St. Vincents Hurling, Gaelic Football and Camogie Club

LONG TERM ATHLETIC DEVELOPMENT PATHWAY

MAY 2021

Contents

1. Introduction

1.1 St. Vincents History

The Club has been synonymous with Gaelic games in Dublin and beyond for the past ninety years. Founded on 2nd September 1931 the Club originally settled in Raheny, but in 1987 it moved back to its spiritual home of Marino, located just off the Malahide Road, behind Griffith Avenue.

St. Vincents field over 40 team of all ages in Football, Hurling and Camogie. St Vincents have a hugely successful Mini Leagues which runs on a Saturday morning and Wednesday evenings where boys and girls from age 4 years and up learn Gaelic Games.

1.2 Athletic Development Pathway

At St. Vincents we seek to provide modern, top class facilities and coaching, for all our members and we strive to provide the opportunity for every member to achieve their full potential. To help achieve this goal our Chairperson has sanctioned an athletic development working group to design, document and roll out an Athletic Development Pathway which is detailed in this document. The working group comprises:

Emma Byrne	GPO/Strength & Conditioning Coach
Leigh Ryan	Athletic Development/Strength & Conditioning Coach
Stephen Keane	Athletic Development/Strength & Conditioning Coach
Michael O'Driscoll	Athletic Development/Strength & Conditioning Coach
Helen Drumgoole	Juvenile Camogie Director
Denise O'Leary	Juvenile Camogie Director
Niamh Adamson	Juvenile Ladies Football Director
Tony O'Connell	Juvenile Boys Director
Conor Dignam	Chair

1.3 Who is this document intended for?

This document provides the framework and practical guidance for all mentors of juvenile age groups up to and including Minor, to enable them to implement the St. Vincent's Athletic Development Pathway. This program is designed to help the development of the key components of fitness and the acquisition of fundamental motor skills of all children progressing from U8 through to adult games.

This document is available in softcopy (pdf) here

1.4 What is Long-Term Athletic Development?

Long-Term Athletic Development (LTAD) programmes are designed to provide a **systematic, structured, and developmental pathway** for all club members, resulting in increased participation. The goal of such programmes is to improve the quality of sports programmes and to meet the needs of each stage of human development. LTAD is the answer to two fundamental questions:

1) What must be done at each key stage of human development to give every child the best chance of engaging in lifelong and health-promoting physical activity?
2) How can we meet the needs of those with athletic talent and drive to give them the best chance of reaching elite performance and sporting success?

Effective long-term athlete development is focused on the **overall progressive development** of an individual throughout their life. While physical literacy and sport skill development are key components within LTAD, an equal amount of emphasis must be placed upon an individual's emotional, psychological, and moral development. As coaches, mentors, and volunteers at St. Vincents GAA, it is essential that we do our utmost to **guide and empower** our athletes by sustaining a club culture which promotes independent and group learning in a safe, fun, and motivating environment.

The LTAD programme provides an evidence-based approach to the development of physical performance in youth athletes. It is a seven-stage framework guiding participation, training, competition, and recovery programmes in sport and physical activity. The seven stages are as follows:

2. Overview of LTAD pathway at St. Vincents

As an athletic development working group within the club, we have created this document to outline and describe the seven stages of the LTAD pathway with specific reference to Gaelic sport coaching at St. Vincents GAA Club. Additionally, the key physical characteristics and components of fitness which are trainable throughout childhood, adolescence, and adulthood will be described alongside training methods and drills which can be implemented by our coaches. **See Appendix 1** for a small literature review of long-term athletic development.

Mission Statement

Our mission is to sustain a long-term programme of athletic development within the club. We consider it a privilege to be in a position whereby we can help our athletes to grow as individuals both physically and emotionally. As sport and performance science continues to evolve, our commitment will always be the same: helping and empowering our athletes to optimise key physical characteristics and sports skills, while fostering a healthy relationship with sport and physical activity.

Timeline and Resources

A system of LTAD is an evolving one involving may elements.
- Video resources are available to coaches here: https://vins.ie/LTADVideos.
- Workshops, seminars, and continuous evaluation and monitoring will be carried out by the athletic development working group.
- Coaching workshops and seminars will be organised for each team throughout each season to provide theoretical learning opportunities and practical hands-on coaching experience.
- Topics of workshops and seminars will vary based on the stage of development.
  In these group meetings, coaches will be shown how to periodise and plan training cycles and sessions for their respective teams.
- A line of communication will be established between the LTAD working group and the various team mentors using an LTAD contact email LTAD@StVincentsGAA.ie.
- Continuous evaluation and monitoring will be ensured via monthly check-ins with the LTAD working group to reflect on the athletic development interventions that are being employed in training and to create a continuous feedback loop.

Ultimately, we wish to **empower our coaches**. Coaching is an evolving skill which is continuously developed through experience and education.

 Note: The phases, Training to Win and Active for Live are not included in the St. Vincents LTAD pathway.

3. Active Start (Males and Females 0-6 Years)

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Children at this age must begin to learn the **ABCs** of movement – **Agility, Balance, Coordination, and Speed**. These are essential in developing fundamental movement patterns as they later provide the foundation for fundamental sport skills. Children should be able to have fun with physical activity through both **structured and unstructured free play** that incorporates a variety of body movements. An early active start enhances the development of brain function, coordination, social skills, gross motor skills, emotions, and imagination. This early stage of development is critical to help children build confidence, develop posture and balance, build strong muscles and bones, move well, and enjoy being active.

Establishing a healthy connection with physical activity should be the major goal of this phase. Children at this age are inherently explorative and learn through interacting with the environment and people around them. Coaches and parents are in a great position to nurture this natural curiosity which children possess. Providing them with the resources and the space to begin "figuring out" physical movement is key. When a child enters into the mini leagues at our club, they take their first step into a structured sporting environment and begin to participate in various activities and games. It may be the first time they hold a hurley in their hand, and the first time they kick a football. Maybe one day in the future, they will lift a trophy wearing blue and white. At a minimum, we will have played an important role in their overall physical development.

3.1 Aim: Introduce children to physical activity, movement, and Gaelic sport.

"Children learn as they play. Most importantly, in play children learn how to learn."
O. Fred Donaldson. See Appendix 4, References.

ABCs methods for Active Start - Agility, Balance, Coordination, and Speed.
A variety of fun group structured, and unstructured movement games can be implemented by coaches in the Active Start stage (mini leagues) to begin teaching the ABCs outside of the initial basic skill coaching of Gaelic sport.

Simple **ABCs** activities for children:

1. Tag & Chasing
2. Animal Movements
3. Obstacle Courses (Running, Crawling, Jumping, Hopping)
4. Bean Bag Throw n' Catch
5. Skipping
6. Jumping
7. Hopping
8. Potato Sack Race
9. Egg n' Spoon Race

3.2   Key Point 1: Benefits of Animal Movement

Benefits of Animal Movement.

Ground Based Movement Skill (Trunk Stability & Pillar Training).

- These movements build overall robustness through repeated contact with the ground.
- Wrists, elbows, shoulders (common areas of injury in contact field-sports).
- Receive repeat loading (great for tendon and joint health).
- Building confidence in performing awkward moves like rolling, crawling, and diving will help to prepare athletes for the often-unpredictable nature of in-game sporting movement (high chaos component in sport).
- A lot can go wrong when a roll or dive is performed incorrectly. Therefore, practice = less chance of getting hurt in a game.
- Fun movements to perform.
- Increase neuro-muscular co-ordination, balance, and stability.
- Exploratory and allow children to "figure out" and explore movement possibilities and solutions. The learner must self-organise to complete the movement task.
- Ability of core muscles to "co-contract" to stabilise the trunk under load and during movement in contact sports.

3.3   Games & Activities for Active Start Phase

3.3.1   Leap-Frog Tag

Coaching Instructions: Gather the children present in an appropriate space and prepare for the game. Choose 1-2 players as taggers. They must chase the other players and try to tag them. When a player is tagged, they must crouch down into a frog position. Players who have not yet been tagged can leapfrog over the tagged player to get them back in the game.

Components of Fitness: Speed, change of direction, agility, balance, coordination, evasiveness, aerobic fitness.

Sets/Reps: At **the** coaches' discretion. Generally, 2-3 rounds.

3.3.2   Bridges and Rivers

Coaching Instructions: Gather the children present in a suitable space and prepare for the game. Half the players are 'bridges' and the other half are 'rivers'. On the whistle, the children begin to run around in any direction. When the coach calls "Bridges!", the **bridges** players must get into the bridge position (hips in the air/pike push up position) and the rivers players must crawl under as many bridges as they can until the coach blows the whistle. On the next round, if the coach calls "Rivers!", the rivers players must lay down on the

ground in the rivers position and the bridges players must jump over as many rivers as they can until the coach blows the whistle.

Components of Fitness: Speed, change of direction, agility, balance, coordination, core stability, aerobic fitness.

3.3.3 Sea, Ship, Shore

Coaching Instructions: The coach sets up 3 lines of cones. The middle line is called the 'Ship' and either side of that are the 'Sea' and the 'Shore'. The coach instructs players to line up on the ship line and on the coach's call players must move to the line called out by the coach. The coach can make this more challenging by instructing players to hop, skip, crawl etc., instead of running.

