

Category of Activity: Health and Fitness

Name of Activity: Aerobics

The word aerobics means 'with oxygen'. It is a type of physical exercise that combines rhythmic aerobic exercise with stretching and strength training routines with the objective of improving all elements of fitness (flexibility, muscular strength, and cardio-vascular fitness). It is usually performed to music and may be practiced in a group setting led by a teacher, although it can be done solo and without musical accompaniment. The goal of aerobics is the prevention of illness and the promotion of physical fitness.

At competency level students should learn and practice low-impact aerobics. Routines should include basic floor-based rhythmic exercises combined with stretching and some strength training.

At proficiency level students should attain high proficiency in high-impact/high Intensity aerobics which features lots of foot movements that involve lifting off the ground, jumping, hopping and jogging. In addition routine could include additional steps, the use of exercise balls and/or dumbbells.

Etiquettes of Aerobics

- It is very important to warm up and cool down before and after exercise to permit a slow build up to an individual's target heart rate for aerobic training and to avoid injury to muscles, tendons and ligaments.
- When lifting weights, students should not train the same muscle groups on consecutive days. Allow at least one or two days of rest between training sessions.
- Always pay careful attention to one's posture while lifting weights.
- Always wear comfortable well fitting footwear that cushions the feet and offers good ankle support.
- Try to take moderate exercise three or four times a week rather than intensive exercise intermittently.
- Be careful while exercising outside. Avoid very hot weather conditions and don't exercise in deserted areas.
- If at any time during the exercise you feel dizzy, nauseous, faint or in pain stop exercising immediately.

History of the Game

The term 'Aerobics' was devised by Dr. Kenneth H. Cooper, an exercise physiologist for the San Antonio Air Force Hospital, Texas, to describe the system of exercise that he devised to help prevent coronary heart disease. Dr. Cooper originally formulated aerobic exercises specifically for astronauts, but soon realized that the same set of exercises are useful for the general public as well, especially those who are overweight, who are more likely to develop various heart diseases and other circulatory disorders.

Facts about the Game

- Aerobic movements should be rhythmic and repetitive. The movements should involve the large muscle groups of the arms and legs.
- Aerobic activity should be undertaken for at least 20 minutes to be beneficial to health.
- Aerobic activities include swimming, running, cycling and walking.
- Aerobic activity improves the heart, lungs and cardiovascular system.

Basic Requirements/ Equipment

- Any suitable indoor flooring (preferably wooden)
- A music system
- Floor/exercise mats for vigorous training and toning
- Dumbbells for adding variety in different upper body exercises and strengthening core muscles
- Exercise balls to increase muscle strength and strengthen all of the principle muscle groups
- An elevated platform (e.g. a step) to add variety. The height for beginners should be no more than 10cms rising to 30cms for more experienced participants.

Use STEP to modify fitness and aerobics activities so that all students are included. Try these modifications or devise your own.

- Space**
 - Perform the stepping patterns and actions in a confined space, almost staying on the same spot.
 - Include actions and movements that take students off the spot moving forwards, backwards and sideways in the space.
 - Ensure there is sufficient turning and stopping space for students who have mobility impairments.
 - Make sure the area is free of obstructions for students who have visual, mobility or coordination difficulties.

- Task**
 - Increase/decrease the number of actions in a routine
 - Simplify the movements or increase the intensity by adding arm or other body movements
 - Students in wheel chairs can create simple routine to the beats of the music
 - Movement skills may be performed more effectively with support from such things as a chair, wall, the floor or a partner.
 - Teach students the step formations so that they can apply perform them in sequence and to the beat of music.
 - Provide frequent rest periods, or the opportunity to be seated for some part of the session.
 - Include a different action that provides a similar challenge. For example shoulder shrugs may provide a similar challenge to hopping or jumping for students who have physical impairments.

- Equipment**
 - Provide students with DUMBELLS or Exercise Balls to add variety to program
 - Lower or increase the height of platforms for stepping onto and off.
 - Use any type of platform or a raised surface instead of bench.

- People**
 - Let students create their own movements, stepping patterns and actions.
 - Work in pairs to create routines.
 - Lead others through routines that students have created themselves
 - Work with a partner who is able to offer support to another student.

