

Health and Physical Education

Standard



Activity book



**Government of Kerala
Department of General Education**

Prepared by

State Council of Educational Research and Training (SCERT), Kerala

2025

THE NATIONAL ANTHEM

Jana-gana-mana adhinayaka, jaya he
Bharatha-bhagya-vidhata
Punjab-Sindh-Gujarat-Maratha
Dravida-Utkala-Banga
Vindhya-Himachala-Yamuna-Ganga
Uchchala-Jaladhi-taranga
Tava subha name jage,
Tava subha asisa mage,
Gahe tava jaya gatha.
Jana-gana-mangala-dayaka jaya he
Bharatha-bhagya-vidhata
Jaya he, jaya he, jaya he,
Jaya jaya jaya, jaya he

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.

Health and Physical Education



Prepared by

State Council of Educational Research and Training (SCERT)

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Dear learners,

Dynamic children with admirable physical and mental fitness are our most incredible assets. They are the ones who can give a new vision to the development and progress of our country. Health and Physical Education has been introduced as a mandatory subject in our curriculum to enable our children to develop a growth mindset for imbibing knowledge and be socially committed through physical activities. The pent-up energy of children can be tapped and redirected constructively to physical activities that may enable them to inculcate time management skills and enhance their kinaesthetic intelligence. This activity book has been designed to materialize this concept among the tenth standard students.

A Vibrant Society with Better Mental Health, Treads Towards Excellence in Performance, Champion of Safety, Technology and Emerging Healthy Kerala, Play in Harmony with Nature are the five chapters included in this book. It provides maximum opportunities for children to involve in group activities and games. There is also room for pragmatic discussion on how to overcome challenges with confidence.

This book also imparts strategies to overcome mental stress and emphasizes the necessity of speed, reaction time, agility, balance, power and co-ordination for attaining excellence in sports performance. It also underlines the need of embracing systematic exercises and various yogasanas in our daily routine through activity oriented content to gain sound health.

The school should take initiative to evaluate the health of children and must ensure their comprehensive development.

We present this activity book to assure our children, a delightful and healthy learning experience.

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THE CONSTITUTION OF INDIA

PREAMBLE

WE, THE PEOPLE OF INDIA, having solemnly resolved to constitute India into a ¹**[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 ²[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.**

1. Subs. by the Constitution (Forty-second Amendment) Act, 1976, Sec.2, for "Sovereign Democratic Republic" (w.e.f. 3.1.1977)
2. Subs. by the Constitution (Forty-second Amendment) Act, 1976, Sec.2, for "Unity of the Nation" (w.e.f. 3.1.1977)

A Vibrant Society with Better Mental Health

1

You have learnt about dimensions of health such as physical health and emotional health in the previous classes. Shall we get familiarised with the other two dimensions - mental health and social health?

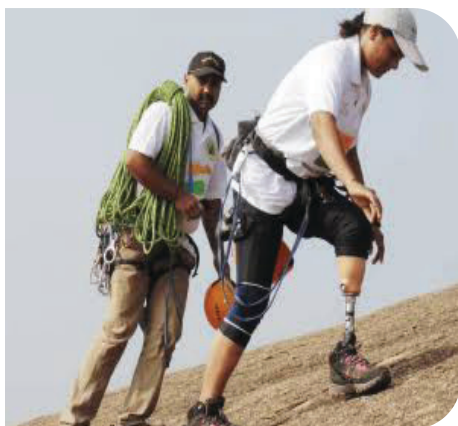
Let us start with a real - life incident

Arunima Sinha was a national volleyball player. On 12th April 2011, while trying to rescue her fellow passengers, Arunima was thrown off board a train by a group of bandits.

The accident cost her left leg which was amputated at the young age of 26. Later, a prosthetic leg (artificial leg) was implanted, so that Arunima could return to her normal life. While under treatment, she decided to scale Mount Everest drawing inspiration from Yuvraj Singh who had fought malignancy (cancer) and returned to international cricket. She got



Standard 10



the foundational training for mountaineering with the assistance provided by Nehru Institute of Mountaineering, Uttarkashi and Bachendri Pal, who had conquered Mount Everest. Afterwards, Arunima conquered Everest on 21st May, 2013. Arunima Sinha became the first Indian female amputee to scale Mount Everest. On 1st January 2019, she got recognition as world's first female amputee to conquer Mount Vinson, the highest peak in Antarctica. In 2015, the

nation honoured her with the Padma Shri.

Arunima Sinha's success story is a powerful example of how one can overcome mental stress.

Mental Health

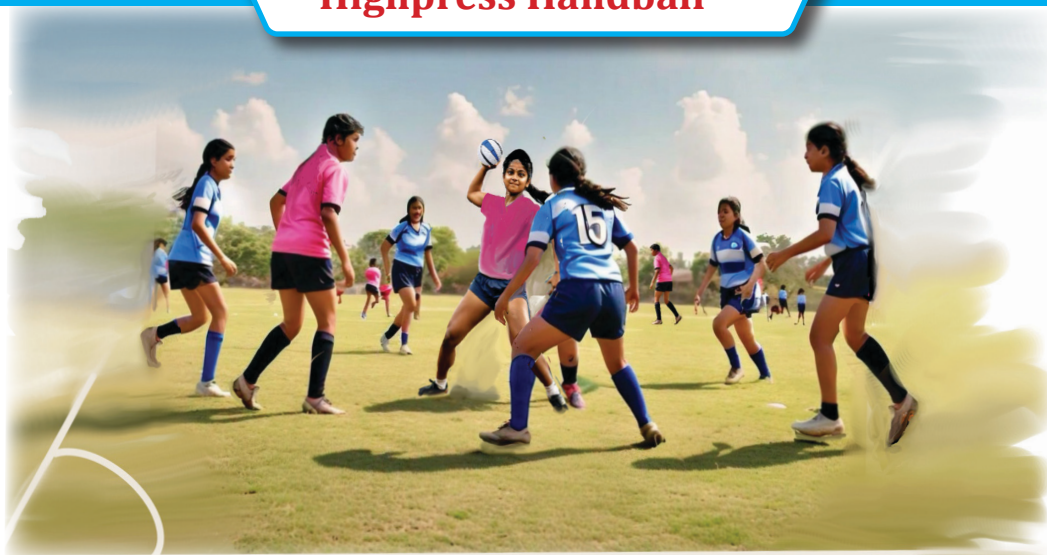
Mental health is the ability to recognise one's capabilities and cope up with stress. It is the state of mind that helps an individual to overcome mental stress and to function constructively and effectively in society (World Health Organisation).

Shall we get familiarised with the game Highpress Handball?



Activity 1

Highpress Handball





Rules and Regulations

- The play area should be 30m long and 15m wide.
- Circles with a diameter of 50 cm each will be drawn in the centre of the border lines of the court. These circles will be demarcated as Strikers (S) and Warriors (W) as shown in the picture. This is the goal.
- A semicircle with a diameter of 3m will be drawn around the goal, from the centre of the borderlines.
- Corner arcs of 1m diameter will be drawn on the four corners of the court. This is the 'Free Throw Area'.



- Players form two teams with seven members each.
- The teams are named 'Strikers' and 'Warriors'.
- Football, Volleyball or Handball may be used for the game.
- Start the game from the Free Throw Area.
- The team that wins the toss should pass the ball using hands from the Free Throw Area between the goals marked with their names.
- The team Warriors should try to place the ball into the Strikers goal and vice versa.
- A player is allowed to enter the goal zone of the opposing team only if he/she possesses the ball. The defence players are also not allowed in the goal zone.
- The opposing team should restart the game from the nearest free throw area whenever a point is scored or the ball goes out of the court.



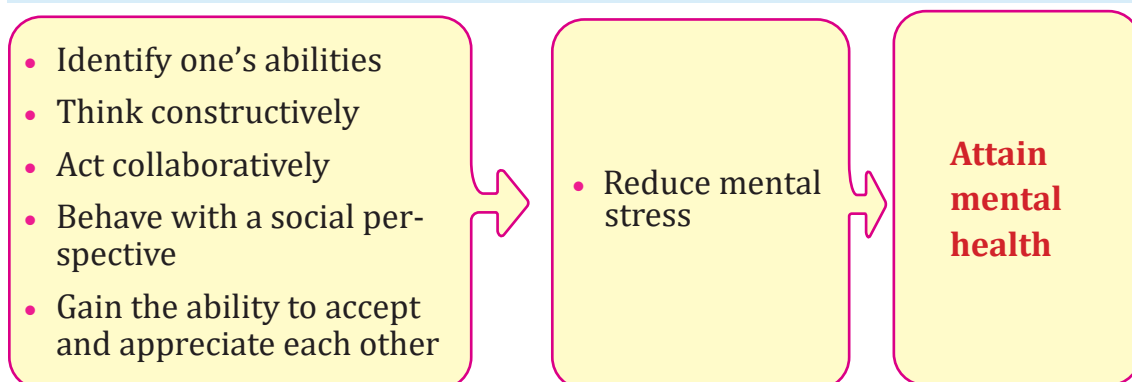
Standard 10

- Running more than 5 steps with the ball will be considered a foul.
- The opposing team should restart the game from the point where the foul occurred.
- All the students in the class will get an opportunity through rolling substitution.
- When the game ends, the team that scores maximum number of goals will be the winner.

Discussion after the game :

You have played Highpress Handball. Share your experience.

To attain Mental Health



Assessment

1. In which situations did you experience mental pleasure while playing Highpress Handball?
 - When my team scored a goal.
 -
 -
 -
2. Mention the situations in which you experienced mental stress during the game.
 - When a goal could not be scored within the allotted time.
 -
 -
 -



3. Prepare a note on the skills that you could use effectively.

.....

.....

.....

4. Could I participate in the game effectively?
If not, what could be the reasons?
List the ways to overcome these challenges, with the help of your teacher.

Reasons	Solutions
..... 	

Friendship beyond Borders



This is a picture of jubilation when India's Neeraj Chopra won first place and Pakistan's Arshad Nadeem bagged second place in Javelin Throw in the World Athletics Championship held at Budapest in Hungary, 2023. Neeraj invited Nadeem to join him under the Indian flag, as he was celebrating the success. When Nadeem joined him, it became an excellent example of friendship



Standard 10

beyond borders. Their friendship that was characterised by mutual respect, support and encouragement created a sense of unity among their fans pertaining to both countries.

Media have reported that Arshad Nadeem considers Neeraj as his mentor in his heart of hearts, beyond their competitive spirit in the field. In the Paris Olympics 2024, Arshad Nadeem became the champion and Neeraj Chopra was in the second position. Even this change of position did not affect the intensity of their friendship. This illustrates the role of co-operation and friendship in achieving common goals and maintaining social harmony.

Social Health

Social health is the state of improved emotional well-being and better social life through creating healthy and qualitative interpersonal relationships.



Activity 2

Let us play a game.

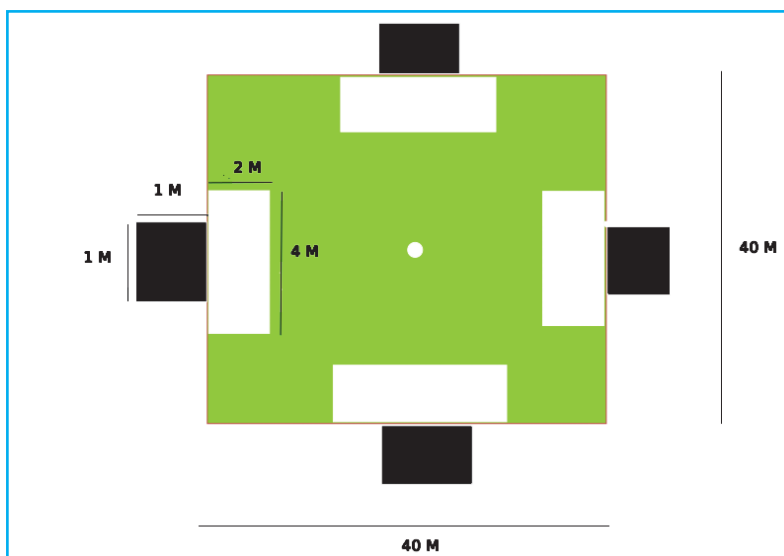
Fourpost Football



Rules and Regulations

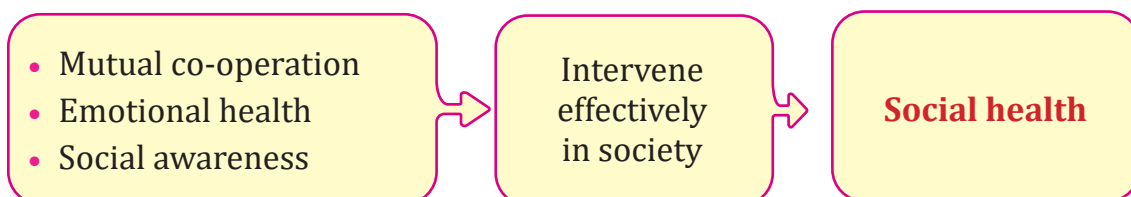
- This game is played in a court that is 40m long and wide.
- There will be four goal posts with 1m height and width placed in the centre of the four borderlines.
- There will be a free zone, 4m long and 2m wide in front of the posts.