Components of Fitness: Speed, change of direction, agility, reaction time, agility, balance, coordination, aerobic fitness.

Sets/Reps: At the coach's discretion. Generally, 2-3 rounds.

3.3.4 Stuck in The Mud

Coaching Instructions: Set up a cone grid appropriate to the number of children present. Typically, a grid of 10 metres in length and width. Choose one player to be in. The player who is in must run around and tag as many other players as they can. When tagged, a player becomes 'stuck in the mud', they cannot move and must stand with their legs and arms apart. The only way to be freed is for a non-tagged player to crawl through their legs. Players are safe while crawling under legs and cannot be tagged. The game ends when all players have been tagged and are 'stuck in the mud'.

Components of Fitness: Speed, change of direction, evasiveness, core stability, agility, balance, coordination, aerobic fitness.

Sets/Reps: At the coaches' discretion. Generally, 2-3 rounds.

3.3.5 Simon Says 'Movement'

Coaching Instructions: Gather the children present in a suitable space and prepare for the game. A great warm up game. Creativity is key.

Simon Says Calls	
● Sit down	● Roll on the floor
● Turn around in a circle	● Skip around the room
● Jump up and down	● Gallop like a horse
● Hop on your right foot	● Hop to the left/right
● Hop on your left foot	● Make circles with your arms
● Clap your hands	● Do jumping jacks
● Touch your nose	● Walk like a penguin
● Wiggle your fingers	● Do a push up

Simon Says Calls	
● Put one arm in the air	● Walk on your tiptoes
● Flap your arms like a bird	● Do a silly dance
● Slither on the ground like a snake	

Components of Fitness: General movement and motor skill ability, movement exploration, upper and lower limb strength and robustness, core stability, agility, balance, coordination, aerobic fitness.
Sets/Reps: Generally used for a fun warm up. Typically, 1-2 rounds.

3.3.6 Animal Movements

Coaching Instructions: Gather the children present in a suitable space and prepare for the game. See **Science for Sport** exercise library here: https://app.scienceforsport.com/exercise-library – alphabet exercises.

Animal Movements: Bear Crawls, Crab Walks, Galloping Horses, Slithering Snakes, Forward and Backward Tumbles, Bunny Hops/Pogo Jumps, Twists, Turns.

Components of Fitness: General movement and motor skill ability, movement exploration, upper and lower limb strength and robustness, core stability, agility, balance, coordination, aerobic fitness.

Sets/Reps: At the coach's discretion. Generally, 2-3 rounds.

3.3.7 Hopscotch

Coaching Instructions: Using tape on the ground or a ladder, perform double and single leg hopscotch variations.

Components of Fitness: General movement and motor skill ability, lower limb strength and robustness, jump and land mechanics, reactive strength, core stability, agility, balance, coordination, aerobic fitness.

Sets/Reps: At the coach's discretion. Generally, 2-3 rounds.

3.4 Key Point 2: Introduction to Gaelic Sport Skills

Introduction to Gaelic Sport Skills (ABCs Phase).
At this early stage of development and sport participation, children must be exposed to the basic skills of Gaelic sport. Simple exercises and games which incorporate skills such as kick and catch, hop, solo, handpass, ground strike (ball/tyre), moving with ball in hand, moving with hurl in hand and so forth are important to allow children to begin ingraining the motor patterns associated with Gaelic sport and more generally, athletic movement. The key skills are then progressed in the FUNdamentals stage.

3.5 Active Start (ABCs) Session Planner (Illustration)

The example Session Planner below outlines the design and structure of a comprehensive ABCs training session. The LTAD coaches will work with Team Mentors to assist them in completing their session planners. We encourage all coaches to use this template for planning training sessions.

N.B - Games and activities in this phase should be included in warm-ups following the simple format below (the structure remains the same but variety in the programme is encouraged session to session to optimise engagement).

PNU 2	St. Vincents U7 (ABCs & Introduction to Gaelic Sport)					Date:	09/07/2021
				Session Plan			
Training	Phase	Week	No. Players	Session	Volume	Intensity	Day
Cycle	P. 1	Wk. 2	15	2	60 mins	5	Sat
				Warm-Up			
Coach: Athletic Development	Raise Body Temp		Game/Activity 1		Game/Activity 2		
Coach & Sport Coach **Time:** 15mins	1) Half lap jog 2) Animal Ground Contact 3) Simon Says		Bridges & Rivers		Hop Scotch		
			Gaelic Sport Exposure & Intro Skills				
Coach: Sport Coach **Time:** 20mins	Skill 1			Skill 2		Note:	
	Handpassing			Kicking/Picking			
			Mini-Gaelic Games				
Coach: Sport Coach **Time:**	Game 1			Game 2		Note:	

Below is a blank template session planner suitable for Active Start / ABC's.

Session%20Planner
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3.6 Key Point 3: Planning Training and Coaching

Planning Training & Coaching.

It is important to plan your sessions in advance in order to place structure on your coaching with respect to the yearly training cycle. It is very important to note that **planning a session** and **implementing a session** are two very different things. This is where your development as a coach comes in! Being adaptable and versatile as a coach is key for providing great training sessions. Resources, coaching workshops, seminars, and continuous evaluation and monitoring will be required for learning to programme and implement training.

4. FUNdamentals (Girls 6-8 Years, Boys, 6-9 Years)

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Children in the 'FUNdamentals' stage are motivated by their desire to have FUN and improve their fundamental movement skills. Children in this stage should participate in a variety of well-structured activities that develop the fundamental movement skills and overall motor skills (ABCs). However, activities and programmes must maintain a focus on fun, and formal competition should be only minimally introduced. Children in this phase begin to transition from the mini leagues into their respective age graded teams (Under 8 and Under 9) and begin playing matches versus other clubs. This is where children get their first real insight and experience into what formal sporting competition looks and feels like. Actively encouraging children to participate and have fun is essential during this transition period. A major goal of this stage of development is to build a solid base of sound movement skills preceding the initial Active Start stage.

We must encourage exploration and growth. Our role as coaches is to foster an environment in which children are forced to challenge new positions, ranges, and skills, all while developing key life skills of communication and learning to overcome failure. **Allow for failure** and watch the joy of kids figuring things out for themselves.

4.1 Aim: Extend the Active Start phase

Extending the active start phase to be more specific while coaching fundamental sports skills and continuing to encourage movement exploration and fundamental movement patterns.

4.2 Games & Activities for FUNdamentals Phase

4.2.1 Bull Dog

Coaching Instructions: Set up two lines of cones around 15-20 metres apart (two end lines = home)**.** Pick 1-2 players to be the bulldogs. The bulldogs stand in the middle of the play area. All remaining players stand at one end of the area (home). The aim of the game is to run from one end of the field of play to the other, without being caught by the bulldogs. When a player is caught, they become a bulldog themselves.

Components of Fitness: Speed (acceleration, deceleration, top speed), Change of Direction, Agility, Evasiveness, Endurance.

Sets/Reps: At the coach's discretion. Generally, 2-3 rounds.

4.2.2 Mirroring

Coaching Instructions: Two players face each other. Player 1 is the 'leader' and player 2 is the mirror. In this unstructured open play activity, player 2 must 'mirror' or match the various movements of player 1 e.g., hops, side to side shuffle, lunge, squat, accelerate to run. This is a great warmup game.

Components of Fitness: Extensive jumping, reactive/cognitive processing, movement patterns, frontal plane (side to side) movement, acceleration.

Sets/Reps: At the coach's discretion. Generally. 2-3 rounds each as 'leader' and 'mirror'.

4.3 Key Point 4: Introduction to Low Level Plyometrics

Introduction to Low Level Plyometrics (Extensive Jumping and Landing).

In the FUNdamentals stage, we may begin to incorporate some more structure into our training with respect to low level plyometric training (extensive jumping) in various planes of motion (through games and fun activities). Simple hopping exercises can be easily included in session warmups through games. By building an extensive base of jumping and landing, we begin to progressively develop the general strength capabilities of the muscles, tendons, and ligaments of the lower limbs (foot/ankle complex, knee, hip) and as a result increase overall reactive strength, the robustness of the athlete, and mitigate injury risk. The lower limbs are common areas of injury in Gaelic Games, therefore we must progressively expose athletes to jumping and ground impacts. Additionally, exposure to jumping and landing in various planes of motion will increase neuromuscular co-ordination, balance, and stability, furthermore, developing key movement and proprioceptive skills (the body's ability to perceive its own position in space).

Planes of Motion
Sagittal - forward and back movement.
Frontal - side to side movement.
**Transverse** - rotational movement.

