used in folk and traditional songs such as Tamang Selo of the Tamang tribe and Shebru of the Sherpa tribe. Some examples of songs using Selo Taal are: Kalkatte Kaiyo Kesh Mero Bangyo, Himal Jhalala Hiule Maichyang Ramri Jiule, Chyangwa Hoi Chyangwa, Lekaka Hami Keta Ketu, Mathi Mathi Sailungema, etc.

मात्रा	१	२	३	४	५	६	७	८
बोल	धूम	-	-	-	प्राक्	-	धूम	-

12.8 Practising playing local folk instruments—melodic and percussive

Local folk instruments are made using locally available means and materials. They reflect the characteristics of a particular locality, community, or ethnicity. They are used to produce musical notes or sounds. Folk instruments are mostly used in local and folk songs. There are many folk instruments that are often used in Nepali music. We'll learn about a few instruments in this class.

(a) Sarangi (Introduction to Sarangi)

Sarangi is a very popular instrument among the original folk instruments of Nepal. This is the traditional instrument of the Gandharva caste. It is said to have been named Sarangi because it makes a melodious sound like a stork bird. The big sarangi is called Arbajo. Its voice is referred to as male, while the voice of the small sarangi is referred to as female. Since it is believed that the structure of the sarangi is made from the body of a horse, it is believed that the parts of the sarangi are also named after the parts of the horse, such as: Tauko (head), Gala (cheek), Karang (ribs), Lagam (bridle), Pet (stomach), (puchi) Ghodi (mare), etc. The uppermost part of the sarangi is called Kalash or Shir, while the tuning pegs are called Murra. The one that holds the string is called Sundari. Other parts are named Galo, Loti, Dhanu, Kammar, Chanp, etc. The hair tied to the stick



of the bow is made from the hair from horsetail. The 4 strings attached to the sarangi used to be prepared from horse intestines, but since horse intestines are not easily available today, goat intestines or parachute thread or badminton thread are used instead.

Nowadays, even metal strings are used. There is a custom of putting resin on the thread or hair that is tied to the wooden bow to produce a good sound. The wood of the sarangi is usually made from dudhekhira, tuni (Toona ciliate), paiyun, walnut, mango etc.

There is still a tradition of travelling by Gandharva musicians singing narrating the stories of heroes, martyrs of different eras, stories based on true events on the accompaniment of sarangi in our society. The Gandharva people are making it their livelihood. Nowadays, people from other castes also play sarangi and take and give various trainings. The song 'Hey Barai', 'Babale Sodhlan Ni Khoi Chhora Bhanlan' sung by famous Nepali artist Jhalakman Gandharva is considered to be a very popular song. Learn to play sarangi by following the notation given below.

आमैले सोझिन नि

(भक्तकमान गन्धर्व)

हे वरै (२)

दसी धारापो न रोए आमा (२)

याची पथाम्ला तस्विरै खिचेर

(कस्तो लेख्यो नि भावी ले

कर्म लीला खै मलाई हजुर) (२)

हे वरै

वावाले सोझान नि खोई छोरा भन्लान् (२)

रण जित्दै छन् भन्दिए (२)

आमाले सोझिन नि खोई छोरा भन्निन् (२)

रजहै खुल्यो भन्दिए (२)

दाजैले सोझान खोई भाइ भन्लान् (२)

अंशै बहयो भन्दिए (२)

भाउजुले सोध्लिन नि खोई देवर भल्लिन् (२)

खसी काट भन्दिए (२)

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ताल - भ्याउरे (६/८)

लोकगीतमा सूर वादन वा ताल वादन - बाबाले सोध्लान नि

स्थायी			
स्वर	रे रे गरे गप प गप	रे रे सा रे ग -	सा सा रेग रेसा रे सा सा - रे ग - -
शब्द	बा बा लेऽ सोध्लान नि	खोई छो रा भ न्ला न	रण जि त्वै छऽऽऽ भ नि द एऽऽऽ
स्वर	रे रे गरे गप प गप	रे रे सा रे ग -	सा सा रेग सा रे सा सा - रे ग - -
शब्द	आ मै लेऽ सोध्लिन् नि	खै छो रा भल्लि न	र ज हैऽ खु तयो भ नि द एऽऽऽ

Activity 12.13

(a) Practise "Tiriri Murali BajyoBanaima" song on sarangi or bansuri.