- Students form two groups with equal number of players.
- The teams can be named 'Altius' and 'Fortius'.
- The game is played using a football.
- The game is played in two halves of 10 minutes duration.
- The team that wins the toss can choose either attack or defence.
- In the first half, the attacking team will try to score a goal and the opposing team will defend. The game can be continued vice versa in the next half.
- The players should not enter the 'free zone' in front of the goal post, as shown in the picture.
- The rules of football like throw-in and corner kick should be followed in the game.
- The team that scores maximum number of goals will be declared as the winner.

Attaining Social Health





Assessment

1. Did you get the support of fellow players while defending during 'Fourpost Football'?

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2. Has the encouragement of fellow players helped you to win the match? Describe your experience.

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3. Based on your experience of playing 'Fourpost Football', prepare a note on the topic 'Social Health can be enhanced through Sports'.

.....

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Let the Mind be Free

The story of Manoj Kumar Sharma IPS who was born and brought up in Bilgram in Madhya Pradesh is an excellent example of overcoming mental stress. Manoj Kumar, who passed his tenth standard with a third class, failed in most of the subjects in twelfth standard as he could not bear the stress related to higher education. The advice given to the class by an officer, who came to check malpractices in the examination, was a turning point in his life. Later, he passed twelfth standard and became a graduate. With firm determination and hard work, he overcame stress and passed the civil services examination with flying colours and became an IPS officer.



Mistakes of the past do not determine our future. The life story of Manoj Kumar Sharma IPS is a powerful example of how one can overcome any challenge in life with mental strength and determination.

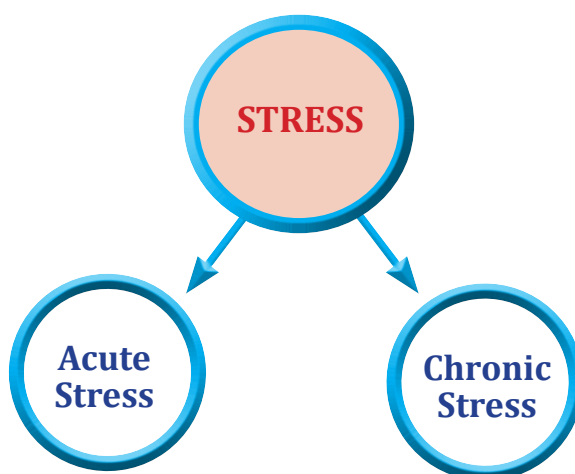


How does mental stress occur?

Mental stress develops when there is an imbalance between demand of the situation and the ability of an individual in handling it.

Example: The stress of a student who attends an examination without adequate preparation.

Two types of Stress



Acute Stress : Acute stress is a temporary, short term stress.

Chronic Stress : Chronic stress is the kind of stress that remains permanent or lasts for a long time. Compared to acute stress, chronic stress leads to several diseases.





Activity 3

Let us Play and Enjoy

Play games like football or volleyball in which all children can participate. The play should be held under the supervision of teacher.

Play for 30 minutes



While engaging in physical activities and games

- The increased production of happiness hormones like dopamine, endorphin and serotonin reduces stress.
- When children focus more on the game, they get a break from day to day mental stress.
- Mental stress makes the muscles more rigid. But, they become flexible when the child engages in physical activities. This helps in reducing mental stress.

Other factors that help in reducing mental stress

- Sufficient sleep
- Punctuality
- Proper diet
- Appreciation of arts
- Leisure trips





Assessment

1. Have you felt that your mental stress has reduced while engaging in games? If so, what are the reasons?
.....
.....
.....
2. Identify people in your locality who have attained a successful life by overcoming challenges and prepare a note to present in class.
3. Conduct a panel discussion in your class on how mental health and social health influence personal life.



Activity 4

Imaginary Body Scanning

To start this process, we need to be in the Shavasana position of Yoga. At first, focus on your breathing. Close your eyes slowly in accordance with the teacher's instructions and experience the gradual vanishing of light. After closing the eyes completely, let the mind focus on breathing. Relax each part of the body from feet to head. After this stage, the body feels relaxed. Finally, focus on breathing again. Open your eyes slowly and complete the activity according to the teacher's instructions.



Engage in healthy recreation

We should know the means to overcome stress. Mental stress is a complex problem that affects every aspect of life. By learning to overcome mental stress, we can lead a happy life. The best way to do this is to engage in recreation that we are fond of.





Assessment

1. Describe your experience while you were engaged in Imaginary Body Scanning.

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2. Prepare a note on the change of your mental state before and after the Imaginary Body Scanning activity.

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.....

3. How do games help in reducing mental stress? Discuss.

Secret of Diet

Ananthu was an excellent sprinter. He maintained an active training schedule, hard work and proper diet that helped him to excel in competitions. But later his lifestyle changed. Behaviour changes in adolescence led to dietary indifference that affected his healthy eating habit. The junk food and carbonated drinks that he took along with his friends led to a decrease in the amount of nutrients in his food. As days passed by, the impact of the change started reflecting on his body as well as in his performance. Many a time, he became reluctant to participate in practice sessions. When nutrients got reduced in his body, he started expressing mood swings, restlessness and depression. This affected his achievements. All these caused him great disappointment. When he approached the doctor, it was found that nutritional deficiency was the cause of his problems.



Junk food

Junk food are food items that are high in energy, fat, salt, sugar and low in nutrients.

e.g.: burger, pizza, etc.

Carbonated drinks

Drinks containing carbon dioxide are carbonated drinks.

e.g. : soda, soft drinks

Depression

Depression is a state of unhappiness or disinterestedness in activities that lasts continuously at least for a period of two weeks.

The doctor convinced him that he had a deficiency of omega 3 fatty acid and vitamin B complex. Ananthu reported this to his physical education teacher. The teacher advised him to change his unscientific diet and food habits. Ananthu regained his health and excellence in performance by bringing about a change in his diet and attending training sessions regularly.

Unscientific cooking leads to loss of nutrients in food.

Let us learn more about it.



Activity 5

My diet for a week

Table 1

Days	Breakfast	Snack	Lunch	Snack	Supper
Day I					
Day II					
Day III					
Day IV					
Day V					
Day VI					
Day VII					

Record the details of your diet for the next one week using table 1.



Preservation of Nutritional Values

Table 2

Activity	Nutrients lost	Reasons for loss of nutrients	Consequences of loss of nutrients	Methods of preservation
Washing vegetables after cutting	Vitamin B complex, Vitamin C	Water - soluble vitamins are lost when vegetables are washed after cutting.	Deficiency of these vitamins leads to fatigue, loss of balance, hallucination, mental stress and lack of coordination.	Cut the vegetables only after washing.
Over cooking of food	Vitamin B complex, Vitamin C	Water - soluble vitamins get vapourised when food is over cooked.	Deficiency of these vitamins leads to fatigue, loss of balance, hallucination, mental stress and lack of coordination.	Do not over cook. Cook using pressure cooker or air fryer.
Frying the fish	Omega 3 fatty acid	Excess heat leads to the loss of omega 3 fatty acid	Deficiency of omega 3 fatty acid leads to depression, ADHD (Attention Deficit Hyperactivity Disorder), hair loss, joint pain and rigidity of joints	Consume fish in curry form. (Mackerel and sardine are fish rich in omega 3 fatty acid.)

Based on the discussion in class, you may propose changes in table 1. Record those changes in table 4.



Vitamins and Sources

Table 3

Vitamins	Sources
Vitamin A	Spinach, tubers, carrot, egg
Vitamin B complex	Egg, leafy vegetables, milk, fish, nuts, fruits
Vitamin C	Sweet potato, lemon, orange, broccoli, guava
Vitamin E	Seeds, leafy vegetables, nuts
Vitamin K	Dark green leafy vegetables : avocado, green spinach, cauliflower leaves, drumstick leaves (moringa leaves), pumpkin leaves, etc.



Activity 6

Changes in my diet

Table 4

Days	Breakfast	Snack	Lunch	Snack	Supper
Day I					
Day II					
Day III					
Day IV					
Day V					
Day VI					
Day VII					



Assessment

- What have you understood from the story of Ananthu?

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2. List out the health issues that are caused by the deficiency of vitamin B complex and vitamin C.

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3. Explain the situations in which vitamin B complex and vitamin C are lost in food.

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4. Record and discuss the aspects that should be kept in mind while cooking.

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5. Which are the food items rich in omega 3 fatty acid?

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6. What changes have you brought about in your diet, to preserve the nutritional value of food? Evaluate.

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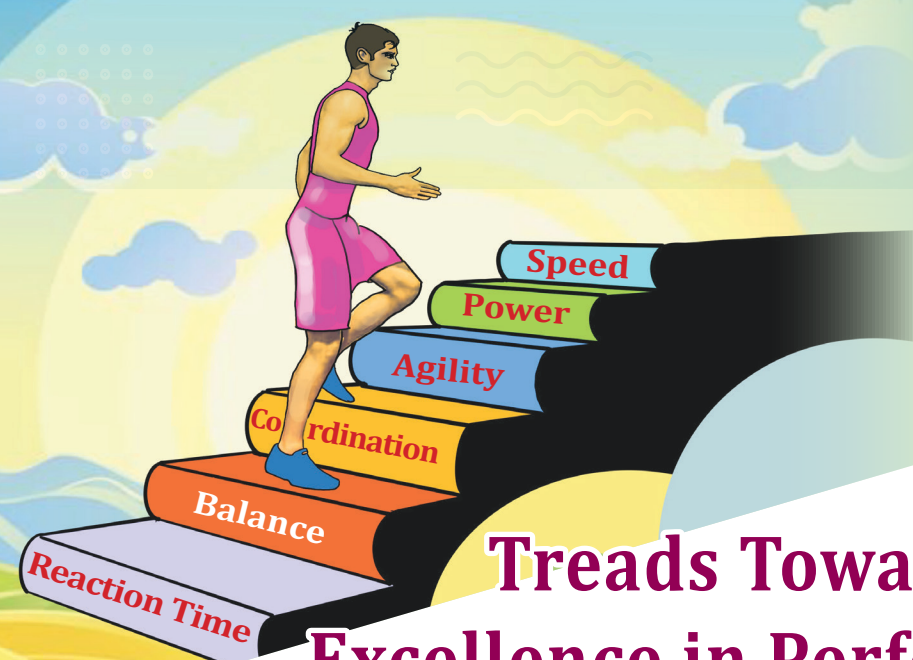
7. Prepare an article on how you could effectively use the life skills that you have comprehended from the lesson 'A Vibrant Society with better Mental Health' in your daily life.