A Simple Entry-Level Jumping Progression Example
Level 1: On the Spot Double Leg Pogo Jumps
Level 2: Forward and Back Double Leg Pogo Jumps
Level 3: Side to Side Double Leg Pogo Jumps
Level 4: Rotational Double Leg Pogo Jumps

THREE PLANES OF MOTION

Transverse   Frontal   Sagittal
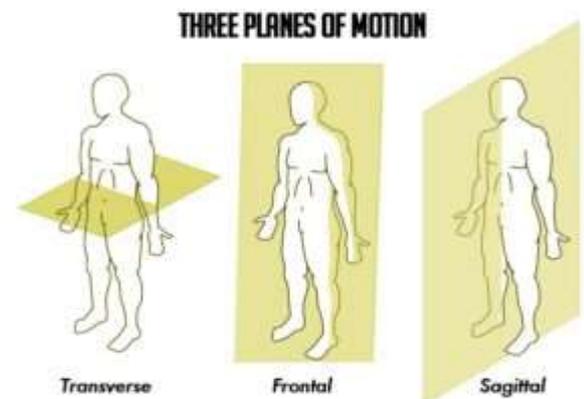
Lower Limb Strength & Robustness

How?
Extensive, safe low-level plyometrics in addition to learning and refining the key fundamental movement patterns (Squat, Hip Hinge, Single Leg Stance & Lunge).

Why?
- General strength of muscles, tendons, and ligaments of the lower limbs.
- Reactive Strength.
- Increase robustness and mitigate injury risk.
- Increase neuromuscular co-ordination and proprioception.
- Prepare the body for more intensive jumping and landing in following stages of development.
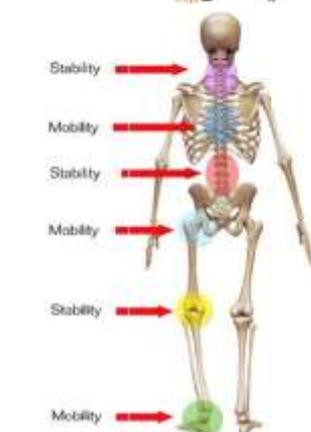
What?
Skipping, Simple Hops and Jumps in the three planes of motion.

Note: More structured and specific low level plyometrics and extensive jumping must be enhanced in the 'Training to Train' Stage.

4.3.1 Circle Tag

Coaching Instructions: Gather the children present in groups of 4 in a suitable space and prepare for the game. Pick 1 player as the tagger and 3 others as the circle. 1 player in the circle must be chosen as   the player to protect. The circle players must place their hands over each other's shoulders and spin around in a circle to protect their chosen teammate from being tagged by the tagger.

Components of Fitness: Speed, Change of Direction, Agility, Balance, Coordination, Aerobic Fitness.

Sets/Reps: At the coach's discretion. Generally, 2-3 rounds.

4.3.2 Bear Crawl Tag Wars

Coaching Instructions: Gather the children present in a suitable space in pairs and prepare for the game. Player 1 is the tagger and player 2 is the bear crawler. The tagger must attempt to tag the foot/ankle of the bear crawler. The bear crawler must use bear crawl manoeuvres to avoid being tagged.

Components of Fitness: Speed, Change of Direction, Agility, Balance, Coordination, Core Stability, Robustness, Evasiveness, Aerobic Fitness.

4.3.3 Cone Reaction + Noughts & Crosses

Coaching Instructions: Gather the children present in a suitable space in pairs and prepare for the game. Players line up across from each other with a cone in the middle between them. Each player has a blue and red cone behind them. The coach calls out various commands such as "hop!", "jump!", "twist!", and the players must follow the commands on the spot. When the coach calls the colour of a cone either blue or red, the players must react, grab the correct cone behind them and race to place it on top of the cone in the middle between them.

Components of Fitness: Perception/Action Coupling, Speed, Change of Direction, Agility, Balance, Coordination, Reaction time, Aerobic Fitness, Lower Limb Strength.

4.4 FUNdamentals Session Planner

Please refer to Active Start (Section 3.4.1 for information on the Session Planner). Below is a blank template session planner suitable for Active Start which can be modified to suit FUNdamentals.

Session%20Planner
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5. Learning to Train (Girls 8-11 Years, Boys 9-12 Years)

Learn to Train
Males 9-12
Females 8-12

| Active Start	FUNdamentals	Learn to Train	Train to Train	Train to Compete	Train to Win	Active for Life
Males and Females 0-6	Males 6-9 Females 6-8	Males 9-12 Females 8-12	Males 12-16 Females 11-15	Males 16-23+/- Females 15-21+/-	Males 19+/- Females 18+/-	Enter at Any Age

5. Learning to Train (Girls 8-11 Years, Boys 9-12 Years)

The primary focus of this phase is to build on the FUNdamentals (i.e., ABCs) phase and begin to develop more sport-specific movement skills (e.g. running, jumping, kicking (RJK)). This phase is viewed as a key window of trainability for balance and coordination and where the greatest gains can be obtained in these physical qualities on the athletic development pathway. Below outlines some examples of age-appropriate warm-up games/ drills which incorporate the above-mentioned qualities.

During this phase we will look to put a more structured approach on technical ball skills, by introducing a skill development pathway with age-appropriate ball skill targets. This will be covered in more depth in the technical skills development document.

5.1 Aim: Build on FUNdamentals stage, introduce sport specific movement skills

The aim of Learning to Train is to build upon the FUNdamentals stage and begin introducing more sport-specific movement skills and technical ball skills.

5.2 Games & Activities for Learning to Train (Age 8-9)

Age 8-9 y/o - Games/ Drills
The following games and activities are aimed at running, jumping, change of direction, and fundamental movement patterns.

5.2.1 Super-heroes

The coach instructs kids to do 3-4 different "superhero" moves and to perform each movement for 20-30 seconds. The coach first demonstrates the super-hero move and the kids must try to copy it.

Examples of Superhero Movements:
- **"The Flash"**- Encourage kids to progress from a stationary march to a fast run, emphasising good running technique- Opposite arm and leg movement and high knee position.

- **"The Hulk"-** Get kids to perform "Hulk Smash"- get them to jump down towards the group quickly- emphasised a quick stop.
- **"Superman"**- Jumping up and reaching for the sky with two legs or a single leg for a "Superman pose".

5.2.2 Spring

Jumping-based game, which involves a lot of different single and double-legged, up-down and side-to-side jumping. Perform 3-4 jumping movements each for 10-20 seconds.

Example Jumping Calls:
- Double Spring- Double-leg pogo jumps
- Super Spring- Broad jumping
- Silly Spring- Side-to Side Hopping

5.2.3 Free for all

Set up a square with cones where players have to avoid chasers. Every player is given a bib to use as a tail and must try to catch another player's bib while protecting their own bib from other players. If a player's bib is caught, he/she must still try to catch other players. Game Duration 5-6 minutes.

Balance Games:

5.2.4 Drop Squat

Player is instructed to move up onto tiptoes with both arms raised and on the coaches call will drop down into a squat. Aim is to stop themselves falling as quickly as possible.

5.2.5 Duck Fighting

Two players go into a squat position with palms facing each other. On the coach's call, players attempt to unbalance their opponent by pushing against their palms.

Co-ordination Games:

5.2.6 Reaction Time

Coach instructs players to get into twos and face each other with a cone in between them. The aim of the game is to grab the cone before your opponent does when the coach shouts "cone". Coach can make other calls such as "do 5 star jumps" or "do 5 squats" in an attempt to distract players.

5.2.7 Sea, Ship, Shore

Coach sets up 3 lines of cones. The middle line is called the Ship and either side of that are the Sea and the Shore. The Coach instructs players to line up on the Ship line and on the coaches call must move to the line called out by the coach.

The coach can make this more challenging by instructing players to hop, skip, crawl etc., instead of running.

5.2.8 Sample Warm-Up Template (8–9-year-olds)

Perform each station for 5 minutes for a total of 20 minutes before moving on to technical skills games and drills.

Station 1: Running and Change of Direction	Station 2: Jumping/Landing
Free for all	Spring
Chasing game where all players must catch other player's bibs, while stopping other players from catching theirs.	Jumping-based game that involves a lot of different single and double-legged up-down and side-to-side jumping. Perform 3-4 jumping movements each for 10-20 seconds.
Station 3: Balance	Station 4: Coordination
Duck Fighting	Reaction Time
Two players go into a squat position with palms facing each other. On the coach's call, players attempt to unbalance their opponent by pushing against their palms. Switch partner every 30 seconds.	The aim of the game is to grab the cone before your opponent does when the coach shouts "cone". Coach can make other calls such as "do 5 star jumps" or "do 5 squats" in an attempt to distract players.

5.3 Games & Activities for Learning to Train (Age 10-12)

The following games and activities are aimed at running, jumping, change of direction, fundamental movement patterns.

5.3.1 Free- for-all

See Section 5.2.3 game details (for age 8-9) above.

5.3.2 Countermovement Jump

The player fixes his/her hands to their hips and performs a jump for maximum height by quickly squatting down and exploding away from the ground. Encourage players to be as explosive as possible.

5.3.3 Broad Jump

The aim of this exercise is to jump as far as possible. The coach should instruct players to perform a rapid countermovement with a big arm action before jumping for distance. The landing should be performed with "soft knees" into a good athletic base position.

5.3.4 Quick Stop

The aim of this drill is to encourage players to decelerate quickly and get into a good athletic position to improve their ability to change direction. The coach gets the players to line up on the end-line and marks out cones 10 metres away. Players must then accelerate up to the cone and stop at the cone as quickly as possible.