ताल - भ्याउरे (६/८)

लोकगीतमा सूर वा ताल वादन - तिरिरी मुरली बज्यो बनैमा

स्थायी			
स्वर	ग प छ साँ - -	- - - रे - ग	रे सा नि छ छ नि प प मे गरे ग रेसा
शब्द	ति रि स रीऽऽऽ	ऽऽऽऽ सऽऽऽ	मुर ली ब ज्योऽ ब नैऽ माऽऽऽ
स्वर	छ सा रे ग ग म	ग रे सा सा सा -	सा - - रे सा छ छ सा रे ग ग म
शब्द	ब नैऽ माऽऽऽ	ली मा या न माऽऽ	रेऽऽ होऽऽ ब नैऽ माऽऽऽ
स्वर	ग रे सा सा सा -	सा - - - - -	
शब्द	ली मा या न माऽऽ	रेऽऽ सऽऽऽ	

- (b) Look at the notation below and practise playing them on a melodic instrument of your choice.

ताल - भूयादरे (६/८)

कक्षागत गीतमा सुर वा ताल वादन

स्वायी				
स्वर	प - ग रे - सा	ध - सा प - प	प - ध सा - म	ग - ग ग - -
शब्द	टे S स्ने ध S ती	ब S स्ने ओ S त	मि S ठो हा S वा	पा S S नी S S
स्वर	ग - म म ध प	म - ग रे - म	ग - सा रे - ध	सा - - सा - -
शब्द	ये S मा टा S मा	फु ल छ फु ल छ	हा S सो जि न द	गा S S नी S S
अन्तरा				
स्वर	ग - म प - ध	प - म ग - रे	ग - म प - ध	प - - प - -
शब्द	स्वा S व ल म वी	पा ड ला हा S मा	जा S ग रि S ला	हा S S त S S
स्वर	ध - म म - म	प - म ग - रे	सा - म ग - रे	सा - - सा - -
शब्द	स S ज ना S को	बि S उ छ S नं	ह न छन ए S कै	सा S S व S S

- (c) From the given Taals of 6 beats, practice playing any local taal of your choice:

Look at the given rhythm notation and find out which one matches the taal you have learned so far and practice.

Since the saman laya , Dugun and Tigunlayas are used, it is necessary to play or recite 2 or 3 beats simultaneously within the time it takes to play or recite 1 beat.

For this, the bols or syllables of tabla or madal are grouped and each set of bols is written on a curve symbol that resembles a crescent. For instance, (धि = तकधिन्ताड) Here, the time taken for playing or reciting Ghin and the time taken for reciting or playing TaKaGhinTang should be the same.

Here, the time required to play or recite Ghin and the time required to play or recite TaKaGhinTang should be equal.

Practice it along with the song as mentioned below.

मात्रा	१	२	३	४	५	६
तबला बोल	धा	धि	ना	धा	तु	ना
मादल बोल	धि	—	ताड	तक	धि	ताड
तिगुन लय	<u>१ २ ३</u>	<u>४ ५ ६</u>	<u>१ २ ३</u>	<u>४ ५ ६</u>	<u>१ २ ३</u>	<u>४ ५ ६</u>
तबला बोल	<u>धाधिना</u>	<u>धातुना</u>	<u>धाधिना</u>	<u>धातुना</u>	<u>धाधिना</u>	<u>धातुना</u>
मादल बोल	<u>धिन्-ताड</u>	<u>तकधिन्ताड</u>	<u>धिन्-ताड</u>	<u>तकधिन्ताड</u>	<u>धिन्-ताड</u>	<u>तकधिन्ताड</u>
चिन्ह	X			0		

मात्रा	१	२	३	४	५	६
तबलामा	धा	धि	ना	धा	तु	ना
प्रकार	धा	धि	तेटे	नाना	धि	धेटे
मादलमा	धि	धि	ताड	तक	धि	ताड
तिगुन	<u>१ २ ३</u>	<u>४ ५ ६</u>	<u>१ २ ३</u>	<u>४ ५ ६</u>	<u>१ २ ३</u>	<u>४ ५ ६</u>
तबला	<u>धाधिना</u>	<u>धातुना</u>	<u>धाधिना</u>	<u>धातुना</u>	<u>धाधिना</u>	<u>धातुना</u>
मादल	<u>धिधिताड</u>	<u>तकधिताड</u>	<u>धिधिताड</u>	<u>तकधिताड</u>	<u>धिधिताड</u>	<u>तकधिताड</u>
चिन्ह	X			0		

