



Professional Development Service for Teachers | An tSeirbhís um Fhorbairt Ghairmiúil do Mhúinteoirí

PRIMARY PHYSICAL EDUCATION



AQUATICS



ATHLETICS



DANCE



GAMES



GYMNASTICS



OUTDOOR &
ADVENTURE



Cooperative
Learning

Cooperative Learning

First developed in the 1970s, Cooperative Learning was seen as a method, through combining social and academic learning, of promoting pupils' interpersonal skills and their ability to interact and achieve in an ever-changing economic and social world. Cooperative Learning improves pupils' learning and furthers their development as young people. The pupils become responsible for learning the material, whilst taking on the role of helping their classmates learn. In the act of taking on this position, the pupils improve their own understanding of what is being learned.

Five elements are critical to Cooperative Learning: *Adapted from Casey and Dyson (2016)*

By embedding the following elements into our lessons, PE content can be taught and learned in a cooperative manner, regardless of context or strand:

1. Interpersonal Skills and Small Group Skills *Being able to work together, negotiate, and compromise for the greater good of the group*
2. Promotive Face-to-Face Interaction *Helping each other to learn*
3. *Positive Interdependence Working well together*
4. Group processing *Being able to critically reflect on the development of the group and move ideas forward*
5. Individual Accountability *Taking responsibility for your own contribution and effort*

Cooperative Learning and the PE curriculum

Through physical education the child can experience the joy of physical exertion and the satisfaction of achievement while developing skills and positive attitudes that enhance self-esteem. The Physical education curriculum provides opportunities to develop desirable personal and social attributes: the concept of fair play, the acceptance of success and failure, and the ability to cooperate in group situations. These opportunities contribute to the understanding and promotion of a healthy life-style. Physical education, as an integral part of the total curriculum, provides vital opportunities for the physical, social, emotional and intellectual development of the child.

PE Curriculum pg. 2

The Educational Benefits of Cooperative Learning:

- There is improvement in the *physical, social, and cognitive* skills of learners (Casey & Goodyear, 2015) which directly impacts a pupil's physical literacy journey.
- Cooperative Learning can provide instruction that leads pupils to more *authentic learning experiences*, allows for more *active participation*, is more meaningful, and empowers pupils to learn complex content particularly in the affective domain (Casey & Rio, 2019).
- Teachers notice an increase in *positive instructions* that encourage pupils to give more effort, and this facilitates an increase in *interpersonal skills and purposeful discussion*.
- Research also suggests that Cooperative Learning can *decrease negative* teacher or coach *behaviours*, such as overcorrecting pupils, disciplining pupils, interrupting pupils, and hurrying pupils in their activities too much (Casey & Dyson, 2016).
- Primary school pupils have identified that cooperative learning helps them to learn how to listen, be part of a team; help and encourage others and helps to make physical education fair which enhances motivation for participation (Dyson et al, 2020).

Warm Up Activities Conducive to Cooperative Learning

Planet Mover

Divide the pupils into pairs. Provide each pair with 2 skipping ropes and a hula hoop or bean bag. The pair must work collaboratively to use the ropes to pick up a hoop (planet) and to move it to another designated area of the playing space without dropping it.

Bridge Ball

In groups assign a number of pupils to be the bridges and the remainder of the students will be the bridge testers. The bridges line up in a bridge position (on all fours), the bridge testers stand either side of the bridge and roll or kick the ball under the bridge. Once the bridge passes the test, the person holding the bridge stands up and runs to the front of the group. Each group must move cooperatively from one side of the space to the other. Within the group pupils take turns being the bridges and bridge testers.

One Behind

Arrange pupils in small groups and invite one person to be the leader who moves around the space. The remaining pupils in each group are the followers who are one move behind. For example, if the person at front walks first and then lunges, as they begin to lunge the rest of the group begins walking i.e. they are copying one action behind the activity of the leader.