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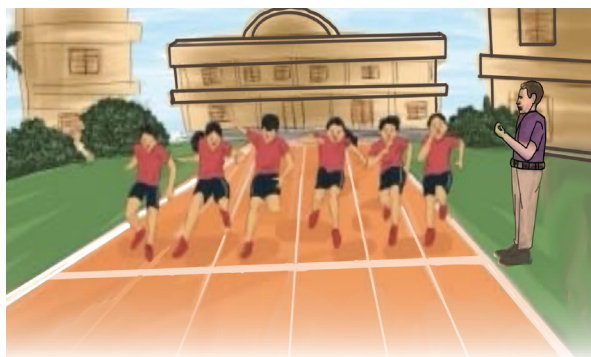
Treads Towards Excellence in Performance

A sports person's excellence depends on various components of performance related physical fitness. The basic components of performance related physical fitness are speed, agility, power, coordination, balance and reaction time. The need for performance-related components of physical fitness varies in tune with the nature of sports.

Let us get acquainted with certain testing methods of performance-related physical fitness components

1. Speed (30m race)

- The distance between the starting line and finishing line is 30m.
- Five or six children can stand on the starting line of the track.
- They can start the race as per teacher's instructions.

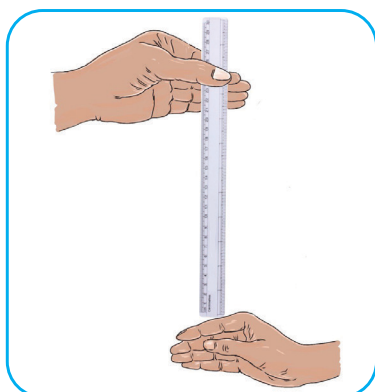


Record the time taken by each student after she/he finishes the 30m race.

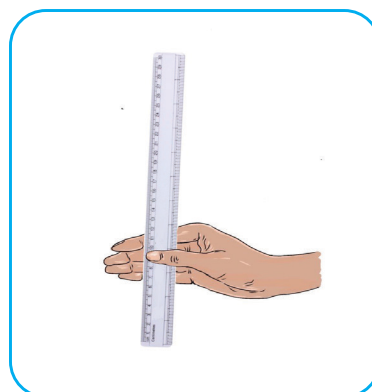
Standard Test	My Score (in seconds)	Date
Speed (30m race)		



2. Reaction Time (Ruler Drop Test)



The teacher holds the ruler vertically



The student catches the ruler when it drops down

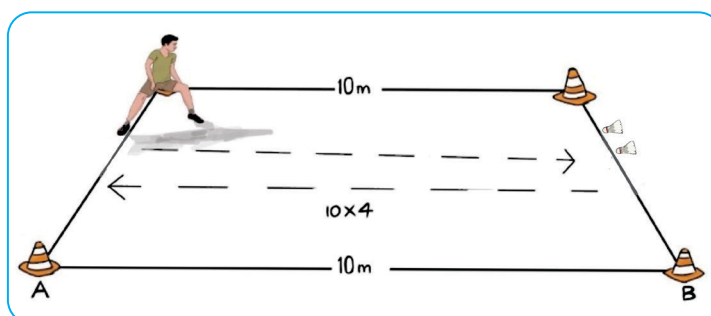
- A 30cm long scale is required.
- Place the palm on the table, with the fingers extended, as seen in the picture.
- Place the hand on the table as seen in the illustration. Teacher will hold the scale between the thumb and the index finger of the student, so that it is at '0' on the scale. (The bottom part of the scale that is held vertically should be parallel to the fingers.)
- The testing method aims to check the speed at which the scale is caught when it is dropped down by the teacher.
- Your score is the measure of the point where you hold the scale as it falls down between your fingers.

Conduct the Ruler Drop Test in your class as well.

Who are the top scorers?

Standard Test	My Score (in centimetres)	Date
Reaction Time (Ruler Drop Test)		

3. Agility (Shuttle Run)



- Draw two lines at a distance of 10m.
- One is the start line and the other is the end line.
- Place two shuttlecocks (or any other similar objects) at the end line.
- When the teacher blows the whistle, run from the start line towards the end line, pick a shuttlecock, and return to the start line. Place the shuttlecock at the start line. (Do not throw the shuttlecock.)
- Run again to the end line to pick the second shuttlecock and finish at the start line.
- The total time taken is your score.

Who are the top scorers in the Shuttle Run?

Standard Test	My Score (in seconds)	Date
Agility (Shuttle Run)		

4. Balance (Flamingo Balance Test)

Flamingo Balance Test is a test to measure the balance of the body

- Place one leg on a brick and stand as shown in the illustration.
- Fold the other leg backwards, hold it close to the body and stand straight. (If you are folding the left leg, hold it with the left hand and vice versa.)



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- Extend the other hand forward as seen in the picture and stand straight. If you bend or lose grip while standing in this position, the timer will be stopped. When you regain your balance, the timer will be restarted.
- The aim is to retain the position for one minute in the balancing posture.
- Remaining without losing balance for a minute or losing balance less often can be considered a good measure of body balance.

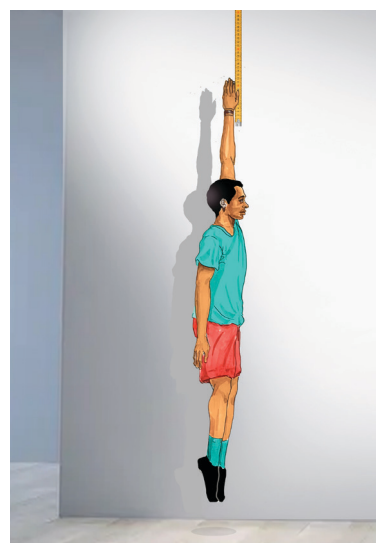
Conduct a Flamingo Balance test in your class.

Who are the best performers?

Standard Test	My Score (Number of times I lost balance)	Date
Balance (Flamingo Balance Test)		

5. Power (Vertical Jump Test)

- Mark the measurement in centimetres on the wall, as given in the picture.
- Raise your hand in standing position and mark the height where you can touch the wall.
- Jump to the maximum and record the height where your hand can touch the wall.
- Your score is the difference between these two heights.
- Take the help of the teacher wherever required.



Conduct the Vertical Jump Test in your class.

Who are the top scorers?

Standard Test	My Score (in centimetres)	Date
Power (Vertical Jump Test)		



6. Coordination (Alternate - Hand Wall - Toss Test)

- Mark a line on the floor at a distance of two meters from the wall.
- The child who participates in this test should stand behind the marked line. Then she/he should throw the ball with one hand towards the wall and catch it with the other hand when it rebounds back.
- Count the number of times he / she catches the ball in 30 seconds duration. This is the score.



Conduct the Alternate - Hand wall - Toss Test.

Who are the top scorers?

Standard Test	My Score (in numbers)	Date
Coordination (Alternate- Hand Wall - Toss Test)		



Activity 1

My Score My Goal

We have identified the physical fitness components related to performance. Record your score in all the six tests that you have taken under 'My score' in table-I. Now, fix your goal in each physical fitness factor related to performance and record it under 'My Goal.'

With the help of your teacher, try to understand how you can improve your score.



Table 1

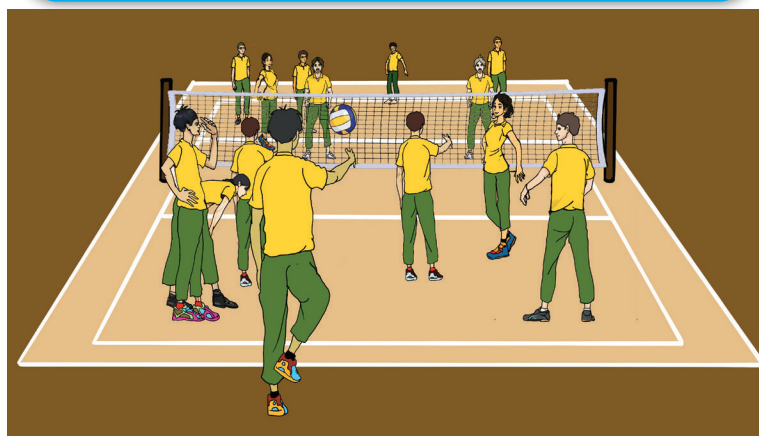
My Score, My Goal

Sl. No.	Standard Test	My Score	Date	My Goal	Date
1.	Speed (30m)				
2.	Reaction Time (Ruler Drop Test)				
3.	Agility (Shuttle Run)				
4.	Balancing (Flamingo Balance Test)				
5.	Power (Vertical Jump Test)				
6.	Coordination (Alternate Hand Wall Toss Test)				



Activity 2

Leg Head Volley



Rules and Regulations

- Play in a court that is similar to a volleyball court.
- You can set the height of the net in a suitable manner.
- Children should form two teams.
- Use a football or a volleyball.



- One team should consist of seven members.
- All the children should be given a chance using rolling substitution.
- Toss the ball from behind the end line and service it with the leg.
- Use your hand only for service in the game.
- Body parts except hand may be used during the game.
- Like volleyball, one team is allowed only three touches. The ball should be sent to the opposite court within the third touch.
- Points are awarded following the rally rule.

Did you like this game?



Assessment

1. Which players showed excellence in the game? How was it possible for them? Is there any connection between their physical fitness score and excellence? Compare with the help of your teacher.

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2. Which all stages of the game reflected speed, reaction time, agility, balance, power and coordination? Elucidate.

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3. Bring about desirable changes in the rules of the game with the help of your teacher and play the game in the space available at your school. Discuss your experience in the class.



Self-satisfaction through Yoga

People who do yoga to reduce mental stress and for health are increasing day by day. Yoga is an excellent method to soothen the mind.

You have already learnt different yogasanas in different classes. Do you practise them? Which are the yogasanas you do?

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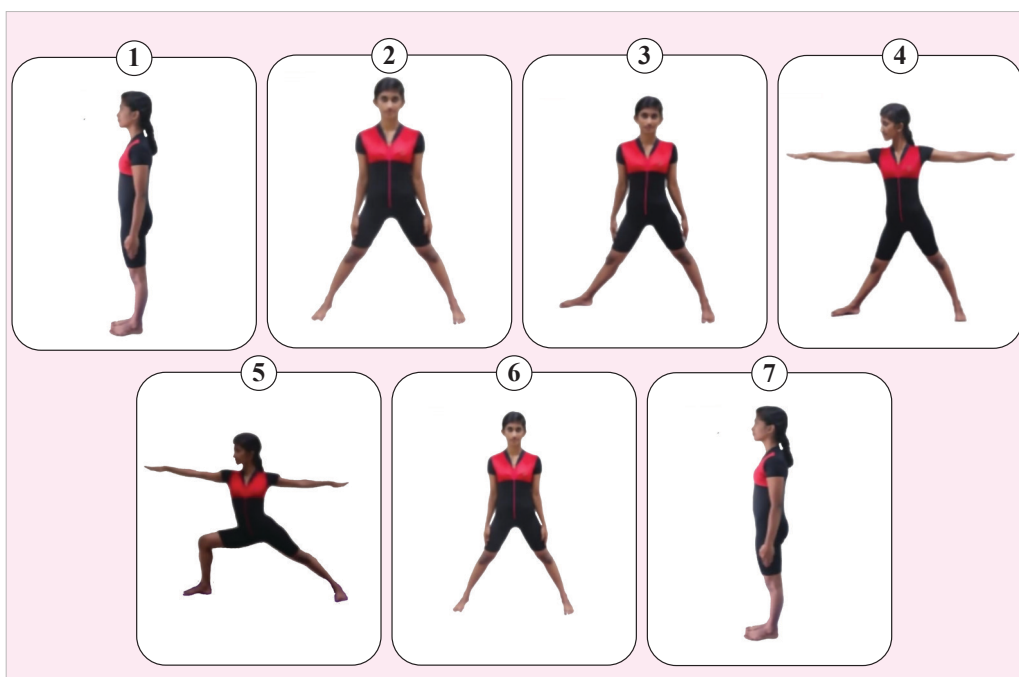
Do's and Don'ts while doing Yoga

Do's	Don'ts
• Use a yoga mat or a thick sheet compulsorily. • Wear loose clothes. • Perform yoga on an empty stomach. • Empty your bowels and urinary bladder before practising yoga. • Yoga should be performed in a well ventilated area.	• Do not practise yoga on bare floor or on soft materials. • Do not wear tight garments while doing yoga. • Do not perform yoga soon after a meal. • Don't practise yoga when you are ill or have any physical discomfort. • Don't practise yoga in places that are not properly ventilated or in places where there is sound pollution.

