

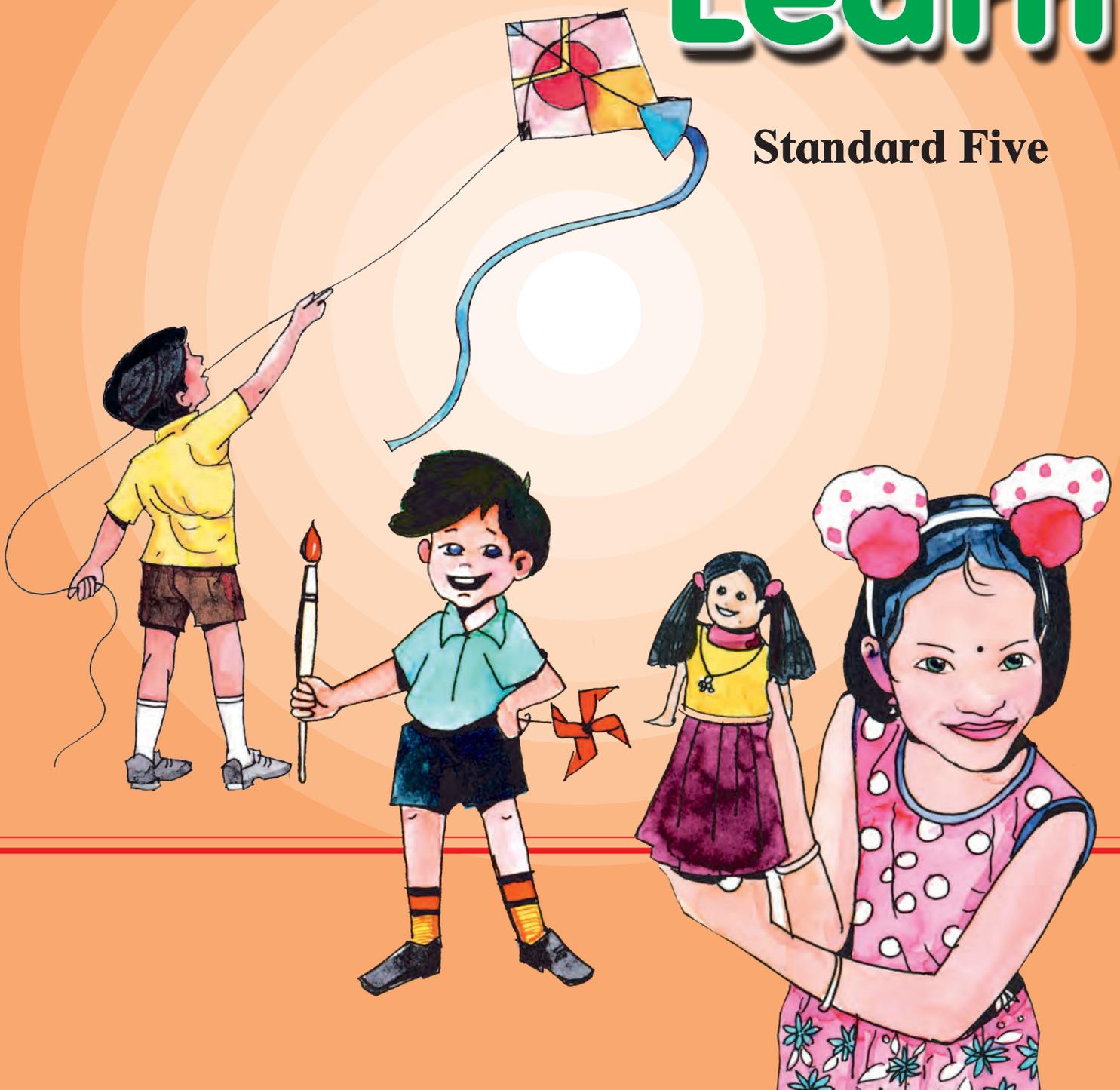
Play



Do

Learn

Standard Five



The Coordination Committee formed by G.R. No. Abhyas - 2116/ (Pra.Kra.43/16) SD - 4 Dated 25.4.2016 has given approval to prescribe this textbook in its meeting held on 29.4.2022 and it has been decided to implement it from the Academic Year 2022-23.

Play

Do

Learn

(Health and Physical Education,
Work Experience, Art Education)

Standard Five



**Maharashtra State Bureau of Textbook Production and
Curriculum Research, Pune.**



S5J9B9

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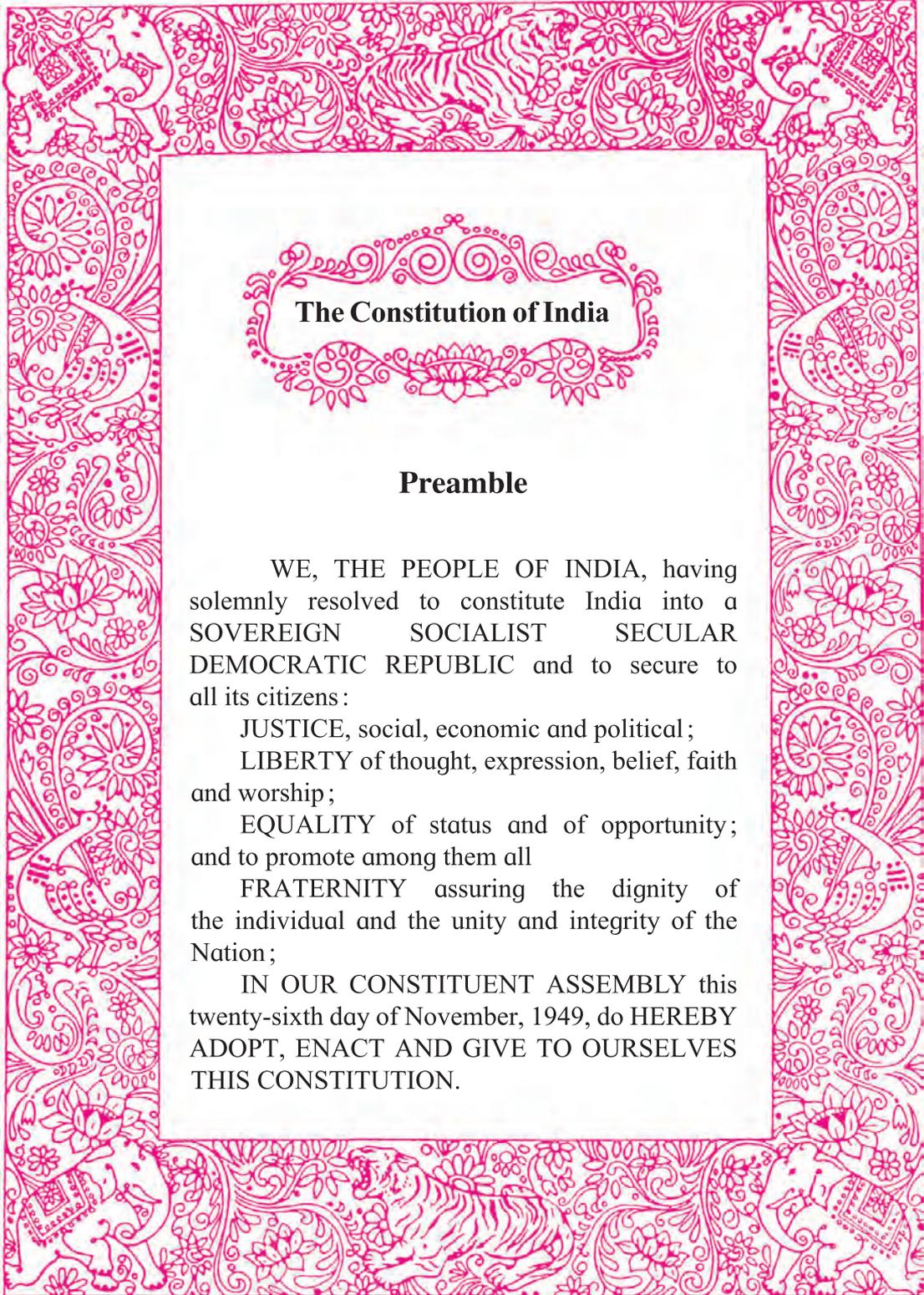
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The Constitution of India

Preamble

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

JUSTICE, social, economic and political ;

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

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

FRATERNITY assuring the dignity of the individual and the unity and integrity of the Nation ;

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

NATIONAL ANTHEM

Jana-gana-mana-adhināyaka jaya hē
Bhārata-bhāgya-vidhātā,

Panjāba-Sindhu-Gujarāta-Marāthā
Drāvida-Utkala-Banga

Vindhya-Himāchala-Yamunā-Gangā
uchchala-jaladhi-taranga

Tava subha nāmē jāgē, tava subha āsisa māgē,
gāhē tava jaya-gāthā,

Jana-gana-mangala-dāyaka jaya hē
Bhārata-bhāgya-vidhātā,

Jaya hē, Jaya hē, Jaya hē,
Jaya jaya jaya, jaya hē.

PLEDGE

India is my country. All Indians
are my brothers and sisters.

I love my country, and I am proud
of its rich and varied heritage. I shall
always strive to be worthy of it.

I shall give my parents, teachers
and all elders respect, and treat
everyone with courtesy.

To my country and my people,
I pledge my devotion. In their
well-being and prosperity alone lies
my happiness.

PREFACE

Dear little friends!

Welcome to you all in Standard Five. We are happy to place this book **‘Play, Do, Learn’** in your hands. After completing Standards One to Four you have now entered the first class of the secondary school. You are now grown up. You enjoy reading and writing. You like to take responsibility for a task. You enjoy conversations.

The book offers everything that you like to do. There are many games and many other things that you can do or make. You will learn about singing, playing musical instruments, play acting, and dance. You will also be introduced to various animals, birds, gardening, spinning yarn etc.

With the help of this book you will be able to do many things of your interest. At the same time, this book will make you aware of your responsibilities such as using water carefully or facing a crisis without panic. You must make a habit of doing your daily chores yourself and help the needy whenever you can. We are confident that you will learn all this, with the help of the book.

Try out the following activities – drawing yarn using a spindle, preparing pots for flowering plants, clay modelling, some tailoring and making toys and dolls. If you develop your skills in these activities, you will even be able to earn some money.

You will also enjoy obtaining more information using the QR Codes. Let us know your favourite parts of this book. And what more you would like us to include in it. We are sure that you will like the book very much.

Our heartfelt good wishes for making progress in your education.



Pune

Date : 5 January 2022

Indian Solar Year :

Poush 15, 1943

(Krishnakumar Patil)

Director

Maharashtra State Bureau of Textbook
Production and Curriculum Research, Pune.

For Teachers

We are presenting the textbook named **“Play, Do and Learn”** for Standard Five which is a combination of three subjects : **Health and Physical Education, Work Experience and Art Education**. The book has close relation to Language, Mathematics and Environment Studies just like these three subjects. It will enhance the beautiful multitude which will give the students many enjoyable experiences. The attempts of giving the best projects will make their education life-oriented and prove to be useful throughout their lives. The teachers will facilitate the completion of the projects using their creativity and given instructions. The concept of Playful Learning can be achieved by taking aid of the resourced parents in certain fields, other teachers, the players, the businessmen, the actors, the craftsmen as well as the modern aids of Information Technology.

The mental perspective of the students of Standard Five has changed. There is rapid development in their thinking power, understanding, inquisitiveness, daring to express opinions and inclination toward special hobbies. The projects, pictures and the instructions for the teachers are planned considering all these aspects. The prime emphasis is on reading and writing. The related other topics such as pictures, handwriting, clay work, production of aesthetic objects, water literacy, disaster management, productive projects, road safety , information technology, occupation oriented topics, health, games and farming are included in the book. All these topics are closely related to the lives of the students and are quite interesting for them.

The book is meant for the children, so the objectives, syllabus and all the projects are not included. The Handbooks for the Teachers published by the Textbook Bureau will guide the teachers. The handbooks are available in the Depots of the Textbook Bureau.

In order to bring the children with special needs into the mainstream, the attempts are made to make the book meaningful, interesting and useful , the features such as arrangement of the topics, guiding instructions for the teachers and parents, the section ‘My Action’ in order to let the students express themselves are included. Such actions can be adapted by focusing on the interest of the students, their creativity and abilities.

Though Health and Physical Education, Work Experience and Art Education, these three subjects are included in one book, the projects, syllabus and the evaluation will be planned as per allotted periods. These subjects will be combined with other subjects. Have flexibility in the projects by considering the place, time and available resources. The classroom arrangement and the technology can be used in a creative manner. Have Continuous Comprehensive Evaluation by deciding justified criteria to achieve the results of the teaching learning process. Be more considerate to the students’ with special needs.

Most of the teachers are enthusiastic and strive hard to implement the educational values in the students by having various projects. Send such informative videos to the Textbook Bureau . Your creativity, innovation and constitutive instructions will definitely be considered worthy.

We expect the acceptance of the textbook **“Play, Do and Learn”**.

Best wishes for all.

Play, Do, Learn Subject Committee and Study Group

Textbook Bureau, Pune

Play

Learning by Playing

Do

Learning by Doing

Learn

Learning by Art

Play, Do , Learn - Standard Four - Learning Outcomes

Subject	Units	Learning Outcomes
1	Play	1. Health <ul style="list-style-type: none"> Children learn and understand some health related good habits and follow them. Get proper information related to playgrounds.
		2. Different kinds of movements and perfect postures <ul style="list-style-type: none"> Are able to maintain proper postures and practise different kinds of movements.
		3. Games and Races <ul style="list-style-type: none"> Take interest in different types of games Participate in different types of games Participate in various races.
		4. Skill-based Projects <ul style="list-style-type: none"> Practise all the skill-based projects and try to get mastery.
		5. Physical Exercises <ul style="list-style-type: none"> Activate the joints and muscles by proper physical exercises.
2	Do	1. Need-based Projects <ul style="list-style-type: none"> Water Literacy Disaster Management <ul style="list-style-type: none"> Make a list of industries in the surroundings and speak about them. Understand the importance of garbage/ waste management. Play the role of volunteer in the local celebrations and festivals. Understand the methods of measuring water and rainfall. Get introduction of the methods of transporting water. Understand the measures to reduce the severity of the effects of natural disasters.
		2. Interest-based Projects <ul style="list-style-type: none"> Make crafts from the available materials in the surroundings according to the activities of interest.
		3. Skill-based Projects <ul style="list-style-type: none"> Create skillful somethings that are related with the needs and the requirements of the society.
		4. Voluntary Projects Production-based Projects • Food, Clothing and Shelter <ul style="list-style-type: none"> Learn basic production – related skills and take part in projects that help in earning some money. Participate in the activities based on food, shelter and clothing.
		5. Field of Technology, Road Safety <ul style="list-style-type: none"> Understand different uses of the computer and use some applications in the computer. Understand the rules of the transport.
		6. Other Fields <ul style="list-style-type: none"> Understand other uses of the pet animals apart from milk.
3	Learn	1. Pictures <ul style="list-style-type: none"> Practise of drawing different shapes using various types of lines. Understand the importance of background in the picture, draw picture from memory. Draw picture with imagination. Make designs in various outer shapes. Learn block printing using the method of spray painting. Learn to prepare and use stencils. Understand the features of collage. Prepare frames and greeting cards using the technique of collage. Practise specific shapes for copywriting. Make sketches of natural objects and manmade objects.
		2. Sculpture <ul style="list-style-type: none"> Make square block and rolls of kneaded clay. Make various types of patterns, designs, toys and objects with the help of rolls of clay. Make paper modelling from available materials by using his imagination.
		3. Singing <ul style="list-style-type: none"> Practise swaralankaras. Get introduction of Bhoo Raga.
		4. Play Instruments <ul style="list-style-type: none"> Get acquaint with various wind instruments. Get information about musical instruments used for background music.
		5. Dance <ul style="list-style-type: none"> Tell types of dance. Practise hand gestures. (Hastamudras)
		6. Drama <ul style="list-style-type: none"> Acknowledge the art form of dance. Get information of classroom theatre, and stage-design. Make presentation with actions.

The Constitution of India

Chapter V A

Fundamental Duties

ARTICLE 51A

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

- (a) to abide by the Constitution and respect its ideals and institutions, the National Flag and the National Anthem;
- (b) to cherish and follow the noble ideals which inspired our national struggle for freedom;
- (c) to uphold and protect the sovereignty, unity and integrity of India;
- (d) to defend the country and render national service when called upon to do so;
- (e) to promote harmony and the spirit of common brotherhood amongst all the people of India transcending religious, linguistic and regional or sectional diversities, to renounce practices derogatory to the dignity of women;
- (f) to value and preserve the rich heritage of our composite culture;
- (g) to protect and improve the natural environment including forests, lakes, rivers and wild life and to have compassion for living creatures;
- (h) to develop the scientific temper, humanism and the spirit of inquiry and reform;
- (i) to safeguard public property and to abjure violence;
- (j) to strive towards excellence in all spheres of individual and collective activity so that the nation constantly rises to higher levels of endeavour and achievement;
- (k) who is a parent or guardian to provide opportunities for education to his child or, as the case may be, ward between the age of six and fourteen years.

CONTENTS

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Do

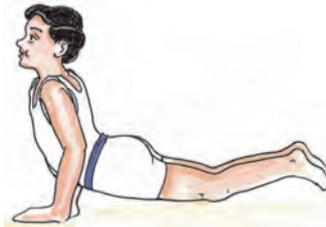
Unit	Page
1. Compulsory Activities	
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Learn

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1. Health

1.1 My Daily Routine



1. Get up early everyday.
(Write all that you do next.)

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Special Features of Daily Routine

1. I feel fresh whole day as I exercise every morning.

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◆ Discuss statements made under in Daily Routine and special features based on it. Appreciate significant points. Focus on the importance of adopting an active lifestyle.

1.2 Diet

Generally, our diet consists of carbohydrates, proteins, fats, vitamins, salts, minerals and water. All of these make our diet a balanced diet.

My diet

Type of food : Rice, Curry, Bhakari

Grandmother, Grandfather, Mother, Father, Brother and Sister are having food together. Here is the conversation that takes place.

Grandfather : Wow! Today the curry has a special taste!

Grandmother : It is prepared from a mixture of all the pulses.

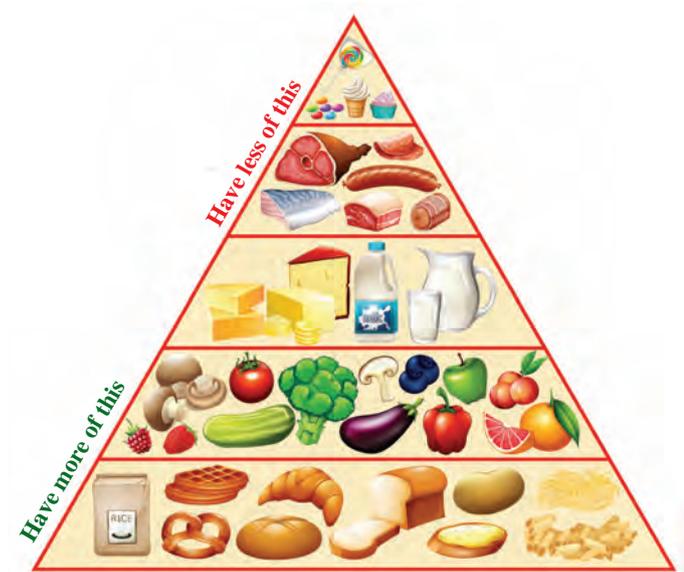
Father : That's why it's so tasty?

Brother : Not only tasty, but it has several necessary vitamins, carbohydrates and proteins required for our body.

Mother : How do you know about it?

Sister : Oh Mummy, we learn this in school. It is called a balanced diet.

A balanced diet is important for a healthy and strong body. Proteins, carbohydrates, fats, vitamins, minerals, salts, fibre and water are the key ingredients of a balanced diet. Our body gets required energy from it to grow and develop.



My Activity

Make a list of grains, fruits, vegetables, leafy vegetables, vegetables grown in the wild and the fruits that you eat.

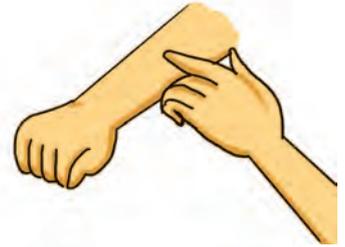
- ◆ Inform students about the importance of ingredients in the food items and their function. Emphasize the need to eat seasonal vegetables and fruits. Discuss eating habits of the students and appreciate the good ones.

1.3 Personal Hygiene

(A) Importance of Physical Cleanliness

Write about the need to clean our body parts.

Skin : Daily bathing makes our skin clean and healthy.



Ears :



Nose :



Teeth :



Hands :



Hair :

Eyes :



◆ Tell the importance of personal cleanliness. After due discussion ensure that the students learn to be responsible for personal as well as environmental cleanliness.

1.4 Rest and Sleep

Rest and sleep : We get tired after physical exercise. We need to rest to revitalize our body. Rest is our body's essential need. After sound sleep, the tiredness goes away, we feel enthusiastic and energetic and get new energy for more work. Sleep is a must for our body, but we need to keep some things in mind. Afternoon sleep is responsible for obesity, hence we should avoid sleeping in the afternoon. We should avoid sleeping immediately after dinner also.



1.5 Good Habits



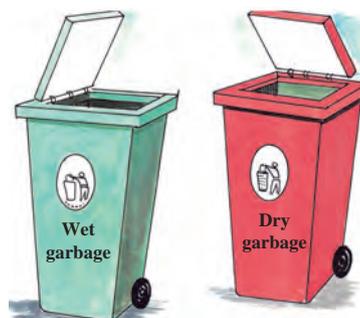
Use facial masks.



Avoid eating food in open places or uncovered food.



Use water responsibly.



Manage garbage properly.

My Activity

List your good habits.

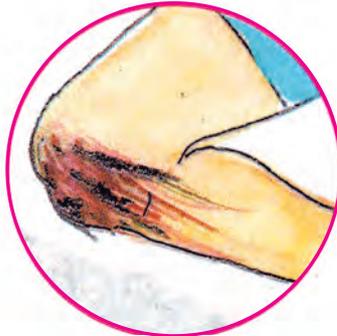
- ◆ Tell the importance of exercise, rest and sleep in human life.
- ◆ Inform about the ill effects of bad habits.

1.6 First Aid

First aid is the first and immediate help given to a person who is injured or has met with an accident even before a doctor's help can be availed.



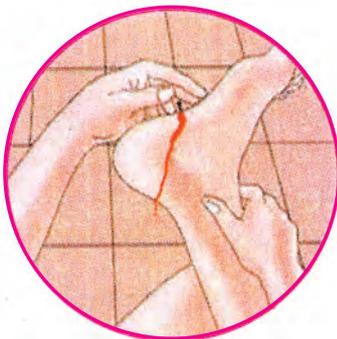
cut



bruise



twist



prick



first aid box



blunt trauma

- Observe the above images and tell in the class what first aid you will provide.

1.
2.
3.
4.
5.

My Activity

Observe the above pictures and collect information about required first aid.

Learn about the things in the first aid box and their uses.

- ◆ Have a discussion about the first aid materials required, and their uses/how to use them. Give necessary guidance. Inform the students about school first aid box and how to use the things in it.
- ◆ If possible, visit a nearby Primary Health Centre with students.

2. Various Movements

2.1 Basic Movements

Basic movements are developed through physical education. They help the person to gain strength and to develop some useful skills. This enables proficiency in playing various sports.

Given below are some basic movements as samples. Practice them.

Movements performed on the spot	Movements that involve change of place	Movements done with a partner	Movements performed with props
Bend	Walk	Pull	Throw
Turn	Run	Push	Knock
Twist	Jump	Grab	Catch
Move	Hop	Carry on one side	Kick
Balance	Skip	Carry on back	Bounce ball
Stretch	Brisk walk	Run to catch	Stop ball
Swing	Front roll	Carry	Aim
Jump	Back roll	Balance	Hit the ball back
Sit	Giant stride walk	Make a pyramid	Hit the ball with the head
Sleep	Pull		Roll the ball
Move body parts	Slide		

New game created using the movements given above

Name of the game

Rules of the game

.....