5.3.5 3-Point Start

A 3-point start is basically a crouch start performed with only one hand (and therefore "3 points" – one hand and two feet) in contact on the ground. The other hand is held up off the ground, and back behind and above the hip.

5.3.6 Split Squat

Player starts the movement in a lunge position with the front knee aligned with the ankle and the rear knee aligned with the hip. The player then ascends, keeping the body upright with the hands fixed on the hips. Perform 10 repetitions with the same front leg then repeat with the other.

5.3.7 Push-Up Arm Wrestling

Players get into pairs and face each other in the press-up position. The players then grab hold of the opposite hand of their opponent. The aim of the game is to try to unbalance their opponent while maintaining their own position.

5.3.8 Multidirectional One-Legged Hopping

The coach instructs players to hop on one leg on the spot. After 10 seconds this is progressed to lateral side-to side hopping or forward and backward hopping. Emphasize a quick push-off and landing with each hop and to be "springy". Alternate legs every 30 seconds for 2 sets.

5.3.9 Hop Wars

Players pair up with one another and must hop on one foot. The aim of the game is to attempt to unbalance their opponents with a shoulder-to-shoulder charge until they go down on both feet.

Coordination Games:

5.3.10 Knee Tag

In pairs, players try to tag their opponent's knees, whilst at the same time trying to avoid them tagging their own knees. Switch opponents every 30 seconds.

5.3.11 Throwing and Catching

Get players into pairs and using tennis balls / sliotars instruct them to throw and catch the ball using two hands, one hand etc. This can be progressed in many different ways such as:

- Players throwing and catching two balls simultaneously
- Bouncing the ball into the ground for partner to catch
- Overhand and underhand throwing.
- Throw and Catch while on one leg.

5.3.12 Forward Marching

The coach instructs players to march on the spot ensuring that all players have "an opposite arm to opposite leg" movement. Once players have attained this contralateral limb movement, the coach instructs the players to march forward. Make sure players are forcefully driving the knee and arms up and down like a piston.

5.3.13 Skipping

Coach provides the same instructions as for the Forward Marching drill above, but also tells the players to hop as they move the arms and legs in the opposite directions. Ensure players are pushing off the ground quickly as they skip. Here, we are introducing timing, rhythm, and tempo to the movement.

5.3.14 Handball

The coach splits players into 2 teams (ideally 5 v 5). The aim of the game is to throw the sliotar/tennis ball into the opponent's goal to score. When in possession of the ball, a player can only take 2 steps and must pass the ball to a teammate or into the opponent's goal. This will help improve hand-eye coordination in more match-specific situations.

5.4 Learning to Train Session Planner

Please refer to Active Start (Section 3.4.1) for information on the template Session Planner. Below is a blank template session planner suitable for Active Start / ABC's which can be modified to suit Learning to Train.

Session%20Planner
%20Template%20Bla

6. Training to Train (Girls 11- 16 Yeas, Boys 12-16 Years)

Train to Train
Males 12-16
Females 11-15

| Active Start | FUNdamentals | Learn to Train | Train to Train | Train to Compete | Train to Win | Active for Life |
| Males and Females 0-6 | Males 6-9 Females 6-8 | Males 9-12 Females 8-12 | Males 12-16 Females 11-15 | Males 16-23+/- Females 15-21+/- | Males 19+/- Females 18+/- | Enter at Any Age |

6. Training to Train (Girls 11-16 Years, Boys 12-16 Years)

The 'Training to Train' stage of the LTAD pathway explores the age range from 11-16 years. At this stage, we begin to see rapid growth developments in youth (puberty/growth spurts), therefore it is a crucial time to implement effective and enjoyable training and movement practice. Athletes' sporting capabilities begin to significantly enhance in this stage, as their motor learning and understanding becomes more advanced. The presence of rapid physical developments presents great opportunity for developing athletes as a whole, in terms of optimising performance and reducing injury risk—while always ensuring enjoyment is still prioritised. Drop-out rate can be high in this stage, so emphasis on enjoyment is pivotal.
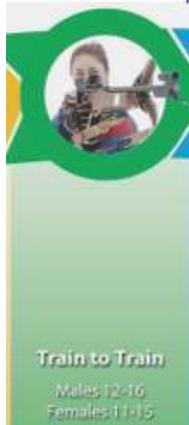
6.1 Aim: Build on FUNdamentals & expose to new modes of training

In this stage, we start to build on the fundamentals worked on with the goal of laying strong and robust foundations for the future. Ultimately, we are exposing the athletes to new modes of training which they will encounter more often in the future.

Components of Fitness:

Aerobic	Speed	Agility	Robustness	Functional Movement
Focus on creating the proficient aerobic base. Introduction to different modes of aerobic training – (MAS, Tempos, Fartleks, Shuttles) *	Introduction to acceleration sprinting technique its required intensity. Acceleration and sprinting mechanics begin to become more emphasised through warmups.	Exposure and education to the basics and need for effective agility and change of direction.	A staple through all stages of LTAD. Specific mobility work as the athletes begin to grow and mature rapidly. Low level plyometrics to begin.	Correct movement patterns of squat, lunge, hip hinge primarily. Push & pull were applicable. The goal is to build proficiency in movement for introduction to resistance training. Core work to progress from learning to train phase, more emphasis on specific stability and rotational strength.

*See Glossary of Terms

6.2 Games & Activities for Training to Train

6.2.1 Aerobic

The aerobic component of fitness is one of the most important with regards to field-sports. It is also crucial in enhancing quality of life. The aerobic energy system is essentially an athletes 'endurance system'. If an athlete has proficient aerobic capacity, they will be able to last longer in their given sport or competition. There are many ways of improving an individual's aerobic capacity, some of which are renowned in field-sport for having direct and specific adaptations.

Tempo runs, MAS runs, Shuttle runs and Fartlek style training are all effective and important for implementation into an athlete's programme. At this stage of development, it is important to introduce athletes to these different modes of running. We are exposing them not only to elicit good aerobic adaptations, but also so that they can learn and understand the rationale behind them.

6.2.1.1 Aerobic Games/ Drills (Girls 11-16 Years, Boys 12-16 Years)

The following games / drills are recommended and suitable for players at the "Train to Train" stage of development.

6.2.1.1.1   Game/Drill Idea 1: Shuttle Race

Designed to introduce an aerobic stimulus to training while adding a competitive aspect to drive enjoyment.
- Set out more than 2 even teams, cones at 13m, 21m and 45m lines.
- Run 13m and back, 21m and back, 45m and back.
- Team who finishes first wins. (Forfeit for losing team)

6.2.1.1.2   Game/Drill Idea 2: Return the cone (Linear Tempo)

Designed to introduce longer linear runs to the athletes, working at an effective intensity. The competitive element here is paramount to drive enjoyment.
- Set out more than 2 teams, with corresponding team cones 65m or 130m away.

- 1 team member at a time runs, collects 1 cone, and brings it back to the start line (base).

Team who collects all the cones first wins.

6.2.1.1.3   Game/Drill Idea 3: Leader Run (Fartlek)

Emphasising aerobic capacity while exposing some anaerobic work within the drill. Specific to a match.
- All athletes in a line, running the perimeter of a box/pitch.
- When whistle blows, the athlete at the back sprints to the top of the line and resumes the moderate pace of the run.
- Progress/Regress using box dimensions, total duration of drill, total amount of sprints per athlete.

6.2.2 Speed

A fundamental in all field-based sports. Speed refers to an athlete's ability to move rapidly from one part of the pitch to another. The faster an athlete is, the more likely they are to beat their opponent to the ball, evade their opponent in a race or catch up with an opponent in possession. A fast athlete is crucial.

Speed training is all about quality. There is a big difference between a 'fast' athlete and a 'fit' athlete. Training the speed component of fitness is not about flogging the athlete but maintaining high quality in the work which they complete. This essentially means driving maximal intent and output in each repetition of sprinting over certain distances and providing plenty of recovery between each effort.

At the 'Training to Train' stage, athletes will have built up degrees of acceleration and speed work through many games and activities in the earlier

phases of the pathway. This stage begins to expose the athletes to more direct acceleration and sprint work and instruction on good sprinting mechanics.

6.2.3 Speed Games/Drills (Girls 11-16 Years, Boys 12-16 Years)

The following games / drills are recommended and suitable for players at the "Train to Train" stage of development.

6.2.3.1 Game/Drill Idea 1: 45m Race (Max Velocity Work)

Competitive drill designed to expose athletes to maximum velocity sprinting.

- Only perform once or twice (Quality over quantity for speed work).

6.2.3.2 Game/Drill Idea 2: Knockout Flag Race (Reaction speed, Acceleration, Agility)

Competitive racing drill to work on reaction time, coordination, and speed work.

- Have 1 less cone laid out ~30m away for every athlete present (10 athletes, 9 cones).
- Spread out the cones, have athletes start with their backs turned. Once the whistle is blown, it results in a race to grab a cone.
- If you do not get a cone, you are knocked out.

6.2.3.3 Game/Drill Idea 3: Curved Relay (Speed work with curvature)

Competitive race focusing on non-linear speed work and coordination.