Let's get familiarised with Veerabhadrasana, Ushtrasana and Ardha Matsyasana in this unit. Include these asanas along with the other asanas that you perform everyday.



1. Veerabhadrasana – Various Stages



1. Stand straight, with arms and legs together.
2. Now, stand with legs three feet apart.
3. Turn the right foot to the right.
4. Inhale slowly and lift your hands along the sides to the shoulder level.
5. Exhale slowly, fold the right knee and slightly lower the body. (The left knee should be straight.) The right thigh should be parallel to the floor.
6. Inhale and stand straight.
7. Exhale and come back to the starting position.

Repeat the activity to the other side as well.

Benefits of Veerabhadrasana

- The hip becomes flexible.
- Ankles gain strength.
- Develops concentration
- Helps in the expansion of the chest

Discuss with your teacher and understand how benefits like flexibility of the hip, strengthening of ankles, concentration and chest expansion are achieved through Veerabhadrasana.

Discuss your experience of performing Veerabhadrasana.





Assessment

1. Were you able to reduce mental stress after practising yoga? Prepare a note.

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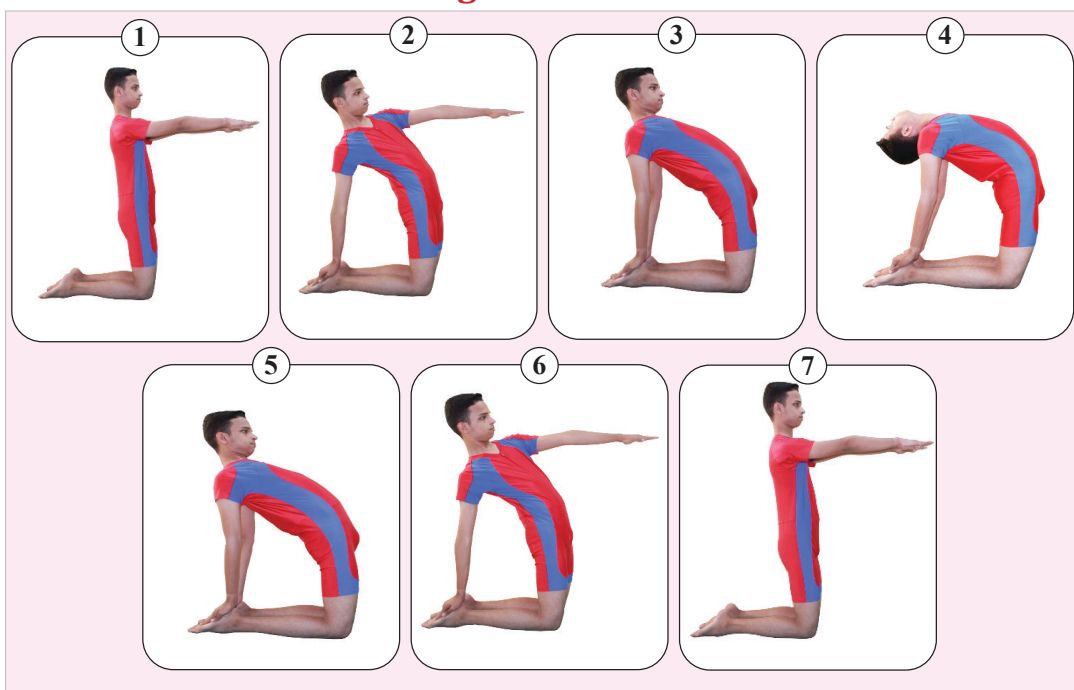
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2. How does Veerabhadrasana strengthen your ankles?

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2. Ushtrasana - Various Stages



1. Kneel down. Place the knees and feet close together. Raise both hands parallel to the floor.
2. Slowly bend backwards, and hold the right heel with your right hand.
3. Now, slowly hold the left heel. (Do not strain the body)
4. Push your hips forward and bend your head and spine backwards as much as possible.



5. Slowly lift your head.
6. Slowly release your left hand and extend it forward.
7. Release your right hand and extend it forward so as to reach the starting position.

Benefits of Ushtrasana

- Stimulates thyroid gland.
- Makes the neck, chest and abdomen more flexible
- As the pelvic region becomes more flexible, girls get relief from pain during menstruation.
- Improves digestion.

Ask your teacher about the situations in which Ushtrasana should be avoided.

Share your experience after performing Ushtrasana.



Assessment

1. People with hypertension (high blood pressure) should not perform Ushtrasana. Why?

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2. How does Ushtrasana improve digestion?

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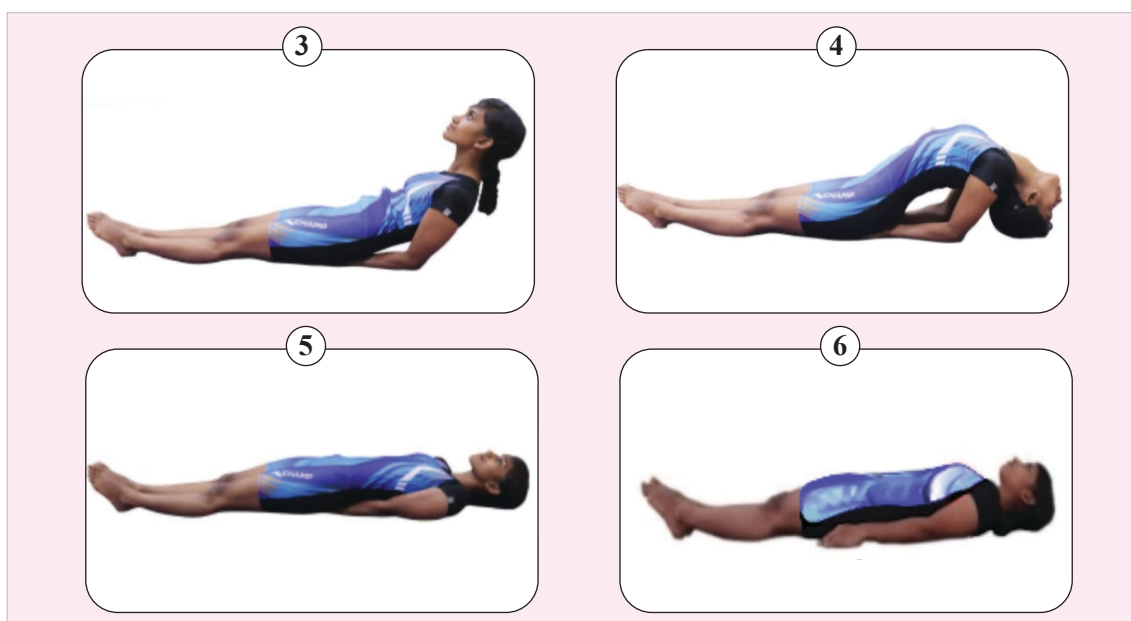
3. How many of your classmates perform yoga regularly? Identify the reasons that prompt them to perform yoga regularly.

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3. Ardha Matsyasana - Various Stages





1. Lie in supine position keeping the legs together and arms by the side of the body.
2. Place the palms under the buttocks.
3. Inhale and lift your upper body by applying pressure on the elbows.
4. Lift the chest and gently place your head on the mat. Remain in that position for a comfortable time.
5. Exhale and come back to the second step.
6. Come back to the resting position.

Benefits of Ardha Matsyasana

- Muscles in the neck become flexible and strong.
- Improves the fitness of respiratory muscles
- Strengthens the back muscles.

Discuss the benefits of Ardha Matsyasana in the class with the help of your teacher.

Share your experience after practising Ardha Matsyasana in the class.



Assessment

1. Explain the steps of performing Ardha Matsyasana.

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2. How does yoga help in improving the standard of your learning?

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3. How does Ardha Matsyasana help in improving the fitness of your respiratory muscles?

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4. As an adolescent how can you influence others through the practice of yoga? Explain.

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Adolescence and Body Posture

The ability to stand upright distinguishes humans from other animals. It is important to maintain proper body posture. Unhealthy lifestyle, lack of exercise and being overweight can lead to various body posture deformities.

Importance of body posture

Body posture plays a major role in the physical and mental well being of an individual. Proper alignment of the spine helps the body's muscular system to function optimally. This helps in proper distribution of body weight and reduces stress in muscles and joints. Beyond physical health, body posture influences one's personality to a great extent.



Activity 3

Barrier Kho



Standard 10



Rules and Regulations

- Use a playground similar to that of Kho Kho.
- Tie a rope between the poles at a height of 80cm.
- There should be two teams.
- One team should be the chasers and the other the runners. The game should be played in two halves of 15 minutes duration.
- Four players from the chasing team and all from the runners' team should enter the ground at a time.
- The runners whom the chasers touch will be declared out.
- Once four members of the runners' team are dismissed, the four chasers will be replaced by their own team members. Thus, more players get the opportunity to be the chasers.
- The chasers in the first half will be the runners in the next half.
- While crossing the rope between the poles, the chasers should pass under the rope. But the runners are free to either jump over or pass under the rope.
- The team that dismisses maximum number of runners will be declared as the winners.
- Changes can be made in the size of playground and equipment used, according to the situation.

Discussion

Haven't you experienced difficulty while passing under the rope?

What could be the reason?

- You took more time while bending and crawling under the rope.
- We got awareness regarding the need of flexibility in the thoracic area, back and hip.
- Lack of flexibility and mobility in our joints affects our fitness in real life situations.

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Benefits of proper body posture

- Reduces possibilities of back pain
- Offers relief to the neck and shoulders
- Accentuates energy levels
- Improves body aesthetics

Causes of postural deformities

Hereditary factors, lifestyle and accidents may lead to postural deformities. These deformities cause many difficulties to the body. Certain deformities are due to carelessness and unhealthy lifestyle. This can be rectified by developing a proper lifestyle and exercise to a certain extent.

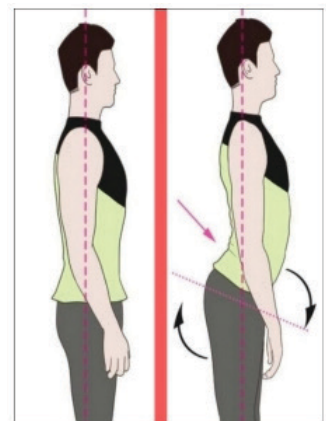
Let us get familiarised with certain postural deformities.

Lordosis

Lordosis is the increase in the natural curvature of the lumbar spine. The abdominal muscles become weak and slouch forward.

Observe the picture. What is shown in the picture?

The picture illustrates the structural deformities of the lumbar spine.



What are the causes of lordosis? Let us discuss.

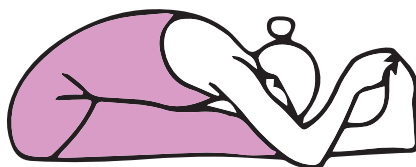
- Congenital disability
- Spinal column injury
- Wrong body posture in day-to-day activities
- Obesity
- Weak abdominal muscles
- Rigidity of muscles in the lower back
- Vitamin deficiency

Remedial measures for Lordosis

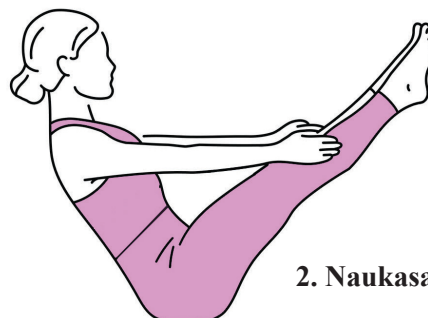
- Maintain a proper body posture while standing, walking and sitting.
- Place a pillow under the abdomen while lying in prone position.
- Proper exercise for the flexibility of muscles in the lower back.
- Proper exercise for strengthening the abdominal muscles.