- Physical & Health Education /Games**

Links to continuous and comprehensive assessment frame work for classes IX and X

 - An appreciation and understanding of the physical fitness requirements of Aerobics
 - An involvement in sports/physical education programmes
 - Team work
 - A knowledge of different fitness activities and the etiquettes of participating
 - Skills of agility, balance and coordination
 - Motivation and commitment to take part in Aerobics
 - Ability to lead others
 - An awareness of rules of safety
 - An evidence of being self disciplined

- Life Skills**
 - Be original, flexible and imaginative in creating routines that are enjoyable and increase heart rates sufficiently
 - Generate new ideas with fluency
 - Elaborate/build on new ideas
 - Listen attentively
 - Be comfortable with one's own self and overcome weaknesses for positive self-concept



Purpose of the activity

To exercise regularly and safely for personal well-being

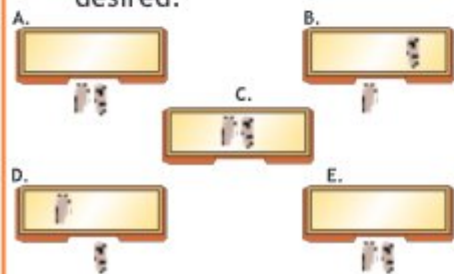
Outcome of the activities

understanding the place of regular activity as part of an overall healthy lifestyle. Commitment to exercising safely and effectively for the benefit of personal health and well being.

Teach these step patterns using a step or bench

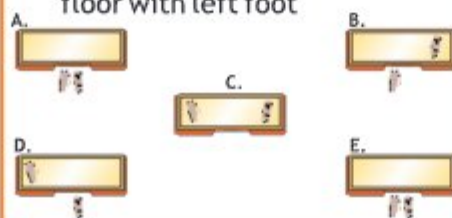
Basic Step

- Step up with your right foot on bench and then your left.
- Step down with your right foot and then your left.
- Repeat as many times as desired.



V-Step

- Step up on bench with right foot as wide as possible
- Step up on bench with the left foot as wide as possible
- Step down backwards to the floor with right foot
- Step down backwards to the floor with left foot



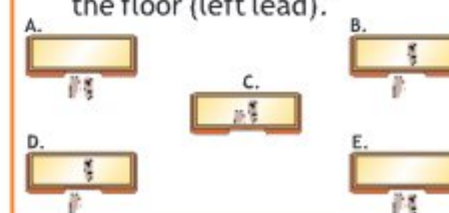
Lift Step

- Step on bench with your right foot.
- Bring left leg up but don't step on the bench. Lift left knee and then step back with left foot, followed by the right.
- Alternate stepping foot and lifting leg.



Step Tap/Tap up

- Step with your left foot on floor (right lead).
- Tap up your left foot on bench.
- Step down with your left foot on floor
- Tap up your right foot on bench
- Repeat with your right foot on the floor (left lead).



Try adding these arm actions to the step patterns

Bicep curls

Elbows should be at the side of the trunk with the palms of the hand facing upward. Bring the hands toward the chest by flexing the elbow and return them to the side of the trunk.

Hammer Curls

Similar to bicep curls except the palms are facing each other rather than facing upward. This movement can also be done by alternating arm movements.

Choreography

Try putting these steps together to music

- Basic step (4x)
- V-step (2x)
- Lift step (2x)
- Step tap (4x)

Now make up your own sequences and have some fun

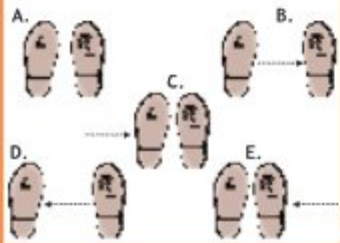
- First start all moves with right foot and repeat the same from left foot.
- Challenge your coordination by combining moves with different type of music.
- Change the order of the steps.
- Can you add your own steps?
- Can you make your routine longer?
- Can you add arm actions to make the routine more challenging?



Teach these step patterns using a step or bench

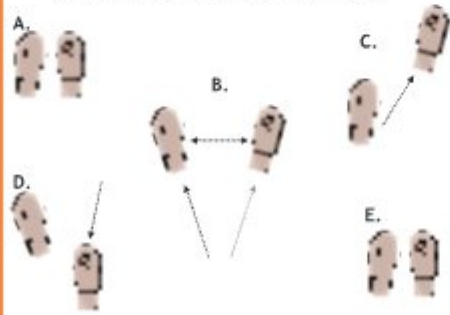
Step Touch

- Begin the step-touch by stepping your right foot out to the right and then bringing your left foot to meet it.
- Next, step your left foot back to the left and bring your right foot to meet it.
- Repeat as many times as desired.



V-Step

- Step out with right foot as wide as possible
- Similarly Step out with the left foot as wide as possible
- Now Step backwards with right foot followed by left foot



- Imagine making a "V" with your feet.