Relay Warm Up

Arrange pupils in groups of five and invite them to line up one behind the other. The first pupil in the line completes a designated activity on the spot (e.g. 5 jumping jacks/squats) and then runs to the end of the line. The next pupil in the line immediately repeats the designated activity before moving their group further down the line. Teams try to move from one point to another in the hall as quickly as possible.

1, 2, 3 Action

Invite pupils to stand facing each other in pairs. Give each pupil a letter 'A' or 'B'. 'A' starts by saying the number 1. B follows by saying the number 2, and A says 3. Continue until the pupils are familiar with the three number pattern – 1, 2, 3, 1, 2, 3, 1, 2, 3. Now ask the pupils to replace the number 1 with a jump, so instead of saying the number one, the pupil jumps (two feet to two feet on the spot, high as they can). The numbers 2 and 3 are spoken as before. Once the pupils are comfortable with this (jump, 2, 3, jump, 2, 3,) invite them to replace the number 2 with an action of their choice. So the pattern is now jump, action, 3, jump, action, 3. Continue by replacing the number 3 so that all of the numbers are now actions. Allow the activity to continue for a set amount of time, and then reverse the process.

Find Someone Who (Move Well, Move Often, Bk.2, Pg. 40)

Invite pupils to find a space in a designated playing area. The teacher begins the activity by saying 'find someone who... has the same colour hair'. Pupils must find a partner with the same colour hair and make a shape, hold the shape for a count of five and then hop around the playing area. On a signal, pupils freeze and teacher repeats the activity using an alternative instruction for 'find someone who', for example,

- has the same number of brothers and sisters?
- lives in the same area as you?

- has the same type of pet?
- has the same birthday month as you?
- has the same colour eyes?



Finger Count (Move Well, Move Often, Bk.2, Pg.107)

Arrange pupils in pairs. Invite each pupil to face each other one metre apart. Begin with side stepping around the playing area mirroring each other's movement as they go. Each pupil puts one hand behind their back. This hand should hold up a certain amount of fingers. After travelling at least ten metres, the teacher calls 'one, two, three, go' and both pupils bring their hand from behind their backs, showing the number of fingers they are holding up. The aim is to count the total number of fingers on both hands and call out the total number. Challenge pupils to continue side stepping as they play.

Variations:

- Individual (one person at a time) or competition (partner Vs partner)
- One hand or two hands
- Add or multiply the numbers on both hands
- Subtract the smaller amount from the larger amount
- Change the locomotor skill

Mirror Mirror:

Arrange pupils in pairs. Invite one pupil to lead and the other to mirror every movement, facial expression or action, of the leader. After a few minutes, exchange roles. Pupils move through this activity without talking but laughter is encouraged!!

Cooperative Learning Structures

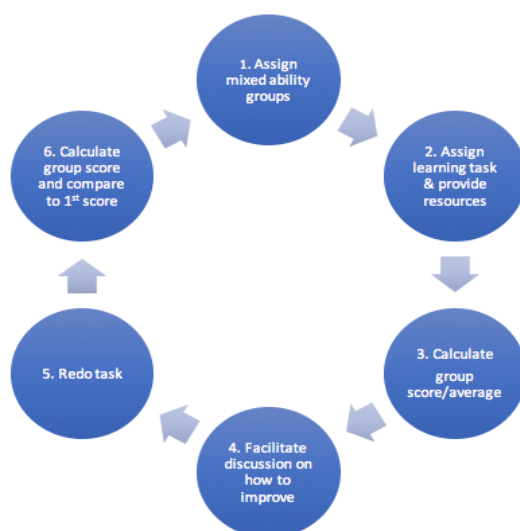


Student Teams – Achievement Division (STAD)

(STAD) is a *Cooperative learning* strategy where pupils with different levels of ability work together in small teams/groups to accomplish a shared learning goal. Each pupil is placed on a small team that is assigned a learning task. The task commences and continues for a specific period of time, pupils in each team are assessed and their scores are added/averaged to get a team score. Each team then partakes in a group discussion on how the team can improve, is given feedback and follows by retrying the task. At the end of the task, assessment is provided once more and team averages/scores are compared to see if there have been any improvements.