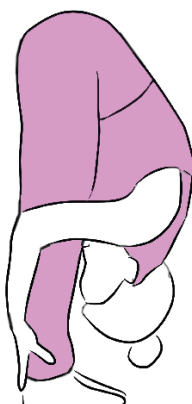
Remedial exercises for Lordosis



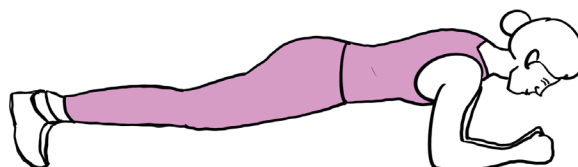
1. Paschimottasana



2. Naukasana



3. Padahasthasana



4. Plank

Scoliosis

Scoliosis is a sideways curve of the spine. This leads to uneven shoulder levels.

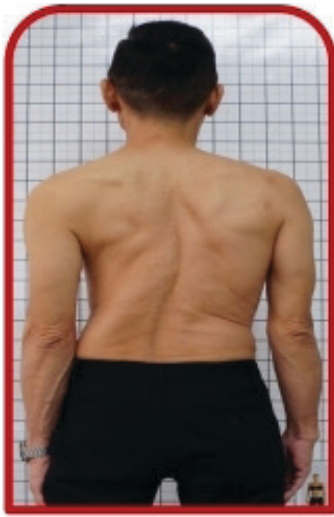


"If scoliosis can be diagnosed early it can help reduce the extent of curvature in the spine and thereby reduce the pain experienced throughout life"

This is the experience shared on social media by Phillippine's Catriona Gray, who was crowned Miss Universe 2018, on the occasion of World Scoliosis day.

She narrated how she was diagnosed with scoliosis at the age of twelve and how she overcame the deformity to achieve success in life.

Look at the pictures



What do they indicate?

Pictures show the curvature of the spine. This is a postural deformity.

Symptoms of Scoliosis

Discuss the symptoms of Scoliosis.

- One shoulder is seen elevated.
- One side of the back is seen elevated than the other.
- Difficulty is experienced on the spine while standing and sitting for a long duration.
- Develops back pain

Causes of Scoliosis

Let us discuss the causes of Scoliosis.

- Genetic disabilities
- Hereditary factors
- Vitamin deficiency
- Spinal column injury
- Wrong lifestyle habits
- Muscles on one side of the body become rigid. Muscles on the other side become weak.

Remedial measures for Scoliosis

Discuss the remedial measures of Scoliosis.

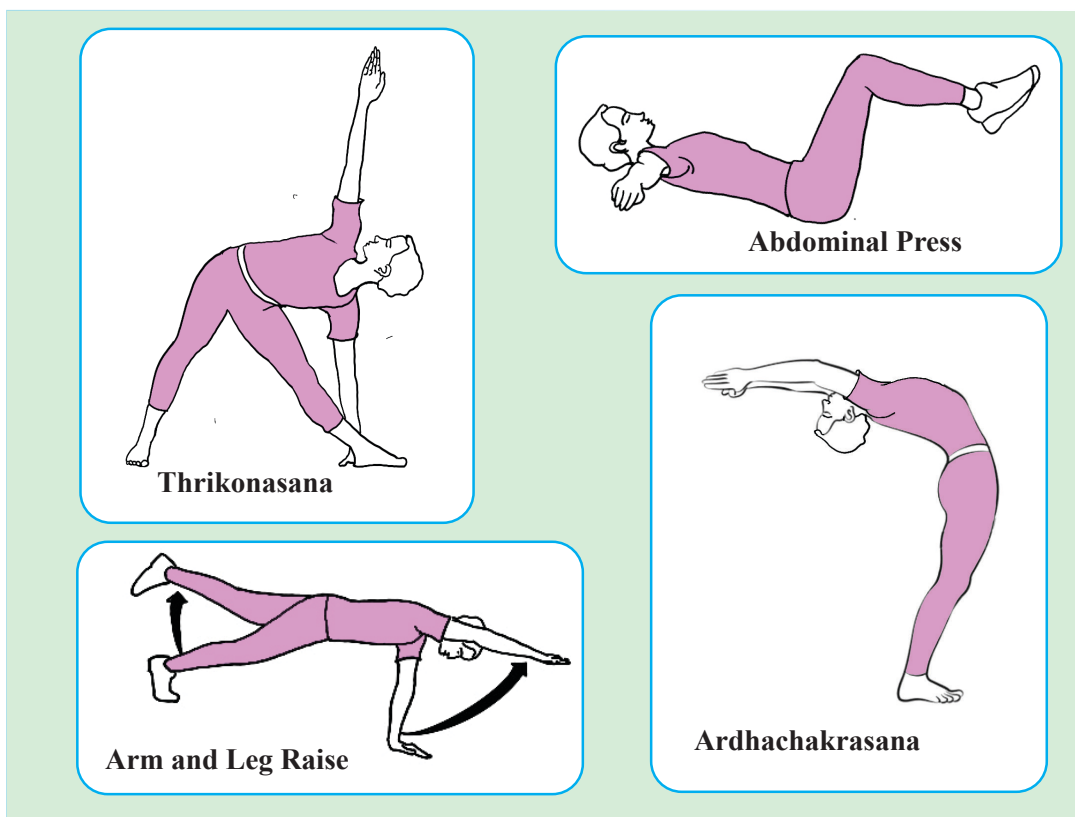
- Maintain a proper body posture.
- Strengthen the weak muscles through exercise.



Standard 10

- Make the rigid muscles flexible through stretching exercises.

Remedial exercises for Scoliosis



Assessment

1. What is Lordosis? What should be taken care of to correct Lordosis?
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2. What is Scoliosis? How can we correct Scoliosis?
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3. What are the physical fitness components required for swift move under the rope while playing 'Barrier Kho'?
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Champion of Safety

3

Joel and Beethoven, who are natives of Thiruvananthapuram, were best friends. In 2015, on the eve of Republic Day, they were returning from school after attending a class conducted by The Red Cross on '**Emergency Situation and First Aid**'. On the way, they tried to pluck coconuts from a grove near their residence. They did not notice the electric line near the coconut tree. Both were hit by electric shock. Though Beethoven got jerked away, Joel was still stuck to the electric line. Recalling the knowledge from the first aid class that wearing shoes would function as a safety gear, Beethoven kicked Joel with his shoes to disconnect the electric wire. After checking Joel's condition, Beethoven administered necessary first aid and brought him back to life. Later in 2016 the Central Government honoured Beethoven with National Bravery Award for his courageous act of saving the life of Joel.



Standard 10

Discussion

1. How do you evaluate Beethoven's action?
2. A mere knowledge of first aid itself is not enough. Rather, one should be able to apply that knowledge in the essential situations. What should be done for this?

We often hear the word 'safety'.

We often notice safety warning on signboards. We also hear a lot about safety measures from our parents, teachers and daily news. We are already familiar with different aspects of safety in previous classes.



Assessment

1. You have learnt the dangers involved in drowning in the previous classes. Share the steps of first aid for drowning.

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2. Prioritising safety is crucial in day-to-day life. Give reasons.

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It is better to prevent an accident from happening than adopt corrective measures after it has happened. Therefore, we should be aware of our surroundings. We should understand the possible dangers and adopt measures to ensure personal safety and that of others. Safety at home as well as in public spaces is the responsibility of all of us. Let us discuss various measures of safety.

Situations that may lead to accidents.

- Slippery and wet floor may lead to slip and fall.
- Loose electric wire may lead to an electric shock.
- Negligence on road may lead to accident.

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We must develop proper awareness to provide necessary first aid to victims of such accidents.

The Basic Principles of First Aid

- **Assess the situation:** The rescuer should ensure that the location and circumstances are safe for providing first aid.
- **Maintain a calm mindset:** Panic will worsen the situation. Stay calm.
- **Seek help :** Seek the help of emergency services, if required.
- **Provide appropriate care :** Offer proper care to the patient, depending on the kind of injury.

Let us discuss the first aid measures that should be administered for snakebite and electric shock, which commonly occur in our state.

Snakebite

Venomous snakes like king cobra, cobra, viper, etc. and non-venomous snakes like rat snakes are commonly seen in our state.

Mention the precautionary measures to be adopted for avoiding a snakebite.

- Keep the surroundings clean
- -----
- -----
- -----



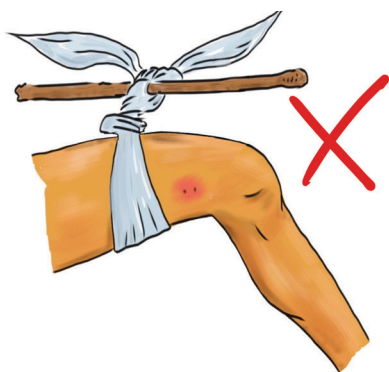
First aid for snakebite

- Move the bitten person from the accident spot.
- Restrict the person's physical movements as far as possible.
- Console the victim.
- Try to identify the type of snake that bit the person.
- Remove ornaments like rings and bangles, as chance of swelling in the bite spot is high.
- Observe the breath of the victim and provide Cardiopulmonary Resuscitation (CPR) if necessary.



Standard 10

- You may use a pressure pad on the affected area and apply pressure. Try to learn the use of pressure pad from your teacher.
- Do not use a tourniquet above the bitten area to restrict blood circulation, as it may later lead to amputation of the limb.



- Shift the casualty to a hospital (with the availability of anti-venom) at the earliest.

Conduct a mock drill in the class to learn the practical aspects of first aid given for snakebite.



Activity 1

TWO-WAY THROWBALL



- Ensure equal representation of boys and girls in both teams.
- You may start the game following the rules and regulations of Throwball.



- You may use two balls at a time so as to ensure proper participation and intensity of the game.
- Both teams should start the service at the same time from the service areas assigned to them.
- Pulse rate should be recorded before and after the game.
- One set of game with 15 points shall be conducted.



Assessment

1. **Hope you recorded the pulse rate before and after the game. What difference did you notice? Why?**

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2. **Share the ideas that you have gathered by playing Two-way Throwball.**

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3. **Mention the precautionary measures to prevent palpitation (increased heart rate) in the snakebite victim.**

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4. **Why is it said that the physical movements of a snakebite victim should be restricted?**

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5. **Which are the hospitals in your locality where anti-venom is available? How far are these hospitals located from your home? List them.**

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Electric Shock



An 'electric shock' refers to an accident that occurs when electricity passes through the body directly or otherwise. This electric current may cause a mild to severe electric shock.

Identify the factors that decide the intensity of an electric shock.

- Duration of the contact
- The voltage of electricity
- The body part exposed to electric shock
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Depending on the intensity of the electric shock, the victim may either have a mild injury or even succumb to death.

Discuss the precautions that should be taken to prevent an electric shock.

1. Use good quality electrical equipment.
2. -----
3. -----

First Aid measures for an Electric Shock

1. We should ensure personal safety and safety of those around us.
2. Don't touch the victim of an electric shock directly. If we touch them, we may also be electrocuted since the victim may still be in contact with the electric current.

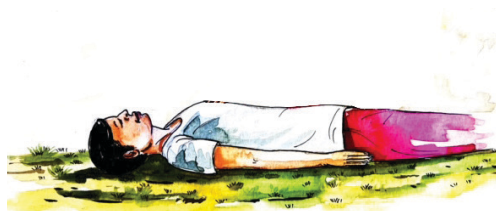


3. Either disconnect the electric connection or block its source. If you cannot disconnect the electric connection, use a dry twig or things like rubber gloves which are bad conductors of electricity, to detach the victim from the source of the shock.
4. Ask the victim if everything is okay (Are you ok?) by patting on the shoulder to test whether the person is responding or not.
5. If visible burns are there, pour cold water on the wound continuously for 10 minutes. Avoid using ice or water that is extremely cold. This may lead to damage of tissues.
6. Cover the burnt area with a sterile bandage. Avoid using objects like cotton that may be sticky.
7. If the victim does not respond, he/she may be in an unconscious state. Check the breathing of the victim. If breathing has stopped, dial '112' to avail emergency service and medical care. Ensure personal medical assistance along with that.