Exercise

1. Write the answers to the given questions.

- a. Mention the importance of music in human life.
- b. "Singing, playing, and dancing are the means of achieving physical, mental, and spiritual happiness. Make this statement clear with logic."
- c. What is Saptaka/Octave? Please give examples of how you can distinguish which swara or note in the notation belongs to which Saptaka or Octave.
- d. What is thaat? Mention the number and names of thaats that are in use in modern times.
- e. Define scale with examples of major and minor scales.
- f. What is raga? Make a list of its characteristics.
- g. Give the introduction of folk songs and modern songs, then write the lyrics of any three songs you like.
- h. Compared to modern and folk music, classical music is said to be scriptural, why? Clarify with reasons.
- i. Give the introduction of Rupak Taal and Jhaptaal and give examples of any two songs or ornaments composed in these Taalas.
- j. Mention the similarities and differences between Khyali, Samhala and Selo.

Dance and Acting**13**

In Nepal, a variety of feasts, fairs, and festivals are observed. During these occasions, it is customary for people to dance and sing in accordance with their customs and traditions. Dance is a way for people to express their emotions and life experiences through the movement of various body parts and adopting various stances and postures in time with the music. Singing and dance are fundamentally governed by music. As a result, music is essential to dance. Because of this, music is regarded as a crucial component of dancing. The element that is related to dance is acting. Acting is the act of imitating a character's emotions by using various body parts, costumes, vision, posture, gestures, etc.

13.1 Introduction to folk, classical, traditional, and modern dance and their importance

Dances performed to folk songs are called folk dances and dances performed to classical songs are called classical dances. Similarly, a dance performed to modern songs is called modern dance. Dances such as Charya, Maruni, etc. which have been performed traditionally are called traditional dances. Dance is performed according to the lyrics, moods, and rhythm of the song. Dance introduces nationalism, art, culture, and tradition. It is the responsibility of all of us to protect and promote them properly. Folk, classical, modern, and traditional dances are popular in Nepal. Here is a general introduction to the popular dance in Nepal and the way of dancing.

Activity 13.1

You should also discuss popular folk, classical, modern, and traditional dances you know and practice those dances in class with the aid of images or videos.

(a) Folk Dance

A folk dance is a dance performed with independent body postures to folk music. In folk dance, the cultural traditions and customs prevalent in folk life are presented. It is also a collective expression of the joy and beauty of folk life. The cultural forms of all the people are reflected in the folk dances which are associated with their place, costumes, religion, customs, and culture. Popular folk dances in Nepalese culture include Jhyaure, Khyali, Kaura, Maruni, Bhojpuri, Maithili, Sherpa, Newari, Tamang, Tharu, etc. Folk dance is characterized by a strong emphasis on makeup, facial expressions, and costumes. It has its own originality and rules based on customary conduct. Folk dance embodies the national identity and should be passed down from generation to generation without deviating from its original style.



Activity 13.2

Watch a Maruni dance video and practice the postures used in it and perform it in class.

(b) Classical dance

Classical dance is a dance performed in line with the melody, rhythm, tempo, and beats of music, and uses acting to express the moods and emotions of the song through various body postures (mudras) and movements. Classical dance is performed with prescribed music and body postures (angamudra), following the rules of the scriptures. In this, singers, instrumentalists, and dancers all should have sound knowledge of the various rules and disciplines of classical music and acting developed from the Guru Parampara. Bharata Natyam, Kathak dance, Charya dance, etc. are examples of classical dance.

Activity 13.3

Watch classical dance videos. Practice the postures used according to your ability and demonstrate them in class.

(c) Modern dance

When a creator adds something new to folk or classical dances, or when an old tradition is modified and presented in a new style, it becomes a modern dance. Modern dances are dances that do not have stability and keep changing with time. Such dances are always evolving and presented in new forms to suit the needs of the nation, time, circumstance, and audience.

Lyrical Hip-hop, Lyrical B-boying, Lyrical Contemporary, etc. are examples of modern dances. These dances are performed focusing on the meaning of each word.

Activity 13.4

Watch a popular modern dance on social media, learn the dance styles used in it, discuss it with your friends, and perform the dance in class.