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My Activity

List new possible games using the given movements in your notebook. Prepare the rules of the new game and play with your friends.

- ◆ Give information and practice the above movements. Initially, practice various movements. Encourage them to innovate and prepare a new game using the given movements. Guide them to create a new game and play it skilfully.

2.2 Drill Parade

Till now we have studied orders like Attention, Stand at ease or At ease, Squad Halt, Slow March, Quick March, Right Turn, Left Turn, About Turn, column Right/ Left, Forward and Right / Left salute in Drill Parade. This year, we shall study and practise walk to the left, walk to the right, two feet forward, two feet backward and Triple File Bun. Let us get familiar with Blank File technique and Left direction.

1. Walk to the right

Order : Squad, walk one/two/three/four steps to your right

Count : Count the numbers to move to the right as per your steps to the right.

For example : For two steps count 'One-Two' , 'Two-Two'

Requirement : To move the squad to the right up to 12 steps. (But 4 steps at a time, up to three times only. For more than 12 steps, move to your right and 'Quick March'.)

Action : When you get 'Move to the Right' command, – on the count of 'one' put your right foot one foot away to the right.

On the count of 'Two', take left leg close to the right one and take 'Attention' position.

'Two-two', 'Three-Two', 'Four-Two'. At every count of 'Two' bring left foot close to the right foot.

2. Walk to the left

Order : Squad, to your left, 1 / 2 / 3 / 4 steps

Count : Count the numbers to move to the left as per your steps to the left. For example: For Two steps, count 'One-Two', 'Two-Two'.

Requirement : To move the squad to the left up to 12 step. (But 4 steps at a time, up to three times only. For more than 12 steps, move to your right and do 'Quick March'.)

Action : When you get 'Move to the left' order, do all the actions like Move to the Right, but to your left. Similarly, do the activity of 'Walk to the forward', and 'Walk to the backward.' Everytime do the action to your left.

◆ Explain the parts of Drill Parade with some demonstrations.

◆ Inform the students about March two steps, two steps backward, make three files, blank file as well as 'Right Direction'.

2.3 Small Games

Small games can be played using different basic movements and sports skills. You can innovate and create a new game using limited props or without any prop.

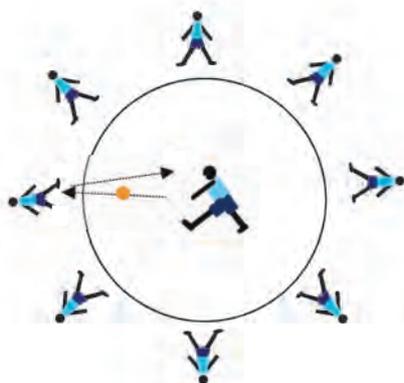
Are you familiar with any of these small games? Collect information about such small games, play and enjoy them.



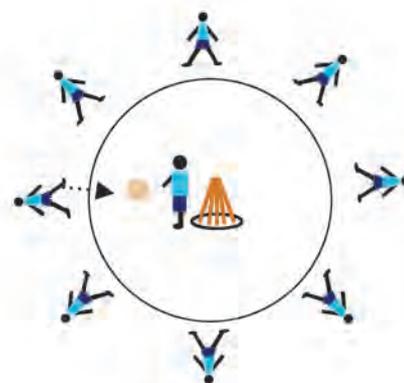
Small-board games



Tug-of-war



Catching the ball



Dog and the bone
(Guarding the object)



Stick polo



Hitting the ball

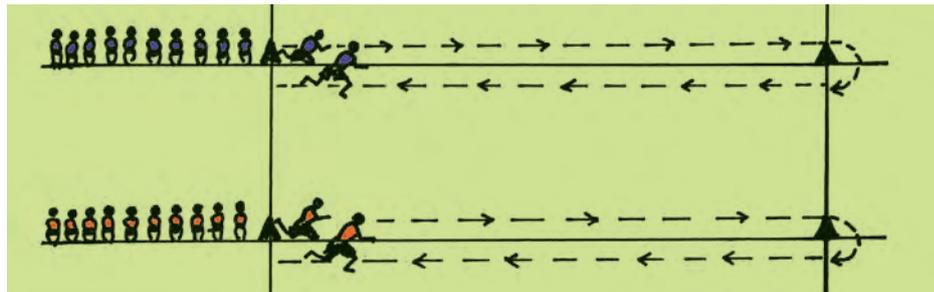
- ◆ Encourage the students to innovate and create new games using available props based on different movements. Focus on the habit of following the rules while playing. Pay attention to safety while playing. Use the book 'Small Games' published by Textbook Bureau (Balbharati), Pune to get more information.

2.4 Races

Game : Take the ball – throw the ball

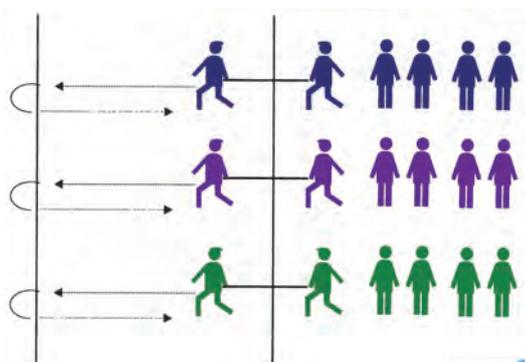
Prop : balls (Numbers to be decided according to the groups), One posts for each group

Movements : Throw, Catch, Run

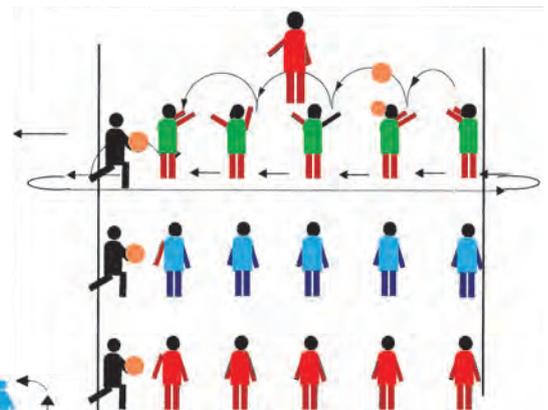


Action : Two teams stand each in single file. Two players in the front run to the post throwing the ball to each other all the way, take a U turn at the post and return the same way. They will pass the ball to the next pair and stand last in the line. The next pair will carry the ball by throwing, catching and running like the first pair. Repeat till all pairs have had their turn. In the end, one student will take the ball in hand and stand at the post. The team whose player reaches the post first will be declared the winner. Congratulate the winning team.

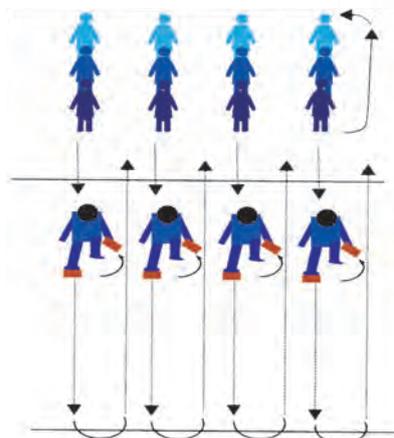
Race : Props



Tank race



Passing the ball race

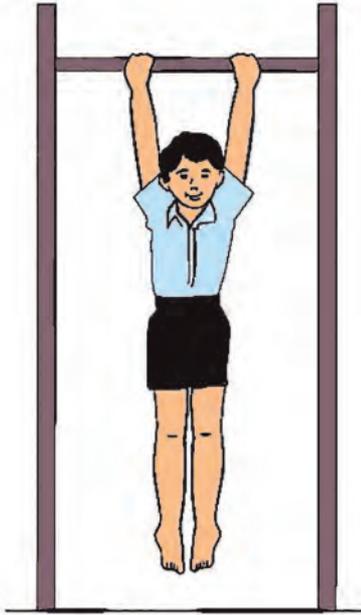


Brick walk race

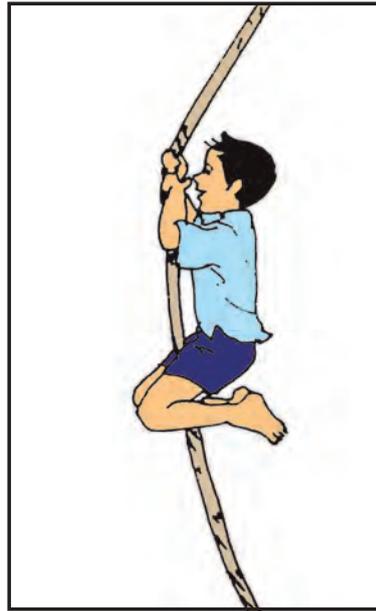
- ◆ The races described above are given as samples. Select some movements and plan other such races. Explain the rules of the game to the students and ask them to focus on the rules and their own safety.

3. Skill-based Activities

3.1 Gymnastics



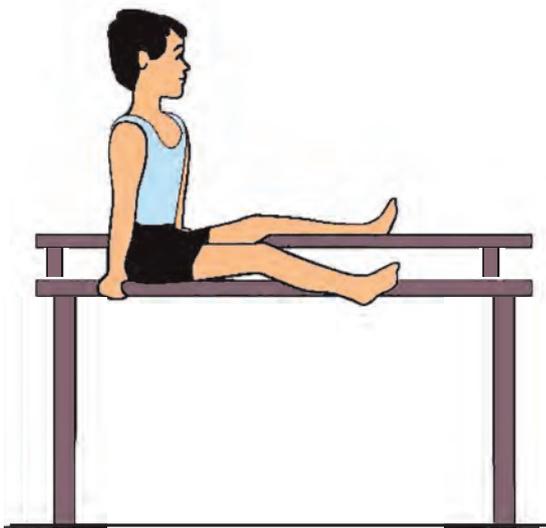
Swing on Single Bar



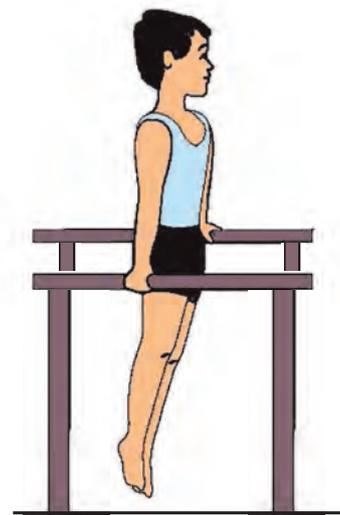
Hang from the Rope



Leapfrog



Sit on the Parallel Bar



Swing on the Parallel Bar

◆ Do the above activities under the supervision of the teacher. Take care of your safety. The single bar or the rope should not be too high above the ground. Use a soft mat or soil below.

3.2 Athletics

Competitions such as running, throwing and jumping go under the Athletics Sports.

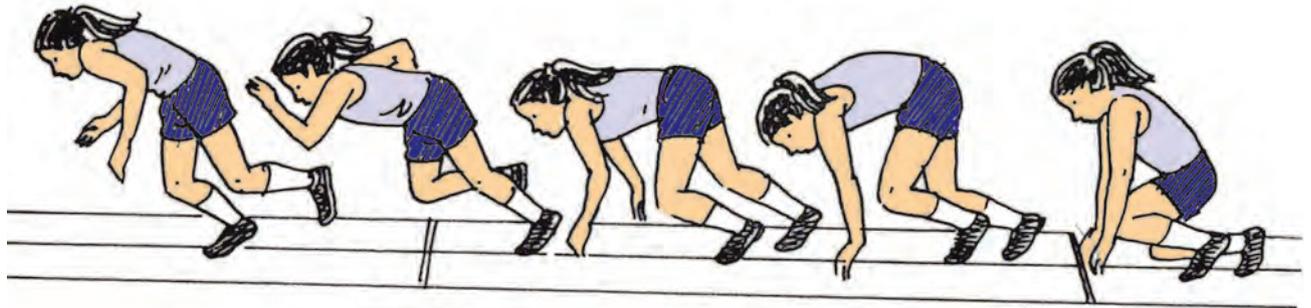
The running races are of Short Distance, Medium Distance or Long Distance. There are Relay and Hurdle races as well.

Throwing includes Javelin, Shot Put, Discuss and Hammer Throw.

There are High Jumps, Long Jumps, Triple Jumps and Pole Vault under jumping category.

To take a start for a running race, you take one of the two positions given below.

Start : At the sound of the gun whistle or clapper start running at full speed. Use quick and short steps, moving arms and legs in opposite directions to each other. Keep a forward lean in the direction of the run and increase speed and stride length.



Technique : Keep in mind some tips while running.

1. Run straight.
2. Keep a forward lean.
3. Move your arms back and forth from the shoulder. Don't move arms sideways.
4. Try to push back at the ground while running.
5. To take longer steps lift the knees as high as possible. Also take bent leg as far back as possible.

End : The maximum speed attained as you approach the finish line should be maintained for some distance beyond the finish line. While coming to the finishing line, make sure that the chest touches the woollen thread even before the feet.

◆ Make the students understand the relation of both the positions and the running distance. Teach them to use the positions before and during the race. Inform the students about the types of the athletic sports.

3.3 A. B. C. Drills

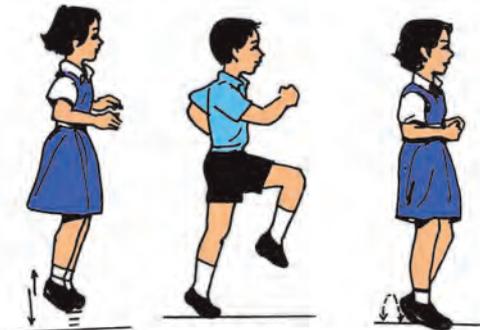
ABC drill is useful in the development of skills such as running, throwing and jumping. 'A' means Agility, 'B' means Balance and 'C' stands for Coordination in A. B. C. Drills.

We can acquire these skills, by doing the following activities.

RUNNING



Ankle Bounce

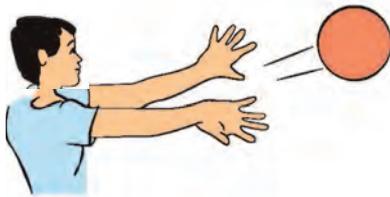


Double Leg Hop



Falling Start

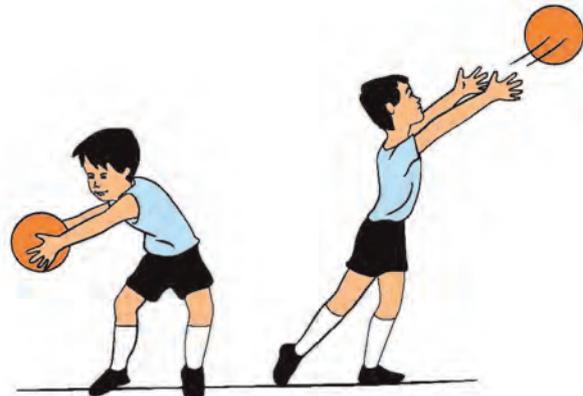
THROWING



Throw the ball straight with hands



Throw the ball with one straight hand



Twist in the waist and throw the ball

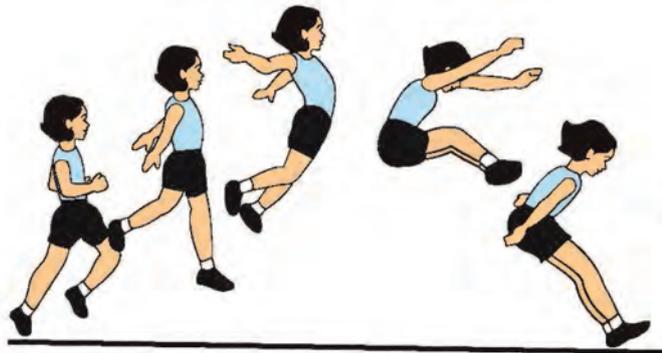
JUMPS



Tuck Jump



Straight Leg Shuffle



Jump and Arch

- ◆ Demonstrate to the students the activities in the ABC Drills.
- ◆ There are many videos of ABC Drills available on the internet. Select the videos best suited for the students and show them. Encourage them to practise those drills.

3.4 Lezium

Lezium is a traditional Maharashtrian sport. It is played on the occasions of special festivals and celebrations, in fairs and marriage processions. Lezium gives our body exercise with a variety of movements in rhythmic dance. It strengthens the joints and muscles by developing flexibility, agility, endurance, muscular strength, coordination and speed.

Different Basic Movements



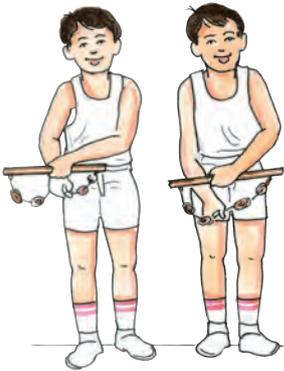
Lezim Shoulder Position



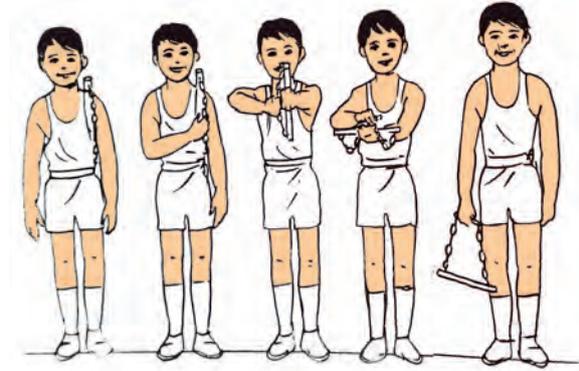
Hushiyar Position/ Attention



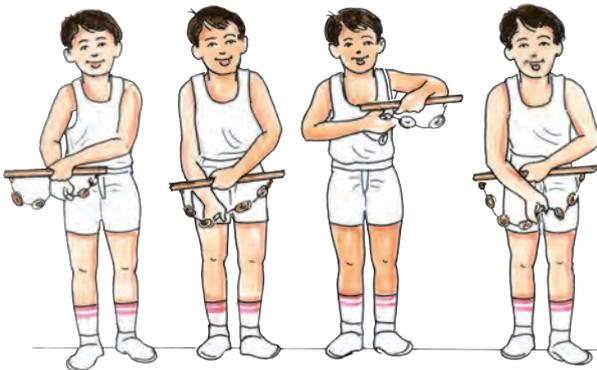
Aaram Position/ Stand at Ease



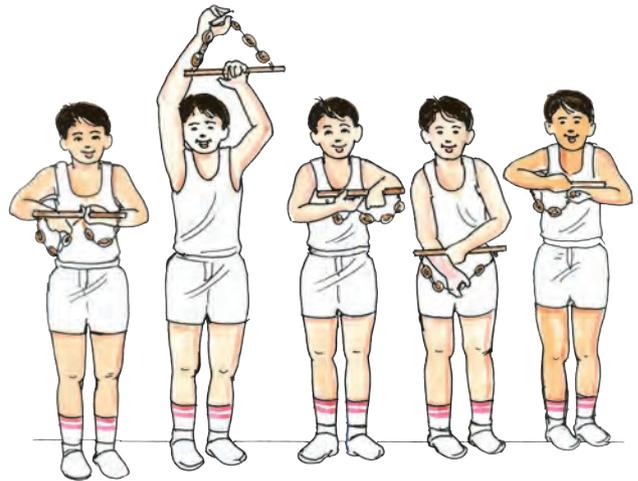
Do Avaj/ Double Beats



Char Avaj/ Four Beats



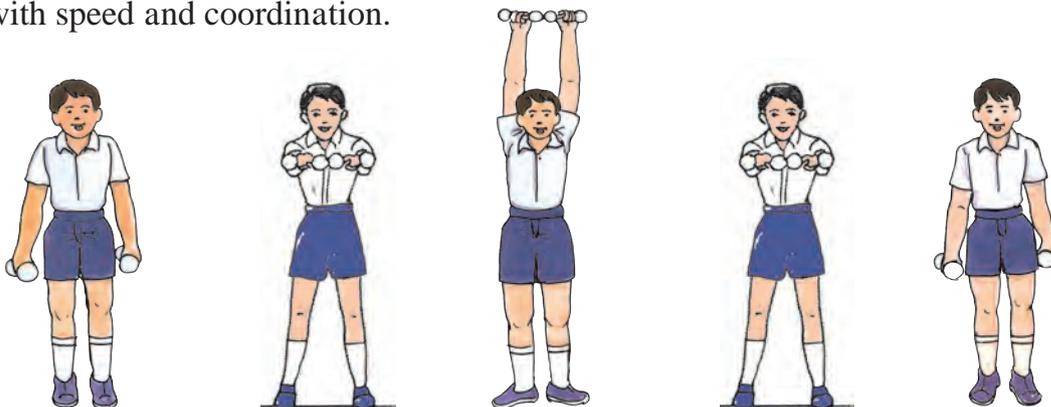
Aath Avaj/ Eight Beats



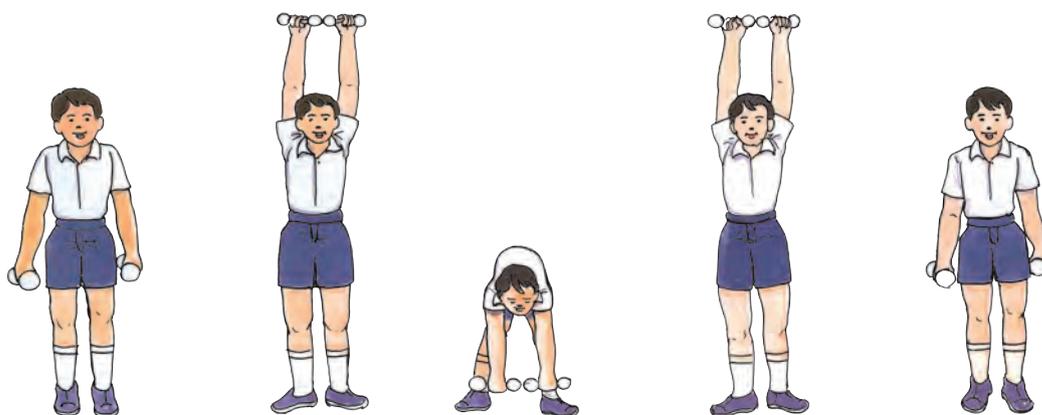
- ◆ Teach Lezium Basic position and ask the students to play the Double Beats, Four Beats and Eight Beats in rhythm.
- ◆ Give a presentation of the lezium unit on various occasions in the school.

3.5 Dumbbells

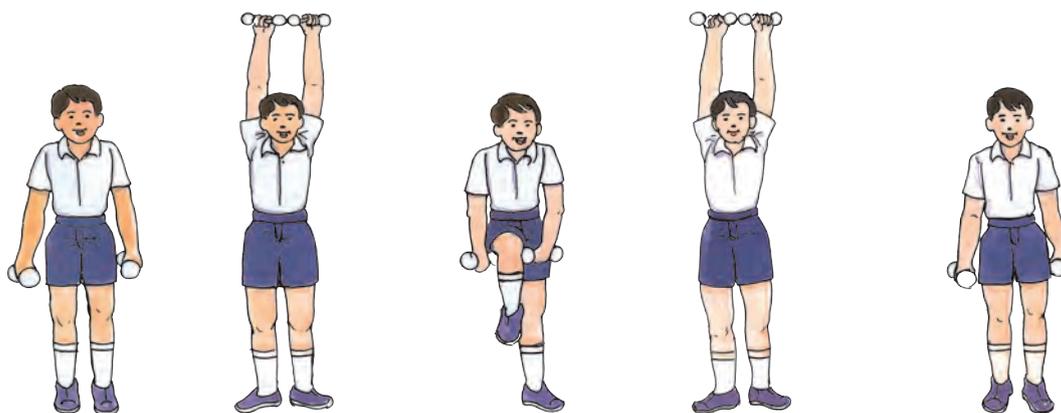
Dumbbells is a simple rhythmic exercise which develops team spirit, discipline and unity along with speed and coordination.