- Lay cones/markers out in a curved (U-Shape) position.
- Break athletes into teams. Half of each team at the start/end of the U shape.
- Relay sprint. Losing team has a forfeit.

6.2.3.4 Game/Idea Drill 4: Chaos Reaction (Agility and Acceleration)

Drill designed to work on athlete's reaction speed, rapid acceleration, and agility.

- 2 players, one player must attempt to catch the other player.
- Starting positions can always change (Standing, Kneeling, Lying, Animal position)
- Player 1 must react to player 2 and run away to a set of cones behind themselves ~10-25m.
- Player 2 initiates the drill from a challenging position and must try to catch player 1 before he/she gets to the cones.

6.2.4 Agility

Agility refers to an athlete's ability to change direction fast and effectively, generally to an external/unknown stimulus. If an athlete has proficient agility, they are capable of organising their limbs rapidly to decelerate and accelerate in a different direction.

Agility is pivotal in field-based sports as it emphasises an athlete's ability to evade opponents' tackles or contrarily, to stay with opponents when tackling. A lot of indirect agility work is done throughout the LTAD pathway, especially in the learning to train phase. Games such as Sea, Ship, Shore and Bulldog teach the athlete to change direction as fast as possible. The training to train phase builds on this foundation, by exposing the athletes to increased external stimuli and more complex games and drills.

Similar to speed training, agility training has a high demand for quality of the game/drill. During each game/effort/drill, ensuring the athlete has ample recovery will have effective crossovers to the adaptations.

6.2.5 Agility Games/ Drills (Girls 11-16 Years, Boys 12-16 Years)

6.2.5.1 Game/Drill Idea 1: Put the Hat on the Pole

Competitive drill exposing athletes to change of direction and accelerate.
- More than 2 players, each player having their own pole in the middle of a game zone.
- Coloured cones are placed at the perimeter of the game zone.
- Players must run, collect a cone, put it on the pole, and repeat until all cones are on their respective pole.
- Only one cone allowed in your hand at one time.

6.2.5.2 Game/Drill Idea 2: T-Drill Relay Race

Exposing athletes to fast change of direction, lateral movement, and acceleration/deceleration.
- Two or more teams, T-Shape with cones laid out in front of each cone.
- Each athlete must run, tip each cone of the T, and run back to tag the next team member.
- One team member runs at a time, competitive race to drive both intent and enjoyment.

6.2.6 Robustness

Robustness is contained in each stage of LTAD. Each phase of development influences the next. Mobility, plyometrics, physical literacy progression, functional movement, sprint exposure, sprinting capacity, aerobic capacity all increases the 'robustness' of our athletes or in other words, gives them

'armour' against the physical strain of high intensity movement which they experience through sport. Through consistent exposure to key training stimuli which is regulated by the minimum effective dosage of training variables (managed by the coach), we can greatly reduce the likelihood of injury in our athletes.

6.2.7 Training to Train Sample Session Blueprint

Warmup:	10 Minutes
Speed Work:	1-2 Speed Games (Maximum 10 Minutes)
Agility Work:	1-2 Agility Games (5-10 Minutes)
Aerobic Work / Game-Play/ Skill Technical Work:	Remainder of Session

6.2.8 Small-Sided Game Variables

Game Dimensions to Manipulate:

- Duration of game
- Pitch size dimensions
- Number of players
- Handicapped teams
- Rewards for skills expression (Scoring Dimensions)
- Short, medium, long rest intervals between games
- Competitive or Non-Competitive
- Size of Goals (If applicable)

6.3 Training to Train Session Planner

Please refer to Active Start (Section 3.4.1) for information on the template Session Planner). Below is a blank template session planner suitable for Active Start / ABC's which can be modified for Training to Train.

Session%20Planner
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7. Training to Compete (Females 15-18 years, Males 16-18 years)

Train to Compete
Males 16-23+/-
Females 15-21+/-

Active Start	FUNdamentals	Learn to Train	Train to Train	Train to Compete	Train to Win	Active for Life
Males and Females 0-6	Males 6-9 Females 6-8	Males 9-12 Females 8-12	Males 12-16 Females 11-15	Males 16-23+/- Females 15-21+/-	Males 19+/- Females 18+/-	Enter at Any Age
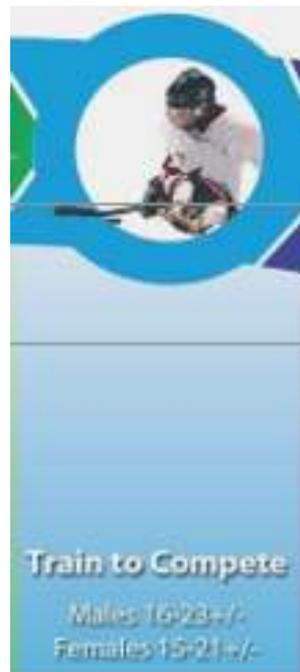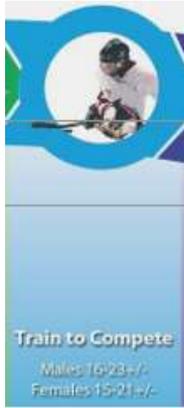
7. Training to Compete: (Males 16-18 years, Females 15-18 years)

7.1   Aim: Helping the athlete to perform in competitive environment

The aim of this stage is to help the athlete learn to perform in competitive environments. With a solid foundation of skill and training from previous LTAD stages the athlete is now ready to focus on improving their **competitive athletic performance**. Adapting to varying competitive conditions is an important part of this stage. This stage can be used to fine-tune "the engine" along with technical skills.

Player Characteristics

Winning can become an integral part of a player's mindset. As we prepare our players to perform at higher levels, it is important not to lose sight of what it means to belong to a GAA team. Sport participation allows us to grow physically, socially, and emotionally, while developing key psychosocial and life skills. At this stage of a youth athlete's life, it is important to be aware that some players may be under pressure from schoolwork and time commitments with other sports or part time jobs. Coaches need to plan and take into account other sporting activities players are participating in and factor in training load, volume and intensity and allow adequate recovery and rest for their players. Players can crave more acceptance from their peers at this stage. Players at this stage may be the same age but vary in size due to players developing at varying rates (chronological versus biological age).

The success of your training programme depends on how well you can manage the variables which can influence and affect athletic performance.

7.2   Games & Activities for Training to Compete

7.2.1 Speed

Speed refers to quick movement. Players require many different types of speed to perform - agility, multi-directional speed, reaction skills, coordination, acceleration, deceleration, speed endurance and speed repeatability. Further running technique drills can be introduced in this phase to work on posture and running mechanics.

See the video resources here: https://vins.ie/LTADVideos, for examples of developing speed - wall drills, arm drills, resistance bands with partners, reaction drills and varying start positions.

SAQ (speed, agility & quickness), V Drills, arrow drills, M, T, L Drills, shuffle/cutting, shadow drills are all designed to progress players at different paces and different gears.

7.2.2 Strength

Refers to the ability of your muscles to lift, pull or push a certain amount of weight. A player can make huge improvements during this window to improve their strength with the aim to develop whole body, multi-joint strength, and muscular endurance.

Strength development will result in gains in speed as the athlete will be able to produce more force with their body. Strength can be developed via body weight exercises, partner resisted exercises and free weights - all of which can be performed on the pitch or in a gym-based setting with the appropriate coaching and supervision. Strength work can be incorporated into pitch sessions through circuit-based training or in between skill work and conditioned games. Athletes may begin to learn lifting techniques through the use of brush handles/wooden dowels and light dumbbells and progress accordingly. When learning how to light weights, a large emphasis must be placed upon technical proficiency before adding load to the movements.

Multi-Joint Body Weight Exercises:
- Squat
- Single leg exercises-step up, lunge, single leg squat
- Push/pull exercises
- Core exercises

Intro to Barbell Movements: (can start with dowels and progress)
- Squat, deadlift, bench press, rowing and pulling movements.
- Initial engagement in structured resistance training will result in a hypertrophic response in muscle tissue (increase in muscular size).

7.2.3 Power

Refers to ability to exert maximum force in the shortest amount of time. Explosive strength and power can be developed through appropriately progressed plyometrics and high velocity movements. Plyometric exercises involve repeated rapid stretching and contracting of muscles to increase muscle power. Players must be continuously coached through all stages of development on safe jumping and landing techniques and consistently work on refine the ability to absorb force with the ground to mitigate injury risk. Progression with lower body plyometrics - start from jumping in place or on the spot, standing jumps, multiple jumps, bounds, box drills and depth jumps. Upper body plyometrics examples include med ball chest pass against a wall, overhead forward throws, kneeling side toss, depth push ups, seated throw, med ball slams and plyometric/clap push ups. Video resources are available to coaches here: https://vins.ie/LTADVideos.

7.2.4 Stamina

Refers to the ability to maintain performance over the duration of a training session or match. Stamina can be developed from interval training - continuous

movement where the player works at quicker or slower speeds and intensities using the FITT Principles (frequency, intensity, type & time). Stamina can be drilled in small sided games and running-based drills with the ball included. If players needed more work on aerobic fitness - MAS (Maximal Aerobic Speed) or Tempo running sessions could be prescribed and carried out in their own time. Simple monitoring tests for aerobic and anaerobic fitness could be 1 km/1.2 km time trial on a pitch or Yo-Yo Intermittent Recovery Test. See here: https://vins.ie/LTADVideos for video resource examples.