(d) Traditional dance

Dances that are a mixture of classical and folk dances are traditional dances. It uses traditional music and postures. Bhairava dance, Nrisimha dance, Sorathi, Ghatu etc. are examples of traditional dances. Such dances are influenced by ethnic costumes, religion, and culture. The tradition of performing religious rituals holding a belief in divine powers is also found in traditional dance.

13.2 Postures (Mudra)

When human emotions were expressed through sound as a medium, language, poetry, folk tales, dialogues, etc. were created. When these emotions were expressed through different gestures and movements of the body, dance came into existence. It is believed that different postures were created when expressing happiness and sadness, and when these postures were used artistically, dance forms were developed. Various hand gestures are used in dance and acting, which is called Hasta Mudra. The mudra performed by both hands is called 'Samyukta' hasta mudra (joint hand gestures), and the mudra performed by only one hand is called 'Asamyukta' hasta mudra (disjointed hand gestures). Some of the mudras are mentioned underneath.

Identification and use of Hasta Mudras

(a) Asamyukta (Disjointed hand gestures)

i. Pataka

This hand gesture is formed by keeping all fingers straight and together, and bending a thumb so that it touches the base of the index finger. It is also called Abhaya Mudra. This mudra is used in dance to give blessings, take an oath, forbid something, close the door, etc.



ii. Shikhar

If four fingers are bent from the Musthi Mudra and the thumb is raised up, then the Shikhar posture is formed. This mudra is used to denote Kamadeva, holding a bow, asking questions, hugging, etc.



iii. Soochi

When the index finger is raised upright, this mudra is formed. This mudra is used to show the chakra, show the locks of hair, indicate something, etc.



iv. Alpadma

On spreading all fingers yet ending them slightly forms Alpadma mudra. It is used to denote a full-grown flower (lotus), to ask a question, explain beauty, show one's village surroundings, etc.



(b) Samyukta (Joint hand gestures)

i. Kapot

When two hands are joined together bending the fingers slightly, this mudra is formed. This mudra is used as a humble greeting, a sense of unity, obedience, respect, peace, respectful acceptance, or acceptance of something, etc.



ii. Utsang

This mudra is formed when both hands are crossed and is brought below the shoulder without touching each other. This mudra is used to denote hug, shyness, ornament, etc.



Activity 13.5

Watch an audio-visual recording of the dance, observe how the above-mentioned hand gestures are used, learn by discussing it with friends, and present it on stage or in class.

13.3 Introduction and Practice of folk dance

Folk dances are dances performed on local folk songs and instruments. Kauda, Jhyaure, Maruni, Mayur, Sorathi, Dhime, Tamang, Bhojpuri, Maithili, Jhangad, Tappa, Deuda, Hudkeli, etc. are local dances.

(a) Introduction to Jhyaure dance

Jhyaure dance is a complement to Nepali culture. It is especially based on the theme of love. It is very popular among young boys and girls because young people perform this dance to express their happiness when they meet their beloved. The Jhyaure dance can be danced at any time and on any occasion. It is also a very interesting and jolly dance. In this, dance is presented with acting based on the theme of the union or separation of lovers. Jhyaure is danced in almost all parts of Nepal. Jhyaure song and dance are a means of entertainment in the Gandaki region of western Nepal, so Jhyaure dance has a special trend in this region.

Activity 13.6

मात्रा	१	२	३	४	५	६
बोल	घिं	-	ती	ना	घि	ना

- (i) Practicing the dance in Jhyaure Taal by clapping hands:

In folk music, this rhythm is specifically played in jhayuresongsso this rhythm is called jhyaure taal. This rhythm is used in popular songs such as: Panko Paat Maya Timlai Samjhanchhu Dinko Raat, Balla Paryo Nirmaya Makuri Jaalaima, Charile Kafal Tipyo Khanalai Ho Ki Khwauna, Yo Nepali Shir Uchali, etc.



- (ii) After watching the audio-visual material of the Jhyaure dance popular at the local level, practice dancing with the assistance of the teacher.