Dumbbells Type One



Dumbbells Type Two



Dumbbells Type Three

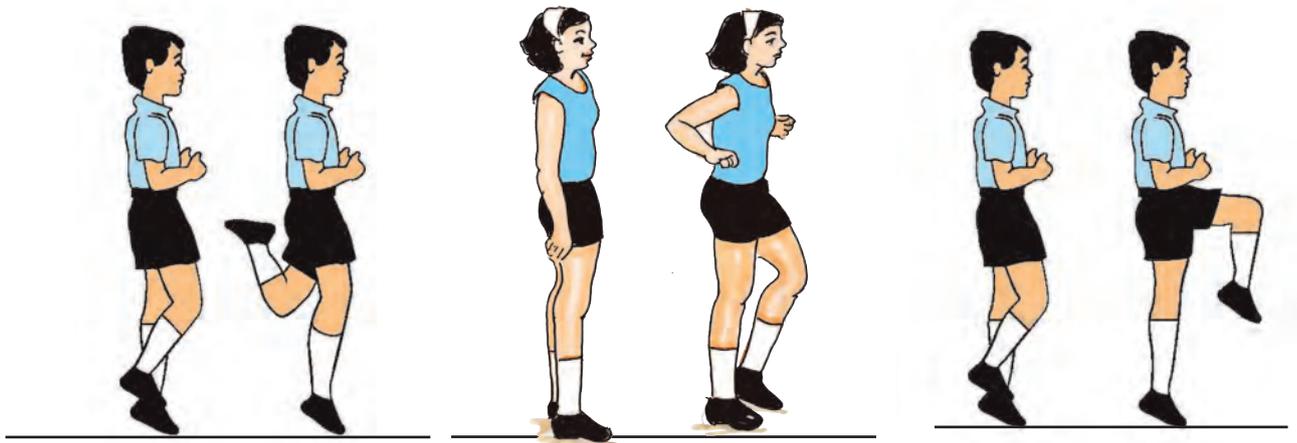
My Activity

Practise the Dumbbells Types.

- ◆ Teach different types of dumbbell exercises. Encourage them to innovate and learn new types of exercises.
- ◆ Use the handbook on 'Health and Physical Education' published by Textbook Bureau (Balbharati), Pune

3.6 Aerobics

Performing different rhythmic movements or exercise to the beat of music is Aerobics. It increases the heart rate, develops the capacity of holding breath and blood circulation.



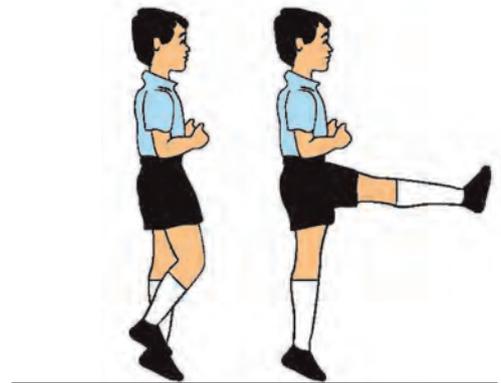
Jog

Marching on the spot

Knee Lift

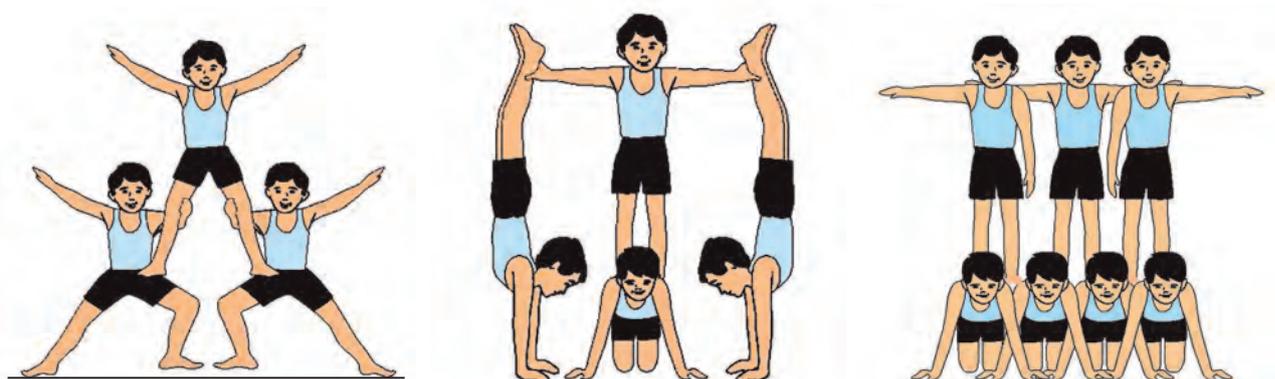


Marching with Arm Circle



Kick Forward

3.7 Human Pyramid



- ◆ Practice different aerobic exercises with music. Practise Human Pyramid in your presence.
- ◆ Refer to the handbooks of 'Health and Physical Education' for Standard 1 to Standard 5 published by Textbook Bureau (Balbharati), Pune.

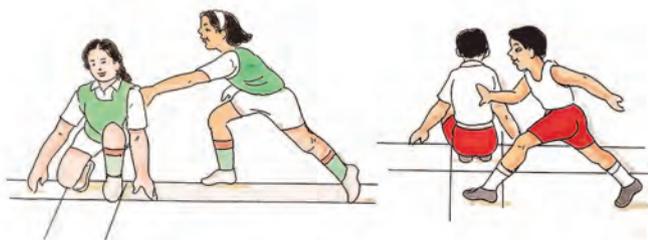
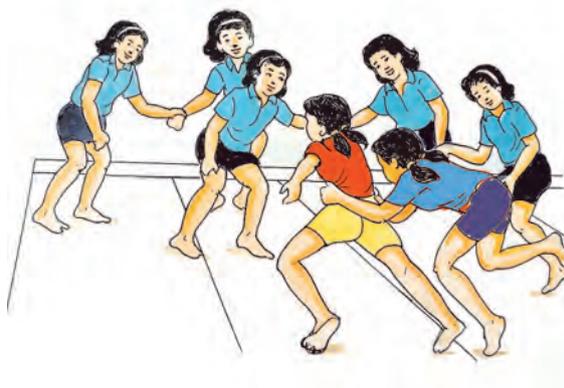
4. Various Games

4.1 Supplementary Games

In order to master the skills of a particular sport, some supplementary games are developed based on the main specific skills involved in that sport. These supplementary games give ample practice as well as enjoyment.

KABADDI

1. Get the opponent 'out' by stretching your arm out.
2. Pull leg and get a player 'out'.
3. Grab wrist.
4. Grab ankle.
5. Grab waist.



KHO-KHO

1. Give 'Kho' in sequence.
2. Zigzag run
3. Chase the player.
4. Run towards the player.
5. Dodge the player.

HANDBALL

1. Have a relay race while dribbling the ball.
2. Throw the ball while running.
3. Hit the ball at specific spot on the wall.
4. Pass the ball to your team without dropping it.
5. Stop the ball which is hit towards the goalpost.



FOOTBALL

1. Dribble the ball with leg.
2. Pass the ball to your partner.
3. Kick the ball to the maximum distance.
4. Kick the ball at specific spot on the wall.
5. Stop the ball kicked at the goalpost.



HOCKEY

1. Grip the stick firmly with the both hands.
2. Make the movement of the legs as per requirement.
3. Point the left shoulder in the direction in which the ball is to be hit.

TABLE TENNIS

1. Begin by serving the ball.
2. Begin the game with cross service.
3. Avoid touching the table when serving.
4. If the ball touches net for service and travels to opponent side reserve.



My Activity

Practice different games and master the skills.

- ◆ The supplementary games given above are just samples. Develop supplementary games based on various sports like this. Encourage the students to learn, play and practice new games and acquire the skills.

4.3 Modified Games

Modified Games

Modification means change. Modified games are developed by changing the main sport. Changing the ground, rules, number of players and skills gives rise to Modified Games. Some difficult skills of the main sport are used in small activities or games to enjoy the game and master the skills. In the absence of the required ground, material and players, the games can be played with a new experience and enjoyed. It is possible to acquire basic skills and obtain mastery easily.

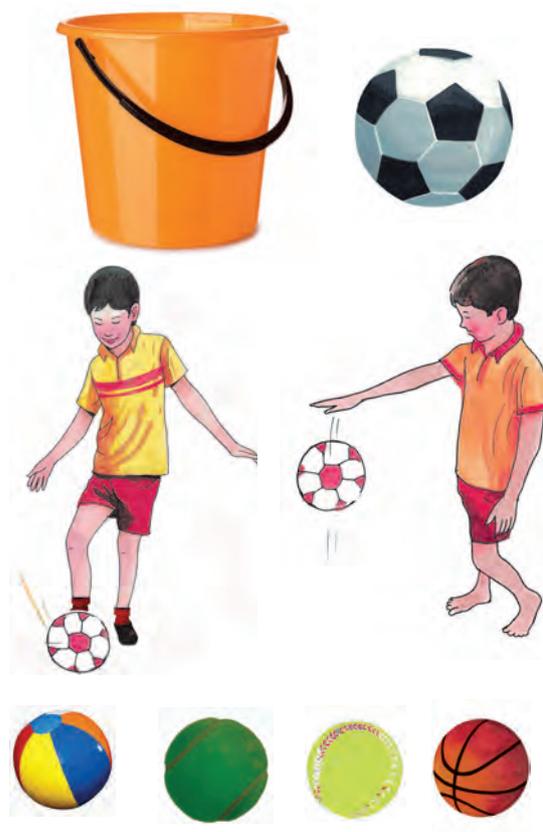
For Example : Measurement of the ground, rules of the sport, number of the players, material, the duration of the sport, marking/score scheme, positions of the players, difficulty level of the skills, uniform, etc. can be changed as needed.

Games Modified from Basketball

Use ring, bucket, box or turn a stool up side down to make instead of basket.

Big ball, balloon, seeds bag or small balls are used instead of basketball.

Playing the game by throwing, catching, passing, dribbling, laying by changing the place or staying in the same place.



Modified Game from Volley Ball

Use of different types of balls.

Use of legs instead of hands, using only one hand.

Throw and catch above the head with fingers.

Practive service on small grounds using small nets.

Games like Underarm pass, Overarm Pass, Service can be played in an innovative way.

Modified game from Tennis/Badminton

Use of hand, bat, stick, wooden board, plywood instead of Racket.

Use of different types of balls, balls made up of sponge, cotton, clothes, dried leaves.

Played in pairs, a groups of three or more.

Modified game from Throw Ball

Use big ball or sponge, ball made up of cotton, clothes or dried leaves instead of Throw Ball.

Throw and catch the ball.

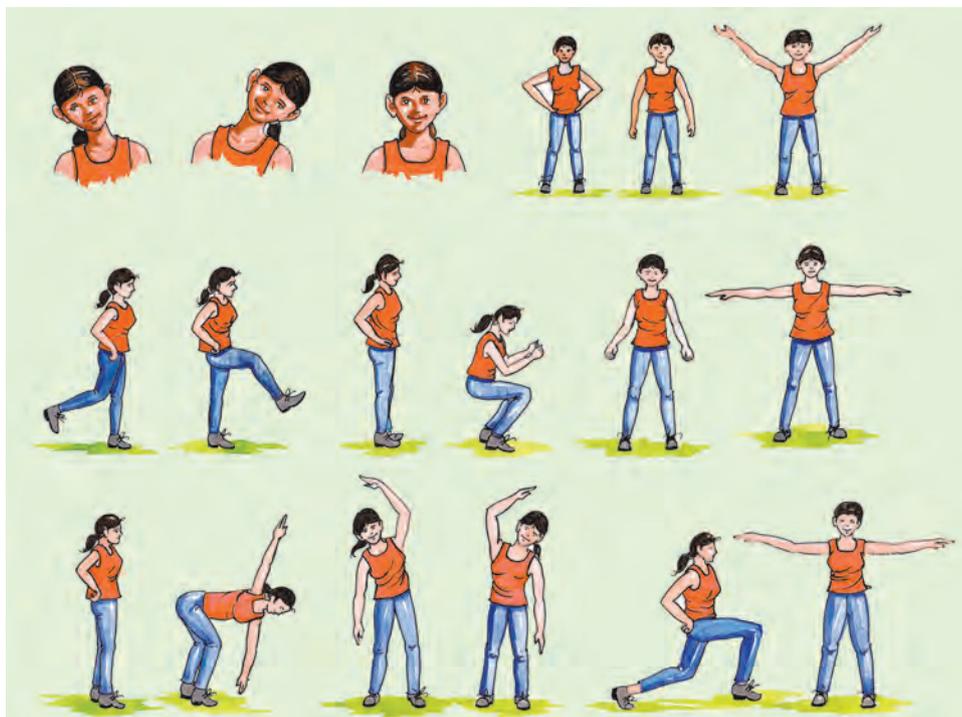


5. Exercises

5.1 Warm up

We need to prepare our body for any sport or dance. There are some movements of muscles and joints called warm up exercises. These exercises reduce the risk of getting injuries during play or dance.

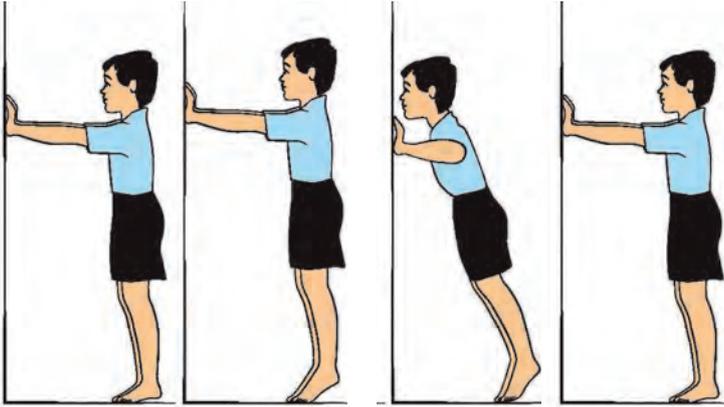
Movements such as stretching muscles and joints, bending, twisting, different types of jumps, moving body parts come under these exercises. Make sure to have a sequence of the warm up exercises from neck to legs or legs to neck so as to give each and every muscle and joint a proper warm up.



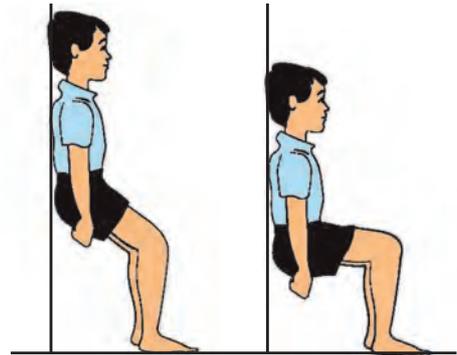
- ◆ Begin your period with some warm up exercises. Make a habit of warming up before playing the games. Have innovative warm up exercises.

5.2 Strengthening Exercises

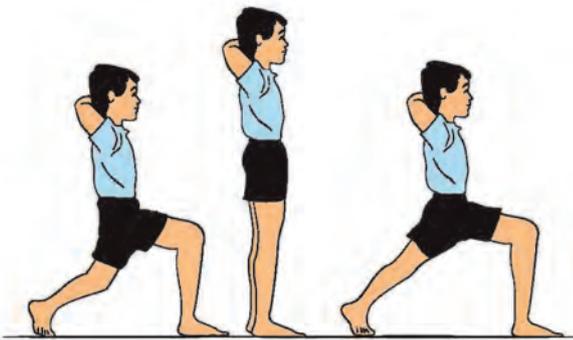
Strengthening exercises are important in developing the physical sturdiness. It enables to acquire different skills and develop physical strength.



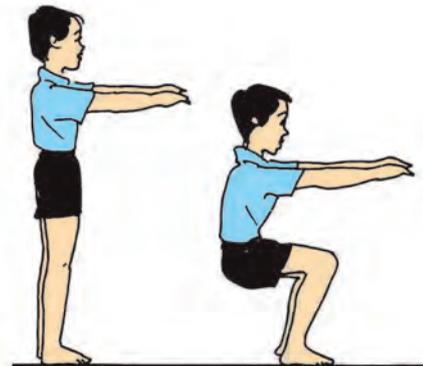
Wall Push Ups



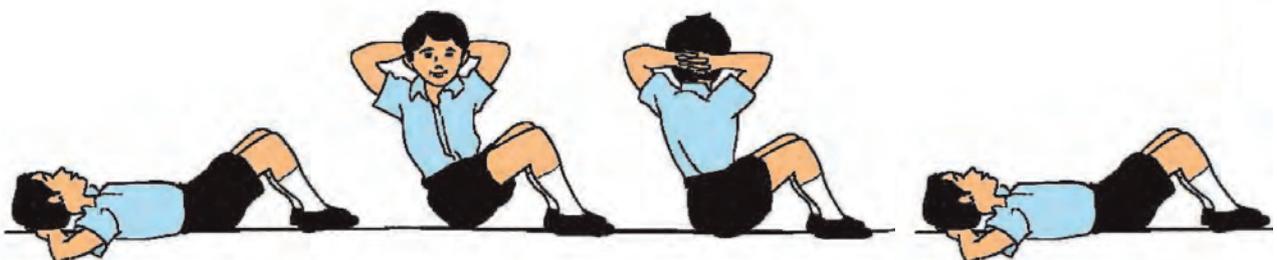
Half Squat with the support of wall



Forward Lunging



Half Squat without support



Obliques



V Seat



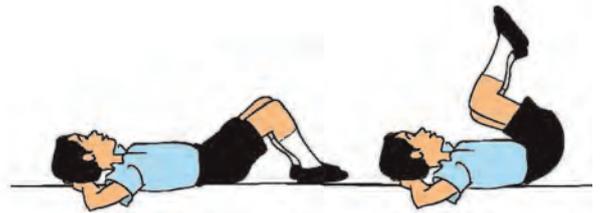
V Seat Cycling



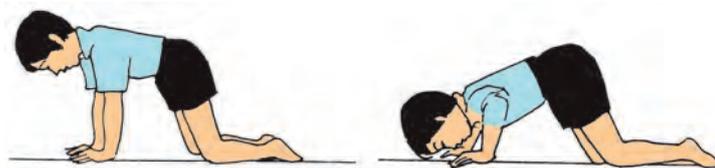
Bent Knee Seat Ups



Crunches



Reverse Crunches



Shoulder Push Ups

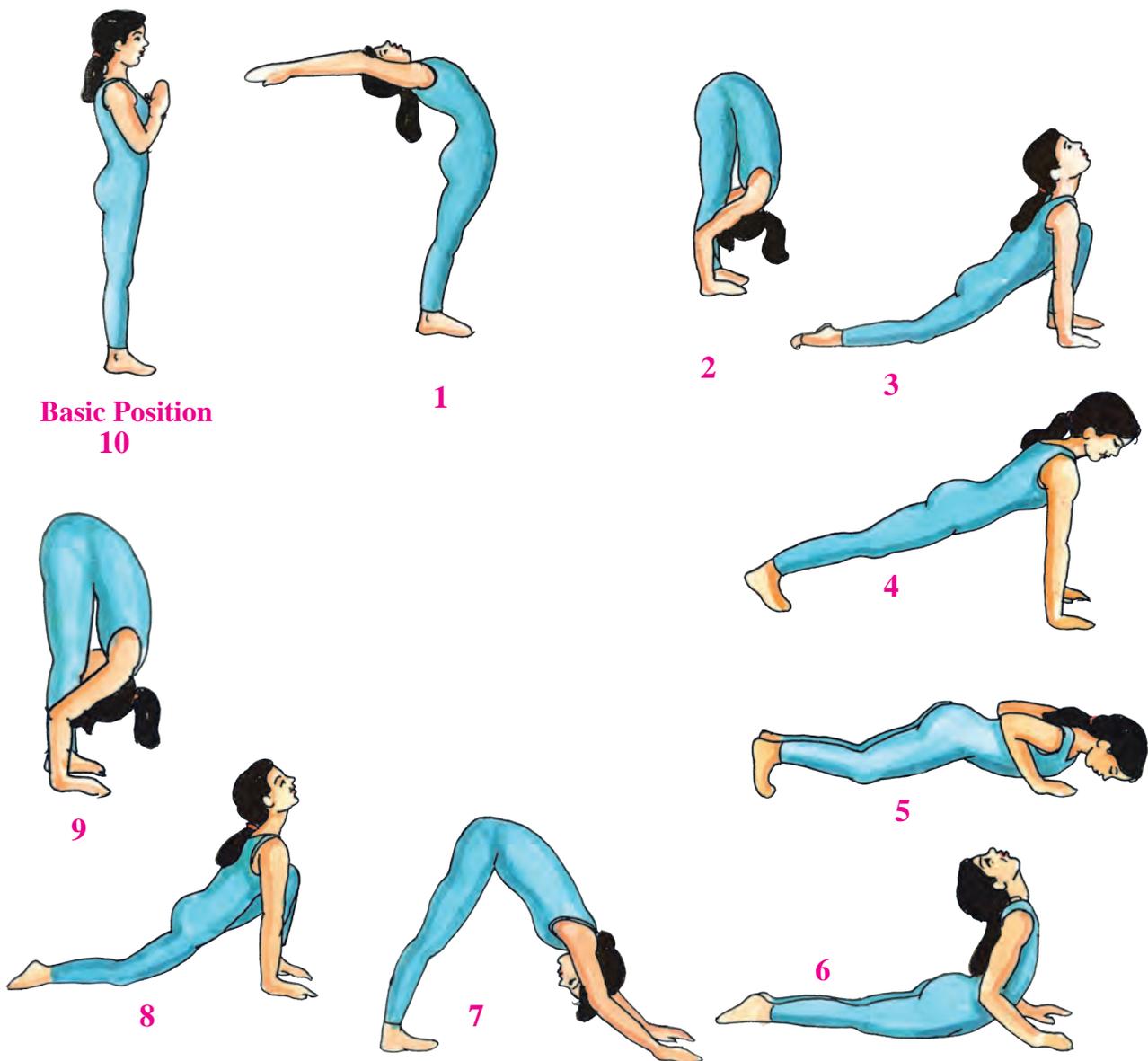
◆ Ensure that the students practice strengthening exercises regularly. Revise the strengthening exercises once in a month regularly and practice them. Keep a record of the physical development of the students.

5.3 Suryanamaskar

Suryanamaskar is a complete exercise. The best time for Suryanamaskar is in the morning. Suryanamaskars are performed in an open, airy place, on an empty stomach.

It increases blood circulation to all important body parts. It boosts the efficiency of the heart and lungs. The muscles of the arms and back are strengthened. It makes the spinal column and waist flexible. It helps to shed the excess fat around the stomach and helps to reduce weight. It helps digestion. It boosts concentration.

Do you perform Suryanamaskar everyday? How many Suryanamaskars do you perform? Try to increase the number.

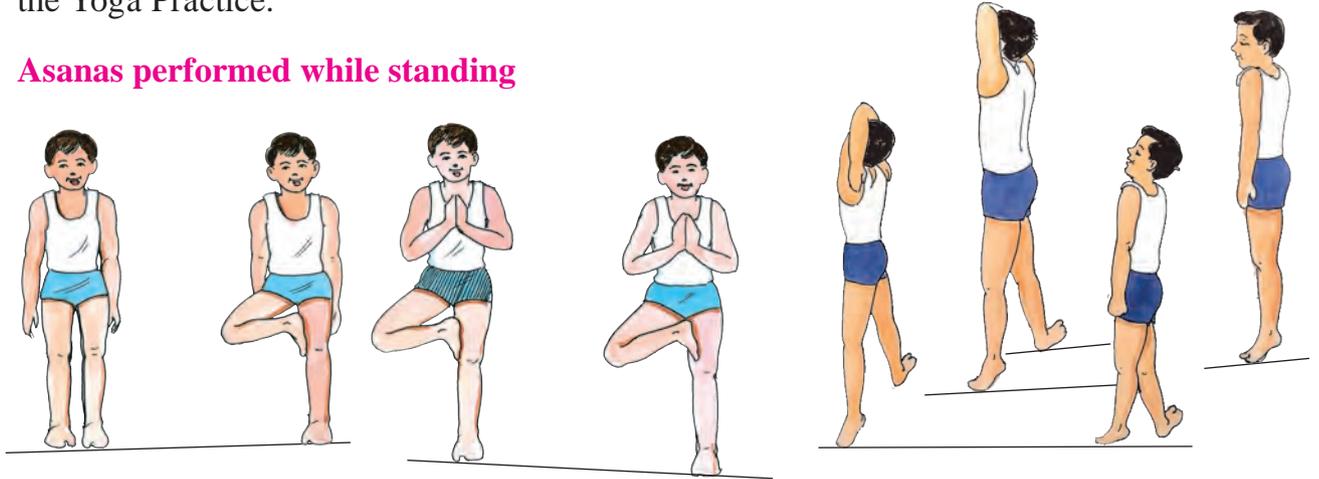


◆ Maintain a suitable physical position while performing Suryanamaskar. Encourage the students to perform Suryanamaskar every day. Arrange a group performance of Suryanamaskar on the occasion of Yoga Day.