If an accident victim does not breathe, provide CPR. Continue CPR until emergency medical service arrives.

Steps involved in CPR (Cardiopulmonary Resuscitation)

1. Make the victim lie in supine position in a safe place.



2. Check the breathing of the victim.



Standard 10

3. Check the pulse of the victim.
4. Before providing CPR, open the mouth of the victim and ensure that there is no object that obstructs the passage of air.
5. Keep one palm on the middle part of the chest of the victim. Keep the next palm over it, and clasp them together. Keep the arms and shoulders of the caregiver at an angle of 90 degrees and compress the victim's chest 30 times. For children who are below the age of one year, pressure should be applied using the index and middle finger.
6. The rate of chest compression shall be 100 times per minute. Compression should be 2 inches deep.
7. Tilt the head backwards and lift the chin.
8. Covering the nose, give rescue breaths twice, at the ratio of one per second. Check whether the chest of the victim is rising and falling.
9. After this, repeat the activity of chest compression 30 times.
10. Ensure the use of Automatic External Defibrillator (AED), if it is available.



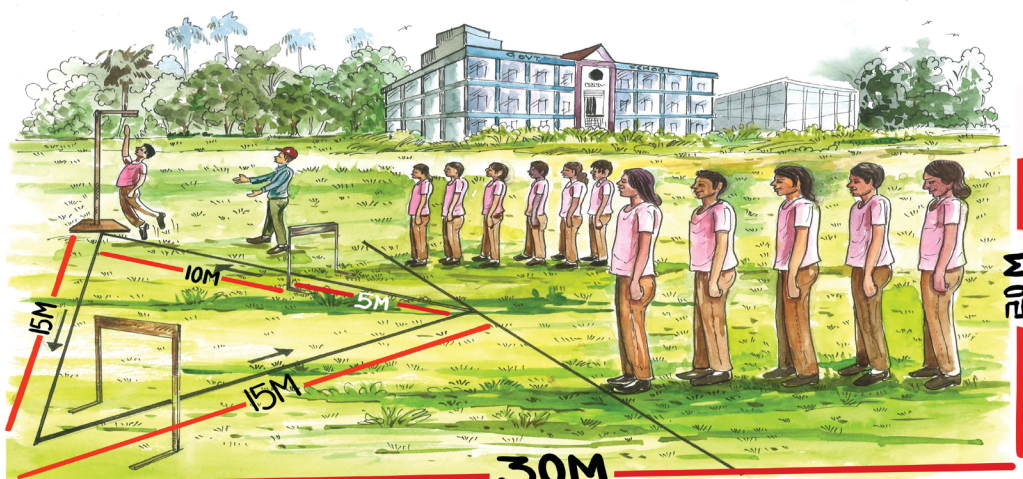
AED is a machine that helps to check and regulate the heart rate, if needed.





Activity 2

Quick Rescue



Rules and Regulations:

- The game is conducted in a court that is 30m long and 20m wide.
- Children should form groups of six members each.
- The first group should start the game following the teacher's instruction.
- The child who is standing in front should jump over the hurdle that is kept at a distance of 5m. Imitating the act of disconnecting electricity, he / she touches the target spot that is marked at a distance of 10m (To mark the target point, a stadiometer, a wall, a pillar or a tree can be made use of).
- Run towards the starting point, passing underneath the hurdle that is kept at a distance of 15m and touch the next player, acting as if help is required.
- The next team member resumes the game.
- The total time taken by all the six members to complete the game is the total score of the team. The next team may start the game when one group finishes its turn.
- The team that finishes in the shortest duration will be declared the winner of the game.



Standard 10

Shall we conduct a mock drill to get a hands on experience of the practical aspects of the activity?



Assessment

1. Elucidate your reflections on various stages of first aid for electric shock while playing the game 'Quick Rescue'?

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2. Were you able to actively participate in the game 'Quick Rescue' ? Why?

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3. Through the game 'Quick Rescue', were you able to acquire the skills of timely intervention and first aid when someone gets electrocuted ? Explain.

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4. Conduct a seminar in your class on 'The Scientific Approach to First Aid'.



Technology and Emerging Healthy Kerala

4



Pointing to the smart watch on her wrist, the teacher asks, "Is checking time the only purpose of using smart watch? What are the other uses of smart watch?"

Discuss

1. to check the pulse rate
2. to check the heart beat
3.
4.
5.

We are living in a period where technology is inevitable. Technology plays an important role in the field of health and fitness, in conducting sports meet as well as training of sports persons.

Standard 10

Let's learn about certain technical equipment that can be used in the field of sports.

Smart Watch



Using smart watch in health sector is of prime importance. It offers a lot of facilities, even though expensive.

Smart watches have already become a part of our daily life. It provides a lot of technical facilities.



Advantages of Smart Watch

1. Health monitoring

Smart watch offers features to monitor the heart beat, duration and quality of sleep, intensity of physical exercise etc.

2. Smart notifications

You can view text messages, e-mails, calls and social media updates directly in your smart watch.

3. Fitness tracking

Smart watches can track your exercise and provide details about activities like walking, running, cycling etc.



4. Voice assistant

Some smart watches have voice assistant features. We can play music and search for information using our voice.

There are more uses of smart watches. Find them and list out.



Activity 1

Let's do an activity.

Smart Recovery



Rules and Regulations

- There will be two lines at a distance of 30 metres on the ground.
- One will be the starting line and other the finishing line.
- Children participating in the activity must wear a smart watch.
- When the teacher blows the whistle, the first participant must run from the starting line to the finishing line.
- After crossing the finishing line, the child's pulse rate should be recorded observing the smart watch.



Standard 10

- The pulse rate should be noted again after resting for one minute.
- Calculate the difference between the two pulse rates. This is the recovery rate of the student.
- All children shall participate in this activity.
- Find out the recovery rate of all the children. (If a smart watch is not available the pulse rate can be recorded with the help of teacher.)
- Find the children who attained a better recovery rate.



My Recovery rate

A measure of improved recovery is the increase in difference between the pulse rate recorded immediately after completing physical activity and the pulse rate recorded after rest.



Assessment

1. Conduct a comparative study of the daily routine of five students who have a better recovery rate.
2. With the help of your teacher, conduct a class room discussion on how recovery rate is related to health.
3. What are the means to improve recovery rate? Explain.

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Sleep Analyser



A sleep analyser is a device that tracks and analyses the duration, quality and phases of a person's sleep pattern. The service of a sleep therapist was utilised to improve the performance of Team India in 2024 Paris Olympics.



Posture Correctors

A posture corrector is a wearable device that helps maintain good posture by aligning the spine and shoulders. They strengthen the back reminding one to keep the body in a proper position. Posture Correctors help relieve back pain, neck pain etc.

Different types of Posture Correctors

- a. **Harness - style Correctors:** These are vest type or harness - style correctors that hold the shoulders. They pull the shoulders gently backward and help to maintain proper posture.
- b. **Braces :** Similar to harness- style correctors, braces support back and shoulders. These are designed to maintain an ideal posture.
- c. **Electronic devices :** Some posture correctors use technology to provide feed back and reminders. They vibrate or beep to alert when there is an adverse change in the body posture of the user.
- d. **Posture reminder Shirts :** These shirts have inbuilt panels. They send reminders to engage in muscle movements beneficial to improve your posture.



Advantages of using posture correctors

- a. **Improved body posture** : Regular use of posture correctors will gradually help us to improve our body posture.
- b. **Pain relief** : By encouraging the correct posture, the discomfort in the neck, shoulders and lumbar spine can be reduced.
- c. **Better proprioception** : These devices increase awareness about body movements.
- d. **Heal the injury** : These devices are useful for those who recover from surgeries related to spine and posterior part of body.

How to use posture corrector effectively

- a. **Use it sparingly** : Posture correctors are recommended to be worn for a short period of time, usually 30 minutes to 2 hours.
- b. **Coordinate with exercises** : Engage in exercises that improve the body posture and strengthen the core, back and shoulder muscles.



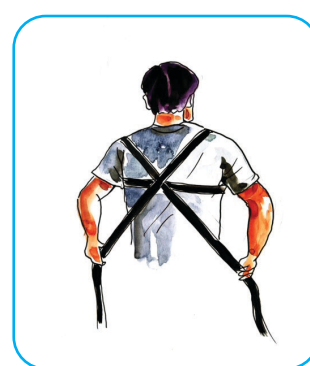
Activity 2



STEP 1



STEP 2



STEP 3

All children can try this activity

- 1. A shawl may be used for this activity
- 2. As shown in the first picture, wrap the shawl from back to front of the body.
- 3. Place both ends of the shawl behind the shoulder as shown in the second picture.



4. As shown in the third picture pull and tighten the left end of the shawl with the right hand and the right end with the left hand.
5. By doing so a cross mark will be formed at the back side.
6. Pull and tighten both ends of the shawl and take a walk. Can you walk with ease? If not, seek the help of teacher.
7. Once the posture of the spine has improved, you can walk effortlessly.



Assessment

1. Describe your experience of using shawl in the above activity.

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2. Identify and write the exercises for better posture of spinal column with the help of your teacher.

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VO₂ Max

The maximum amount of oxygen a person can use during intense exercise is a person's VO₂ Max (Maximum Oxygen Uptake). It helps to measure aerobic fitness.

The significance of knowing VO₂ Max

VO₂ Max is helpful for the following:-

- To understand cardiorespiratory fitness
- To improve sports performance
- To evaluate the effectiveness of training
- To assess physical health



Procedure for measuring VO_2

VO_2 can be measured precisely in exercise labs. VO_2 max machine accurately records the oxygen inhaled and carbon dioxide exhaled during exercise. Based on this, it will record the VO_2 max score. Apart from this, the VO_2 max score can be measured through '12 minute Cooper Run or Walk Test' and 'Beep Test'.

Learn and discuss the method of measuring VO_2 max with your teacher.



Pulse Oximeter

A pulse oximeter is a device that measures the level of oxygen in blood. It became popular during the Covid - 19 pandemic.



Haemoglobin Analysers

It measures the level of haemoglobin in blood.



You are aware of haemoglobin and the need to maintain a balanced haemoglobin level. Discuss the health issues and symptoms arising from an unbalanced haemoglobin level in blood with the help of your teacher. Also find out how exercise influences the haemoglobin level in blood.





Activity 3

Handy Football



While students are playing handy football, the interested students in the class can do the commentary. It may be recorded with the help of teacher and through this, communication skill of students can also be developed.



Rules and Regulations

- Handy football is played in a football court.
- It is played using football.
- Goals are scored exactly like in football.
- Necessary changes can be implemented according to the number of players and availability of space.
- The objective is to score goals. The team that scores more goals wins.
- You can use feet and hands to pass the ball.
- You have to pass the ball immediately after catching it.
- If you take a step before passing the ball, it will be considered as a foul.
- The players of the opposite team can restart the game, if they touch you while you are holding the ball.

You have to check your pulse rate before and after the game and also one minute after playing the game. You should also check your body weight before and after the game.





Assessment

1. You have played the game 'Handy Football'. Why did you get different results when you checked the pulse rate before and after the game?
.....
.....
2. You have checked the weight before and after the game. Is there any difference between these two measures? What are the reasons for this difference?
.....
.....
3. Conduct a debate in class on the topic "Sports Sector and Technology".

Healthcare

➤ by using smart watch

.....
.....

➤ by using posture correctors

.....
.....

➤ by measuring VO_2 max

.....
.....

➤ by using Haemoglobin analysers

.....
.....

I have learnt that the use of technology can be helpful in healthcare. I will make use of it.



Play in Harmony with Nature

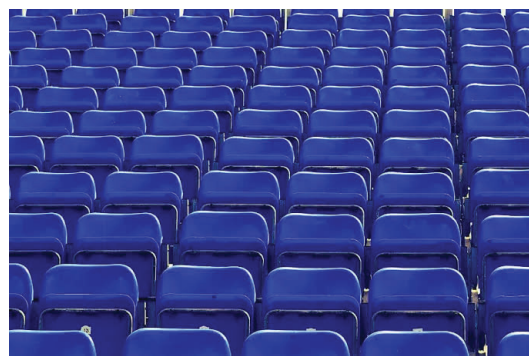
5



Sports and Games should be one of the means to promote nature conservation.
Sustainable Development Goal -15 (United Nations)

This is the 15th goal indicated by the UN which is to be fulfilled by 2030. As part of materialising this goal, the Paris Olympics 2024 was conducted offering priority to conservation of nature.