(b) Introduction to Sorathi dance



Sorathi is a popular dance in the mid-hills of Nepal. Sorathi is the main dance song of the Dura, Kumal, Rai, Gurung, and Magar ethnic groups around Gandaki, Lumbini, and Karnali Pradesh. There are different opinions about how the name Sorathi came to be; for example, it is said that the name Sorathi came from being danced for sixteen days. It is also said that Sorathi is called Sorathi because Queen Sorathi is praised in the song. While singing sorathi, Madal-player does the makeup of the dancing girls and, also uses their own melody to awaken Saraswati in the girls who dance sorathi.

When singing sorathi, if tukka and charan are sung more or less than required, the rhythm of madal will be reversed. Along with Madal, Sorathi songs are sung in combination with mujura, cymbals, Kartal, bansuri, and other instruments. Its characters dance in traditional costumes. Men's costumes include bhoto, kachhad, istakot, feta, top or kundal on the ears, rittha garlands around the neck, etc., while women's costumes include chaubandi choli, ghanghar, karmu, patuki, pachhyaura, gold jantar, naugedi mala, gold bangles, khankar on the ankles, etc.

Activity 13.7

- (i) Practise dancing in Laami and Chhoti Tal while clapping your hands.

Laami Taal has 14 beats. It has 4 vibhags or divisions. It is believed that this rhythm was specifically created to be played in Sorathi songs. Laami taal is played slowly and in a delayed rhythm, while chhoti taal is played at a fast pace after rounding off the taal. Chhoti Tal has 8 beats and 2 divisions. The bols of the larger madal played in Laami Tal and Chhoti Tal are written as follows. Practice the dance with the help of the teacher.



Laami Taal

मात्रा	१	२	३	४	५	६	७	८	९	१०	११	१२	१३	१४
बोल	भ्याम्	-	धीम्	भ्याम्	धीम्	ताम्	फत्	फत्	फत्	ताम्	फत्	धीम्	ताम्	धीम्

Chhoti Taal

मात्रा	१	२	३	४	५	६	७	८
बोल	धीम्	ताम्	फत्	-	फत्	ताम्	धीम्	-

- (ii) Collect and observe the audio-visual material of local Sorathi dance popular at the local level and practice with the help of the teacher.

(c) Introduction to Selo dance

The Selo dance is the identity of the Tamang people. Among many ethnic groups in Nepal, the Tamang people have their own traditional language, religion, customs, and culture, establishing a distinct identity. Among these traditions and cultures, Selo is a very important cultural dance of the traditional Tamang society.

Tamang Selo is a short and cheerful song sung in the rhythm of Damphu. Both Damphu and Selo are complementary to each other. Selo without Damphu and Damphu without Selo are like poetry without Rasa. During various festivals and occasions like Sonam Lhosar and Buddha Purnima, Tamang people perform the Selo dance to the rhythm of Damphu.

Activity 13.8

(i) Practise dancing to the Selo beat.

While clapping to the rhythm of traditional Tamang Selo, practice moving the body parts to the beats of Selo.

मात्रा	१	२	३	४	५	६	७	८
बोल	धूम	-	-	-	प्राक	-	धूम	-

- (ii) Kalkatte Kaiyo Kesh Mero Bangyo, Himal Jhalalal Hiunle Maichyang Ramri Jiule, Chyangba Hoi Chyangba, Lekaka Hami Keta Ketu, Mathi Mathi Sailungema, etc. songs have used this beat. Practice dancing by watching these songs on social media or by collecting audio-visual material of Selo dances in your village.

(d) Introduction to Khyali Dance

Khyali dance songs are more prevalent in the Western region than in the Eastern part of Nepal. It is famous among the Gurung, and Magar, castes living around Gandaki Pradesh in the western region. Khyali is the main root for the different rhythms of folk songs. It is called Khyali Geet or Naach because it is sung and danced by playing the rhythm of Khyali. Various mythological songs, Sorathi songs, historical songs, etc. are sung and danced in Khyali.

The expressions of Khyali songs are mostly laughter, teasing, and retorting among young men and women. These songs are sung in halves of 4 or 8 beats. The Maruni dance, commonly known as Maruni, is also performed in Khyali.

Activity 13.9

- (i) Practise Khyali and Samhala rhythmalong with dances:

Khayali is a popular rhythm of 8 beats. There are many folk and traditional songs and dances in this taal, such as GaunchhaGeet Nepali, ResamFiriri, SimsimePanima, etc.