7.2.5 Flexibility

Refers to the ability to move joints effectively through a complete range of motion. During this phase it is important to place a special emphasis on flexibility training, balance and mobility work due to the sudden growth of bones, tendons, ligaments, and muscles. Static stretches are more appropriate after training or games with dynamic stretches are more appropriate before training and games. Partner stretches can be beneficial along with encouraging recovery practices at home. The athletes should be encouraged and educated on the benefits of foam rolling and band assisted stretching and recovery techniques - to help prepare the body for subsequent training.

See video resources here: https://vins.ie/LTADVideos for examples (general flexibility and mobility movements).

7.2.6 Putting it all together

Overall, the above athletic qualities can be worked on during match situations on the pitch. For example, implementing small-sided games and modifying or adapting the conditions to suit player needs (aerobic development, or speed development) or what it is you would like to achieve from the activity. The activity can be modified and adapted using the STEP-modify method - space, time/task, equipment and people (see small sided game manipulations in the 'Training to train' stage. It is important to keep working on the skills of the game at high pace and under pressure to simulate in-game situations. Coaching content must be relevant to the game demands.

7.2.7 Functional Movement Screening (FMS).

Functional movement is the ability to produce and maintain a balance between mobility and stability while performing fundamental patterns (T. Okada, K C.Huxel, T W. Nesser (2011).

The Functional Movement Screen (FMS) is a series of 7 tests that classify fundamental movement. Each test is scored on an ordinal scale with 4 categories 0-3.

The FMS is a ranking and grading system that documents movement patterns that are key to normal movement. By screening these patterns, the FMS

identifies functional limitations and asymmetries. The screen uses seven movements that represent the mobility and stability movements that occur in human growth and development – squatting, stepping, lunging, reaching, striding, and two movements that require trunk stability. Deficiencies in any of the above movement patterns may be worked on and corrected with specific exercises.

7.2.8 Video Resources

Athletic Development and Physical Fitness Exercises Video Demonstrations are located here: https://vins.ie/LTADVideos.

1) Fun Games (Active Start-Fundamentals)
2) Balloon exercises (Active Start-Fundamentals)
3) Partner Resistance exercises (Train to Train)
4) Running Mechanics (Train to Train-Train to Compete)
5) Jumping Mechanics (Train to Train-Train to Compete)
6) Resistance Training-Body Weight Exercises (Train to Train-Train to Compete)
7) Warm Up Samples RAMP (Train to Train- Train to Compete)

7.2.9 Running Mechanics Drills

- Straight Line:
- Wall drills - Arms isolated
- Knee drive, Toe up, Cues - Push the ground away, Bucket of water on toe etc.
- Double switch on whistle
- Arm drills-standing arm swings on number of call, sitting on ground, hip to lip, pockets
- Skipping
- Ankling
- Bounding
- Quick feet, Rise arms and Go
- Falling starts, why go back when you want to go forward
- Acceleration-fast feet 5m, striding
- Resistance harnesses 45 degree lean
- Ladder-one foot, two foot, in and out, backways and forwards, in and out pass ball facing partner
- Vary starts, 2 point, one point stance, on belly, react to ball
- Cutting, Shuffling & Change of Direction:
- Loading leg wall drill
- Cutting (Ladder)
- Shuffle Right and Left and accelerate forward
- Reaction to partner
- Colour call square
- Rats and Rabbits
- Tag Games

7.2.10 Jumping/Landing Mechanics
- Pogo hops on spot, movement, side to side
- Long Jump
- Counter Movement Jump, Standing Long Jump
- Land and Stick Left to Right
- Triangle Hop
- 1 foot landing onto 2 feet, 2 to 1, 1 to 2 etc
- Copycat

7.2.11 Resistance Exercises
- Squat
- Lunge
- Inverted Row
- Push Up
- T Plane
- Plank
- Step Up

7.2.12 Warm up
Samples - Components of GAA 15 (https://learning.gaa.ie/gaa15)
RAMP - **Raise, Activate, Mobilise, Potentiate**

RAMP is a widely accepted and commonly used protocol to structure the warm-up.

Raise, Activate, Mobilise, Potentiate
A well-designed warm-up should improve performance in the subsequent workout or competition. The RAMP protocol helps to include the elements that have been shown to help improve performance.

1. Raise: This phase is designed to elevate heart rate, breathing rate, body temperature and joint viscosity with lower intensity movements e.g., jogging.
2. Activate and Mobilise: This section focuses on stretching, actively moving through a range of motion, and includes stabilization and motor control elements e.g., movement patterns and dynamic flexibility.
3. Potentiate: This last section increases the intensity of movement, bringing it up to the level needed for performance. This is especially helpful when the subsequent training session or competition requires high levels of speed, power, or strength e.g., squat jump, countermovement jump, power skips, sprinting.

See video resources here (https://vins.ie/LTADVideos) for examples of warmups.

7.2.13 Fundamental Movement Patterns & Exercises

Lower Body Categories

Bilateral Knee Dominant (Squat Pattern)
Unilateral Knee Dominant (Single Leg Lunge)
Bilateral Hip Dominant (Hip Hinge Pattern, Deadlift)
Unilateral Hip Dominant (SL Romanian Deadlift, Lateral Lunge, Reaching Lunge)

Upper Body Categories

Horizontal Push (Push Up, Bench Press)
Vertical Press (Overhead Press)
Horizontal Pull (TRX Row, Bent Over Row)
Vertical Pull (Chin Up, Lat Pull Down)

Core Stability Categories

Anti-Extension (Plank, Bear Position, Dead-bug)
Anti-Lateral Flexion (Side Plank, Copenhagen)
Anti-Rotation (Band Push Pull, Pallof)
Carries/Locomotion (Kettlebell Suitcase Carry, Offset Carry)

7.2.13.1   Example fundamental movement exercises

Exercise	Key Teaching Points	Cues	Adaptations/ Progressions
SQUAT	Neutral lumbar spine Ankle, knee, and hip in alignment Hip travels below knee Torso parallel to shin Feet flat on ground	Sit back on chair Chest tall Show off crest Look straight ahead	ADAPTATION: Counter balance Box Squat PROGRESSION: Overhead Squat with dowel Squat Jump
LUNGE	Shoulders directly above hips Front knee above ankle at all times Back knee below hips at bottom Ankle, knee and hip in alignment Neutral lumbar spine Front foot stays firmly planted	Step, Plant, Drop Stay Tall Alignment	ADAPTATION: Lunge from bottom up Reverse Lunge Split Lunge PROGRESSION: Lunge & Rotation/Press
INVERTED ROW	Straight line ankle, knee, hip, shoulder and head Hands directly beneath shoulders with overhand grip Movement is initiated with upper back not with arms Body travels as one	Alignment, head to toes Eyes focused on the roof Body move as one	ADAPTATION: Inverted Row Front leg Inverted Row Glute Bridge PROGRESSION: Inverted Row feet elevated Chin ups Pull ups
PUSH UP	Straight line ankle, knee, hip, shoulder and head throughout the movement Hands directly beneath shoulders Fingers pointing forwards Shoulder blades back and down Elbows at 45 degrees when viewed from above	Alignment, head to toes No worming move as one	ADAPTATION: Push up knees Push up from chair PROGRESSION: T Push Up

Exercise	Key Teaching Points	Cues	Adaptations/ Progressions
	Body travels as one		Spiderman Push up Med Ball Push Up
T PLANE	Athlete balanced on one leg with soft knee Hips remain balanced Player moves through hips and keep knee ankle constant Rear leg out behind them Pelvis remains neutral, rear toe pointing to ground Neutral lumbar spine	Move through the hips Place your chest on a table	ADAPTATION: Waiters Bow Waiters Bow from Wall T Place with foot on wall PROGRESSION: Waiters Bow with medball in chest. T Plane with Rotation T Plane with med ball reach
PLANK	Straight line ankle, knee, hip, shoulder and head Elbows directly beneath shoulders with forearms parallel Shoulder blades back and down Glutes squeezed Abs braced/ Breathing maintained	Alignment, head through toes Squeeze the glutes Breathe	ADAPTATIONS: Front plank on knees Side plank on knees PROGRESSIONS: Front plank one leg Front plank one arm Starfish Side plank
STEP UP	Box height below knee (mid shin) Foot on box stay flat at all times Bottom leg remains extended Ankle, knee and hip in alignment Neutral lumbar spine Hips remain balanced	Plant the front foot Weight on front leg	ADAPTATIONS: Step Up Low Box PROGRESSIONS: Step Up knee raise Step up and Press

7.2.14 Flexibility, Mobility, Activation, & Core Exercises:

- **Sitting stretch**

- o Sit down on ground, Lumbar spine flat against wall.
- o Rotate the hips and flex your knees bringing your feet towards your body.
- o Place the bottoms of your feet together and ankles dorsiflexed.
- o Foam rollers or pillows for can be placed under thighs and knees to decrease pressure on the knees and hips.
- o Place dowel overhead and raise hands until you feel a stretch.
- o This strengthens the quads and glutes and improves the mobility of the thoracic spine and shoulders.
- o Perform 3 sets of this exercise holding for at least 30secs each.