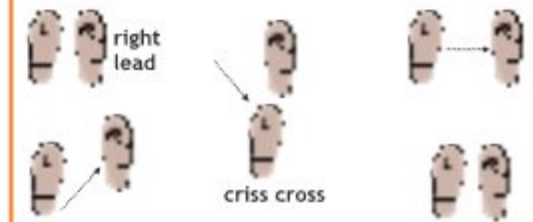
Hamstring Curl

- Turn the step-touch into a hamstring curl that pulls your heel to your butt.
 - Begin stepping your right foot to the right and then by pulling the left foot up to the butt.
 - Next, step your left foot to the left and pull your right foot up to your butt.
 - Repeat as many times as desired
- Increase intensity and challenge to the hamstring curl by repeating the movement in counts of three or more.



Grapevine

- Step with your right foot to the right followed by stepping the left foot behind your right
- Further follow by stepping the right foot to the right once more and pulling your left foot to a tap next to the right ankle.
- The basic movement is step, behind, step, together.
- Repeat the sequence travelling back to the left.



Try using the steps in these different combinations

- Step touch (x2) • V-step(x2) • Hamstring curls (x2) • V-step (x2) • Grapevine • Step outs (x2)" • Grapevine • V-step
- Grapevine • V-step • Step touch(x4) • V-step (x2) • Hamstring curls • Put the moves together in different orders • Try increasing the intensity of your aerobic programme by increasing the music tempo and the length of the routine • Knee ups (x2)

Assessment

Knowledge	Maximum 4 marks	<ul style="list-style-type: none"> • What is aerobics? • What are the different types of aerobics? • Calculation of pulse rates after aerobic exercises.
Application of skills	Maximum 16 marks	<ul style="list-style-type: none"> • Different floor movements • Different moves using platforms • Coordination of movements with music • Coordination of body movements • Ability to work within target heart rate zone • Ability to work aerobically for sustained periods of time

Links to NCERT syllabus

Theme: Health and physical fitness and orientation to sports skills

Links to other subjects

Science: pulse rates: students determine how their pulse rate changes when exercising. They take their pulse rate after 1 minute, 3 minutes and 5 minutes and compare the results

Maths Graphical representations: the relationship between time and the number of steps at different music tempos can be represented through line graphs.



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Outcome of the activities

understanding the place of regular activity as part of an overall healthy lifestyle. Commitment to exercising safely and effectively for the benefit of personal health and well being.

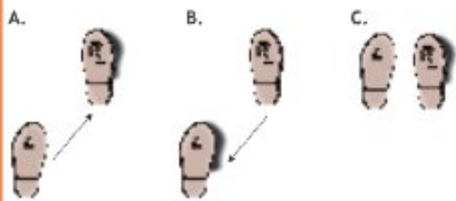
Floor workout

It is possible to combine moves learnt at competency level along with these moves to make choreography little challenging

Skills

Mambo

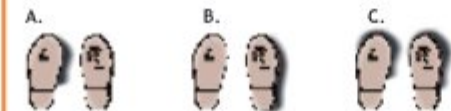
- To start with Mambo move step forward and back, forward and back with the same foot. Repeat with the other foot.



Shading indicates transfer of body weight.

Cha-Cha-Cha

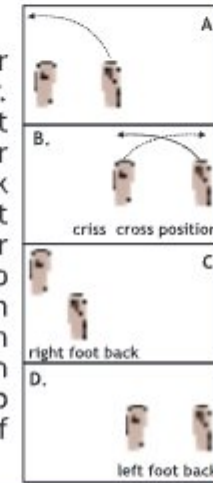
- With a Cha-Cha-Cha, you're just doing three steps really fast - instead of one, two, it's one, two, three.



Shading indicates transfer of body weight.

Jazz Square

- Start with your feet together. Cross your right foot over your left, step back with your left foot, step your right foot out to the side, then step forward on your left. Each step takes up two counts of music.



Kick Ball Change

- To do a kick ball change, kick your right foot out in front of you or across your body. Tap the ball of your right foot down on the ground and shift your weight onto it, then immediately step back onto your left foot. This is the "ball change" portion of the move.