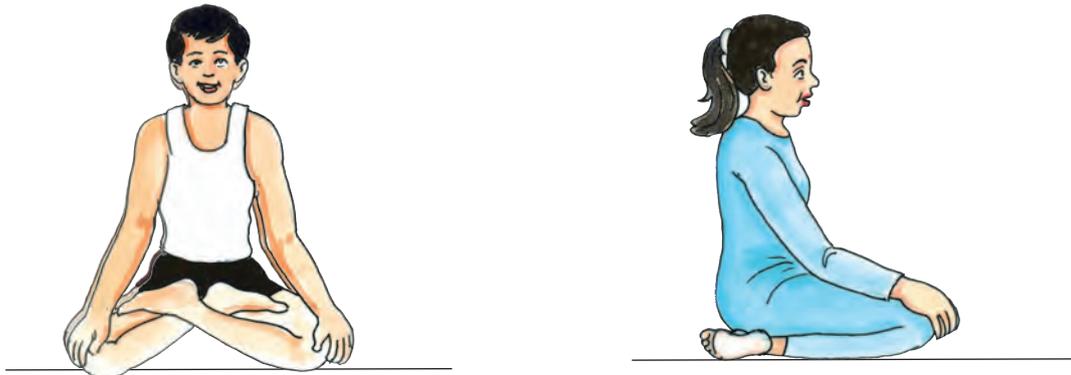
5.4 Yogasanas : Preparation

Yoga is ancient traditional science. Yoga enables us to maintain sound health. The different positions of the body are called Asanas. The practice of the Asanas gives our body flexibility and sturdiness. It is mandatory to perform some body positions as a preparation to the Yoga Practice.

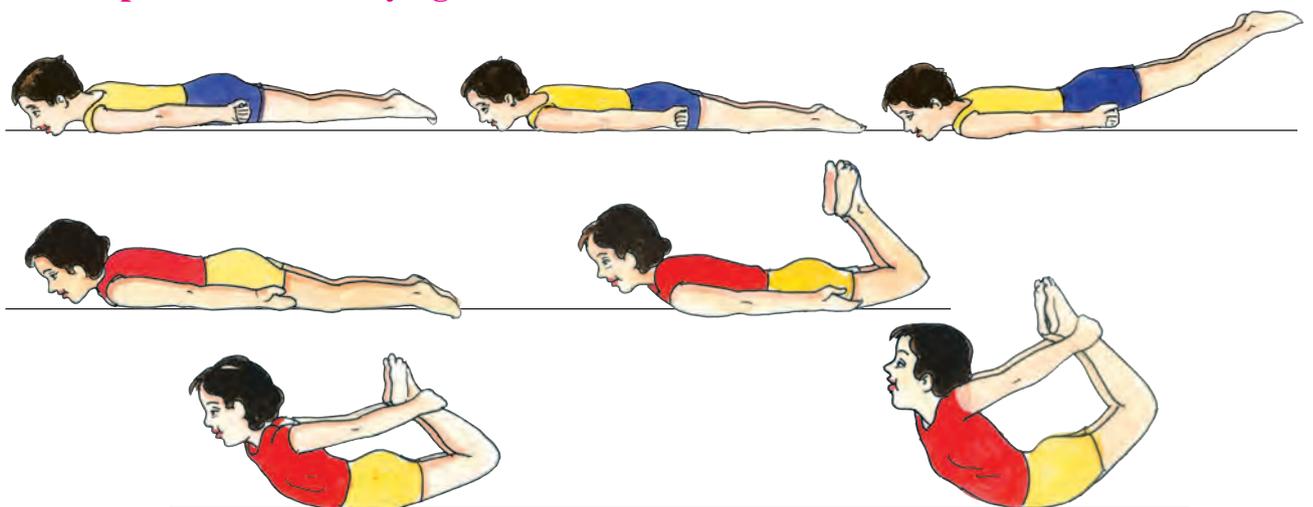
Asanas performed while standing



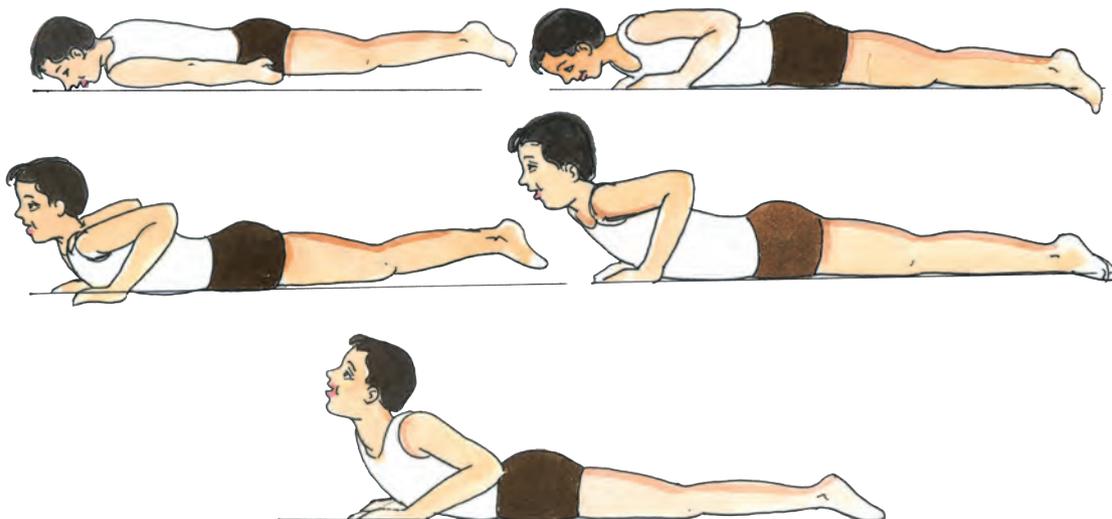
Asanas performed while sitting



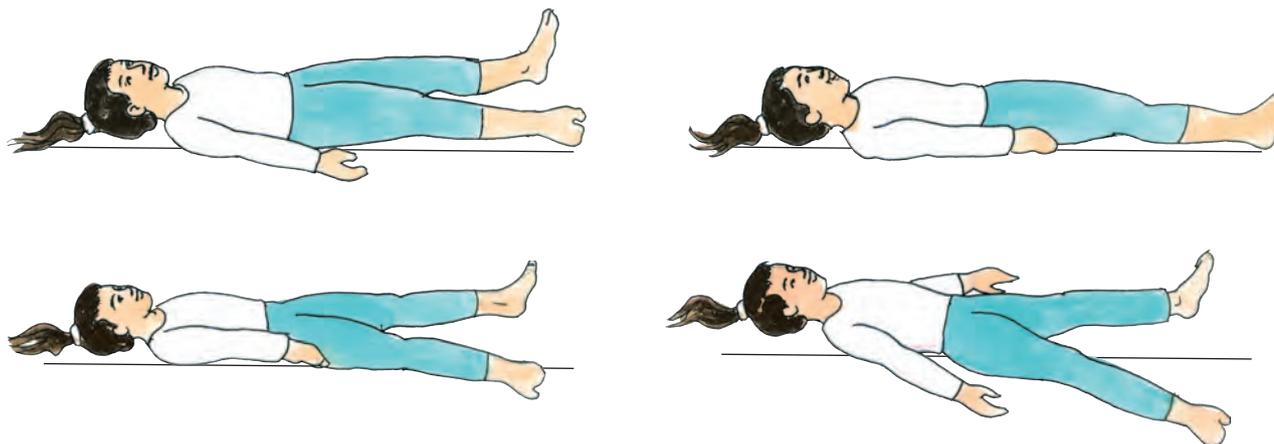
Asanas performed while lying on stomach



Asanas performed for balance.



Asanas performed while lying on back



Preparation for Pranayam : Breathing Exercises



Inhale to fill chest



Inhale fill abdomen
is pushed out



Breathe slowly



Exhale through
the mouth

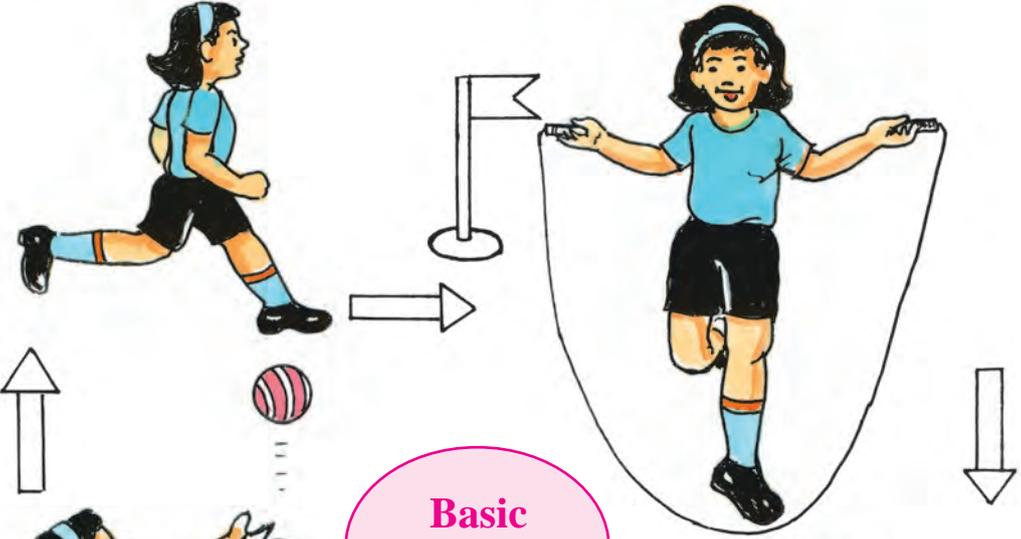
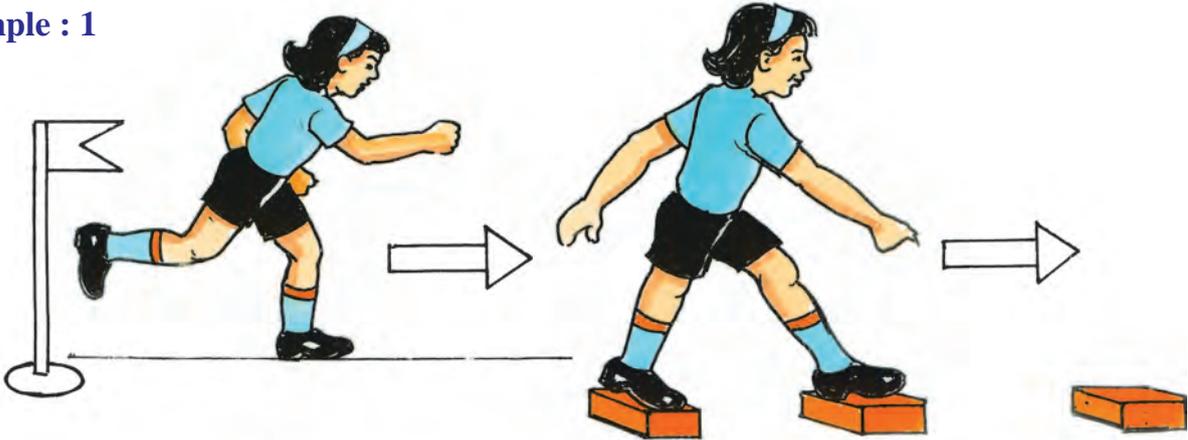
My Activity

Which Asanas can you perform from the given list? Learn different asanas and practice them in the morning/evening.

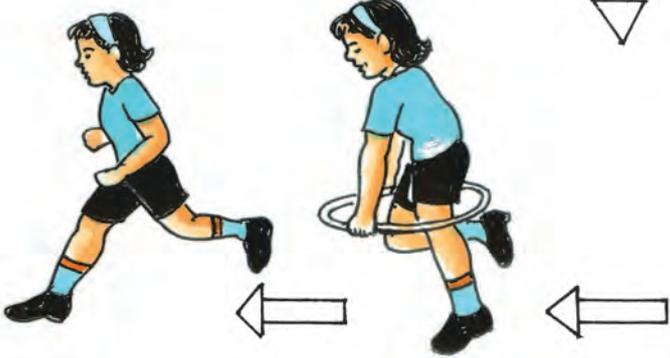
- ◆ Introduce Yoga to the students and encourage them to follow the rules and regulations of the (Yam and Niyam). Ensure that the students practice different Asanas and Pranayam daily.

5.5 Obstacle Race

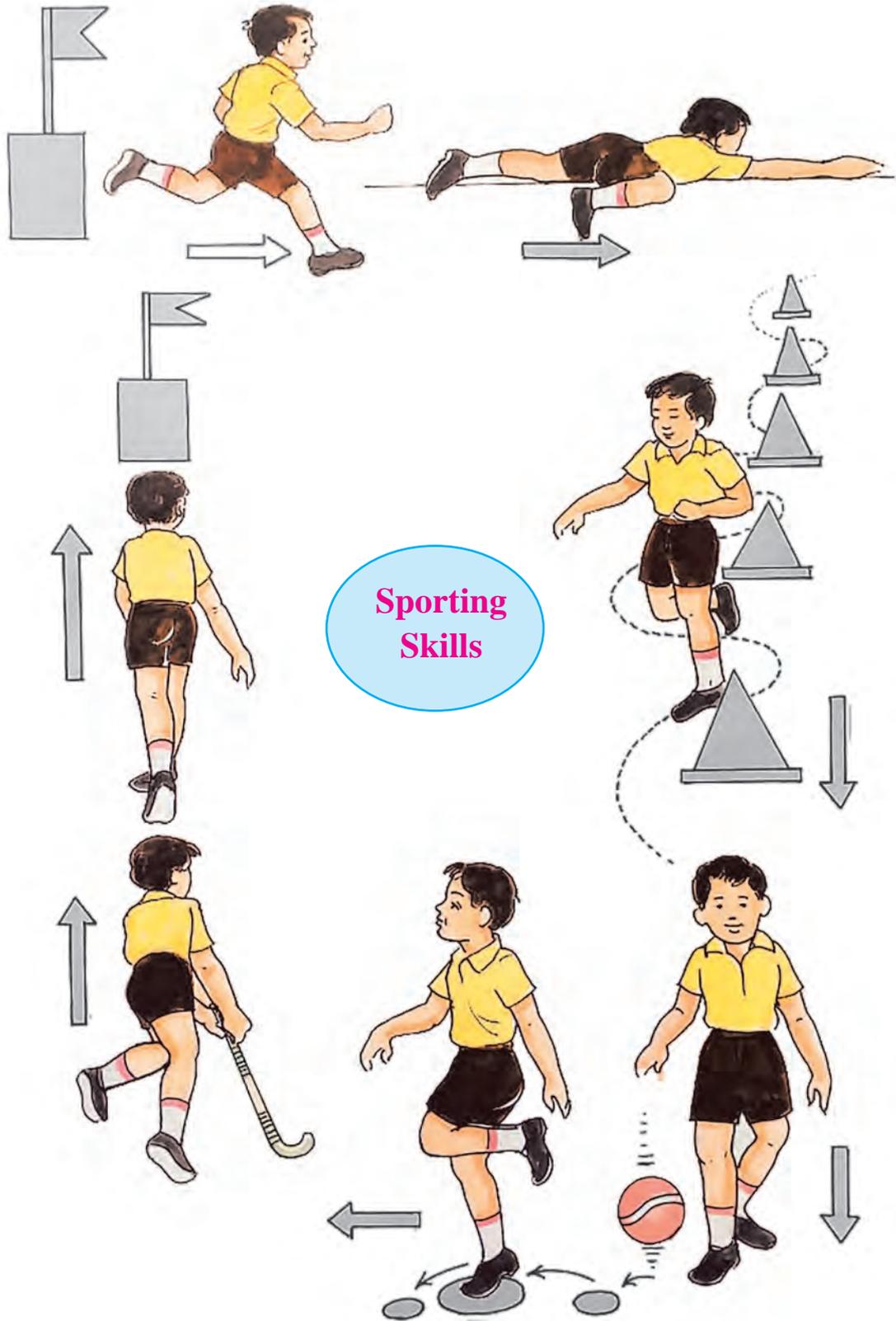
Sample : 1



Basic Movements



Sample : 2



◆ Develop skills for an obstacle race using various basic movements and sporting skills. Get the students to innovate and design new obstacle races and to run those races. It will enable the development of basic movement.

5.6 Physical Health Development Programme

Physical health is important for a person's disease free, positive and healthy life. The following programmes can be undertaken for the development of physical health and strength.

Efficiency of the heart : Spot running raising the high knees.

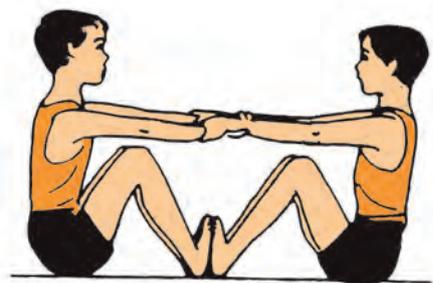
Action : Run on the spot in straight a position, raising the knees waist high. Move arms while doing it.



Strengthening the legs : Partner pull-ups

Action :

1. Form pairs of the students. Ask them to sit on the floor facing one another.
2. Ask the students to place the heels on the floor, bend the knees and touch the feet.
3. Hold each other's wrists and stand by straightening the knees. Then tell them to release the hands.



Strengthening the hands : Stretching the elbows.

Action :

1. Take enough distance in between your feet.
2. Raise a hand above head and fold in the elbow. Place the palm at the centre of the back.
3. Try to take the hand further down. Hold the position for 10 to 30 seconds. Repeat with the other hand also.



Flexibility : Bring the legs close and keep them straight.

Action :

1. Sit, keep your legs straight and keep your hands on your waist.
2. Fold your knees in the above position. Bring them together. Try to bring the heels close to the hips.
3. Straight your legs.



◆ Have various programmes for physical fitness development.

5.7 Motor Health Development Activities

Motor skills are important in developing some sport skills.

The following activities can be undertaken for the development of motor health.

Speed

Action :

1. Take your position at starting point for running.
2. Rise and start running at full speed. Cross different distances such as 30 mtrs, 50 mtrs, 80 mtrs and 100 mtrs. Walk to the starting line.

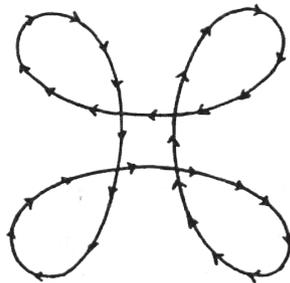
Coordination

Action :

1. Perform jumping jacks on the spot. Perform various arm movements like moving arms to the sides, up, front from back, back from front, bringing close to the chest by folding elbows and taking down again.

Direction Orientation

Action : After getting signal, run as per the direction shown in figure below and stop when you get next signal.



Strength/ Power

Action :

1. Sit with both feet touching the line. Make an angle of 40° to 45° between the legs.
2. Hold the ball in both hands and take the hands behind your head.
3. Use maximum strength of the arms to bring the ball forward from behind your head and throw it high and straight in front to the farthest possible distance.

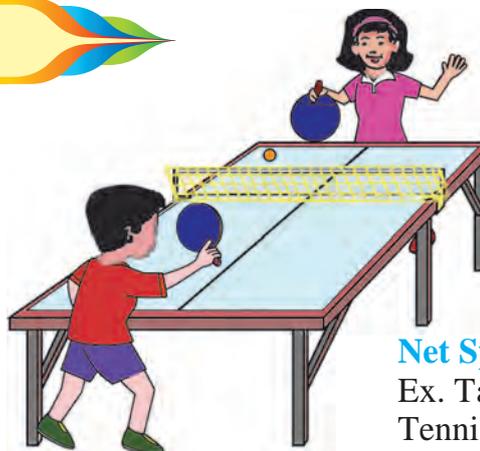
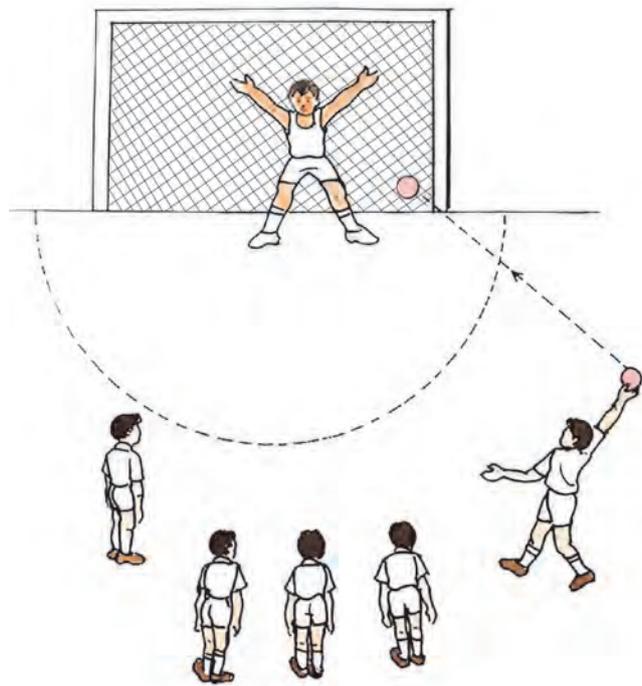
Undertake various activities for motor health development.

◆ Have different activities for developing the motor strength.

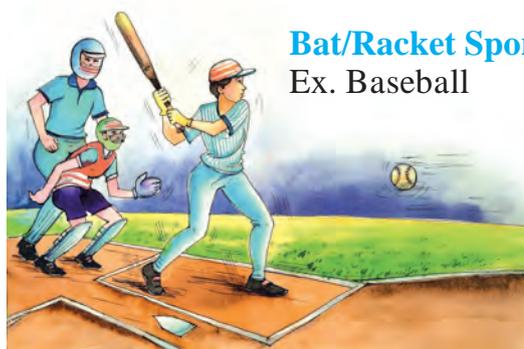
5.8 Different Sports and Their Types

Different sports and their types

Ball Sports : Ex. Netball

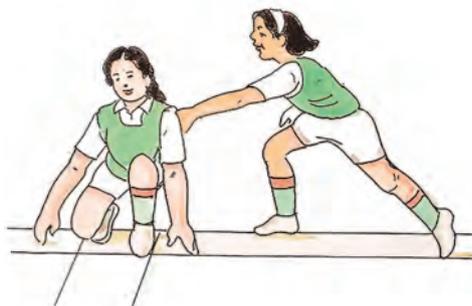


Net Sports :
Ex. Table
Tennis



Bat/Racket Sports :
Ex. Baseball

Contact Sports : Ex. Kho Kho



Shooting : Ex. Carrom



Duel Player/ Pair Sport :
Taekwondo, Judo



My Activity

Obtain information about the following games and sports.

- (1) Ball Sports :
- (2) Net Sports :
- (3) Bat/Racket Sports :
- (4) Contact Sports :
- (5) Shooting Sports :
- (6) Duel Player/ Pair Sports :

◆ Encourage the students to collect information of different famous sportsmen and sportswomen of India. Encourage them to collect information of different sports and sports types.

5.8 My Game and Exercise



Games and exercises are important for sound health. Keep a record of the suryanamaskar, exercise, games, sports practice, dance, hobbies and physical work you do. Adopt an active lifestyle.

Different Programmes

Morning- Time	Games/Activities/ Programmes/ Hobby/Dance/Sports Practice/ Exercise, Study/School
Evening-Time	Games/Activities/Programmes/Hobby/Dance/Sports Practice/ Exercise, Study/School

◆ Guide the students to keep a record of their daily exercises and games.