- **Toe touch squat/Monkey Squat**

- o Stand with feet shoulder width apart.
- o Bend forward to touch your toes.
- o Place hands under toes and sit back into it.
- o Slowly raise one hand at a time to come in line with spine and follow with head.
- o Repeat with other hand.
- o Stand up and repeat exercise again.
- o Perform 3 sets of 8-10 reps.

- **Squat with raised heels**

- o Place heels on raised platform.
- o Lower yourself by sitting back into the squat. Raise dowel overhead and try to keep arms back.
- o You get more depth by having your heels on a raised platform.
- o Perform 3 sets of 8-10 reps.

- **T-band Squat**

- o Squat as normal but loop a Thera-Band around your legs but above your knees.
- o Stand with your arms overhead and squat back and down until your thighs are parallel to the floor.

o   Return to a standing position by extending your hips.
o   Keep your chest up and your back flat.
o   Perform 3 sets of 8-10 reps.

- **Hip flexor stretch**

o   Get into a lunge position with back knee on
o   soft mat or pad with back foot either elevated on bench or on the ground.
o   While keeping a slight forward lean of the torso, tighten the core and tighten the glute of the leg with the knee on the ground
o   Maintaining this posture, shift the entire body slightly forward

- **Thoracic spine foam rolling**

o   Lie on your back with the foam roller between you and the ground.
o   Support your head with your hands.
o   Pause on 5 different points for 30 secs each.
o   Starting from your mid back and moving upwards towards your neck.
o   Use your heels to lift your buttocks and roll up and down your upper back.

- **Thoracic spine tennis ball stretch**

Tape two tennis balls together or place them in a sock.
Lie on your back with the balls under your spine just above your lower back and your hands behind your head.
Perform 5 crunches.
Then raise arms over your chest and alternately reach over your head for 5 reps on each arm.
Move the balls up your spine 1-2inches and repeat exercises.
o   Continue moving the balls up your spine until they are just above your shoulder blades and below the base of your neck.

- **Leg Bridge**

o   Lie with your knees bent and feet flat on the floor, arms by your side with palms down.
o   Tighten your abs, flatten your back.
o   Press down into your feet and raise your hips off the floor.
o   Squeeze buttocks tight then straighten out one leg.
o   Bring leg back up to bent-knee position, and then switch legs.
o   Slowly lower your back to the floor, keeping your hips tight.
o   Perform 3 sets of 8-10 reps on both sides.

- **Leg Lowering**
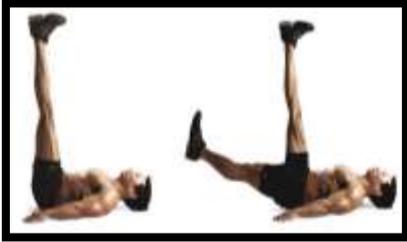
  - Lie on your back with your legs extended straight up.
  - Keeping your legs straight, lower your left leg until your foot is 5cm off the floor.
  - Return to starting position, and then repeat on right leg.
  - That's one rep. Think about pushing the bottom of your heel away from your hip as you lower your leg.
  - You can perform this on a doorway.
  - Perform 3 sets of 8-10 reps each leg.

- **Hamstrings Foam rolling**

  - Place foam roller under Hamstring with hips lifted off floor.
  - Cross opposite leg to increase pressure.
  - Slowly roll hamstring, apply pressure on tender spots and hold for 30 seconds.

- **Plank**

  - Lie face down on the ground.
  - Lift yourself up into your elbows whilst keeping your feet on the ground toes pointing to the floor.
  - Keep your body aligned straight, pulling in your belly button inwards. Hold this position for 30 secs.
  - Perform 3 sets of 30 secs and progress up to 45 secs when it becomes easier. Lift either one arm or one leg to make it harder. Marching planks.

- **Side Planks**

  - Lie on your side.
  - Place forearm on mat under shoulder perpendicular to body.
  - Place upper leg directly on top of lower leg and straighten knees and hips. Raise body upward by straightening waist so body is ridged.
  - Hold position for 30 secs.
  - Repeat on opposite side. Perform 3 sets of 30 secs on each side.

For all flexibility, mobility, activation, and core exercises please see our video resource located here: https://vins.ie/LTADVideos

7.3 Training to Compete Session Planner

Emphasis on performance. Below is a blank template session planner.

Session%20Planner
%20Template%20Bla

Below is a completed example outlining the design and structure of a training session. The LTAD coaches will work with Team Mentors to assist them complete their session planners. We encourage all coaches to use this template for planning training sessions.

Pitch Session Planner & Blueprint

PNU 1		Team 2021					Date:	09/07/2021
					Periodised Training Plan			
Periodisation	Phase	Week	No. Players	GPS	Session	Volume	Intensity	Day
Cycle	P. 2	Wk. 3	28	X M	3	90 mins	8	Sat

Warm-Up (RAMP)

Coach: S&C	Raise Body Temp		Activate/Mobilise		Preparing for Performance		
Coach &					**Core Striking Skills**		
Hurling	1) Half lap jog		GAA 15 Warm Up		1) Strike to hand/feet		
Coach	2) Chaotic		Primal Movements		2) Moving target head height		
Time: 20 mins	3) Handpassing/Striking		Dynamic Strecthes		3) Overhead bat down		
	Endline to 20 M		Potentiation		4) Over shoulder pass		

Acceleration / Speed / Agility / Plyometrics (ASAP)

Coach: S&C	COD/Agility Mechanics			Reactive Agility		
Coach						
Time: 5 mins	Change of Direction Mechanics			Races reacting to different colour cones, numbers		
	1) Coaching cues of COD			and calls		
	2) 25 m races with cutting at 90 degree angles					

Principles of Play

Coach: Hurling	5v2 Possession Boxes					
Coach/Manager						
Time: 10mins		4 Boxes 10m x 10m				
	5 Attackers v 2 Defenders - 60 sec reps					
	Theme: Intensity in the Tackle (Defenders) & Possession in Tight Areas (Attackers)					

Phase of Play

Coach: Manager	Counter Attacking at Speed					
Time: 20mins						
	Attack v Defence Set Up (4v7)					
	2 Additional Attackers coming from deep with the ball v 2 Defenders					
	Defenders start high up pitch out of position					
	Theme: Attack fast before Defence has time to re-organise					

Games / Match

Coach: Hurling	Medium Sided Games					
Coach/Manager						
Time: 20mins		3 Team Tournament				
	1 Medium Sized Pitch - 9v9 players					
	6 x3mins Games					
	Theme: Counter Attacking at Speed					

Fitness Development

Coach: S&C	Repeated Sprint Ability					
Coach						
Time: 10 mins		6x 40 M Sprints (2 sets)				
	90% Max Speed					
	Sprint Duration: 6 sec					
	Recovery: 35 sec between sprints, 2 mins between sets					

APPENDICES

Appendix 1: General Overview & Literature.

Within LTAD programmes, the **maturational status** of each child should be considered at every stage of development. This provides a more strategic approach to youth athletic development and allows for more thoughtful planning and prescription of training. Developing a **coach's eye** is key to effective coaching and communication. Ultimately, learning to be flexible and adaptable as a coach is critical with respect to each child's level of movement and sporting ability.

Original models of LTAD suggested that there are critical **"windows of opportunity"** which exist during the developmental years, whereby children and adolescents are more sensitive to training-induced adaptation, which simply means that, with exposure to the correct training interventions, they will become fitter at a faster rate than older age groups. However, Lloyd and Oliver (2012) released a paper called "A new approach to long-term athletic development", claiming that there was no scientific evidence for windows of opportunity and that all components of physical development can be trained all the time. The authors gave reference to certain modes of training being more effective at certain times of the child's developing years. For example, hypertrophy (muscle-building) training would be more effective at post-puberty versus pre-puberty, taking advantage of natural hormonal changes.

LTAD programmes should integrate the importance of **Peak Height Velocity** (also known as 'growth spurts') to allow for the stages of training emphasis to evolve into a more structured format. Finally, the authors referred to the importance of having appropriately trained coaches at this specialised time in a child's development. It is useful to keep this in mind whilst learning about the various stages of athletic development throughout childhood as there are key fitness and skill components which children must be exposed to at certain ages in order to enhance their athletic potential.

The charts below will be explained in further detail via workshops. The timeline of growth and maturation for children in sport is depicted and we can see how the training emphasis changes based on age – exactly like our programme and the various stages of development. In the example below, font size refers to importance as described e.g., in the 12-15 age bracket, a big emphasis is placed upon agility, speed, power, and strength. The development in fitness gained is subsequently and predominantly a result of both neurological and hormonal changes. However, it is still essential that we train and stress these physical qualities in our athletes. Coaches will be educated to have a good understanding of the below charts.

The YPD model for males. Font size refers to importance; light blue boxes refer to preadolescent periods of adaptation, dark blue boxes refer to adolescent periods of adaptation. FMS = fundamental movement skills; MC = metabolic conditioning; PHV = peak height velocity; SSS = sport-specific skills; YPD = youth physical development.