This approach focuses on cooperation, improvement and the development of social skills. The role of the teacher is to create tasks that require cooperation, provide necessary resources to complete the task, facilitate discussion after the first task, observe student interactions, and provide feedback. STAD may be used at the beginning of a four or six week learning block in PE and again at the end of the block. Groups can work on developing their intended team improvement during the block of PE learning. Additionally STAD can be used at the beginning and end of a lesson. STAD aligns with approaches such as [goal setting](#) and a focus on [effort and improvement](#) over outcome.

The following diagram outlines how to use the STAD cooperative learning structure in a PE lesson:



Using the STAD cooperative learning structure in the Athletics lesson

- Arrange participants into groups of 4 to 6 of mixed ability
- Invite each participant to participate in the learning task - run for 90 seconds continuously around the space available. Each individual counts how many rounds/laps run in 90 seconds.
- Record score (discuss different ways of doing this e.g. a way to avoid social comparison if this an issue in the class)
- Write score on a post it and place on wall
- Add individual scores and team calculate their group total
- Discussion as a team how the group score can be improved e.g develop teamwork skills, work together to improve the skill of running, etc
- Teacher scaffolds an optional activity based on each teams chosen way to improve their score
- **Option 1: Runaway Train**

Each team forms a line one behind the other (standing a safe distance apart) in the shape of a train. Each team jogs around the playing area . On command, the last child in the group increases pace to move to the front of the group. Once they get there, they slow down to the pace being set by the group. The activity continues in this way.

An alternative is for the child at the head of the group to increase pace and maintain that pace until they have caught up with the line of pupils again. For this version, the lap must not be too long and the group must maintain a slow steady pace.

- Each group may choose this activity or identify their own approach to improvement.
- Re-do the initial running learning task, with each participant counting the number of laps ran in 90 seconds
- Record new score on a new post-it
- Calculate new group total score and improvement score

Resources: Cones/spot markers to mark out the running area, postettes, pens (participants use their own)

Group Processing (discussion/feedback prompts)

Group processing is one element of cooperative learning. Group processing is a reflective, guided discussion that allows pupils to reflect and discuss together their respective successes and failures during a particular task or lesson and share their ideas to plan for the next lesson.

After completing STAD as outlined above, group processing could be used to facilitate discussion and feedback. Use a number of the suggested questions to encourage whole group reflection & discussion. Reflective templates found in the PE Homework Active Everyday [Resource](#) may be used to support group processing.

- What worked well for you as a team?
- What did you find difficult?
- What do you or your team need to work on?
- How will you work on this?
- Give me an example of how your group worked well today?
- How did you deal with challenges that arose?
- What did your team or partner do well?
- Did the team members learn anything about themselves today?

The image shows a 'Level 2 Questions Post-activity Reflection Template' from PDST. It includes a section for 'The activity I completed was' with options 'I completed it', 'On my own', or 'With someone else'. Below this are four numbered questions: 1. How did this activity make you feel in your mind and body? (with smiley faces for happy, motivated, energy, better, worried, and not enjoy); 2. How did this activity make you feel in your mind and body? (with a human figure and 'Please circle or colour in'); 3. When did you find any or difficult about the activity?; 4. Does this activity remind you of another game you have played?; and 5. I would like to do this activity again (Yes/No).

Using the STAD cooperative learning structure in a Games lesson



- Arrange participants into groups of 4 to 6 of mixed ability
- Assign each group a learning task - *How many times can the group strike the object in the air before it hits the ground?*
 - a balloon and body parts (not hands)
 - a racket and small soft ball
 - a racket and a tennis ball
 - a soft foam football
 - 2 balloons and body parts (not hands)
- Allow each group to try the activity three times before recording their highest number of hits
- Discussion as a group how the score can be improved using the cooperative learning structure 'Numbered Heads Together'.