Rhythm and beats of Khyali Taal

मात्रा	१	२	३	४	५	६	७	८
बोल	धि	-	न	ती	न	क	धि	ना

- (ii) Samhalais another taal used in folk music with the same number of beats as Khyali. The 8 beats of this taalare also divided into two divisions of4 beats each. While playing the samhalaatal, the bol is played in an open manner on a large madal. It is used in many folk and traditional songs and dances, such as Maruni Geet, AkashaimaHeraun Ta Ho Kalo Mailo Badal, Lahanale Jurayo Ki, etc. Practice dancing by observing these songs on social media or by collecting audio-visual materials of Selo dances in your village.

Rhythm and beats of SamhalaTaal

मात्रा	१	२	३	४	५	६	७	८
बोल	ताइ	-	-	ती	ताइ	-	धिइ	ताइ

13.4 Introduction and practice of acting

Acting is a performing art in which the actor presents the incidents from society on stage with all the necessary materials in accordance with the rules for exhibiting art. The character conveys the emotions of the subject using body posture, language, costumes, and jewelry in relation to the event through acting. Acting is presented by imitating the character, behavior, and lifestyle of the subject as if it were real.

Activity 13.10

Acting Practice

Divide the class into different groups. As a group, search for events or stories that happened in your community or village and make a screenplay related to them. For that, collect the various dialogues used and the costumes worn by those characters.

Based on this, do acting rehearsals and perform during the cultural program held at the school.

Importance of drama and acting

Performing drama and acting helps in personality development. It also helps people who are interested in the field of art to enter this field in the future. Drama and acting develop people's skills in speaking, thinking, singing, dancing, and understanding the situation of their village. It helps in expressing the reality of society, and the problems of family, community, and school through art.

Activity 13.11

Choose an event that happened in society or a story in a textbook. Discuss with your friends and present the art of acting by selecting the characters, dialogues, and costumes required by the story setting the stage.

Types of Acting

Abhinaya or acting is classified into four types namely Vachik, Angik, Aharya and Satvik which are explained below:

(a) Vachik

Acting or expressions presented through the use of speech are called Vachik or Bhashik Abhinaya. In this, the characters express their feelings through speech or dialogue. A sad character speaks slowly, while an excited character speaks quickly. In the same way, it is spoken with a shout to express anger, while when expressing a normal situation, it is spoken in a calm manner.

(b) Angik

Presenting the action of a subject or a character through body language or body gestures is called Angik Abhinaya. In Angik Abhinaya, acting is done through body movements without the use of words. That is why physical gestures are important in this.

(c) Aharya

Acting in which the artist is decorated with make-up, clothes, ornaments, etc., according to the subject or character that is to be acted, is called Aharya. For instance, the act of performing in the Bhailo song wearing gunyu choli, patuki on the waist, thread on the hair, anklets, earrings, pote, shirful, etc., is Aharya abhinaya.

(d) Satvik

Translating other people's emotions into acting is considered Satvik abhinaya. It has 8 types. The expression of feelings like surprise (Stambha), fainting (Pralaya), change of voice (Vaishvarya), changes in the face (Vaivarna), body trembling (Vepathu), excitement (Romancha), the flow of tears (Ashrupat), sweating (Pasina), etc. from the inner mind is considered Satvikabhinaya.

Activity 13.12

Have a group of friends prepare a dialogue and present a drama about a topic you like or the feeling that school is a peaceful zone.

Character acting

Character acting is the presentation of acting that imitates a person, character, or subject. For this kind of presentation, a suitable character and appropriate costumes are selected, and preparing the dialogues in colloquial language, acting is performed. With the help of various social networks, one can practice modeling or imitating any character by observing audio-visuals related to acting.

Activity 13.13

Prepare an act based on a local incident or from a drama or story in any 8th-grade textbook. Select the characters, prepare their dialogue, and their costumes, and perform.

Exercise

1. Answer the following questions.

- a. Introduce dance and express your opinion about the effect it has on human health.
- b. Give a brief introduction to popular folk, modern and traditional dances in Nepal.
- c. What are Mudras? Define Samyukta and Asamyukta Mudras and describe two mudras from each category with the help of pictures.
- d. Introduce Sorathi dance and write about the dress worn by men and women in it.
- e. Mention the similarities and differences between the rhythms used in Khyali and Selo dance.
- f. Justify the statement that dance and acting maintain the physical and mental balance of people with arguments.