

Warm-up and cool-down activities

Every PE lesson should begin with a warm-up and finish with a cool-down activity. This article provides some background information and advice on warm-ups and cool-downs, as well as a list of related games you may wish to try out in your PE lesson.

WARM-UP

A warm-up is a group of exercises performed immediately before more strenuous physical activity. It helps the body to adjust from a state of rest to a state of exercise. Warming-up is an essential element of every physical education lesson as it prepares the body appropriately for involvement in the main body of the lesson. The warm-up may also be used as a valuable opportunity to recap and revise established skills and knowledge or it can introduce new movement ideas that can be developed later in the session. In addition to this, warm-up activities can aid social development by incorporating the formation of groups and encouraging social interaction among individuals. Warm-up activities are useful to establish group sizes for later tasks, such as arranging participants into pairs or small groups. Indeed the warm-up can be viewed as a starting of the

lesson, a lead-in to the main activity, or as a way of establishing the focus of the session.

Every warm-up should include

- | pulse-raising aerobic activities to prepare the cardiovascular system and warm the muscles of the body
- | mobility exercises to prepare the joints
- | stretches to prepare the muscles and their associated ligaments and connective tissue
- | activity-related movements to prepare the children for the focus of the main activity.

The warm-up should begin with very gentle exercises to allow a steady increase in the body and muscle temperature. This gentle exercise could take the form of a game or jogging, depending on the size of the area, and can then be followed by mobility and stretching exercises. Mobility exercises increase the range of movement of the limbs whilst stretching improves the flexibility of the muscles.

Guidelines for safe, effective warm-ups

- | Keep the warm-ups simple and relevant to the main

activity that will follow.

- | Begin all warming-up activities in a slow and controlled manner increasing the intensity gradually.
- | Modify games and activities depending on the age level, weather conditions and space available.
- | Avoid games and activities that involve chasing in the early stages. Sprints and tag games are not recommended in the early part of the warm-up.
- | Include mobility and stretching exercises later in the warm-up.
- | Establish a routine to initiate activity immediately on entering the play area.
- | Ensure that the warm-up is fun.

Time allocation for warming-up and cooling-down

The warm-up and cool-down should take approximately one fifth of the total lesson time. This is just a guideline as the length of the warm-up and cool-down is dependent on the nature and intensity of the main activity in the lesson and on the extent of the children's efforts. General guidelines for the duration of warm-ups and cool-downs can be seen in the following table.

	Mminutes		
Duration of lesson	30	45	60
Warm-up	4-5	6	8
Cool-down	1-2	3	4

knees and swing the arms, increase speed.

- | Jogging: slow, faster, knees up in front, heels up to the bum.
- | Skipping: skip forward swinging arms, skip high, skip wide, skip across and side skip.
- | Extensions: combinations and sequences of all of the above. Jog around and change directions. Make the pathway of a shape on the ground as you run. For example; a square, the letter T, the number 5. Change speed, add upper body movements such as swinging arms, circling arms, hugging your body to keep warm and stretching arms up.
- | Exercises on the spot: march, jog, sprint or skip on the spot.

Mobility exercises

- | Nod head slowly up and down.
- | Rotate shoulders forwards and backwards.
- | Circle arm swings forwards and backwards.
- | Outstretched arms, rotate wrists clockwise and anticlockwise.
- | Rotate hips, clockwise and anti-clockwise.
- | Rotate knees, clockwise and anti-clockwise.
- | Standing on one foot, point toes and rotate and flex ankles.

Stretches

- | Shoulders
 - Arm circles: using the arms

Warm-up activities can aid social development by incorporating the formation of groups and encouraging social interaction among individuals

Pulse-raising activities

- | Walking: slow, fast, big steps, small steps, forwards, backwards, sideways, walk on hot coals, punch the air with your hands, hug your own body.
- | Marching: lift the

to make circles in the air.

- Active eights: using the arms to make figures of eight in the air.

- | Back and chest: cat stretch – make an angry cat/happy cat.
- | Side stretch: stand with feet shoulder width apart and slowly let the left hand sink



towards the left knee. Slowly come back to starting position and repeat on the other side.