Numbered Heads Together

Numbered Heads Together is another cooperative learning structure suitable for the PE lesson. The teacher poses a problem/question. Each pupil independently thinks about a solution, then comes together with their teammates in a group, and discuss their answers together. The whole group discusses and agrees on a consensus. When ready each group sits down and the teacher calls a number assigned to one of the members of the team and that pupil answers on behalf of the team. The response may be verbal, written, demonstration, using digital technologies etc.

- All groups are named (A, B, C, etc) and all pupils are numbered (1, 2, 3, etc) within each group
- Teacher poses a question to the whole class... how can we improve the task of keeping the object up for longer
- All pupils have thinking (and potentially writing time)
- Pupils put heads together, discussing until they have a consensus

- All pupils sit down to signal to teacher they have reached a consensus
- Teacher selects a number at random. All numbered pupils stand up.
- Teacher chooses a group.
- The numbered pupil from this group responds and shares how they aim to improve at keeping the object in the air for longer.

Using the STAD cooperative learning structure in the Games lesson

- Re-attempt the task
- Assign 5 minutes to each group to attempt the task (possibly several times) before recording the highest score

Resources: balloons, rackets, soft balls, tennis balls, soft foam football

Further ideas to use STAD in the PE lesson:

Sprinting, throwing for distance, jumping for distance/height, basketball shooting, cooperative games e.g. hula hut challenge



Jigsaw

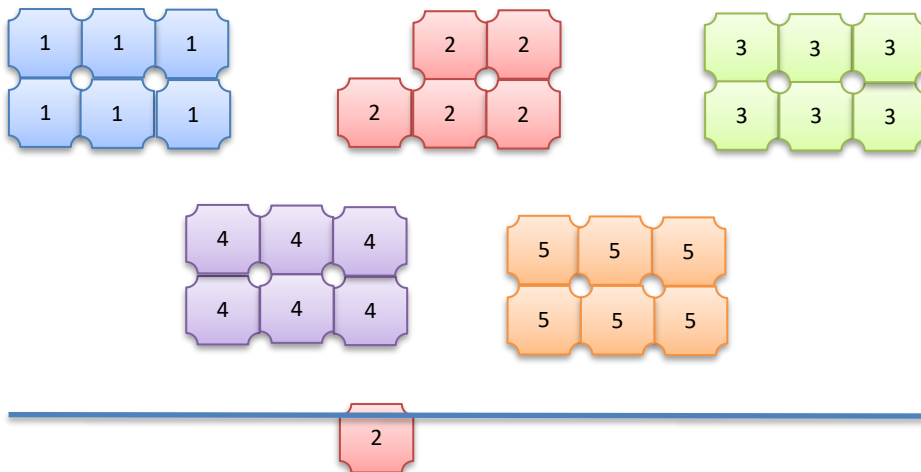
Jigsaw is a cooperative learning structure where pupils spend time learning together in groups about a particular PE topic or activity, before sharing this knowledge and teaching other pupils in the class about their topic. The collective knowledge/activity of all the groups is then brought together at the end of the class to complete the 'jigsaw'. To begin, each pupil starts out as a member of a jigsaw group. Within each jigsaw group the pupils are assigned a number (e.g. 1-6). On the teacher's direction, each pupil leaves their jigsaw group and joins an 'expert' group. The expert group consists of all the pupils of the same number e.g. number 1's expert group etc. When in the expert group, the pupils are asked by working together to learn about a particular PE topic/activity and consider how they will teach this activity to their jigsaw group at a later point. After a designated period of time pupils return to their jigsaw group, and in turn each member teaches the rest of the group what they have learned. All the learning is then put together/performed to complete the jigsaw.