- As a precursor to environmental protection, the Olympic village used geothermal and solar energy.
- Chairs made of recycled plastic were used at the venue.
- They used rainwater harvesting for water preservation.



Standard 10

- Green spaces were created in and around the Olympic venues.

This eco-friendly spectacle ensured participants and spectators a cool healthy environment. It helped to reduce air pollution by absorbing carbon



dioxide. This paved the way for the preservation of biodiversity. The Olympic villages and venues were constructed without destroying the existing natural ecosystem. They arranged public transportation which could be used in all the venues. There was a transportation system specially set to encourage cycling and walking. Locally available food ingredients were used for the preparation of food.

At the 2024 Paris Olympics, swimming marathon events and triathlon swimming events were held in the Seine River. The river was the focal point of 2024 games. The river was considered unsuitable for swimming due to high levels of E-coli bacteria.



This was rectified and the river was made safe for the events. Paris Mayor Annie Hidalgo swam in the Seine river in response to the controversy ahead of the Olympics.



Assessment

1. How was green protocol observed in the 2024 Paris Olympics?

- Used solar energy for electricity.
- -----
- -----





Activity 1

Let's engage in an eco-friendly activity.

Make a ball



This activity introduces how to make a ball using waste plastic materials discarded in our schools.

1. **Materials required** : Plastic bottles, plastic covers, candy wrappers, masking tape, etc.
2. **Method of making** : Roll the plastic covers, candy wrappers, etc. collected by children into the shape of a ball. Cover it completely with a large plastic bag. Then wrap the masking tape all around to strengthen the ball. We can make balls of different sizes like this.



Assessment

1. What are the benefits you have achieved while engaging in this activity?

- This activity imparted joy.
- -----
- -----
- -----





The St. Lawrence Cricket Stadium in England was known as the only first class cricket ground which had a big tree within its boundary. Many international matches were held in that ground preserving this huge lime tree standing close to the boundary within the ground. This is a perfect example of maintaining the natural habitat by formulating special rules to be followed in the instance of ball hitting the tree. This grand old tree fell to the ground due to a heavy wind in 2005.

Let's play a game using the ball we made in the previous activity...



Activity 2

Leg Softball





Rules and Regulations

- We use the ball made in the previous activity.
- A play ground of 15 metre length and width is used.
- Of the two teams with equal number of players, one team can become the hitting team and the other the fielding team.
- You may decide the hitting and the fielding teams by tossing a coin.
- One member of the fielding team bowls the ball through an underarm throw. One member of the hitting team hits the ball using leg, from the hitting area.
- The member who hits the ball can run anticlockwise to the next base. When the player reaches all the four bases, the team gets a run.
- At the same time, the fielding team members can dismiss the hitting team members.
- The hitting team can dismiss the players of fielding either by catching the ball or touching any open base with the ball.
- An over consists of bowling three balls (pitching).
- It is played in two innings.
- The team that scores more runs is declared the winner.
- Pitching should be done from the middle of the ground as shown in the picture.



Assessment

1. Write how the previous activity 'Make a ball' helps to conserve nature.

.....

.....

.....



Standard 10

2. How can we protect nature by engaging in similar types of games? Explain.

.....

.....

3. Note down your experience of playing the game.

.....

.....

Green islet and biodiversity for conservation of nature



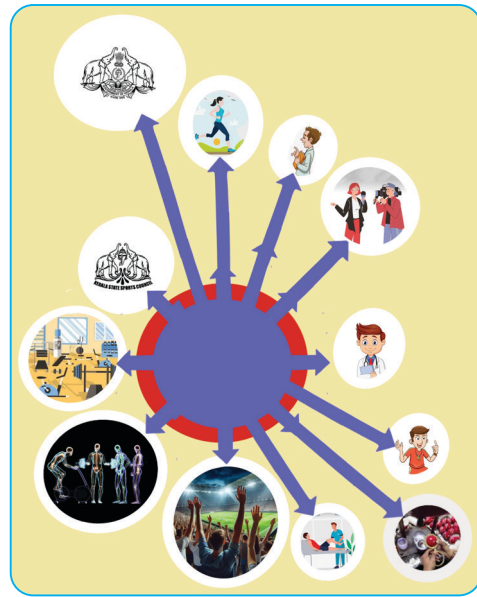
The Green Islet Outreach Project is an innovative project implemented in Kerala under the leadership of Haritha Keralam Mission in collaboration with the local self-government institutions with the aim of preserving local biodiversity and restoring the environment. At present we have green spots in 574 acres. When 136 acres in Muzhakunnu Gramapanchayath in Kannur district become Navakeralam Green Islet, a total of 710 acres shall come under this project. The Green Islet Outreach Project aims to find barren lands in public areas and create natural forest models by planting indigenous trees and plants to conserve them. It will be beneficial for the public to a great extent if safe places in the green spots are provided for outdoor physical exercises. Abundant supply of oxygen gives the mind a refreshing and distinctive experience.



Sports Ecosystem

A sports ecosystem is a framework that encompasses various stakeholders adopting a social inclusion and a progressive approach to sports with the aim of sustainable sports development and the overall well-being of the people.

Several institutions, organisations and individuals who work tirelessly to expand the sports world are a part of this sports ecosystem. The most prominent participants of this system are the sports stars. Coaches, various teams, clubs, basic infrastructure, sports enthusiasts, technology, media and sports legal system are constantly engaged in its activities complementing each other.



India has always been a major centre of tourist attraction due to its vast diversity. India's sports tourism sector that is expected to grow in recent years, excites visitors from within and outside the country. Sports tourism focuses on travelling to watch and participate in sports events.

Let's understand about sports ecotourism.



Sports Ecotourism

Sports ecotourism is an integral part of sports ecosystem. Sports ecotourism is a recreational sport that integrates sports with environment. Kerala is an ideal state for sports ecotourism. Our backwaters, river banks, mountains, beaches, waterfalls, forests are all assets of sports ecotourism.

Sports ecotourism is also a recreational activity. Through this we get close to nature and at the same time can participate in sports and inculcate a sports culture. This will promote among children a sense of responsibility to conserve nature.



Activity 3

1. Identify the nearby spots conducive for sports ecotourism with the help of your teacher.
2. On a convenient day visit one of these places under the supervision of teachers and participate in physical activities following the safety measures.

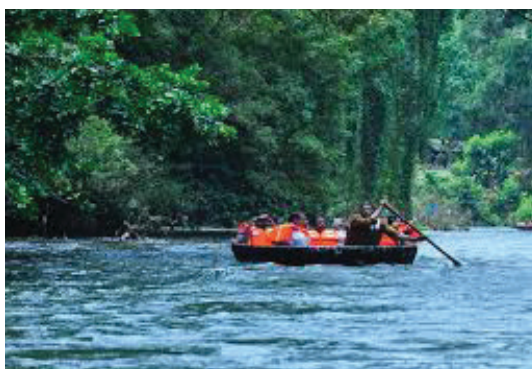


Assessment

1. Prepare a note on the experience of sports ecotourism you have participated in.
.....
.....
.....
.....
2. In groups, prepare a digital album by including the main places where sports ecotourism takes place in Kerala. Include the pictures of sports activities conducted there.



3. Identify the adventurous activities in the following pictures with the help of your teacher and write in the space provided.



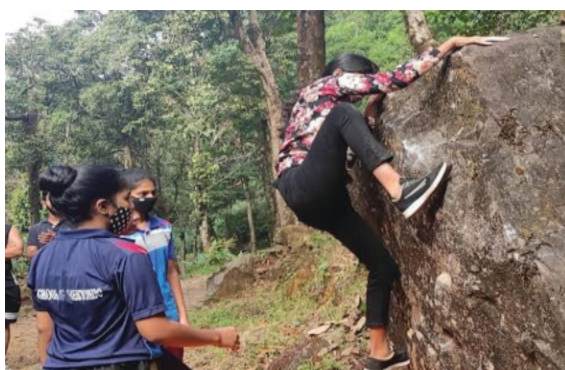
1.

2.



3.

4.



5.

4. Prepare a note on how this chapter has influenced you to be in harmony with nature.



Notes

This image shows a full page of primary-ruled paper. It features multiple horizontal rows of small, evenly spaced blue dots, which are commonly used as guides for handwriting practice in elementary school. The dots form continuous lines across the width of the page, providing a structured space for writing letters and words. There are no margins, text, or other markings present on the sheet.

Annexure

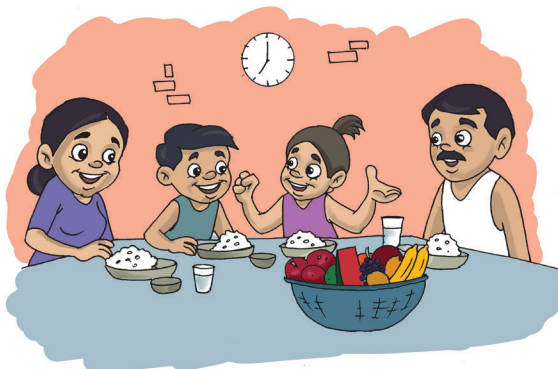
- ☐ Lifestyle Formation
- ☐ A Regular Day in Life
- ☐ Warming up
- ☐ Cooling down



Lifestyle Formation

Food habits

- Dine with your family.
- Avoid the use of digital devices during dining.
- It is better to eat one hour after and two to three hours before exercise.
- Never skip your breakfast. Chew food properly and eat slowly.
- Drink two to three litres of boiled water everyday.
- Ensure rainbow diet (fruits and vegetables of different colours).
- Avoid adulterated fast food, carbonated drinks and junk food as far as possible.
- Have dinner at least two to three hours before going to bed.



Exercise habits



- Enjoy exercising with family members. Give preference to aerobic exercises like walking, jogging, cycling, swimming etc.
- Students of age group 5 to 7 must do aerobic exercise for atleast one hour daily. They should indulge in strength training for 3 days a week (Source - World Health Organisation).



A Regular Day in Life

- Engage in short duration physical activities before going to school. Help your parents with domestic chores.
- You may go to school by walking or cycling. If you travel by a vehicle, find time to walk with your friends.



During class time



- Stretching should be practised during short breaks.
- Walk as much as possible while at school. Keep the habit of visiting the school library and lab everyday, so as to develop the habit of being physically active.

During Interval

- Use opportunities to walk and engage in leisure time physical activities.
- Participate in curricular and creative activities as far as possible.



After reaching home

- Engage in recreational sports with family and friends. You can also take your pet for a walk, if you have one.
- Reduce screen time used for entertainment purposes.

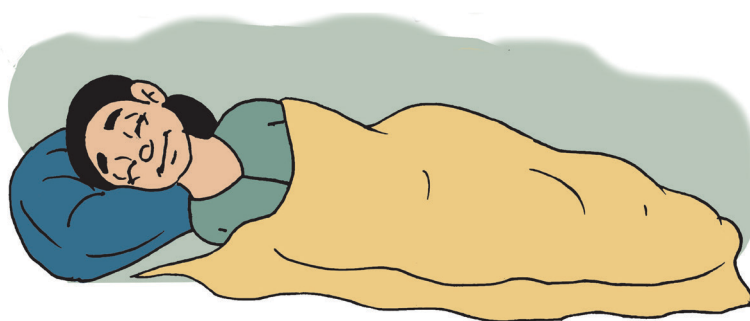


Study time

- Doing simple exercises and listening to music in short breaks during studies help you to remain active.
- Pressing the stress ball/squeeze ball during study hours reduces stress.
- Schedule your study time.



Sleep



- Make it a habit to sleep and rise early.
- World Health Organization (WHO) recommends 9 to 12 hours of sleep for children of 6 to 12 years of age and 8 to 10 hours of sleep for those of 13 to 18 years.
- One can sleep in supine or sideways position so as to maintain the natural curves of the back.
- Stop using electronic devices half an hour before going to bed. Keep such devices at least 1 metre away from your body.