1. Compulsory Activities

(A) Need-based Activities

1. Introduction to Culture and the World of Work

1.1 Making a list of the industries in the surroundings and giving information about them



A flour mill : Milling various grains to make flours



Selling masks : Making and selling various kinds of masks



Provisions store : Retailing domestically required provisions and other articles



Photo-copy shop : Making photo-copies of documents



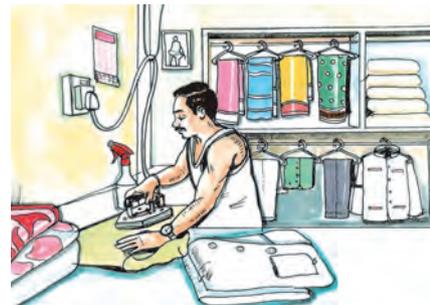
Fall and picot shop : Stitching falls and picoting sari edges



Tailoring shop : Stitching clothes for women, girls and children



Home delivered food service : Preparing and delivering meals to students, seniors and others who need them



Clothes-ironing service : Ironing clothes

My Activity

Visit the local Women's Self Help Group and obtain information about the industries and occupations seen there.

- ◆ Obtain information about industries other than those mentioned in the textbook.

1.2 Importance of waste-management

Playlet

Hey, kids! Stop. You ate peanuts and left the skins and shells strewn in the classroom. Now see what a lot of rubbish there is all around you. Come on, pick it all up and put it in the dustbin.

What did you say? Who spoke?

Oho! I'm Rubbish speaking. Now listen, children, you must be wondering, there's so much rubbish all around, what can little children like us do about it? But, see, you need to think only about your school and your home. All the waste that collects in the house every day, can be separated into two parts, wet garbage and dry garbage. Stalks and skins of vegetables and fruits, spoilt veggies and fruits can all be used to make fertiliser by composting or vermiculture. Dry garbage like waste paper, wrappers, broken plastic or glass articles like dishes and bowls, bags, rags, boxes, cartons, bottles, old newspapers, flyers can be collected and handed over to garbage collectors or those who buy and resell such discarded items. Do you know the name for this process of separating and properly disposing off garbage? It is called Waste Management.

There are many advantages of proper waste management. Our surroundings remain clean. We do not get any foul smells. It prevents flies, mosquitoes and other insects from breeding. And that prevents pollution and disease. Thus it helps to maintain good health. And besides, we get fertilisers and we can enjoy the fruits and flowers from our gardens and farms.

Oh, very good! I see that you've cleaned up the classroom even as you were listening to my speech! Bravo, my dears!



Cleaning the classroom

My Activity

Imagine that you are speaking to the rubbish in your classroom. Write a speech of 5 lines.

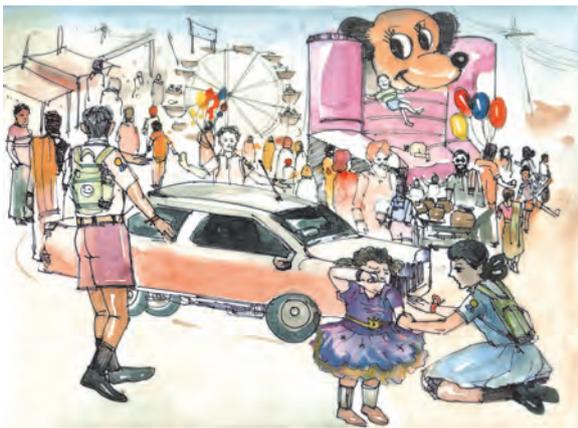
- ◆ Give guidance regarding proper waste management, and disposal and about reuse and recycling.

1.3 Volunteering at local festivals, functions, celebrations

Our society loves to celebrate. Many festivals, fairs and functions are held in villages, towns and cities. To enjoy and to take part in them people gather together in large crowds. At such times, volunteers are needed to organize them well. A person who serves or helps people willingly and happily without expecting any return, reward or honour is called a volunteer.

Volunteers need to estimate the nature and number of people expected in the gathering for a festival or function and accordingly carry out many different tasks. Some of the tasks have been given below.

Spreading themselves out in different places in the crowd to control and guide people.



To help lost children to get to the proper places.



Looking after the footwear stand



Offering first aid



Preparing notice boards



Helping senior citizens

My Activity

Volunteer at a festival or other function and write a detailed letter to a friend describing your experience.

- ◆ Give guidance to children of different age groups to work as volunteers.

2. Water Literacy

2.1 Measuring water

Let us measure the amount of water used by one family in a day. There are several ways of measuring water.

(a) By using a water meter :

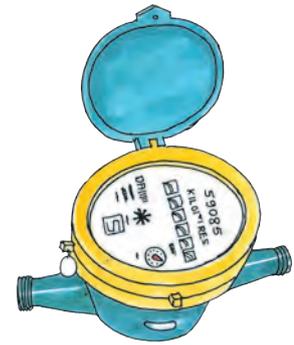
Tools and materials : water meter and bucket

Procedure

1. Place a bucket under a tap connected to a water meter. Open the tap and observe the water meter.
2. Using a bucket with a litre scale marked on it, note how much water collects in the bucket when the water meter shows 1 unit.
3. By noting the number of water units used up in a day and the amount of water that makes one unit of water, you can tell approximately how many litres of water are used in a day.

(b) Other methods of measuring water

1. Observe and take note of the capacity of the large tanks that supply water to towns/cities which is marked on them.
2. Water can be measured by observing the capacity marked on overhead tanks in our house.



2.2 Measuring rainfall

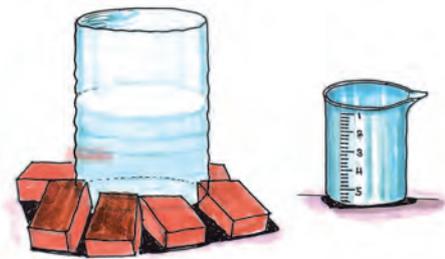
Rain is Nature's gift for all living things. It is important to measure rainfall to plan for future use of water. The laboratory of the meteorological department uses a rain gauge for this purpose. The height of the water column that collects in the measuring jar of the rain gauge gives us the amount of rainfall in 24 hours. Rainfall is measured in millimetres.

• Let us make a rain gauge and measure rainfall

Tools and materials : An empty water bottle, a serrated blade or knife, bricks or stones, a measuring cylinder or beaker

Procedure

1. Cut away the narrow upper portion of the bottle.
2. Before it starts raining, place the bottle in the open with the support of the bricks or stones.
3. When it stops raining, pour the water collected into a measuring jar and find its volume.
4. Record the rainfall at that time depending on the number of millimetres of water filled in the rain gauge.



My Activity

Observe a rain gauge and draw a picture of it. Collect news items about weather and rainfall from newspapers and read them.

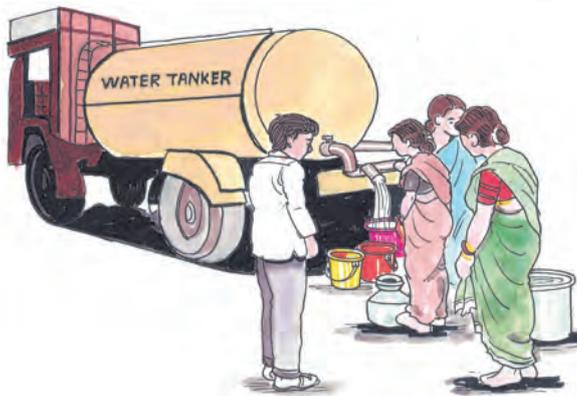
- ◆ Guide the students about how to use a water meter. Show them the water reservoirs in the village/ town/ city and explain to them their capacity. Give proper guidance when conducting the experiment for measuring rainfall.

2.3 Methods of transporting water

Let us see how water reaches our houses.

Rain water collects in dams, lakes, rivers and wells and we use this water for the whole year. So this water has to be brought to our village/ town/ city and to our houses and fields. Various kinds of methods are used to transport this water.

- (1) **Carrying water on the head :** Water is carried in a pot, pitcher or other container supported on one's head.
- (2) **Carrying water in a waterskin :** The large wide leather bags of water hung one on either side of a pack-animal are called waterskins. They are mostly used in rural areas to carry water for use in homes.
- (3) **Storing water using a water carrier:** A water carrier or *kaavad* consists of a long bamboo stick from which containers of water are hung by means of ropes.
- (4) **Carrying water through pipes :** Pipes of varying sizes are used to transport water from the water source to every house. This is the most common method used everywhere nowadays.
- (5) **Transporting water in water tankers:** A pump is used to fill water into tankers which are then driven to the parts where water is needed especially to drought hit areas in the summer.
- (6) **Tube well :** Water that is deep underground is lifted to the surface through pipes by means of a hand pump or a motor driven pump.



My Activity

Write in short and draw a picture on the topic, 'This is how water comes to my house'. Make a model of a water carrier.

- ◆ Have a picture-reading and discussion or show a video or filmstrip introducing the children to the different methods of transporting water.

3. Disaster Management

Natural Disasters

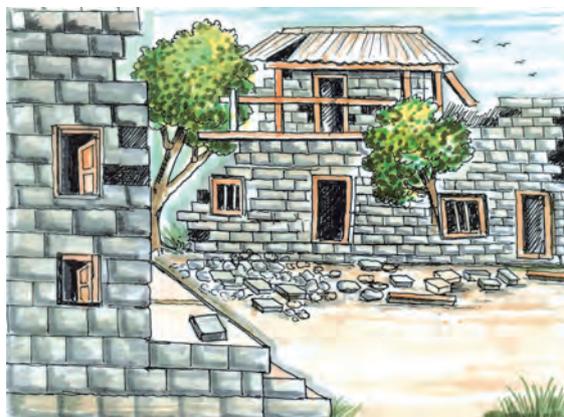
The crisis situations that arise due to the harm caused by certain natural phenomena are called natural disasters. Examples of such phenomena are storms, cyclones, floods, earthquakes, forest fires, tsunamis, epidemics, etc.

Sometimes we get a warning about its occurrence. Some steps can be taken to reduce the harmful effects of the disaster and the damage caused by it to life and property.

The plan put in place to reduce the severity of the effects of a natural disaster is called 'natural disaster management'.

• **Earthquake** : Movements that take place deep inside the earth release enormous amounts of energy. They result in rapid movements under the surface of the earth in the earth's crust. The surface of the earth also moves. The ground under us shakes, tremors occur and cracks appear in it. Such a shaking of the earth's surface for a few moments is called an earthquake.

• **Causes of an earthquake** : When layers of rock or tectonic plates slide over one another beneath faults in the earth's crust, then sudden movements take place and an earthquake occurs. Chemical reactions that take place between the liquid and gaseous constituents of the earth's mantle/ core can cause an earthquake. An explosion in a mine or one caused by any other human activity can also cause an earthquake.



The tremors caused by an earthquake may be mild or intense. Their intensity is measured on a scale called the Richter scale.

• **Effects of an earthquake** : Houses, buildings collapse, trees are uprooted.

• **Measures for minimizing the damage caused by an earthquake** :

- (1) When you feel the tremors, leave the building and stay out in the open.
- (2) Crouch under a strong table, bed or bench.
- (3) Fold a thick sheet/ blanket/ quilt many times over and protect your head with it before going outdoors.
- (4) Turn off the gas cylinder/ stove in your house.
- (5) Switch off all electrical appliances.
- (6) Stay far from electric supply lines, lights, bridges, buildings.
- (7) If driving in a vehicle stop in a safe place. Avoid stepping out.
- (8) Help each other to keep your morale high.
- (9) Face the crisis with confidence. Do not panic.

• **Floods :** Heavy rains cause water levels to rise and that causes floods.

• **Causes of flood :** Encroachments into river and nullah beds, increasing amounts of dumped garbage make the river/ nullah beds shallow and that causes flooding. An earthquake may cause a crack in a dam wall and give rise to the possibility of a flood. Water level rises during a high tide and causes flooding. Barrages, weirs may



also get damaged resulting in floods. Meltwaters from the Himalayas may also cause floods.

• **Measures for reducing damage caused by a flood :** Houses should be constructed at safe distances from river banks. Plant trees. Protect and conserve forests. Desilt reservoirs of water regularly. Remove the silt and other garbage from the beds of rivers, streams, lakes and dams before the start of the monsoon season. Organize teams of local doctors and volunteers and ensure that hospitals and health centres are functional. Give advance warnings to people living near the waters and evacuate them if necessary. Take necessary action to prevent outbreak of diseases.

• **The Corona Virus (Covid 19)**

This is an infectious diseases caused by the SARs-CoV-2 virus. We can get the infection if we breathe in the virus present in the air exhaled by an infected person while we are near them, or, if we touch a contaminated surface with our hands and with the same hands touch our eyes, nose or mouth. This virus spreads very easily in the house and at the crowded places. We should take proper care to protect ourselves from Corona.

• **Take all proper precautions to protect yourself from Corona, namely :**

- Frequently wash your hands clean with soap and water.
- Maintain social distances.
- Avoid touching your eyes, nose and mouth.
- Clean your hands with a sanitizer.
- Cover your mouth with a tissue or handkerchief while coughing or sneezing.
- Use a mask to cover your nose and mouth.

Do this ...Keep yourself and others safe

 <p>Wash your hands well with water.</p>	 <p>Cover your mouth with a tissue or handkerchief while coughing or sneezing.</p>	 <p>If you have a fever, a dry cough or if you have difficulty breathing isolate yourself from others.</p>	 <p>Cook or boil eggs/ meat well before consuming.</p>
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My Activity

Collect slogans relating to a disaster like an earthquake, flood or COVID19. Collect clippings of news items or pictures of a cyclone or tsunami. Make a list of the aid that you can give to those affected by a flood.

- ◆ Give information about the precautions to be taken before, during or after the occurrence of an earthquake, flood or epidemic.

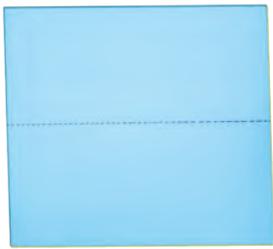
(B) Activities of Interest

1. Making a hat from old newspapers

Tools and materials : Old newspapers, large sized coloured paper, a big colourful wall calendar, other decorative items, scissors, glue, etc.

Procedure

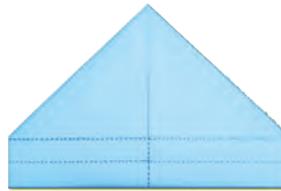
1. Take the two joint pages of a newspaper or a large sheet of coloured paper folded at the centre.
2. Find the centre point of the long folded side of the paper. Now lift the corners of this closed side and fold the paper inwards till the centre point.
3. Now press the folds into place. From here onwards follow the actions shown in the pictures below to finish making the hat.
4. Flip the paper over and fold both the corners inwards.
5. Fold the extra strip below, upwards and fix it in place.
6. Complete the hat as shown in the pictures below.



1



2



3



4



5



6



7



My Activity

Make a variety of hats using old newspapers and gift them to your friends. Write out the procedure for making a hat and ask your friend to make a hat by following those instructions.



- ◆ Arrange an exhibition of the decorative hats made by the children.

2. Making tassels and decorative hangings using strings, threads and beads

Tools and materials : String, beads of various sizes, shapes and colours, a thick paper dish or round piece of cardboard, thick thread, an old comb, the old gasket of a pressure cooker or other large ring, bangles, needle, scissors, glue, etc.

Procedure 1

(A) Making the tassels

1. Take square cardboard piece of 4×4 cm size. Wrap the thick thread around it 10 to 12 times or more if necessary.
2. Pull the wrapped thread up from both ends and tie the loops together tightly.
3. Separate the loops of thread from the cardboard piece, tie it and cut it as shown in the picture.
4. Use an old comb to comb out the fibres of the threads in the loops to make a pretty fluffy tassel.
5. Make tassels of various sizes by the same method.
6. Tassels can be made from woolen yarn of various colours instead of string/ thread.



Procedure 2

(B) Using tassels, beads and thread to make a decorative hanging

1. Wrap string/ thread around the gasket and the bangles and cover them.
2. String some beads on a thread and decorate the middle of the bangle or gasket.
3. String together the beads and tassels to make it look decorative. Make pairs of such decorative strings of varied lengths. Hang them from the decorated ring or gasket in the order of their lengths.
4. Tie strings on the upper side of the ring, bring them together to make a hook for hanging.
5. Use mirrors and sequins to decorate your hanging further.



My Activity

Make various kinds of tassels and hangings.
Draw an artistic picture and decorate it with beads and string.

- ◆ Give proper guidance to the children as they make the tassels and hangings.

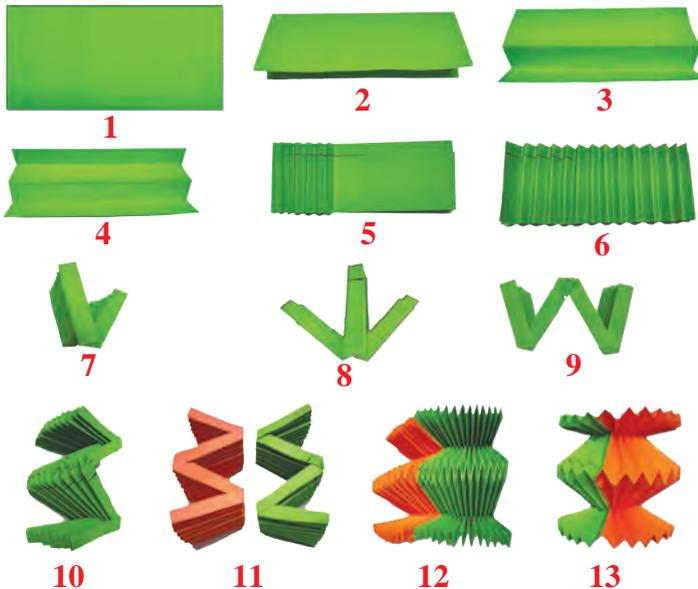
(C) Skill-based Activities

1. A lantern made by folding paper

Tools and materials : 2 sheets of A4 sized (21cm×30cm) coloured paper, thick thread, needle, scissors, glue, etc.

Procedure

- (1) Take the two sheets of paper described above and fold them into a 'W' shape following the figures 1 to 4 below.
- (2) As shown in figure 5, starting from the narrow side, make small folds in the paper at equal distances like a fan, till you reach the other end. You will get an 'I' shape. Press the folds down if necessary to make them tidy.
- (3) Now fold this 'I' shape to get a 'V' shape. Now fold the other sides to get a 'W' shape. You will see from the figure 10 that one side of the lantern is ready. Make the other side also in the same way.
- (4) Now open out these two parts and give them a rounded shape. Stick the two parts to each other. Tie 3 threads at equal distances. (See figure.)
- (5) Tie narrow strips of golden or silver paper beneath the lamp to decorate it. Hang your lantern and display it.



My Activity

Try making paper lanterns of different colours.

- ◆ Guide the children to make the folds properly.

2. Making greeting cards using straw, leaves, flowers

Tools and materials : Coloured cardsheet, dried grass, leaves, dried flowers of different colours, glue, sketch pens, scissors, etc.

Procedure

- (1) Collect flowers, leaves, grass from your surroundings. Place them between two pieces of newspaper and put them under some heavy books that are not being used. (A herbarium sheet or blotting paper can also be used.) In about 2 to 4 days they will have got pressed, flat and dry.
- (2) Cut the cardsheet into a suitable size for your greeting card. On the smooth right side of the card paper draw a border using a sketch pen.
- (3) Take some of the dried flowers leaves, etc. of the right size to make an attractive pattern that will fit inside the border you have drawn.
- (3) On the greeting card, first stick the straw and grass and then the leaves and flowers on top of them. Decorate the card as you wish.



My Activity

Stick dried grass, leaves and flowers on a paper to make a birds' nest picture.



- ◆ Show children how to paint a picture on the mesh of the dried leaf of a peepal tree.

2. Optional Activities

(A) Productive Fields of Work

1. Area : Food

1.1 Kitchen Gardening

Gardening tools and their uses

Pickaxe : for digging and loosening the soil

Hoe : for digging and loosening the soil

Spade : for drawing soil together, making the ground even, lifting soil into a basin

Basin : for carrying soil or manure from one place to another

Gardening trowel : for digging the soil for weeding

Digger : for making pits or furrows in the soil for transplanting seedlings

Hand fork : loosening soil for picking out stones

Fork : for prising out seedlings for transplantation

Secateur : hand tool for pruning branches

Watering can : for watering small plants

Spray pump : for spraying insecticides/ germicides on plants



My Activity

Write what tool you would use for the following purposes.

1. To carry manure for plants
2. To water potted plants
3. To prepare a bed
4. To spray a pesticide on vegetables
5. For weeding

- ◆ Give children the opportunity to use tools as and when the need arises for using them.
- ◆ Explain the precautions to be taken while using the tools, well in advance. Give guidance where necessary.

1.2 Simple Farming

Introduction to different types of crops

Our meals include a variety of preparations like *daals*, rice, *chapattis*, *bhakaris*, *usal*, jaggery, sugar etc. We also use oil. The grains, pulses, sugarcane, oilseeds required for these preparations are grown in fields and are called crops. Let us learn about the different types of crops.

Seeds must be sown in the fields to grow crops.

Seeds of different crops are sown at different times of the year. Only when seeds are sown at the right time and climate do we get a good crop. The period of the year when a crop grows best is called its season. According to their seasons, crops are divided into three types, namely kharip, rabi and summer crops.

Crops can also be divided into the following four types

1. Cereals
2. Pulses
3. Oilseeds
4. Cash crops

1. **Cereals** : Jowar, wheat, bajara, rice are cereal crops.
2. **Pulse crops** : Green gram, Bengal gram, black eyed beans, moth bean, broad bean, and other kinds of beans, peas are pulses.
3. **Oilseed crops** : Oil is extracted from groundnuts, and from seeds of sesame, flax, safflower, sunflower, castor, mustard and soya. Therefore they are called oilseed crops.
4. **Cash crops** : Crops like cotton and sugarcane whose produce is sold for cash directly after harvesting are called cash crops.

Besides the above types there are also other types of crops such as fodder crops, horticultural crops and forest crops.

My Activity

1. Write the answers to the following questions.

- i. Name the main types of crops.
- ii. Of which type is each of the following crops?
(a) wheat (b) sesame (c) green gram (d) fenugreek (e) sugarcane
- iii. What is called the specific time for sowing?

2. Visit an oil mill to observe how oil is pressed out of oil seeds and write a description of the process.

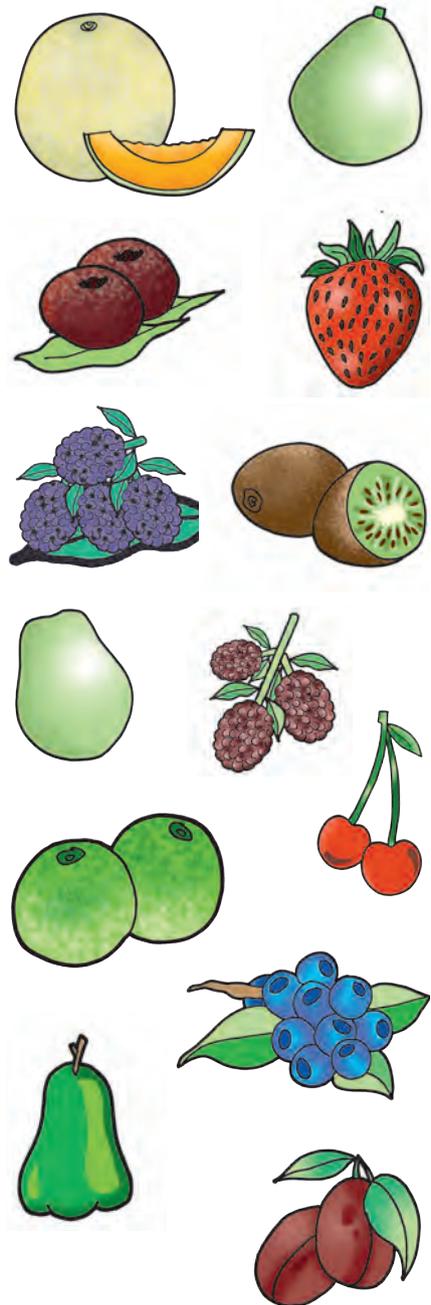
- ◆ Help the children to collect specimens of some crops.