Within the jigsaw structure, all pupils have an important active role in the learning process and are required to contribute to ensure their group can complete the 'jigsaw puzzle'. Group members must work collaboratively towards a common goal and each member of the team depends on the other to succeed. Interactions between pupils are stimulated and they can begin to value the contributions of all team members. Cooperation and social skills are built through the jigsaw structure as well as listening and empathy (Casey & Dyson, 2016). During jigsaw the role of the teacher is to create tasks for each group and to be available to offer feedback.

1.



2.



3.



Using the Jigsaw learning structure in the Athletics lesson



- Pupils start out in their **Jigsaw group** and number themselves 1–5
- Pupils then leave their jigsaw group and join their expert group (i.e. all number 1's go to a designated section of the hall etc)
- The teacher assigns a portion of the content to each number. For example, in an Athletics lesson that is exploring the five jumps:
 - Number 1s learn how to do a two-feet to two-feet jump
 - Number 2s learn how to do a two-feet to one-foot jump
 - Number 3s learn how to do a one-foot to the same foot hop
 - Number 4s learn how to do a one-foot to the other foot leap
 - Number 5s learn how to do a one-foot to two-feet jump.

- The numbered groups (1, 2, 3, 4, 5) work together to become experts in their particular jump using the task cards given by the teacher with pictures. Each group practises their jump and comes up with the learning cues (and possibly an activity) they will use to teach the jump to their original jigsaw group
- Once the numbered expert groups feel confident in their specific jumps, pupils return to their jigsaw groups.
- In turn, each expert then teaches their jump to the other members of their jigsaw group and gives encouragement and feedback while the other members perform the jump.
- Before groups can move on to the next expert and jump they complete a Pair check perform.



Pair – Check - Perform

In the Pair-Check-Perform Cooperative Learning Structure, students are required to work with each other to perform and check information. Pair Check is a great strategy for assessment and accountability. The expert explains, demonstrates, and checks for understanding of their jump. The expert describes the learning cues to their group members. The expert then places pupils in two pairs. In each pair one pupil practices the jump while the other pupil provides encouragement and helps the performer correctly perform the jump. When one pupil has performed the jump correctly, roles are reversed. When pupils in each pair have performed correctly, they join together with the other pair, in their group of four, and each pupil from each pair performs. If all pupils agree that the performance was correct, the pairs can move onto the next experts' jump. If there is disagreement, the pupils must continue working on the performance until they all agree.

Using the Jigsaw learning structure in the [Dance lesson](#)

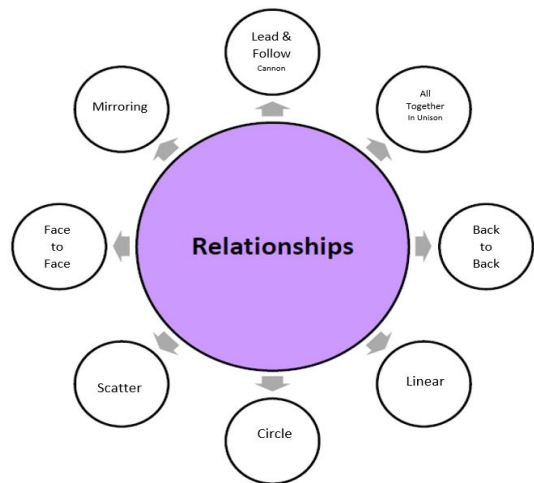
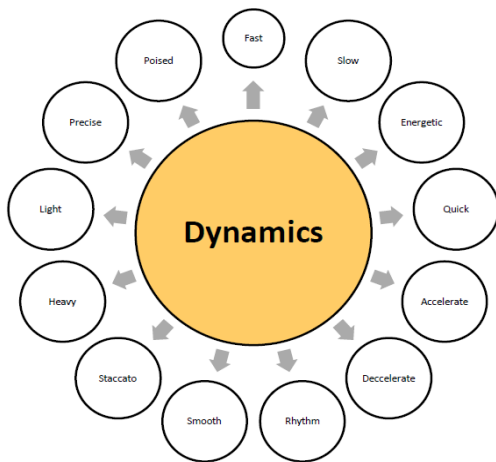