There might be certain changes in your routine during holidays. However, it is better to ensure that you exercise, eat, study, enjoy and sleep on time even during holidays.



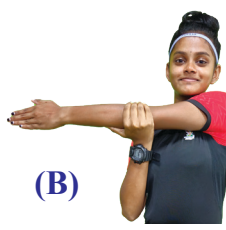
Warming up

- Warming up is the preparatory phase prior to a physical activity or sports event. It will help to enhance performance and prevent injuries.
- All stretching exercises should be held for a specific period of time and repeated in the reverse direction.
- All other exercises should be practised around 10 times and repeated on the other side of the body.

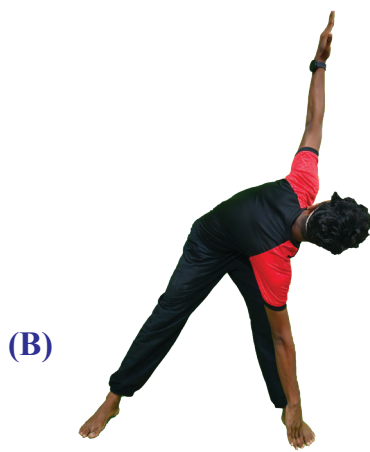
1	NECK STRETCH	 (A)  (B)  (C)  (D)
2	OVERHEAD SHOULDER STRETCH	 (A)  (B)
3	WRIST EXTENSION STRETCH-I	 (A)  (B)
4	WRIST EXTENSION STRETCH-II	 (A)  (B)



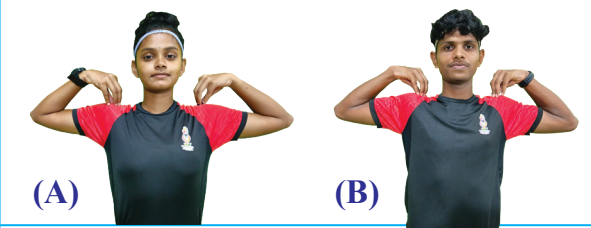
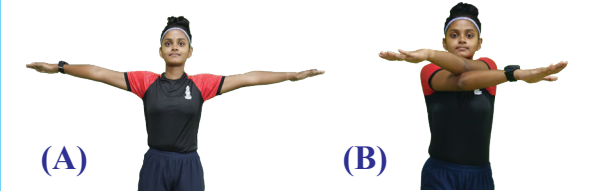
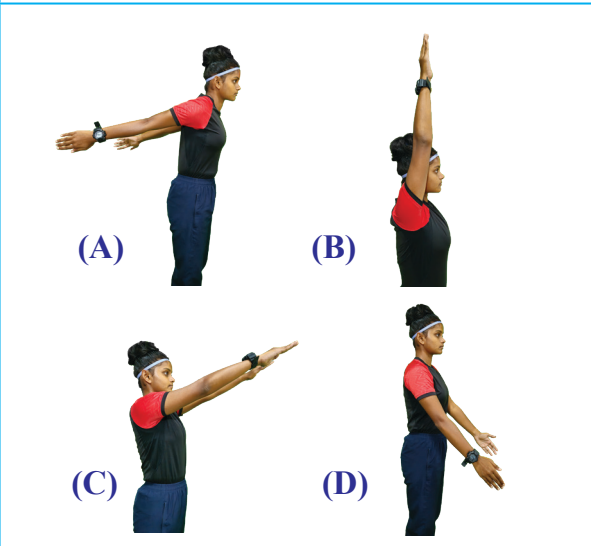
Standard 10

5	SHOULDER STRETCH	  (A) (B)
6	CROSS ARM SHOULDER STRETCH	  (A) (B)
7	BACKSIDE SHOULDER STRETCH	  (A) (B)
8	LUNGE WITH SPINAL TWIST	
9	HAMSTRING STRETCH	  (A) (B)

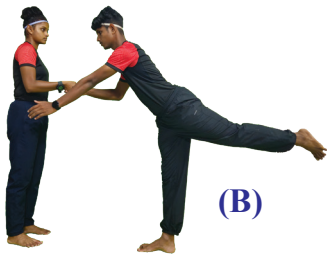
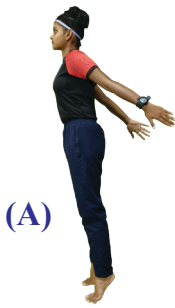
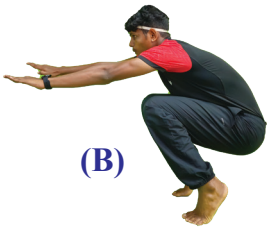


10	STANDING KNEE TO CHEST	  (A) (B)
11	CALF STRETCH	  (A) (B)
12	KNEELING HIP FLEXOR	  (A) (B)
13	CROSS BODY TOE TOUCH	  (A) (B)



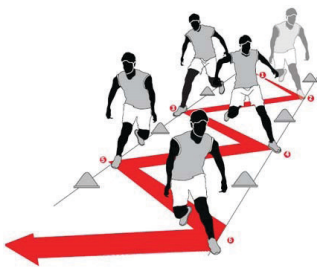
14	SIDE LUNGE TO KNEE RAISE	
15	SHOULDER CIRCLE	
16	ARM SWING	
17	ARM ROTATION	
18	HIP CIRCLE	



19	DORSIFLEXION & PLANTAR FLEXION	 
20	ANKLE INVERSION AND EVERSION	  
21	JUMPING JACKS	 
22	LEG SWING: FORWARD AND BACKWARD	 
23	TUCK JUMPS	 



Standard 10

24	ZIGZAG JUMPS	
25	SQUAT WITH WALKOUTS	(A)  (B)  (C) 
26	SIDE PLANK LEG RAISE	(A)  (B) 

27. Major activities (Choose one of the following activities and do it for 10 minutes)

- Various exercises using hula hoops, skipping rope etc.
- Cycling, swimming, martial arts, aerobic dance, zumba dance etc.
- Going up and down the stairs continuously.
- Jogging (start at a low pace and gradually increase the pace)
- Play any fun games learned in the class.

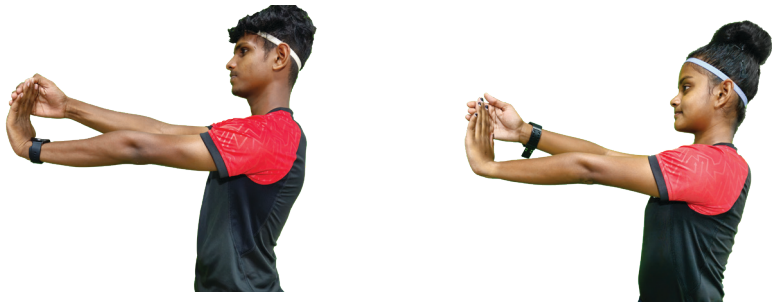


Cooling down

- This is a simple exercise done after a competition or physical activity to bring the body back to its original state. It helps to recover fast, prevent injuries and improve performance.
- Hold all stretching exercises for around 10 seconds and repeat on the other side.

1.	WALK SLOWLY	
2.	JOG SLOWLY	
3.	SLOW JOGGING (with arms relaxed and raised to the side)	



4.	SLOW WALKING AND JOGGING (with both arms bent forward.)	
5.	NECK STRETCH (A)  (B)  (C)  (D) 	
6.	OVERHEAD SHOULDER STRETCH	
7.	WRIST EXTENSION STRETCH-I	



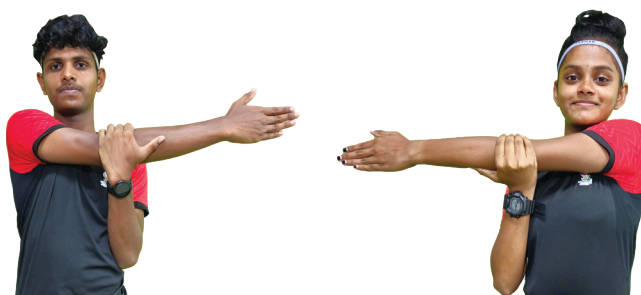
8 WRIST EXTENSION STRETCH-II



9. SHOULDER STRETCH



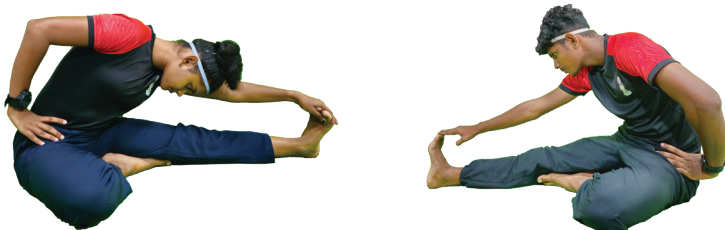
10. CROSS ARM SHOULDER STRETCH



11. STANDING BACK BENDING STRETCH



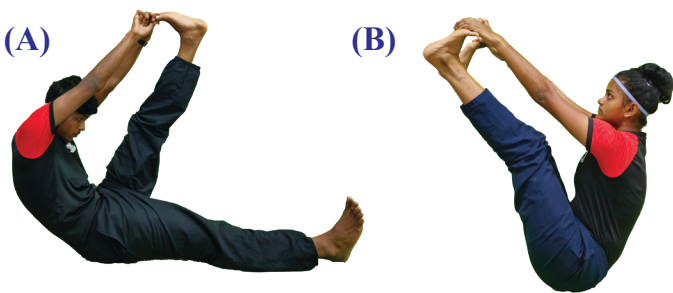
Standard 10

12.	SIDE BEND STRETCH 
13.	HAMSTRING STRETCH 
14.	QUADRICEPS STRETCH 
15.	CALF STRETCH 



16.	KNEELING HIP FLEXOR (A)  (B) 
17.	DORSIFLEXION & PLANTAR FLEXION (A)  (B) 
18.	ANKLE INVERSION AND EVERSION (A)  (B)  (C) 
19.	BUTTERFLY STRETCH (A)  (B) 



20.	LYING HARMSTRING STRETCH 
21.	LIE DOWN AND RELAX 



CONSTITUTION OF INDIA

Part IV A

FUNDAMENTAL DUTIES OF CITIZENS

ARTICLE 51 A

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, 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 achievements;
- (k) who is a parent or guardian to provide opportunities for education to his child or, as the case may be, ward between age of six and fourteen years.

CHILDREN'S RIGHTS

Dear Children,

*Wouldn't you like to know about your rights? Awareness about your rights will inspire and motivate you to ensure your protection and participation, thereby making social justice a reality. You may know that a commission for child rights is functioning in our state called the **Kerala State Commission for Protection of Child Rights**.*

Let's see what your rights are:

- Right to freedom of speech and expression.
- Right to life and liberty.
- Right to maximum survival and development.
- Right to be respected and accepted regardless of caste, creed and colour.
- Right to protection and care against physical, mental and sexual abuse.
- Right to participation.
- Protection from child labour and hazardous work.
- Protection against child marriage.
- Right to know one's culture and live accordingly.
- Protection against neglect.
- Right to free and compulsory education.
- Right to learn, rest and leisure.
- Right to parental and societal care, and protection.

Major Responsibilities

- Protect school and public facilities.
- Observe punctuality in learning and activities of the school.
- Accept and respect school authorities, teachers, parents and fellow students.
- Readiness to accept and respect others regardless of caste, creed or colour.



Contact Address:

Kerala State Commission for Protection of Child Rights

'Sree Ganesh', T. C. 14/2036, Vanross Junction

Kerala University P. O., Thiruvananthapuram - 34, Phone : 0471 - 2326603

Email: childrights.cpcr@kerala.gov.in, rte.cpcr@kerala.gov.in

Website : www.kescpcr.kerala.gov.in

Child Helpline - 1098, Crime Stopper - 1090, Nirbhaya - 1800 425 1400

Kerala Police Helpline - 0471 - 3243000/44000/45000

Online R. T. E Monitoring : www.nireekshana.org.in