The YPD model for females. Font size refers to importance; light pink boxes refer to preadolescent periods of adaptation, dark pink boxes refer to adolescent periods of adaptation. FMS = fundamental movement skills; MC = metabolic conditioning; PHV = peak height velocity; SSS = sport-specific skills; YPD = youth physical development.

Reference: Lloyd, R. S., & Oliver, J. L. (2012). The youth physical development model: A new approach to long-term athletic development. *Strength & Conditioning Journal*, *34*(3), 61-72.

Appendix 2: Additional Games and Activities

Below are lists of fun games which help to expose our children to fundamental athletic positions. See video resources here (https://vins.ie/LTADVideos) and the science for sport exercise library here (https://app.scienceforsport.com/exercise-library). If you would like to know more about a particular game, activity, or exercise, please reach out and the LTAD group will explain all details for you.

Active Start & FUNdamental Games (ABCs, Physical Fitness, Strength, Jump/Landing)
- Bridges and Rivers
- Stuck in the Mud
- Toilet Tag
- LeapFrog Tag
- Shark Attack
- Rocket Ship
- Farmers Tag
- Crocodile Tag
- Traffic Lights
- Walk like an animal-bean bag
- Monkey Tails
- Cups and Saucers
- Traffic Lights
- Ice Warriors

Balloon Exercises
- Keepie up
- Crab walk with balloon between legs, Crab walk keepie up
- Partner volleyball All 4s or crabs
- Croc tags keep balloon, varying from sitting position to standing
- Balloon between knees jumping
- Squat Reach
- Balloon Tap in plank position
- Plank walk with balloon in between legs

Partner Resistance Exercises
- Plank position high fives to your partner
- High High Fives
- Shake hands!
- Knee Touches
- Face Tap
- Duck Wars
- Grab bean bag in middle
- Slide bean bag to your partner
- Hockey goals
- Single leg balance bean bag toss, balloon volleyball
- Slimy Slug

Appendix 3: Glossary of Terms

Acronym	Meaning
Ankling	A running technique drill designed to emphasize short ground contact time, and practice proper foot placement under your hips.
Band Push Pull (Pallof Press)	**The Pallof Press,** named after physical therapist John Pallof, is a fantastic exercise for athletes for two primary reasons: Athletes are often looking for ways to create more rotational power, which is the type of strength you use when you swing a hurley. Specifically, it trains what is called **'anti-rotation'** – the ability of the trunk to resist a rotational movement, thus leading to greater stability and force production via the trunk.
Fartlek	Periods of fast running intermixed with periods of slower running (Continuous training with interval training).
FITT Principles	Organising training or drills via - Frequency, Intensity, Time, Type.
MAS	Maximal Aerobic Speed. Minimal running velocity at which V02 max occurs – the lowest speed at which maximum oxygen uptake occurs. To find an athlete's MAS score, perform a 1 KM test. The test will determine your MAS score by dividing the distance in metres by the time in seconds. Running distances may be prescribed based on MAS scores.
Med-ball	Medicine Ball – implement for resistance training.
RAMP	RAMP - Raise, Activate, Mobilise, Potentiate
Shuttles	Continuous running back and forth between line markers at a certain pace and varying degrees of intensity, duration, and distance. Shuttle tests can be used to evaluate an athlete's speed and agility under aerobic and/or anaerobic strain.
Tempos	Anaerobic threshold or lactate-threshold running. Steady-paced effort level (70% effort). Passive or active rest intervals may be included. Aerobic running with a higher running speed than MAS running due to longer rest periods. Fluid, rhythmic and relaxed during repetitions to improve efficiency and running technique.
Waiters Bow	An imaginative external cue used to demonstrate an effective hip hinge movement – A polite waiter would bow to the table – bending from the hip, keeping knees slightly bent and back flat.
Yo-Yo	The Yo-Yo test is a maximal aerobic endurance fitness test, involving running between markers placed 20 meters apart, at increasing speeds, until exhaustion.

Appendix 4: References

Reference Acronym	Source
Lloyd and Oliver (2012)	https://journals.lww.com/nsca-scj/Fulltext/2012/06000/The_Youth_Physical_Development_Model__A_New.8.aspx
O. Fred Donaldson	Designing the class as a game to promote active learning in K-12 education: A literature review, October 2016, Conference: AECT, Las Vegas

Appendix 5: Fitness Testing Examples

Fitness testing protocols can be carried out at any stage of development. Young children are usually tested for clinical research purposes. However, in a sporting environment like ours, fitness tests should only be carried out from the latter end of the 'Learning to Train' stage and should only be minimally introduced.

Note: The key physical literacy skills should be developed and ascertained before beginning to test performance. Simple to complex, extensive to intensive. Build a fundamental base before thinking about performance. This is the framework which our entire athletic development philosophy is leveraged – empowering the athlete. When we create high levels of engagement and enjoyment in the early stages, we tend to maximise player retention, resulting in positive and healthy outcomes for both the club and the athlete.

Below are some simple examples of fitness testing protocols which can be used to assess various components of fitness. If a coach wishes to conduct any of these testing procedures with their athlete(s) during the year, please contact the LTAD working group so a team member can explain the details of each test to ensure a successful test is completed. Testing measures must have good predictive validity – the test accurately measures what it is supposed to measure. The environment must be consistent and any potential variables which could affect testing results must be managed e.g., bad weather or a wet surface could affect the performer in the test resulting in inaccurate and worthless data.

Aerobic Capacity Fitness Test
Cooper 6-minute run test (as many laps of a junior GAA pitch as possible in six minutes).
Yo-Yo Level 1 Intermittent Recovery Test.
Time Trials (1km)

Anaerobic Capacity Test
300-yard shuttle test.
Two cones placed 25m apart. Athlete must sprint 2x25m x6 repetitions = 50m x6 repetitions = 300 total yards. They rest for 5 minutes and repeat. The average time of the two trials is then recorded. An athlete with efficient anaerobic capacity will show little difference in scoring between the two tests.

Muscular Endurance & Stability Tests
Maximum Repetition Bodyweight Push Ups.
Maximum Repetition Bodyweight Squats.
Maximum Time Front/Side Plank.
N.B – Proficient technique must be achieved in the above before testing.

Lower Body Power
Broad Jump or Counter-Movement Jump – Explosive lower body movement to measure strength, power, and readiness.

Flexibility

Sit and Reach Test - the sit and reach test is a common measure of flexibility, and specifically measures the flexibility of the lower back and hamstring muscles (posterior chain of the body).

Speed (15 metres)

Sprint speed across 15 metres (timing gates or stopwatch).

Agility

Pro-Agility / Agility 505 – Assess a player's quickness and ability to change directions, which are fundamental skills for success.

Recommended: See **Science for Sport** website for in-depth details of physical performance testing - https://www.scienceforsport.com/articles/

Balance Error Scoring System (BESS)

Deficiencies in balance and stability have been shown to increase the risk of lower extremity injuries. Tests such as the balance error scoring system (BESS) can be used to evaluate an athlete's balance and stability. Poor performance on such a test can indicate the need to emphasize these areas in the athlete's training program.

To perform the BESS, athletes stand in various positions while keeping their hands on their hips and their eyes closed. Athletes are instructed to attempt to maintain their balance in each position for 20 seconds, once on a stable surface and once on an unstable surface. The three positions are:
•   Feet together
•   Single leg stand
•   Heel to toe stance (with the dominant foot forward)

Appendix 6: Post-Exercise Nutrition & Recovery

Good quality post exercise nutrition is essential to kickstart an athlete's recovery from strenuous activity and subsequently, get the body ready to the next training session. It is very important for athletes to have a protein and carbohydrate rich meal post training to prevent breakdown of muscle protein, replenish glycogen (the fuel in our body), and promote tissue repair. Glycogen stores are depleted during training and can break down muscle tissue, especially prolonged endurance training. Consuming carbohydrates (CHO) post-training can help replenish glycogen stores (energy stores) in our muscles, which also helps prevent further the breakdown of muscle proteins to be used for energy. Consumption of protein will help promote the repair of tissue that was broken down during training.

Post-competition meals help athletes rehydrate, replenish glycogen stores, and repair muscle tissue. In addition, post-training or post-competition consumption of protein and carbohydrates can also help prepare the body for the next training session or competition. Exercise or competition drains the body of electrolytes and glycogen stores and tears up muscle tissue. This is why post-exercise supplementation of proteins and carbohydrates are vital to the body's recovery.

Players should aim to consume at least 20 grams of protein in their post-training meal or recovery shake. They should also aim to include a good source of carbohydrate in their post-training meal to replenish their energy stores in addition to drinking plenty of water (1.5 litres for every 1kg of body mass lost during exercise). **Good quality sleep and food**, stretching and other recovery methods that the player finds beneficial would be also good for helping them to recover from intense training.

Four R's of Recovery: **Rehydrate, Refuel, Rebuild and Rest** (Water, Carbohydrate, Protein).

This document is available in softcopy (pdf) here

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FERRO COMITANTE

St. Vincents Hurling, Gaelic Football and Camogie Club

LONG TERM ATHLETIC DEVELOPMENT PATHWAY

MAY 2021