

PE Includes Me: Learn-to-Play

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“Sports can be done by anyone, and should be enjoyed by all.”
AWWA Community Integration Service (CIS) Physiotherapist Team

The purpose of inclusive sports and games is to be all-encompassing. It aims to provide a range of choices, in different settings, to enable all with differing abilities to participate in the one setting. Sometimes this may require modifying the sports and games to enable persons with additional needs to engage in activities that may otherwise be challenging for them.

This resource offers a simple guide for parents, caregivers, teachers, coaches, volunteers, or practitioners to implement inclusive sports and games for all students, regardless of their level of functioning and abilities. An example of a modified and inclusive game is also included for reference.

Adapted/modified and inclusive sports and games provide opportunities for children to develop mutual understanding and respect for their peer. This will also encourage children with additional needs to lead more active and healthy lifestyles, thereby improving their quality of life.

Did you know about Disability Sports in Singapore?

In 1973, the then Ministry of Social Affairs, Ministry of Education, Ministry of Health and 8 organisations jointly founded the Singapore Disability Sports Council (SDSC) which aims to transform the lives of Persons with Disabilities (PWDs) through sports as a form of rehabilitative therapy and means to realise their potential.

SDSC continues to offer a wide range of sports at both the elite and recreational levels across all disability groups. Read more about efforts in promoting and enabling inclusive sports [here](#), [here](#) and [here](#).

THE TREE PRINCIPLE

The TREE principle is designed as a practical tool and mental map to help adapt or modify sports and games. There are four essential elements that can be modified to ensure that the sports and games are inclusive towards children of different abilities (Australian Sports Commission, Disability Education Programme).

TREE stands for:

Teaching/coaching style
Rules
Equipment
Environment

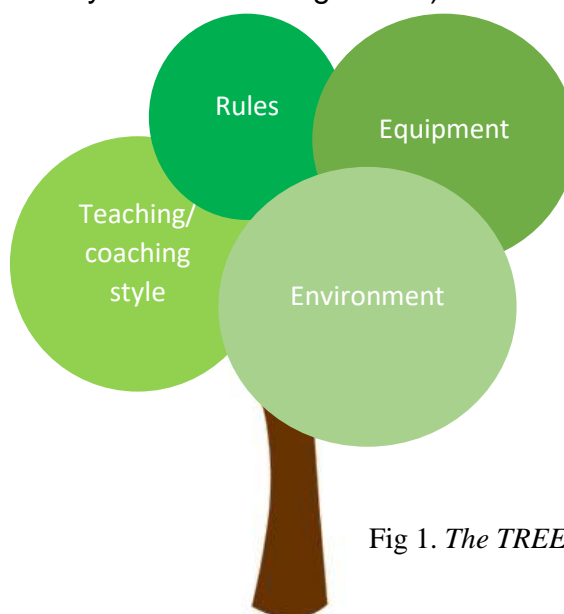


Fig 1. *The TREE Principle*

GOLDEN RULE OF INCLUSION

When adapting and modifying sports and games, we must maintain a balance between maximising a child's potential for involvement and success, while maintaining the integrity of the activity.

This means just enough changes should be made to the sports and games so that they remain meaningful and challenging for the entire group, but not so many changes that the specific skills required for the activities become under-utilised. It may not be necessary to modify the sports and games rules or equipment for everyone just to include one person; it may only require change for that person.

Fig. 2 Examples (not restricted to the following) of some modification based on the TREE principle

PHYSICAL DISABILITY [PD]	DEVELOPMENTAL COORDINATION DISORDER [DCD]	VISUAL IMPAIRMENT [VI]	HEARING IMPAIRMENT [HI]	AUTISM SPECTRUM DISORDER [ASD] INTELLECTUAL DISABILITY [ID]
<p>T - Focus on the child's ability. Be encouraging and understanding. Open communication.</p> <p>R - Allow use of mobility aids (e.g., wheelchairs, Ankle Foot Orthosis). Modify rules to try and match child's abilities (e.g., rolling instead of throwing).</p> <p>E - Use equipment of different sizes and/or materials (e.g., sponge balls, bigger target – goal posts/hula hoops). Allow for protective gears such as helmets, elbow and knee pads, gloves.</p> <p>E - Play indoors or at a smaller play area. Use of artificial turf or exercise mat. Provide supporting structure (e.g., chairs) for child to hold onto or rest.</p>	<p>T – Break down skills into smaller, meaningful parts. Model the movement while using words to describe it. Use guided discovery to teach students on specific skills (e.g., aiming of the target, body position).</p> <p>R - Apply simple, less complex task/rules. Review rules of game play when child is not concentrating on the movements.</p> <p>E - Avoid equipment with sharp edges. Modify or adapt equipment to ensure safety.</p> <p>E - Play indoors or at a smaller play area. Keep the environment as predictable as possible when teaching a new skill.</p>	<p>T - Use tactile and verbal cues.</p> <p>For visual aids, consider larger fonts, and perhaps colours. Spend more time familiarising child to activity. Allow for processing time.</p> <p>R - Take more time to orientate child to the environment (e.g., walk child around the court).</p> <p>E - Use equipment that are colour contrasted and/or are able to produce some sound (e.g., beeping balls, sound sources at target). Allow child to tactually explore the equipment used.</p> <p>E - Safety is always the key. Clear and proper markings for play area (e.g., reduce visual clutter, delineate spaces, use high contrast colours and tactile markers).</p>	<p>T - Use sign language, visual cues and/or written instructions. Where possible, demonstrate rather than rely on verbal explanations.</p> <p>R - May not require significant modifications to the rules. Check for understanding; if child does not reply or seems to have difficulty in understanding, rephrase / demonstrate and wait for nod of head before moving on.</p> <p>E - Use colourful equipment / items that provide visual cues (e.g., lights to signal start and end of race, flags instead of whistle).</p> <p>E - Encourage child to position themselves where they feel most comfortable (e.g., in front of the teacher/front of the group).</p>	<p>T - Use short, simple and precise verbal instructions. Supplement with visual cues/aids, and hand-over-hand feedback when appropriate. Speak slowly. Provide transition prompts when there are upcoming changes.</p> <p>R - Provide as much structure as possible and be predictable (e.g., provide a schedule of events). Make sure that task/rules are specific, clear, consistent, and easily accomplished.</p> <p>E - Use equipment with no sharp edges or add padding to equipment. Other modifications such as hand-rails/harnesses or stabilisers can be considered.</p> <p>E - Clear, consistent and well-demarcated play area to encourage attentional focus and engagement.</p>