1.3 Fruit Processing

Getting to know some unfamiliar fruits

Each fruit requires a specific kind of climate to grow. That is why we find that all fruits do not grow in our region. Besides, some fruits ripen only in a certain season. They are not available throughout the year. We may have heard their names but we are not easily seen in our surroundings.

Sr. No.	Name of fruit	Colour	Shape	Taste
1	Gooseberry	Orange	Round	Sweet and sour
2	Muskmelon	Greenish peach	Round, rough outside	Sweet
3	Pomelo	Greenish	Round, oval shaped	Sweet and sour
4	Kokum	Deep red	Round	Sour
5	Strawberry	Reddish	Small round tapering on one side	Sweet and sour
6	Mulberry	Black	Round	Sour
7	Kiwi	Rough, chocolate brown	Oval	Sweet
8	Pear	Greenish, white	Oval	Sweet
9	Lichi	Light brown	Round	Sweet
10	Apricots	Yellow	Round	Sweet
11	Wax-apple / Rose-apple	Green, pink	Round, tapering	Sweet
12	Cherry	Red	Oval	Sweet
13	Wood apple	Greenish	Round	Sweet and sour
14	Blueberry	Deep blue	Round	Sweet and sour
15	Bael/Bell	Greenish	Round, oval	Sweetish
16	Plum	Red, blackish red	Round	Sweet and sour



My Activity

Write the names and uses of some of the unfamiliar fruits.

- ◆ If possible, show children these exotic fruits and give some information about them.

1.4 Pisciculture

Introduction to the types of nets used for catching fish

Various kinds of fishing nets are used, according to necessity, to catch fish. The type of net is chosen depending upon the place where fishing is to be done.

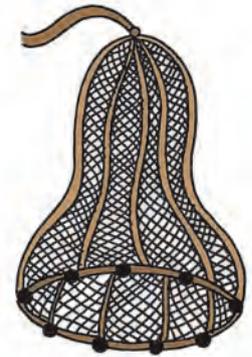
Cast net : This net is round in shape like a cone, tapering to one end and round and open at the other. A 2 to 3 metre long rope is tied to the tapering closed end. Iron or lead shot are tied to the lower border and this part is turned in and stitched up. Standing at a height and holding on to the rope at the tapering end with one hand, the net is thrown into the water with the other. This net is used in shallower waters.

Drag net : This is a very long net. Its mesh size is 2.5 to 4 cm and the width of the net is 3 to 4 metres. A nylon rope is woven into the upper border of the net and floats are attached to it at regular intervals along its length. A thick nylon rope is woven through the lower edge of the net and lead or iron weights are hooked to it. The net is pulled by both ends across a river channel and brought to the river bank. This requires a lot of manpower.

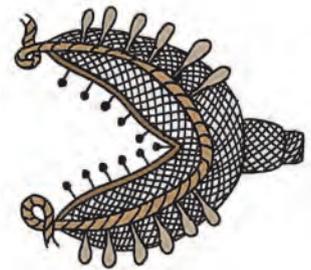
Bag net : A bag net is triangular in shape. Its length may be from 15 to 200 metres. Its mesh size is 5 to 10 cm. This net is fixed in one place across the direction of the current in the sea.

Gill net : Nylon or cotton yarn is used to make this net. Floats are attached to the upper line of the net and weights to the bottom line. The net is kept, fixed vertically like a wall in the water all night. Fish swimming in the water get caught in the net.

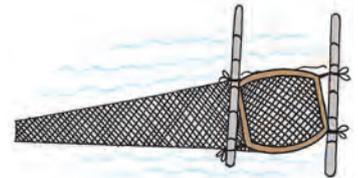
Shore seine net : This is the biggest type of net. Its width is 400 to 500 metres and its height, 10 to 12 metres. The mesh size near the centre is 3 to 5 cm. Floats are attached to the top line of the net and lead weights to the bottom line. A 300 to 400 metres long and 7.5 cm thick rope is tied to both ends of the net. 20 to 25 people are needed to pull this net.



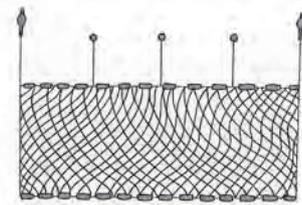
Cast net



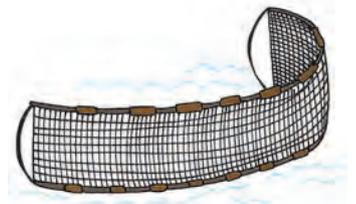
Drag net



Bag net



Gill net



Shore seine net

My Activity

If possible, watch in person, how net fishing is carried out.

- ◆ Explain the precautions that need to be taken while fishing.

1.5 Food Production

Tools required in food production

All kinds of dishes are prepared for eating in every house, restaurant or big industries in smaller or bigger quantities. Let us get to know the tools and devices used in food production.



Sieve : To separate small stones and other rubbish from flours and grains.



Cutting board : To cut fruits and vegetables.



Peeler : To remove the peels of fruits and vegetables like potatoes, gourds.



Knife : To cut vegetables and fruits.



Colander : (Made of cane/ stainless steel/ plastic) To drain the water from fruits and vegetables, etc. after they have been washed.



Kitchen tongs : To lift hot vessels. Kitchen tongs are of two or three types.



Mortar and pestle : Made of steel, stone or brass used for pounding.



Grater : To grate coconut, carrots, radishes, cucumber. There is a special one for nutmeg.

My Activity

All the above implements are manually operated. However, nowadays electrical appliances are used in food production. Make a list of these appliances and make a chart like the one above, showing their names and uses. Collect and stick their pictures in a scrapbook.

- ◆ Give proper guidance for making the list and the chart.

A bhel of mixed pulses

Ingredients and their proportions : $\frac{1}{4}$ cup each of various sprouted pulses such as green gram, moth, etc., 1 tablespoon horse gram, 1 tablespoon tamarind and jaggery chutney, 1 teaspoon ground green chilly, 1 onion and 1 tomato finely chopped, $\frac{1}{2}$ teaspoon chaat masala, salt to taste and for garnishing 1 spoon shev and $\frac{1}{4}$ cup chopped coriander greens.

Procedure

1. Wash the pulses and leave them to sprout.
2. Steam the sprouted pulses lightly. Remove the steamed pulses in a glass or steel container.
3. Add the other ingredients and mix well. Serve into bowls and garnish with shev and coriander greens.



My Activity

Write down the process of sprouting the pulses for making bhel.

- ◆ Explain the advantages of eating sprouted pulses.

2. Area : Clothing

2.1 Producing Cloth

Yarn is drawn from cotton, wool or silk and is used to produce cloth. This process is called 'weaving'. In olden times cloth was woven by hand. Later the spinning wheel was invented. Of all the devices and machines needed in cloth production, the spinning wheel or *charkha* comes first.

The *charkha* evolved very rapidly. There are many types of *charkhas*. Let us get to know the most important of them.

- 1. Khada *charkha* or standing/ upright spinning wheel :** This *charkha* has a wheel of 40 to 60 cm and a disc. The wheel is connected to the disc by a cotton belt. How to spin a yarn with the help of a spinning wheel is still taught at the Sevagram Ashram.
- 2. Kisan *charkha* :** The main parts of this *charkha* are the following : Main wheel, speed, wheel thin string, thick string, spring, disc. This *charkha* has two wheels. The main wheel of 20cm diameter while the smaller wheel which helps to increase the speed of the *charkha* has a 10cm diameter. While spinning yarn the main wheel is parallel to the ground. This *charkha* spins more yarn than the khada *charkha*. This *charkha* is also called 'Yervada *charkha*.'
- 3. Peti or box *charkha* :** This *charkha* is available in various sizes and is fitted in a box. It can be opened or shut with the help of hinges.
- 4. Pravasi *charkha* :** This is a portable *charkha* which can be carried along even while travelling. But the speed of this *charkha* is very less.
- 5. Ambar *charkha* :** This is the newest version of the *charkha*. This has a wooden spinning wheel which can be worked by hand, 4 spindles and 3 pulleys. It has 2, 3 or 4 grooves and each pulley is connected to the main wheel by means of a cotton belt.

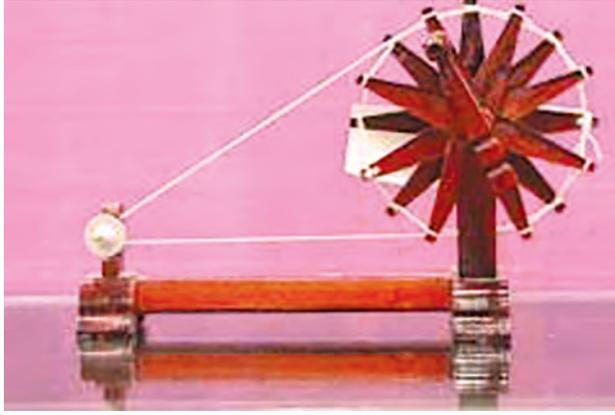
It has an automatic device for wrapping the yarn. Although the yarn obtained using the ambar *charkha* is rough and of ordinary quality it spins four times as much yarn as any of the other *charkhas*.

The importance that Gandhiji gave to the *charkha* as a village industry still continues.

My Activity

Obtain information about *charkhas* by visiting a *charkha* museum or exhibition.
Obtain more detailed information about one of the *charkhas*.

- ◆ Give information about weaving equipment using a *charkha* or pictures/ videos of a *charkhas*.



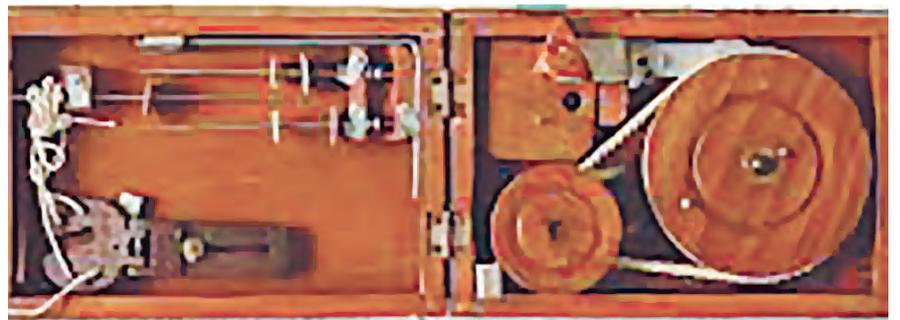
Khada charkha



Ambar charkha



Kisan charkha



Peti charkha

2.2 Basic Tailoring

Stitching a hook on to a garment

We wear many different kinds of dresses. They are made to fit us well, and easy to wear and to take off by the use of certain simple devices such as drawstring, hooks, loops, buttons, etc. Of these the hook is a very commonly used device.

Tools and materials : Cloth, hook and eye, needle, thread, etc.

Procedure :

1. Thread a needle. Bring the two ends of the thread together and tie them in a knot.
2. Place the hook on the cloth in such a way that its round loops are towards the centre of the cloth and the head of the hook is at the edge of the cloth.
3. Pass the needle through the cloth and the loop of the hook so the knot is on the wrong side of the cloth.
4. Now pass the needle back to the wrong side from a point close to the hook's loop but outside it.
5. Repeat these two steps so that there will be several stitches around the hook's loop.
6. Now bring the thread up through the other loop of the hook and repeat the same two steps.
7. Next, bring the thread up one side of the top of the hook and pass it down from the other side thus holding down the head of the hook. Put in 2 or 3 stitches like this, side by side rather than all in the same place.
8. In the end, before pulling the thread tight after the last stitch, pass it through the loop formed by the loose thread and thus tie a knot. Then cut the thread with scissors.



My Activity

Observe an old dress which has hooks. Replace a missing hook by the method described above.

- ◆ Give guidance where necessary.

2.3 Doll Making

Making a doll from waste materials

Tools and materials : Old plastic bottle, toothpick/ stick, black/ dark brown woolen yarn, old newspaper, coloured paper, glue, decorative baubles

Procedure :

1. Take a medium sized plastic bottle. With the help of an elder person make a hole in the lid of the bottle using scissors points or a nail. Fix a toothpick or any stick in this hole.
2. Take a sheet of coloured paper and fold it into pleats. Stick it in such a way as to make a long skirt for the doll. Stick another paper on the upper portion of the bottle including the lid to make a blouse.
3. Make a small ball using clay, plasticine or crushed paper, or use a table tennis ball to make the head.
4. Stick the black or brown strands of wool on the head to make hair. Draw the nose, eyes, and lips in the proper colours.
5. Roll paper and flatten the roll to make the dolls arms and attach them.
6. Decorate your doll with attractive baubles like sequins, beads, lace and shiny coloured paper.
7. The lid of the bottle is the doll's neck. Remove the lid and fill the bottle with small, dry sweets.
8. Your doll is both decorative as well as useful from waste materials.



My Activity

Make a doll using a coconut shell.

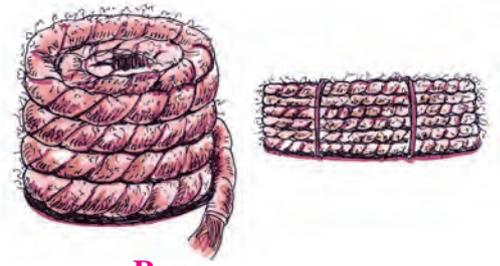
- ◆ Give guidance where necessary.

2.4 Coir Work

Various articles made using coir

When you make a list of the things made of coir, remember to classify them to make it easier to make the list.

1. **Articles of household use** : Rope, string, pot hanger, doormat, wall hanging, decorative articles.
2. **Articles of use in the fields** : Rope, sling
3. **Articles for sale** : Carpet, swing, mattresses, pillows
4. **Other common articles** : Bag, brush



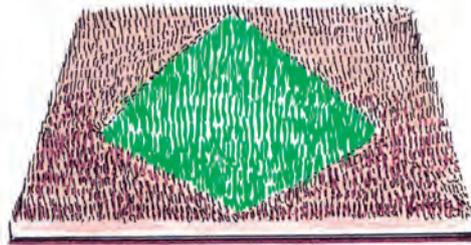
Rope



String



Wall hanging



Doormat



Pot hanger

My Activity

Make a list of the coir articles available in your house.

- ◆ Urge the children to recall the coir articles they have seen, to name them and to make a classified list of those articles. Help them if necessary to do the classification.

3. Area : Shelter

3.1 Clay Modelling

A clay bird

Tools and materials : Clay/ Clay like soil

Procedure :

1. Take some clay. Add enough water and knead it so that it can be shaped into a ball.
2. As shown in the picture shape some clay into an upright stand. Also make the shape of the body.
3. Fix a pin or stick on the top of the base and fit the body properly on top of the base. Prepare the shapes of bird's neck, head and beak.
4. When fitting the bird's head to the body use a thick wire or stick to give support. Make small clay balls for eyes or use beads. Shape some clay into bird's wings.
5. Thus you will get a clay bird.



My Activity

Make a clay model of a tortoise.



- ◆ Offer help and guidance wherever needed.

3.2 Bamboo and Cane Work

Planting, harvesting and storing bamboo

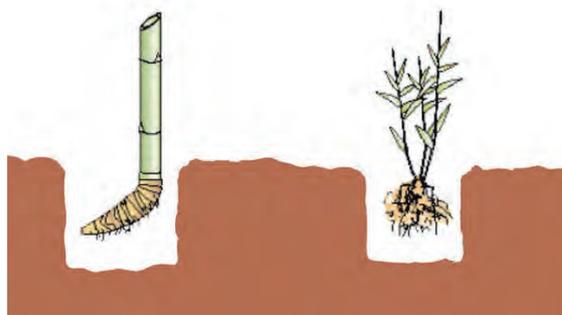
Bamboo can be grown in any kind of soil from the most fertile kind to red, yellow, *murbad*, light, shallow, clayey or sandy soil. Bamboo may be planted on bunds between fields, open spaces around houses, river banks or even hill slopes.

Bamboo may be grown by either of the two methods, namely vegetative or from seeds.

1. Vegetative method : This is the traditional method. Bamboo is grown from an already existing bamboo grove. There are some sub-types of this method.

- i. Growing the small variety of bamboo having a runner stem.
- ii. Planting one year old culms.
- iii. 1 metre long shoots of the bamboo are planted at a slant to the ground.

2. Sowing a seed : Planting a bamboo by sowing a seed in the ground.



Method of planting : A pit of 30cm × 30cm × 30cm size is dug and the bamboo is planted in the month of June. A distance of 1.5 m between 2 plants and 3 m between two rows is maintained.

Harvesting the bamboo : Bamboo is generally harvested in the months of October or November. The bamboo is cut about 20 to 30cm above the ground. Three to four year old bamboo sticks are quite durable.

Storing bamboo : After cutting, the bamboo sticks are kept upside down. They are soaked in a pesticide. They are kept under running water for a month and then dried in the shade.



My Activity

Visit a bamboo plantation. Observe how the work is carried out there and write a description of it. Study how bamboo is grown in your surroundings.

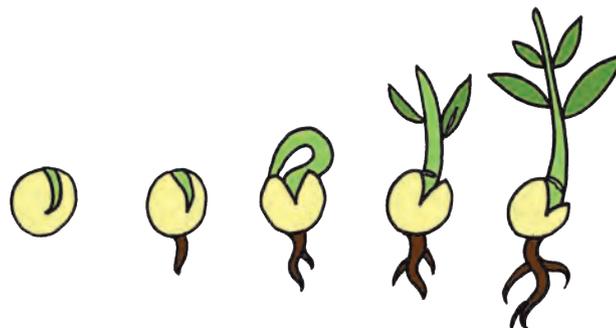
- ◆ Offer help and guidance to the students wherever needed.
- ◆ Arrange a visit to a bamboo farm and give students an opportunity for observation.

3.3 Cultivating Flowering and other Ornamental Plants

Unit : Collecting seeds of flowering plants according to their season and preparing seedlings in the proper way

Dear friends! Flowering and other ornamental plants make our surroundings beautiful, isn't that so ? So let us prepare seedlings of some flowering plants.

1. Collect the seeds of beautiful flowering plants like marigolds, asters, chrysanthemums, babul, gulmohur, bahava, etc. in their season, when they are available. Clean and dry them. Then store them in plastic or paper bags. On each bag, write the name of the plant and the date on which the seeds collected.
2. To prepare the seedlings, fill a small pot or plastic bag with a mixture of soil and organic fertilizer. Sow the seed in it and water it.



My Activity

Sow the seeds and grow the seedlings. Observe the pot every day and write how it grows.

- ◆ Give proper guidance regarding collecting seeds, storing them safely, preparing the seedlings watering them, etc.

(B) Other Areas

Animal Husbandry and Poultry (Conservation of Animals and Birds)

Use of productive domestic animals other than for milk

Certain occupations, if carried on along with agriculture, can help increase income. These are called agribusinesses or complementary occupations to farming.

Dairy : Milk is a part of the diet of all people from newborn babies to the aged. Milk is easily digested and is rich in salts. It is the best balanced diet for small children. That is why it is said to be a complete food. Milk is processed to make several other food stuffs, for example, yoghurt, buttermilk, *lassi*, *ghee*, *chakka* (hung curd), *shrikhand*, etc.

Milk products made by evaporating the water from milk : Ice cream, milkshake, *basundi*, *rabdi*, *khoya*, *pedha*, *kalakand*, *barfi*, *kheer*, *kulfi*, *gulab jamun*, etc.

Milk products made by curdling milk (processing milk by adding an acidic substance) : Cheese, *paneer*, *rasgolla*, *rasmalai*, etc.

Yoghurt : Heat the milk till it boils and allow it to cool to 30 to 35 degrees C. Add some drops of lemon juice or some yoghurt to it and stir. Cover it and keep it aside. The yoghurt will be ready in 10 to 12 hours. A culture of lactic acid bacteria is used to make yoghurt in large quantities.

Chakka (hung curd) : Take good quality yoghurt and tie it in a thin cotton cloth. Allow all the water to drain from it. What is left in the cloth is hung curd or *chakka*. Ten litres of buffalo milk gives 3 to 3.5 kg of *chakka*.

• Uses of domestic animals other than for milk

Camel : The camel is an animal of the desert regions. A camel is used for transport. That is why it is called the Ship of the Desert. A camel is also kept for its milk and meat. Camel hide is used to make footwear and its hair is used for certain industrial clothing.

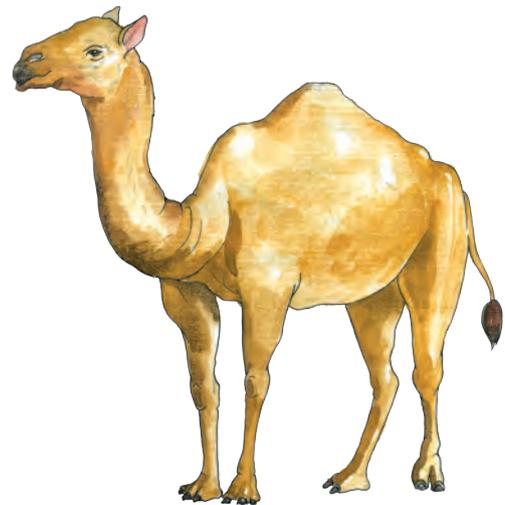
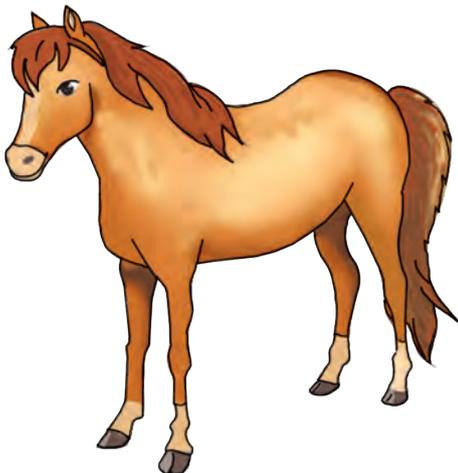
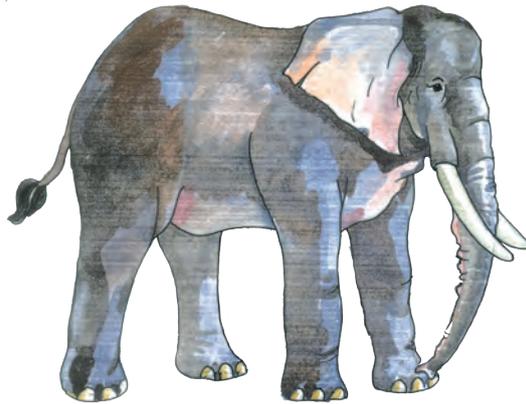
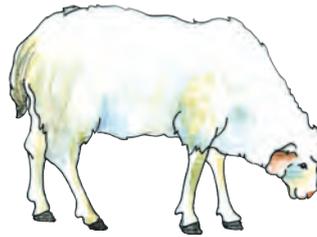
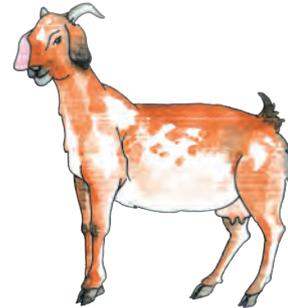
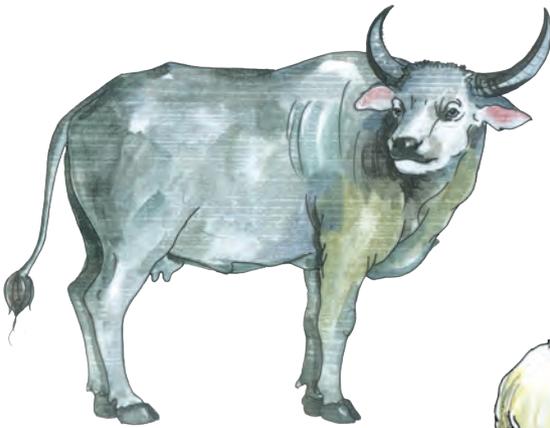
Yak : The yak is an animal found in the Himalayan region. It is kept for use in agriculture, transport and for other heavy work as well as for meat. Clothes, toys, dyes/ colours, ornamental articles are made from its hair.