Try putting these steps and actions together with music

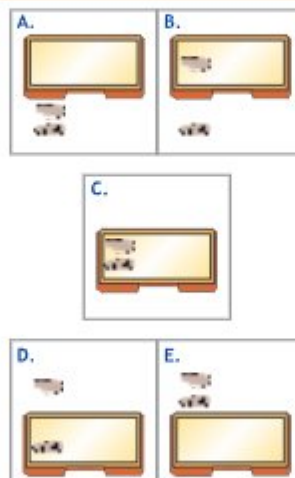
- Step touch(x2) • V-step(x2) • Jazz square (x2) • Kick ball change (x2) • Grapevine • Kick ball change • V-step • Cha-cha-cha

Learn these step patterns

Over the top

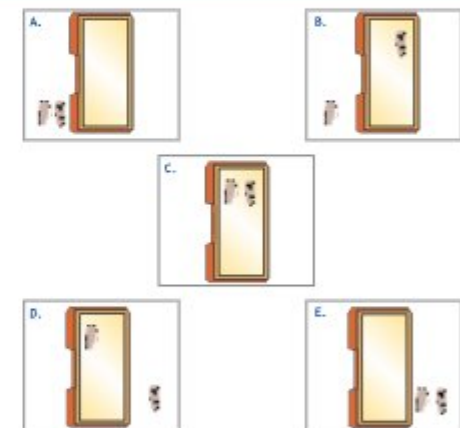
- With your bench in front of you, position yourself to the far left end of the bench.
- Turn your body to the right; your bench should now be on your left side.
- Step up with the left foot, and then step up with the right foot so that both feet are on top of the bench together.
- Step down to the left with your left foot; follow with the right foot.
- Reverse back over the step to start position.

NOTE- For added intensity, add a hop when at the top of the step bench.



A-step

- With the bench vertically oriented, stand to the lower left corner of the bench.
- Shift body weight to the left foot and step up to the front of the step with the right foot.
- Bring the left foot up so that it is also on the bench.
- Step down and back off the bench with the right foot, followed by the left making letter A on the bench.



continue the same with the left leg lead



Turn step

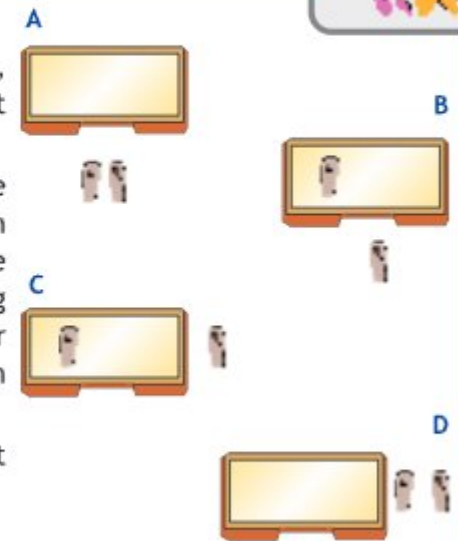
- A turn step traces the shape of an upside-down letter U. Start with standing on left side of bench and facing sideways.
- Step with the left foot onto the nearest end of the bench, turning the entire body 180 degrees to the left.
- Place the right foot on the opposite end of the bench.
- Finally turn the entire body to the left again and step down and off the near side of the bench at the other end, leading with your right foot.

Reverse the steps, leading off with your right foot and rotating 180 degrees to the right as you get on and off the bench, to return to your starting position.



L-step

- With your bench in front of you, position yourself to the far right end of the bench.
- Step up on the bench with the left foot. Lift the right knee in the air and step out wide to the right side of the bench placing the right foot on the floor followed by the left foot down next to the right.
- Do the reverse steps back to start position to complete the L step.



Try using the steps in these different combinations

- Basic step(2x) • V-step (x2) • L-step • Over the top • A-step (x2) • Turn step • Over the top • Knee up • Basic step (x2)
- L-step • Step tap (x2) • Astep • Challenge your coordination by combining moves with different type of music. • Change the order of the steps. • Can you add your own steps? • Can you make your routine longer? • Can you add arm actions to make the routine more challenging? • Try making up your own routines and teach them to each other.

Assessment

Knowledge	Maximum 4 marks	<ul style="list-style-type: none"> • Importance of physical activity as part of a healthy lifestyle • Importance of wellness • Effect of exercise on various body systems and their functioning • Calculation of Target Heart Rate (THR)
Application of skills	Maximum 16 marks	<ul style="list-style-type: none"> • Different high intensity floor movements • Different high intensity moves using platforms • Co-ordination of movements with music • Co-ordination of body movements • Ability to work within target heart rate zone • Ability to work aerobically for sustained periods of time • Ability to create routines at the correct intensity • Ability to lead routines and aerobic workouts

Links to NCERT syllabus

Theme: Fitness: concept of fitness

Links to other subjects

Science: the muscles: understanding of the accumulation of lactic acid in muscles due to a lack of oxygen leading to fatigue (tiredness) after aerobic activities.

Language Rhyming words: students create their own raps using rhyming words that they put to music or sing while performing aerobic routines.