- The pupils start out in their jigsaw group and number themselves 1–5
- The pupils then leave their jigsaw group and join their expert group (i.e. all number 1's go to a designated section of the hall etc)
- The teacher assigns a portion of the content to each number. For example, number 1's are going to make the first section of the dance, 2's the second section and so on. A thematic approach to dance is being used on this occasion and each group is recreating a section of the Jack and Beanstalk story through movement and dance using the dance frame below as a guide. The teacher may choose any [book](#) or theme specific to the lesson/class.
- The numbered expert groups (1, 2, 3, 4, 5) work together to design their section of the dance and become experts in their particular dance move. Each group comes up with the actions (e.g. how the body travels, turns or jumps etc), dynamics (strong or gentle) and relationships (e.g. mirror, lead and follow etc) for their section of the dance and consider how they will teach it to their jigsaw group. For more ideas on actions, dynamics and relationships the group can use the dance ingredient prompt sheet below. Each group can be assigned a designated amount of beats/moves for their section e.g. 4 or 8 depending on time.

Suggested Music: Strauss I: Redetzky March, Op.288

Theme: Jack & The Beanstalk	Move 1 Jack goes to market to sell the cow	Move 2 Jack climbs the beanstalk	Move 3 Jack steals from the Giant	Move 4 The Giant chases Jack	Move 5 Jack chops down the beanstalk
Action					
Dynamics					
Relationships					
Beat					

Dance frame adapted from Ryan (2020)



- Once the numbered groups feel confident in their specific dance they return to their jigsaw teams.
- In turn, each expert then teaches their dance to the other members of their jigsaw group and gives encouragement and feedback while the other members work on perfecting the dance.
- After all experts have taught the dance the groups come together and the whole class performs the same jigsaw dance
- At the end of the lesson, *group processing* may take place. Similar to the earlier example group processing may be prompted by teacher questioning or alternatively a written reflective template may also be used as a stimulus to group processing.

Further ideas for Jigsaw activities

Different sections of a Gymnastics sequence, different rules within tag games, student designed games etc.



Further Cooperative Learning Structures

Think-Pair-Perform

In this structure, pupils might be asked to *Think* of the teaching points for performing a skill, for example, the fundamental movement skills of kicking. Pupils are then partnered up and discuss the teaching points they considered. They then perform or practise the skill in question.

Inside-Outside-Circle Reflection

This is a structure that can be useful for group processing and getting pupils to reflect on their PE and cooperative learning experiences. Pupils make two circles, one on the inside and one directly outside. The pupils turn to face a classmate in the other circle. The teacher sets a discussion question e.g. 'why did your team work well today'. The circles rotate and pupils spend a designated period of time discussing the prompt question with their partner facing them before rotating again to a partner.

Developing Social Skills and Qualities Required for Cooperative Learning

Utilising cooperative learning approaches and structures in your PE class will support the development of positive interpersonal skills. In many instances, however, it may also be beneficial to spend some time explicitly developing relevant social skills and qualities in advance of engaging in cooperative learning (Dyson et al 2010). Research shows that the development of positive social skills and personal qualities is not an automatic outcome of participating in PE, sport or physical activity (Gibbons et al 1997). Pupils may, for example, initially struggle to work collectively, listen to each other and stay on task etc within cooperative learning structures (Dyson et al 2020). While these initial challenges are to be expected, specific planned, intentional and systematic teaching strategies can also be used in PE in advance of cooperative learning to ensure relevant skills are 'taught rather than caught' (Richards et al 2019). Explicitly teaching teamwork, fair play and commitment may, for example, be supportive of engagement in cooperative learning.