Pig : The pig is to be found everywhere. Pigs/ boars are kept for meat. It is called pig keeping or pig farming. Pigs are reared for their meat as well as hide. The skin is used to make belts, shoes, jackets, gloves, the hair for making brushes and their fat for soaps, candles and lubricants.

- ◆ If possible arrange a visit to a nearby agribusiness centre such as a poultry or sheep farm.

My Activity

Write the name and some information about each of the animals shown in the pictures below.



- ◆ Explain the uses of domestic animals according to their uses at the local level.

(C) Area : Technology

(1) Information and Communications Technology (ICT)

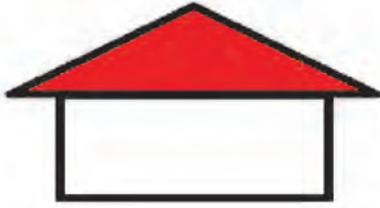
Uses of the computer :

- 1. Advertising :** A computer is used for all kinds of advertisements. It is used to prepare advertisements that appear in newspapers and magazines by filling colours and making them more attractive.
- 2. Printing :** A computer is useful in all kinds of printing processes such as newspapers, magazines, periodicals, reports, books, etc.
- 3. Medicine :** In the field of medicine, computers are used for conducting tests to obtain a complete picture of the patient's condition to record the current condition of the patient with respect to blood pressure, body temperature, pulse rate, etc. Today computers are also used to help with complex surgeries.
- 4. Education :** In the field of education computers are very useful in making the teaching and learning process more effective. Learning and appearing for an examination have become easier with the help of the computer. Computers are also useful for preparing the exam results of students as also for keeping records of the general register.
- 5. Banking :** In banks, computers are used to keep a record of the transactions in customer accounts. In some cities, an identity card can be used for financial transactions through the ATM or the Automatic Teller Machine. This stored information can be processed to obtain a solution. This is called Data Storage.
- 6. Post and Telephones :** Computers are used to a great extent in the post and telegraph field, for example, for correspondence, sending messages, preparing bills, for controlling, etc.
- 7. Personal uses :** We use computers to get information and scientific knowledge as also for entertainment. We use the Internet for online shopping, reading newspapers, obtaining information about various kinds of things from the websites of the relevant companies, referring to encyclopaedias online, etc.
- 8. Agriculture :** In the field of agriculture, computers can help to increase production and to expand agribusinesses by providing information about, for example, agricultural research, studies of soil, weather and climate, and market rates of produce in various market places.
- 9. Police :** Computers help to expose crimes. Computers can be used to keep records of stolen articles, vehicles and notes of an accident or crime scene as also finger prints, facial features, results of tests of mental balance, and information about lost people.

My Activity

Visit a place in the neighbourhood where computers are being used.

The use of tools in Paint



Atharva made the picture you see alongside, using the computer application called Paint.

Paint is one of the various applications which we can use for doing specific tasks with the help of the operating system of a computer. Using the Paint application we can make many different pictures, just like Atharva did. Paint offers all such tools as an artist needs while painting a picture on paper, such as a brush, colours, eraser, etc.

Let us see how Atharva made the picture above.



- He opened the Paint application.



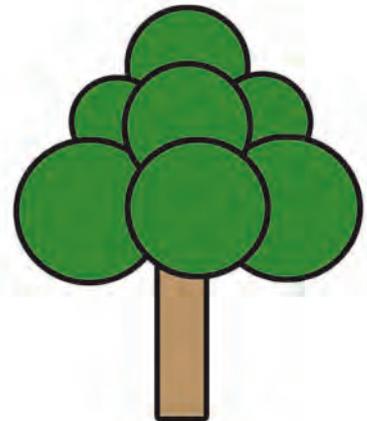
- He used the Shape tool to select the triangle shape.

-  He used the Fill Colour tool to fill it with the colour of his choice.

- Next  he used the Shape tool again to select a rectangle. 

-  Then he used the Fill Colour tool again to fill the colour of his choice.

- And last, he Saved his File.



My Activity

Drawing a picture using various geometrical shapes. Saving the picture or file.

- ◆ Give the children the opportunity to use the Paint application using an available open-source Paint application.

Road Safety



Give Way



No Entry



One Way Traffic
(as shown by
arrows)



One Way Traffic
(as shown by
arrows)



Public Telephone



Petrol Pump



Hospital



First Aid Post



Left Turn



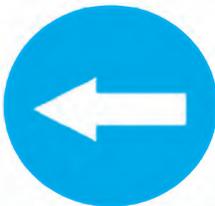
Right Turn



Right Hairpin
Bend (Turn)



Right Reverse
Bend (Turn)



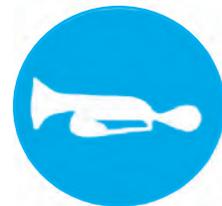
Left Turn Only



Compulsory
Ahead Only



Compulsory Ahead
or Turn Left



Blow Horn

My Activity

Explain to the class about 'The use of GPS Technology to me'.

1. Picture

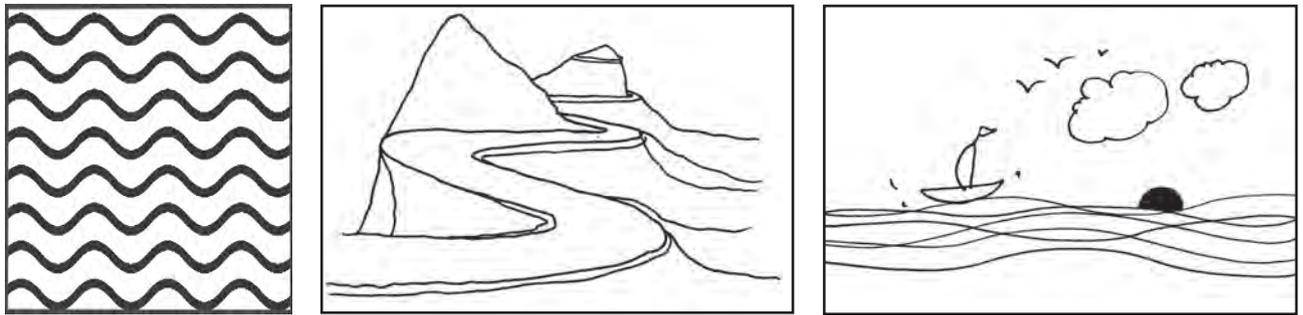
1. Sketching

1.1 Lines

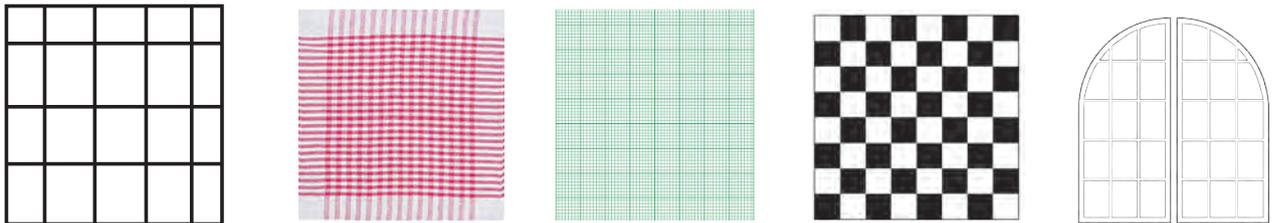
It is necessary to practice lines in order to draw pictures. Use different mediums like colour pencils, crayons, coloured pens or sketch pens to practise lines.

We have practiced vertical lines, horizontal lines, slanting lines, circular lines, zigzag lines and intertwined lines in the earlier Standard. Let's now practise two more types of lines.

Wavy lines: The curving lines are called wavy lines. We find curving lines on waves on water, roads in mountain pass, etc.



Intersecting lines: When two or more lines cross each other in a plane, they are called intersecting lines. We see these lines in the designs on handkerchiefs, graphs, chess boards, window nets and roads that cross each other.



My Activity

Take *rangoli* or soft soil/sand in a big dish or a tray to practice lines on it using a stick or with a finger. Make diagrams of wavy and intersecting lines using thick wool.

◆ Make the children practice wavy and intersecting lines. Make them use different mediums like coloured pencils, crayons, coloured pens or sketch pens for practice.

1.2 Shapes

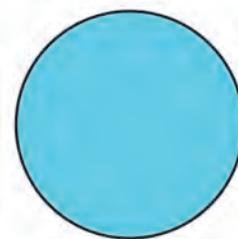
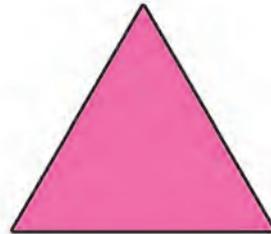
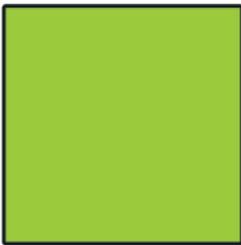
Line, shape, texture, colour and shade are the basic units of pictures. In the previous Standard we have been introduced to the line and its types. Now let's learn more about different types of shapes.

Shapes:

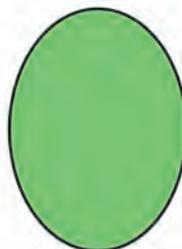
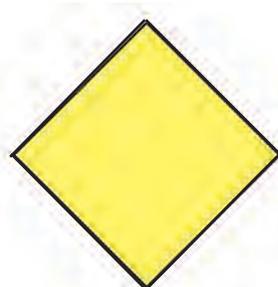
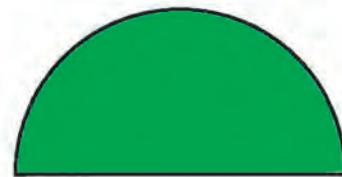
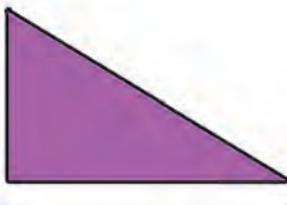
Shapes are made with the help of several lines. Lines indicate the boundary of a shape. Near and far, that is distance, can be shown by smaller or bigger sizes of shapes. Shapes can be filled by colours to make them more attractive. Lines make many different shapes and those shapes go to make pictures. Some shapes made by lines are shown below.

1. Geometrical Shapes

(a) **Basic Shapes** : Square, Triangle, Circle

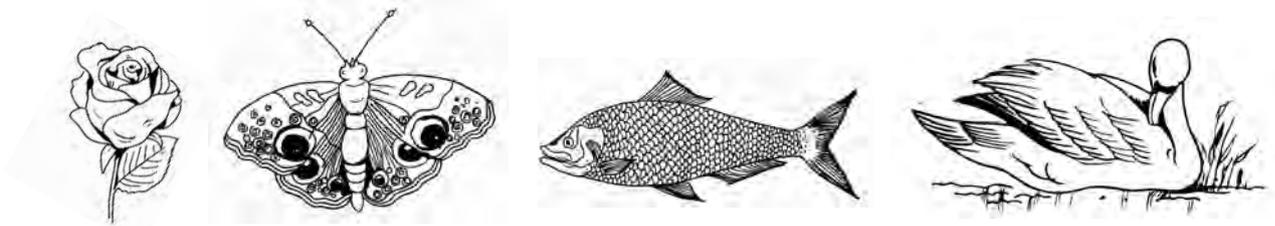


(b) **Secondary Shapes** : Rectangle, Triangle, Semi circle



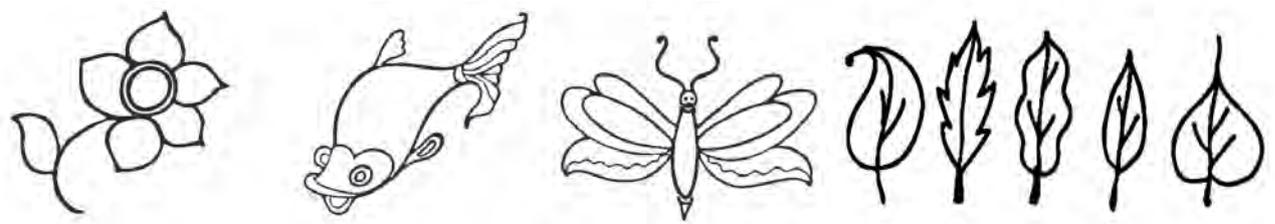
2. Natural Shapes:

Different shapes that are seen in nature are natural shapes. For example, shapes of leaves, flowers, butterflies, birds, animals, conches, shells, fish, etc.



3. Ornamental Shapes:

When natural shapes are modified with individual creativity, to make them more beautiful and novel, the new shapes are called ornamental shapes. For example, the ornamental shapes of fish, leaf, flower, etc., shown below.



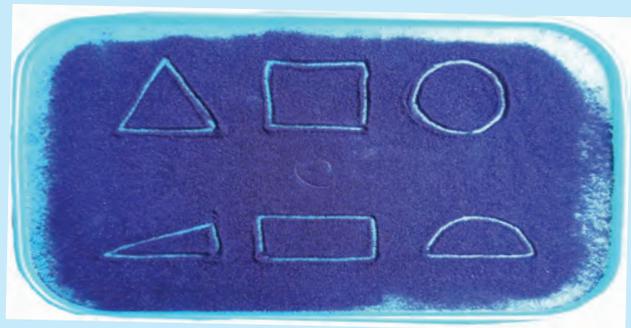
4. Abstract Shapes:

The shapes with no particular form are abstract shapes. For example, flowing colours, drops of colours, etc.



My Activity

Take *rangoli* or soft soil/sand in a big dish or a tray to practise geometrical, natural, and figurative shapes on it with a finger or by using a stick.

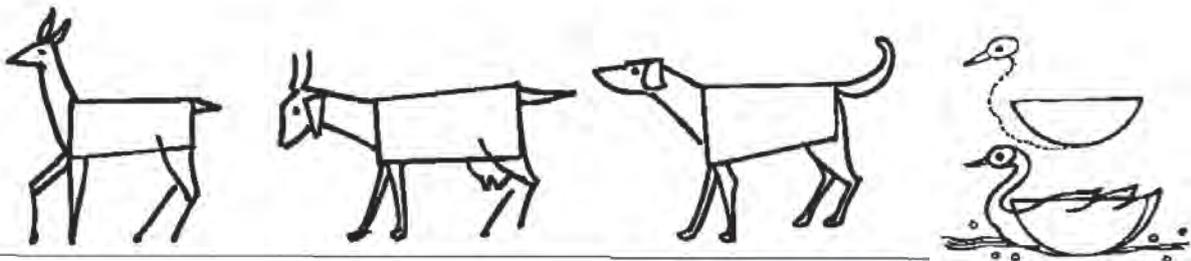
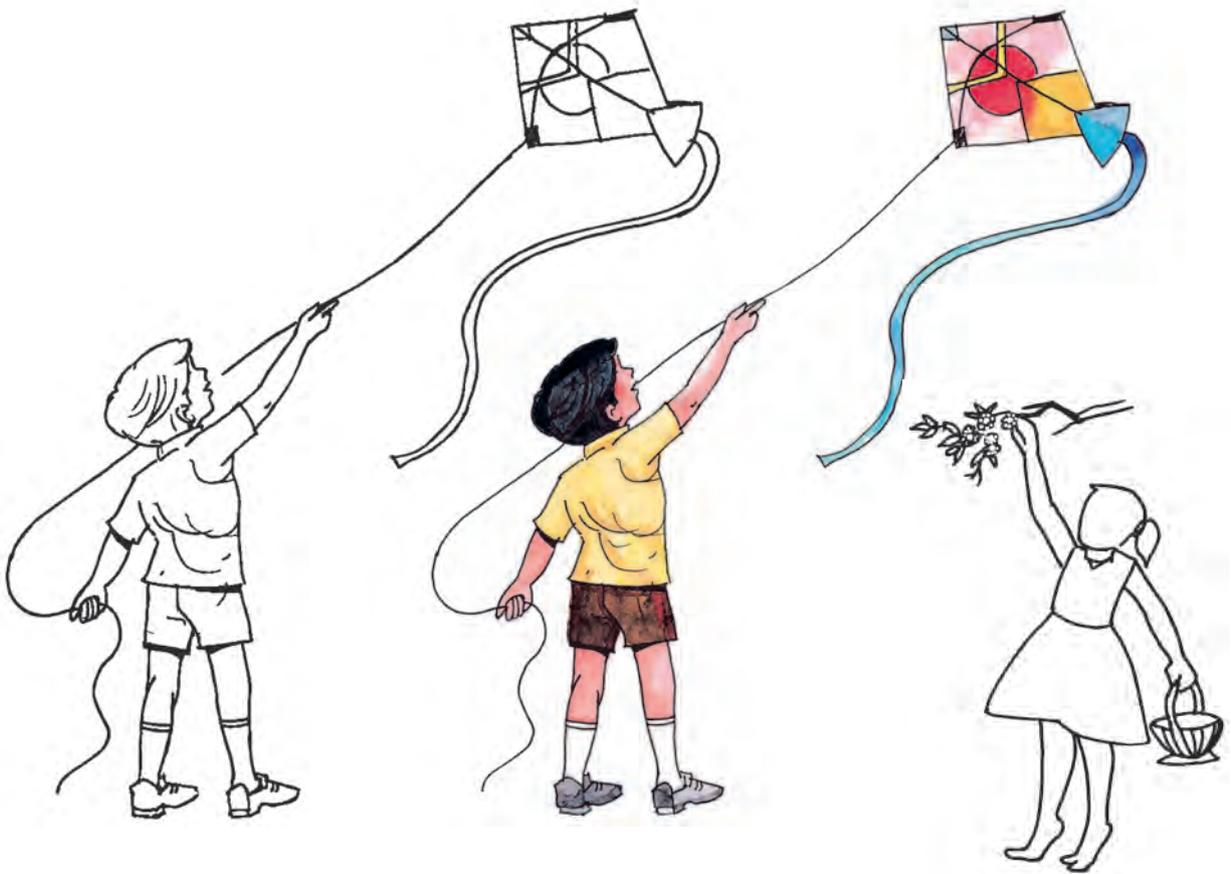


- ◆ Explain to children the difference between geometrical, natural, ornamental and abstract shapes and ask them to draw such shapes.

2. Memory Drawing

Memory drawing is a picture drawn by recalling something previously seen. The topics for memory drawing are related to the things that we have already seen. For example: houses, trees, hills, sky, birds, animals, school, a balloon seller, etc.

A memory drawing must have a background. What can be viewed behind the main picture is called the background.







My Activity

Use a match box or a box of stapler pins as parts of body, a marble or a betel nut as a face, use sticks for neck, hands, legs to show/make different movements of human figures.

- ◆ Teach drawing human figures in a simple way using geometrical shapes. Ask them to draw from memory instead of copying from / referring to books. Explain to the students the importance of background for the pictures.

3. Imaginary Drawing

Imaginary drawings are based on imagination. The basic objective here is to give scope to creativity. These pictures have ample scope for imagination.

Feelings like happiness, enchantment, curiosity, surprise, humour can be expressed through things such as animals clad in colourful attires of human beings, dancing fairies, the dreams you see, get together of animals, gathering of birds, a bungalow of chocolates, etc.

Pictures based on stories in textbooks, poems, stories in Panchatantra, imaginary stories, familiar stories are some more examples of imaginary drawings.



My Activity

Narrate any imaginary story in your group, draw any of the imaginary incidents from the story and colour it.

- ◆ See that the students draw pictures with their imagination. Give them the opportunity to express themselves through pictures. Initiate discussions in the groups about the pictures and the imagination that they have used in those pictures.

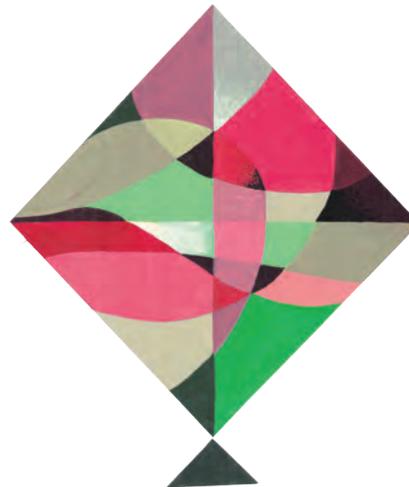
4. Designs (Decoration)

4.1 Patterns with different shapes

Make designs using geometrical or natural patterns within any outer shape. Colour them according to your choice.

Geometrical shapes: square, circle, triangle, etc.

Natural shapes: leaves, flowers, birds, butterflies, fishes, etc.



My Activity

Use different shapes as designs inside a circle and colour them.

- ◆ Make students understand the use of a ruler and compass while drawing geometrical shapes. Guide them properly about how to colour them and show some specimens of designs.

4.2 Printing (Block Printing)

Block printing is the process of using an object to make an inked impression upon a plain surface or paper, this is also known as the printing technique.

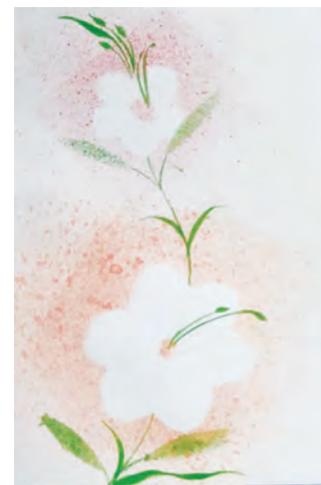
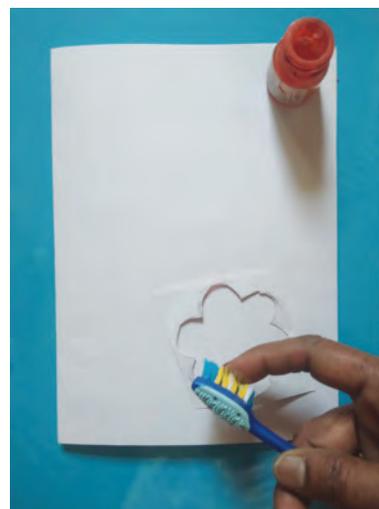
So far, you have learnt to take imprints of natural things. One of its types is given below.

Spray Painting

You must have seen the front yard of your home sprinkled with water. A spray of water on the soil is also a type of imprint where water is imprinted on the earth's surface. In the same way, we can make imprints on paper by spraying colours. Let's see how to make imprints using the spray painting technique.

Material required: water colours, paper, discarded tooth brush, etc.

- Dip the bristles of the brush in any water colour and spray the colour on the paper with your finger.
- Repeat the process using different colours.
- Make a stencil of any simple shape like a vase, a flower or a fish.
- Put the stencil on the paper, dip the bristles of the brush in the water colour and use your finger to spray the colours and make a block painting.



My Activity

Sprinkle the school playground with water and notice the designs created.

Prepare different types of stencils to make spray paintings.

- ◆ Put a big chart on a wall and organize a group activity where children spray colours upon the chart using their hands.
- ◆ Tell the students, what a stencil is and how to make it. Also show them how to use it.

4.3 Collage (Pasting)

In the previous Standard we have seen homogenous collage. A collage is a visual representation made by pasting different forms, colourful papers, materials and other sources available in the surrounding on a surface.

A collage of a cat

Material : A big four sided thick paper as a surface, thick paper of a blackish colour, scissors, glue.

- Stick a big circle of paper as the cat's stomach and a small circle as the face/mouth on a surface.
- Paste two circles as hands and two circles as legs.
- Paste two triangles as ears and one triangle as a nose.
- Paste two ovals as eyes.
- Paste semi circle in the place of mouth.
- Follow the entire procedure as shown in the picture or do it as per your own creativity/ imagination.



My Activity

Cut the shapes of vases, flowers, leaves, butterflies using papers of colourful pictures in newspapers or magazines and paste them to prepare pretty greeting cards.

- ◆ Show the students how various materials like *bindis*, kundans, beads, sand, conch-shells, *rangoli*, pieces of bangles, buttons, match-sticks etc. can be used in collage art. Show them some examples of it.