CASE STUDY: BADMINTON-BALLOON



Fig 3. Photo taken during one of CIS Learn-to-Play series

The following is a case study of how we can use the TREE principle. Where the Physiotherapists (PT) and Occupational Therapists (OT) guided a group of students with various additional needs through a modified game of badminton using balloons.

T: Simplify the instructions and provide visual schedule prior to lesson. Model step-by-step the relevant skills (e.g., holding of racquet, hitting of balloon). Use guided discovery so that all the students can discover performance problems and solutions on her or his own self. Focus on the abilities of each student.

R: Allow for mobility aids (e.g., wheelchairs and Ankle Foot Orthosis). Modify and simplify rules to match the students' abilities (e.g., instead of playing against each other, the students hit the balloon across the net).

E: Instead of a normal badminton shuttlecock, balloons were used. Racquets were padded to ensure safety.

E: Conduct lesson indoors with clearly demarcated play area (e.g., using coloured cones and tapes). Ensure play area is not cluttered. Prepare supporting structure (e.g., chairs) for students to rest or hold on to in between practices.

In the table below, besides the TREE principle, we included some common considerations our Physical Education teachers may ask or have.

<p>DESCRIPTION</p> <ol style="list-style-type: none"> 1. Suspend a net or cloth across two supporting structures (or two persons holding it up from both ends). 2. Divide the children into two teams, one team on each side of the net or cloth. 3. Hit the balloon/beach ball over the net or cloth to the opposite team. 	<p>OBJECTIVE</p> <p>To strike/throw/bounce objects over a net.</p> <p>SKILLS LEARNED</p> <ul style="list-style-type: none"> • Hand-eye coordination • Over arm throw/over arm strike over a height • Force estimation 	<p>MODIFICATION TIPS</p> <p>[PD] Start off with bare hands to strike, instead of racquet. Use a shorter, lighter racquet with bigger racquet frame. Size of balloon/ball can be varied too according to their abilities.</p> <p>[DCD] Use progression of eye-hand coordination. Start off by using the hand to hit the balloon/beach ball, progress to shorter and bigger face racquet, then to a regular size racquet. Use lots of repetition for each skill taught. Hitting of balloon/beach ball can be done to a target first before exchange of hits between each other.</p> <p>[VI] Use a bigger, bright coloured balloon/beach ball and/or tie a bell to it. Use a shorter and bigger face racquet. Child can wear eye protection. Demarcate playing area with contrasting coloured tape/cones. Orientate child to the environment.</p> <p>[HI] Create movement signals. Use coloured flag to signal the start of play. Speak clearly and at a constant pace.</p> <p>[ASD/ID] Use concise simple language. Present information in small, sequential steps and review steps frequently. Keep to small groups or use buddy system.</p> <p>[General] Allow one child at a time to hit the balloon/beach ball over the net initially.</p>
<p>TEACHING & SAFETY</p> <ul style="list-style-type: none"> • Ensure sufficient space between each child to avoid accidental injuries. • Demarcate a playing area; children who are not playing are not allowed to enter. • Recommended for indoors play to avoid unpredictable wind conditions. • Remove all sharp objects away from playing area and cover up any poles with pads for children with Visual Impairment. 	<p>EQUIPMENT</p> <ul style="list-style-type: none"> • Balloon/beach ball • Net or long cloth • String and pole (optional) • Badminton racquets (optional) 	<p>STEP UP!</p> <ul style="list-style-type: none"> • Raise the height of the net/cloth. • Increase the distance between the child and net/cloth. • Use badminton racquets to hit the balloon/beach ball across.

References

Australian Sports Commission. (2021). Sports Ability, accessed August 2021, https://www.sportaus.gov.au/sports_ability/using_tree

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