Approaches to Teaching Social Skills and Personal Qualities

When teaching a social skill or personal quality, the use of modelling and reinforcement as well as discussion, reflection and problem solving dilemmas have been identified as effective teaching strategies (Gibbons et al 1997, Farrant 2013). A sample teaching progression incorporating many of these strategies for teaching social skills and personal qualities is provided in the following table.



Adapted from Clohessy (2019) and Westwood (2015)

Corner Relay (Move Well, Move Often, Bk.2, Pg.26)

Corner relay is an example of an activity that can be used and adapted to explicitly teach the skill of teamwork. Emphasising teamwork creates an inclusive culture where each person is valued and important and this is an essential element of cooperative learning.

CORNER RELAY

Description of Activity
Arrange pupils in groups of five. Use cones to set out a large outdoor square playing area with a pupil from each group at each corner. There should be two pupils at the first corner. On a signal, one pupil from each group in the first corner jogs slowly to the next corner, tags their teammate and stays in that corner. As soon as they have been tagged, that pupil jogs slowly to the next corner and so on. The activity continues until the fifth pupil tags the first pupil, who begins the next round by jogging faster. With each new round, the speed is increased slightly, going from a slow jog, to a faster jog, to running and eventually sprinting.

The illustration shows a square with five pupils at the corners. One pupil is in the middle of the square, having just tagged a teammate at a corner.

Corner relay can be adapted to emphasise the teamwork teaching point of ‘encourage and compliment others’. For example, team members have to provide encouragement to the runner as they approach or alternatively each person runs alongside a teammate for a lap providing encouragement. Further information on how to explicitly teach social skills and personal qualities in PE as well as a variety of resources such as activity listings, assessment and discussion templates as well as book and video modelling resources are available on our Scoilnet page.

<https://www.scoilnet.ie/pdst/physlit/motivation/social/>

Cool Down Activities

Corner Relay from (Move Well, Move Often, Bk.2 Pg.26)

Invite participants to play Corner Relay again. This time encourage participants to begin moving at a faster pace initially and with each new round decrease their pace to a jog and finish with a walk.

Helper and Athlete - Jog in pairs; organise in groups of three

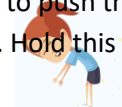
Squares are created around the playing space using spot markers/cones – one square for every three children. On lap 1, pupil 1 jogs/walks around the square. Pupil 2 then ‘helps’ them jog/walk around the square on the second lap. Then Pupil 1 takes a rest and Pupil 2 and Pupil 3 move together. Pupil 2 then takes a rest and Pupil 3 and Pupil 1 move together etc...

On the Train/Ar an Traein ([120 Non Contact Activities for PE Pg. 63](#))

Invite pupils to imagine they are a train by running on the spot, the train goes up a hill and gets slower and slower until it comes to a stop when the pupils sink to their spots on the ground. Invite pupils to sit with legs out in front. They stretch to the right, then back, forward and then back, to the left and then back. To finish, shake out legs and arms.

Straighten your legs/ Searr do chosa ([120 Non Contact Activities for PE Pg. 62](#))

Show pupils how to move into the push-up or high plank position with hands flat on the ground, legs and body straight, toes on the ground, Invite pupils to bring one knee into to their chest and to push the heel of their other leg away from them, as if they are trying to touch the heel on the ground. Hold this position for 20 seconds, then switch legs.



Elephant Breathing Technique ([Breathe Pg. 4](#))

Stand with your feet wide apart. Interlace your fingers in front of you. Inhale through your nose, raising your arms high above your head, like an elephant lifting up it's trunk. Exhale through your mouth as you bend forward, swinging your hands down through your legs.



Shoulder Breathing Technique ([Breathe Pg. 12](#))

Sit in a comfortable position. Inhale slowly, raising your shoulders up towards your ears. Exhale slowly through your mouth, lowering your shoulders back down again. Repeat slowly, rolling your shoulders up and down in time with your breath.

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Farmer