- 1 **Quadriceps stretch:** stand on left foot and extend the right foot backwards. Catch it with the right hand and bring it up as far as the bottom. Children should try to keep knees close together during this stretch and avoid jerky movements.
- 1 **Calf stretch:** stand shoulder width apart, slowly lift heels off the ground and balance on toes for a few seconds. Slowly go back to start position and then slowly raise the toes off the ground and balance on the heels for a few seconds.
- 1 **Groin stretch:** sit on the ground with feet together in a meditating position. Gently push down on the knees to stretch the muscles of the inner leg. Slowly go back to the starting position.
- 1 **Hamstring stretch:** stand with feet shoulder width apart. Bend the left knee slightly to transfer all the weight of the body onto the left foot. Slowly extend right leg away from the body until the heel is on the ground with the toes pointing upwards. Place both hands one on top of the other on the right thigh. Slowly extend both hands downwards towards the knee and stop when a slight stretch is felt at the back of the right leg.

Warm-up games

- 1 **Whistle freeze:** teacher asks the children to walk, jog, or skip. Children follow instructions but on hearing teacher blow the whistle, each child must freeze. If they move then, they must do five jumps. Teacher may ask them to freeze in a balance or to perform a stretch after each whistle.

Note: This is a good starting warm-up game as the children learn how to respond to the whistle which is the teacher's *safety mechanism*. Any time they hear the whistle they must freeze. (Do not use the whistle to start activities).

- 1 **Top gear:** children are asked to imagine that they are driving a car and as the teacher calls out the various gears the children must accelerate or decelerate depending on the gear that is called. All children start travelling around the play area in first gear which is walking and get progressively faster up to running at a brisk pace for fifth gear.

- 1 **Call the number:** allow the children to walk, run or skip around the hall. The teacher calls a number for example, four. The children must form groups of four.

Continue the game calling different numbers each time. Teacher may ask them to perform a balance or to perform a stretch after each whistle. Déan i nGaeilge é ag gloach amach 'beirt le chéile', 'cúigear le chéile' agus mar sin de.

- 1 **Busy bees:** allow the children to walk, skip or run around the hall. When the teacher calls 'busy bees elbows' each child must find a partner and touch elbows. Continue the game calling different body parts each time. Teacher may ask the children to perform a stretch after each body part is called. For example, 'busy bees hands now do a calf stretch'.
- 1 **Soilse tráchtá:** ritheann/siúlann/léimeann (roghnaigh gníomhaíocht amháin) na páistí timpeall an chlóis. Glaonn an múinteoir amach dathanna na soilse tráchtá: Glas = rith ar aghaidh, dearg = stop agus bí i do dhealbh agus ómra/oráiste = rith níos moille/bog sodar/ar an spota. Caithfidh na páistí na hordaithe ón múinteoir a leanacht.
- 1 **The DVD game:** children respond to the following DVD controls, using the appropriate actions: When the teacher calls 'play' the children walk around. 'Rewind' means run or walk backwards, 'Fast forward' means run, 'Pause' means jog on the spot, 'Stop' means stop and 'Eject' means jump up.
- 1 **Partners:** the children run about the play area. When the teacher calls out the number one, the children must find a partner and shake hands. This is partner handshake



COOL-DOWN

Cooling-down is the opposite of warming up and is intended to

assist the body in returning to its normal resting state. Activity should be continued but at a lower intensity. For example, very light jogging, walking, stepping from side to side, gentle rhythmic arm circles and swings. Children should concentrate on breathing very slowly. By the end of the cool-down all children should be breathing normally. Stretching is a valuable part of the cool-down also. Older children can be taught to monitor their pulse rate. Quiet, gentle background music is appropriate if this is taking place indoors. Children can lie on their backs, close their eyes and listen to the music. This has a very calming effect. It integrates well with the idea of quiet time as is suggested in the SPHE curriculum.

Cool-down games

- 1 **Pass the squeeze:** class forms a circle. Children hold hands with left hands turned upwards and right hands turned downwards to make a chain linking hands. They close your eyes breathing deeply and gently for at least five deep breaths. Teacher squeeze the left hand of one child who passes on the squeeze until it goes all around the circle. The children open their eyes. Teacher breaks the chain in one place. The child with which the teacher breaks the chain becomes the leader of the chain and walks slowly round the area or back to classroom.
 - 1 **Frozen bean bag:** each child has a beanbag on his/her head. They move around the room. Hands must not touch the beanbag. If the bag falls off they must stay in that position until another child comes to help by picking up the beanbag and replacing it.
- Variation:** This can also be played as a team game. Give out equal numbers of each coloured beanbag. Reds pick up for the red team, blues for the blue team and so on.

Resources

- 1 *Primary School Curriculum: Teacher Guidelines* p. 106-108.
- 1 *Action for Life* by The Irish Heart Foundation: Books and poster.
- 1 *PSSI Lesson Materials: Warm-up and cool-down bank of activities.*
- 1 PE section on website www.pcsp.ie

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