5. Copywriting

- Practice easy and simple shapes initially for copy writing.
- Prepare Marathi, English letters based on your practice.
- Practice vertical lines, horizontal lines and particular curved shapes in Devanagari script.
- After learning about groups of letters that have similar shapes, practice writing words with them. Know the proper distance between two words and the height of letters while writing words.
- After ample practice, make Marathi and English letters.

C C C C C C C ॐ ॐ ॐ ॐ ॐ ॐ

० ० ० ० ० ० ० ८ ८ ८ ८ ८ ८

व ब क घ ह ळ त द S B G P D

ऊकार, वेलांटी ॐ ॐ ॐ ॐ ॐ ॐ

मात्रा ॐ ॐ ॐ ॐ ॐ ॐ

मूळ अक्षरांचे गट : व ब क ळ

ट ठ ढ ड इ झ

न म भ

Understand the factors that make handwriting good or bad. If simple things like the distance between letters, distance between two lines are observed/ maintained properly, they will definitely help to improve your handwriting.

My Activity

Practice writing letters using graph papers or square lined notebooks.

- ◆ Introduce shapes of letters, aesthetic designs in a simple, easy way.

6. Object Drawing

We see different objects in our surrounding. A picture of those objects is called an object drawing. A still picture can be drawn by observing an object.

- Some objects are found in nature itself. These objects are called **natural objects**. For example, leaves, flowers, fruits, vegetables, stones, shells, etc.
- Some of the objects are not found in nature. Human beings are involved in their creation. These objects are called '**manmade objects**.' For example, cup, saucer, bucket, mug, ball, pots, etc.

Pictures can be drawn using geometrical shapes.

- **Cube / Cuboid** : For example- door, book, mobile, compass box, etc.
- **Cylindrical shape** : For example- cup, glass, mug, bottle, bucket, etc.
- **Spherical shape** : For example- ball, lemon, orange, apple, earthen pot, pumpkin, etc.
- **Pyramidal shape** : For example- ice-cream cone, Mehndi cone, joker's cap, etc.



My Activity

Make easy, simple sketches of manmade and natural objects.

- ◆ Show various objects of different shapes to the students to find out to which shape it matches. Initiate discussion.
- ◆ Show students different objects which are in everyday use and related with each other as well as the inter-related pairs of such objects. For example- cup and saucer, bat and ball, etc.

2. Sculpture

2.1 Clay Modelling

We have already learnt some techniques like sieving the soil, soaking the soil and kneading it. Now let's make various designs with it.

Type 1

Material- kneaded soft soil

- Make a flat, square block of clay.
- Make similar rolls of clay.
- Put the rolls vertically, horizontally, diagonally, circularly on the square surface to make beautiful designs.
- Make designs as shown in the drawing or as per your own imagination.



Using the kneaded soil make cuboid shapes like round, square, cylindrical, conical, etc. Using such clay rolls you can make animals, birds, dolls, toys, etc.



Type 2 : Making flowers with plasticine clay

Material - Plasticine clay, basket, flowerpot (vase)

- Take green plasticine clay for the stem and leaves and then take any coloured clay of your choice for the flowers.
- Make thick, long rolls of clay for flowers.
- Flatten those rolls using a rolling pin.
- Wind the flattened rolls, press the bottom of the flower together with your finger.
- Make green colour calyx and stick it to the base of the flower.
- Take green plasticine clay and make the stem of the flower using a wire or a toothpick.
- Join the flower to the stem, make leaves and stick them.
- Arrange the flowers in a basket or a vase.



Type 3 : Making animals from the basic shapes of plasticine clay. Follow the drawings and carry out the activity accordingly.



Type 4 : Making human body shapes from plasticine clay. Look at the figure and make one like that.



My Activity

Using the soil available in your surroundings, make a flat, square block. Decorate it with designs of clay rolls as per your choice and make a photo frame of it.

- ◆ Show the children the clay models of birds, animals, toys, objects, etc. and ask the students to give some different demonstrations.

2.2 Paper Modelling

In the previous Standard you have learnt crumpling, tearing, folding, pasting, rolling and measuring the paper. You have also learnt to make paper masks. Now let's make paper models by pasting bits of paper.

1. Making paper articles

Material- Balloon, gum, water, a bowl, newspaper, scissors, colours, decorative, sharp nails, a piece of wire.

- Blow the balloon and tie its mouth tight. Mix water and gum together in a bowl.
- Make small bits of newspaper, dip them in the mixture of water and gum. Stick the newspaper bits on half of the balloon. Put seven to eight layers of them.
- After the paper layers have dried, completely burst the balloon with a sharp object and pull the balloon it out.
- Cut the edges of the shape carefully.
- Colour the paper bowl prepared and beautify it with baubles.
- Prepare some more different things with your imagination.



My Activity

With your own imagination make paper models and write what they can be used for.

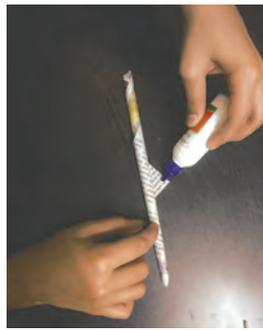


- ◆ Ask the students to make various paper models by pasting pieces of paper. Organize an exhibition of their creations.

2. Decoration of three dimensional objects- Pen stand

Material - Newspapers, gum, scissors, thick coloured paper, thick cardboard, material for decoration.

- Make a roll of a rectangular newspaper and paste its top with gum.
- Make many such rolls, cut their ends to make them equal in length.
- Paste these rolls on the thick coloured rectangular paper close to each other.
- Stick both the ends with a coloured paper. Thus a pipe shape will be made.
- Cut a round out of a thick cardboard and stick it as its bottom.
- Stick beads, *bindis* and lace to decorate the shape and thus you will get a pen stand.
- Put things like pen, pencil, brush and scale in the pen stand.



My Activity

With your imagination make paper models like photo-frames, basket, mat, letters, etc. by making rolls of the newspapers.

- ◆ Tell the students that shapes which have length, breadth as well as thickness or depth are called three dimensional models.

2.3 Use of other mediums

1. A model from paper glass

Material- Two paper glasses, scissors, pencils, thick colourful paper, colours.

- Take two paper glasses. With a pencil, make a line a little above the bottom of the glass as shown in the diagram.
- Make cuts of equal size from the top edges of the glass up to the marked line with scissors.
- Using your hand, press the bottom of the glass as shown in the diagram. You will get a shape of a flower. Similarly, make a flower from the other glass also.
- Stick these flowers on a thick colourful paper. Cut leaves, branches and flowers from colourful paper and stick them. You can even draw these shapes and colour them as per your choice. Draw nose, eyes, and lips on the face of the flowers. Decorate the flowers using beads, kundans and *bindis*.



My Activity

Make models with your imagination using waste material available to you.

- ◆ Get the models done as per choice of the students, using some other mediums as per the material available.

3. Singing

3.1 Swaralankar

In the previous Standard we have learnt about *Swaralankar*. Let's practice some of them.

1. Sa re ga ma pa dha nee sa
Sa nee dha pa ma ga re sa
2. saresaga regarema gamagapa mapamadha padhapanee dhaneedhasa
Saneesadha needhaneepa dhapadhama pamapaga magamare garegasa
3. saregaresa regamagare gamapamaga mapadhpama padhneedhpaa
Dhaneesanidha neesaresani saregaresa saneedhneesa needhapadhaneer
Dhapamapadha pamagapama magaregama garesarega resaneesare
Sanidhaneesa
4. sagarema remagapa gapamadha madhapanee paneedhasa
Sadhaneepa neepadhama dhamapaga pagamare maregasa

3.2 Introduction to the Ragas

Let's know about Ragas in music.

Raga : Regulated arrangement of particular *Swaras* that entertain our minds is called a Raga. Ragas have ascending (Aaroha) and Descending (Awaroha) sequence.

Jati : The number of *Swaras* in a particular Raga decides its Jati.

Raga has three main types of Jati.

Odav - 5 *Swaras*

Shadav - 6 *Swaras*

Sampurna - 7 *Swaras*

Thhat : The composition of seven *Swaras* that have the capability to create the Raga.

Vadi : The main *Swara* in the raga is called 'vadi swara.'

Samvadi : The important *Swara* next to Vadi is Samvadi.

Pakad : A small *Swara* group in the Raga that is frequently played or sung is called the Pakad of Raga or Mukhyanga.

Let's get introduced to Saragam Geet and Lakshan Geet in classical singing through Ragas.

Raga Bhoop

<i>Thaat</i>	Kalyan
<i>Jati</i>	Odav- odav
<i>Varjya Swara</i>	Madhyam and Nishad
<i>Vadi Swara</i>	Gandhar
<i>Samvadi Swara</i>	Dhaivat
<i>Gayan samay</i>	First phase of the night
<i>Aaroha</i>	Sa re ga pa dh sa
<i>Avaroha</i>	Sa dh pa ga re sa
<i>Pakad</i>	Gas re paS ga S sa re, S, dh,S sa

Let's see Saragam Geet from Bhoop Raag.

Saragam Geet Taal- Tritaal

Sthaayi

9	10	11	12	13	14	15	16	1	2	3	4	5	6	7	8
Ga	ga	re	sa	re	re	sa	dh	pa	dh	sa	re	g	re	sa	S
0				3			.	.	.			2			
								×							
Ga	ga	pa	pa	ga	ga	pa	pa	ga	pa	dh	pa	ga	re	sa	S
0				3				×				2			

Antara

ga	ga	pa	S	dh	S	pa	dh	sa	S	dh	pa	sa	S	sa	S
0				3				×				2			
Pa	dh	sa	re	ga	re	sa	S	dh	sa	dh	pa	ga	re	sa	S
0				3				×				2			

My Activity

Listen to songs based on Raga Bhoop.

*Maze Jeevan Gane, Swaye Shri Ram Prabhu Aikati, Jyoti Kalash Chhalke, Onkar Pradhan
Roop Ganeshache*

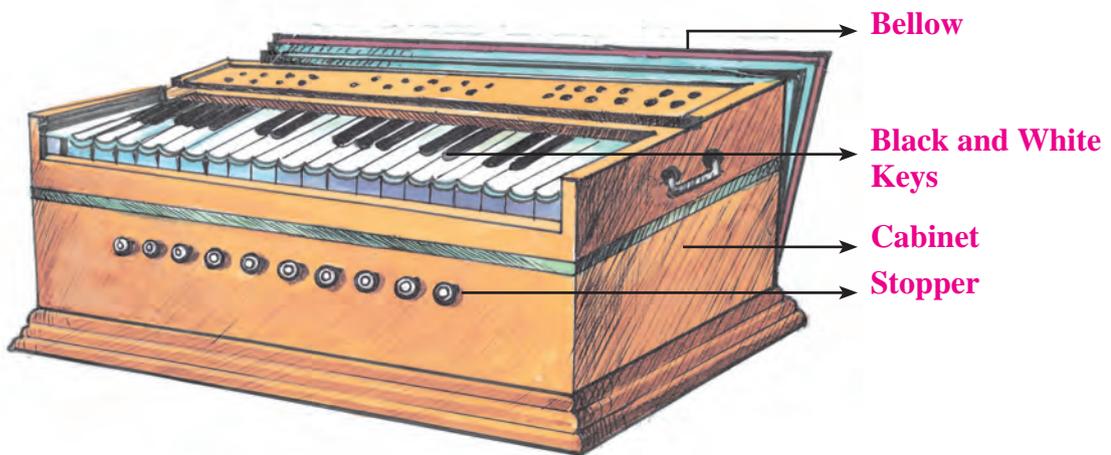
4. Instrumental Music

4.1 Introduction to musical instruments

In the previous Standard we have been introduced to the *Avanadh* or percussion instruments like *Tabla*, *duph*, tambourine (*khanjiri*), *mrudang*, etc. Let's learn about wind instruments (Sushir Vadya) like flute and harmonium this year. The instruments that are played using a column of air are called 'Wind instruments.'

1. Harmonium:

Harmonium is a popular instrument in Hindustani Music. As this instrument is played with the help of wind, it is called wind instrument. It is used to accompany the singer as well as in a solo performance.



2. Flute:

This is one of the important instruments in the category of wind instruments. *Swara* is created by blowing wind through the hollow pipe of a flute. Normally this instrument is made up of a hollow cane or a hollow metal pipe by making holes in them at certain distance. Sometimes the tip of the pipe is narrow. It is called '*Pawa*', it to be blown holding it between the lips. Sometimes it can also be kept horizontal to the lips to blow from above. It is used to accompany the singer in a music performance or can also be used for a solo performance.



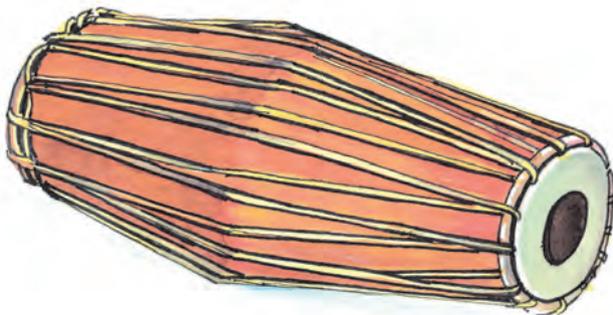
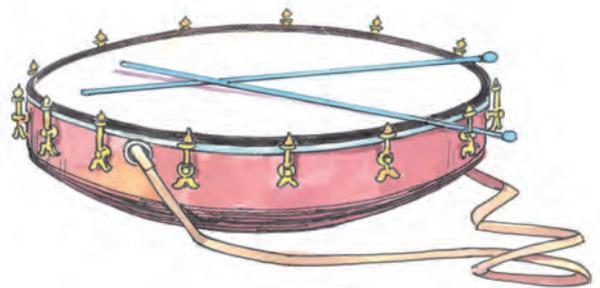
3. Sanai :

It is a wind instrument which is to be played by blowing into it with the mouth. Sanai is even called *Surna* or *Shehnai*. The *Swaras* are created from it by proper use of lips and tongue as well as controlling the pressure of wind with the skillful use of fingers. Sanai is an auspicious instrument which is played in public ceremonies, processions and weddings. The solo performance of this instrument is also very impressive.



4.2 Background Music

Nowadays many instruments are used for background music like flute, sitar, *sarangi*, *tabla*, *dholak*, *taal*, cymbals, violin, guitar, etc.



My Activity

Collect pictures of different wind instruments and paste them in your scrap book.

5. Dance

The different hand gestures in a dance are generally associated with the shape of the birds or animals. Many of the movements in dancing are the imitation of movements of animals and birds seen in nature. As a result, many of these hand gestures are named after birds and animals.

Human beings use physical movements and facial gestures to express emotions. Occasionally they express joy through dancing. To multiply this happiness, they involve more people to dance in groups.

In Indian music there are two types of dances.

(1) Classical dance (2) Folk dance

Dances are bound by their rules. Hand gestures give special beauty to the dances.

1. Classical Dance



Manipuri



Kathak

2. Folk Dance



Koli Dance



Bhangada

Hand Gestures (*Hastamudra*)

Hand gestures are an important aspect of traditional classical dances. Hand gestures are used meaningfully in Indian classical dances.

Asamyukta Hastamudra: A *mudra* performed using only one hand.



Mushthi



Shikhar



Ardachandra



Kapitthya

Samyukta Hastamudra: A *mudra* performed using both the hands.



Matsya



Garud

My Activity

Practice various *Mudras* used in dance.

Using your fingers, perform *mudras* of birds and animals to cast their shadows on the wall.

- ◆ Guide the students while practising the *hastamudras*.

6. Drama

Drama is a very popular art form that entertains the masses. The art form in which the life and incidents in the lives of living, dead, mythical, historical or imaginary characters are performed by another person, is called a 'Drama'. The person who performs this art is called an actor or an artist.

Drama includes script, dialogues, acting, songs, dance, etc. Stage, costume, make-up and back stage are needed to perform the drama in front of the audience.

Drama is a 'visual' (to be seen) and 'audio' (to be heard) entertaining art form. In visual dramas acting is done by using gestures and body movements (*kayik*). For example, dramas telecast on television or performed in auditoriums. In audio dramas, emphasis is on effective reading, dialogue delivery and correct pronunciation. For example, in dramas broadcast on radio, the acting in them is expressed through the speech or reading.

Aspects like memorising proper pronunciation, effective acting, natural performance, etc. have importance in drama. In drama there is flexibility in age, time, make-up, costume and stage set. Considering all these factors, drama is a popular art form of the masses.

Writing of dramas started with *Sanskrit* dramas. There is a famous book written by *Bharatmuni* on drama. The first Marathi drama 'Seeta Swayamvar' was staged on 5 November 1843. Since then 5th November is celebrated as '*Marathi Rangabhoomi Din*'.

Classroom Theatre

Popular dramas are performed in big auditoriums. These dramas need many facilities like a huge stage, music system, screens, seating arrangement for the audience, etc.

If a small skit is to be presented in the classroom, then the classroom itself becomes the stage. This is called a classroom theatre. A classroom can be turned into a theatre in the following way.

- (1) Put the benches in the classroom along the wall.
- (2) The sitting arrangement of the audience, that is, the students in the classroom and teachers can be done by putting chairs in an open space.
- (3) Utilize the front of the classroom as the stage. Use the things needed for the decoration of the stage like bed-sheets, vases, table, etc. available in the classroom itself.
- (4) Draw the boundary between the stage and the audience by putting a row of benches.
- (5) Those willing to do can bring some properties voluntarily from home to design the stage.



(6) In this way memorise and perform the skits from your textbooks in your classroom theatre and enjoy the appreciation of your audience.

Stage-design

Make-up, costume, light arrangements, music and stage set-up are considered to be the major aspects of drama. Because of the stage design the audience realises where the drama is happening. Even the place and time can be understood. Sometimes only one place can be shown on the stage or sometimes we can see three or four parts of the stage.

For example, a drawing room of the house, office, a kitchen, etc. The stage design can be done according to need. During the performance only the part of the stage is shown in the light where the action is taking place.

The performance can be made more entertaining by arranging the stage design according to the area where it is set like rural area, urban area or tribal area. For example, a hut, house or a cut-out of a tree could show that it is a drama set in a rural area. If the stage design is of a drawing room with sofa, beds, chairs, curtains, the audience immediately understands that drama is happening in the urban area.

In some auditoriums they have many curtains as back-drops. For example, a castle, palace, jungle, garden, beach, etc. These curtains are used according to the scene in the drama. Now-a-days rotating or sliding stages are also used. In recent times projectors are being used to show various scenes on a white screen to create different back-drops.

Role-playing

1. Role-playing is based on simple everyday incidents.
2. There can be two or more people in a role-play.
3. The performance/presentation should be of five to ten minutes.

Ravi : Baba, quickly give me your cell phone, it's time for my lecture.

Baba : Yes dear, just wait a while. My meeting will be over within a couple of minutes.

Ravi : Baba, I will have to join the link and set up the background.

Baba : Background! What sort of a background?

Ravi : Baba, don't you know? When I switch my camera on, many unnecessary things are visible in the background, which make my friends laugh.

Baba : Then go and sit in another room.

Ravi : There is no range there.

Baba : Then go sit on the terrace.

Ravi : But when I sit on the terrace, the screen is not visible at all, it becomes all shiny.

Baba : Ravi, online classes are for learning, not for you to show your video.

Ravi : But Baba, all my friends laugh at me.

Baba : Let them laugh, you just concentrate on your studies. Here, take the cell phone and set the video. Switch on your mic and camera only when it's necessary, otherwise let the mic be on mute and the camera switched off.

Ravi : *(Takes the cell phone, sets it up and starts shouting.)* Baba! Baba!

Aai : *(Comes running in)* What happened? Why are you shouting so much?

Ravi : Aai look! *(Cries)*

Aai : Why are you screaming?

Ravi : Aai, I can't join this link. It seems Baba's load of office work has ended up exhausting all the internet.

Aai : Oh dear! What can we do now? *(Thinking)* Do one thing, sit near this window and join Rashi's wi-fi. I'll ask her for the password.

Ravi : Okay Aai. *(Joins the link, the online class begins.)* *(Shouts)* Aai, Aai !

Aai : What happened now?

Ravi : Aai *(Laughs)* Aai, I joined the class. Hurray!

Aai : Okay dear, good! Start studying now.

(To the audience)

A whole year was wasted due to Covid-19. In spite of so many difficulties in education, online classes were held regularly so that children could study from the safety of their home. Students in the rural area as well could study online using their teachers' cell phone. They could complete their homework. Online education made students, parents and the whole society smart. Great are the teachers who could support all their students!

Presentation of Poetry

The Line and Shapes

One line twirled and
Twirled around.
Soon she became
A circle round.

Ran from there
And became on square.
But sitting in 4 corners
She couldn't bear.

The zig-zag of lightning
The stiffness of a post.
Curvy line like a snake
That people fear the most.

Came out straight
But in 3 she bent.
With pointy corners
Into a triangle she went.

Naughty single simple line
Frolicking here and there.
River, boat flowers, fruits
Got those shape because she dared.

A picture, a sculpture
A mountain, a house.
A new form she takes
Every time she comes out.

Water Wealth

Using water
Carefully.
Saves us from
Going thirsty.

Use only
As you need,
What remains
Safely keep.

Water wealth
Water is life
Use it well
And we shall thrive.

-Kiran Bhawsar

Leaky taps?
Change them new!
Extra water,
Do not throw.

Half a glass
You should pour.
Take again if
You want more.



Make-up and Costume

In the previous Standard we have obtained preliminary information about make-up and costume. The right costume is very important for an actor to play a particular role. Along with the costume, make-up highlights an actor's face and expressions more prominent.

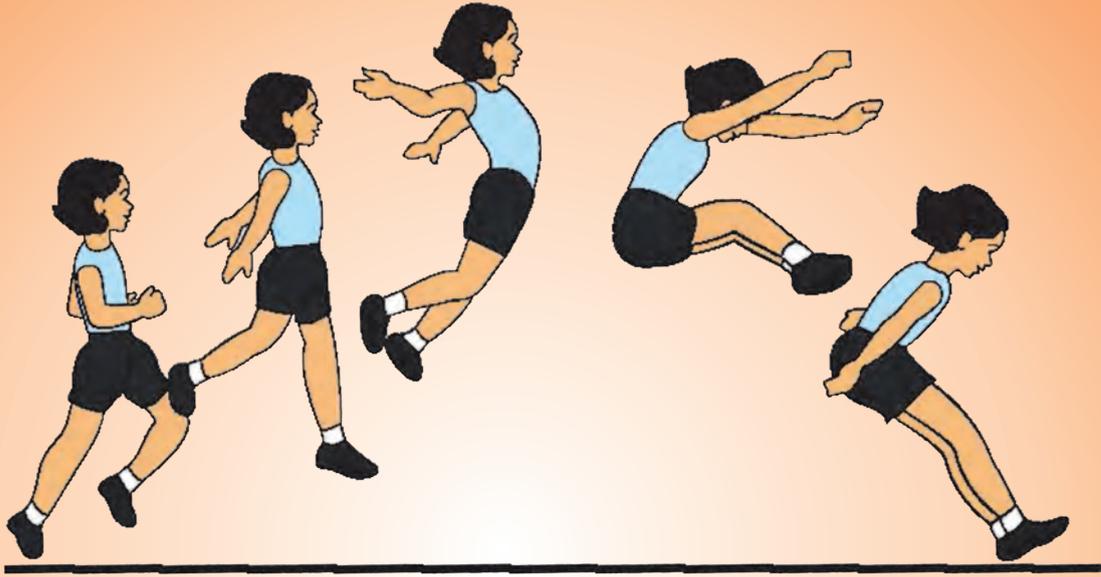
The make-up artist has prime importance in cinema and drama. Costume and make-up help us to identify the age and the physical structure of the character.

For example: The skin tone of a person, shape of his nose, scar of a wound, beard and moustache, type and shape of his eyes, shape of his teeth, his hair style, wrinkles on elderly faces can be shown with make-up.

Make-up can be done/applied using simple things like face talcum powder, turmeric, *kumkum* powder and *kajal*.



- ◆ The teacher herself can do the make-up of the students or invite a make-up artist. For example- for roles like a soldier, police, doctor, clown, grandmother, grandfather, etc.



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