



Tennis Australia Athlete Development Matrix

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Introduction

The purpose of this matrix is to provide a framework / competencies for all those involved in delivering the game of tennis at all levels across the country.

The Athlete Development Matrix has been produced based on empirically and scientifically relevant information which indicates when certain competencies may be best developed. The matrix looks to develop the individual by covering the tennis specific components of technical, tactical, physical and psychological areas of the sport, whilst intertwining the components of social, parental, educative and competitive experiences. These eight components of development have been chosen to guide the development of the child / athlete holistically.

While the matrix is very extensive, it has been designed to guide you in understanding the key skills to be developed at the different stages and to assist you in developing a pathway of development for your children / athletes.

In particular, the Athlete Development Matrix will help:

- Make tennis enjoyable for the participant
- Develop a pathway of development
- Foster the development of great people who play this great game
- Recruit and retain athletes within your programs
- Implement appropriate activities for the appropriate skills and age levels
- Understand a child's development in relation to their skills

Australian tennis has a rich history in professional tennis and tennis participation; we would not be able to achieve this without your wonderful support and dedication to our great game.

As custodians we must continue to deliver tennis in a way which will encourage participants to develop a love for this wonderful sport and to have life-long involvement.

The following outlines the six different stages of the Athlete Development Matrix:

- **EXPLORE** (4 - 7 years)
- **DEVELOP** (7 - 10 years)
- **ENCOURAGE** (10 - 12 years)
- **ENHANCE** (12 - 15 years)
- **CULTIVATE** (15 - 17 years)
- **PERFORM** (17+ years)

As mentioned previously the eight components of the matrix have been chosen to guide the development of the child / athlete holistically. Each one of these areas is critical to the development and although each one may be more critical at a certain point of development, each one contributes to the overall development.

The following outlines the eight different components which accompanies the six stages of the Athlete Development Matrix:

- **PHYSICAL DEVELOPMENT**
- **TECHNICAL DEVELOPMENT**
- **TACTICAL DEVELOPMENT**
- **MENTAL DEVELOPMENT**
- **SOCIAL DEVELOPMENT**
- **PARENTAL ROLE & SUPPORT**
- **EDUCATION**
- **COMPETITION / TOURNAMENTS**

EXPLORE (4 - 7 years)

Physical development

Locomotor Skills

Refine basic locomotor skills such as jumping, hopping, skipping, side-stepping, and running.

- Able to run efficiently, with eyes forward, head level and up, and arms dictating speed of legs.
- Able to jump for distance and height, aided by the use of a coordinated arm swing, and then land safely.
- Capable of jumping and hopping over small distances in multiple directions (i.e. forward, backward and to the side) with right and left legs. Player should be well balanced on landing and not require hands or 'swing leg' to touch the ground.
- Able to side-step to the left and right, and also transition into a run.
- Able to skip rhythmically.
- Able to transition from one locomotor pattern (i.e. run) to another (i.e. jump).

Fundamental motor skills

Finetune single-handed throwing, catching and striking.

- Capable of throwing overarm, with their preferred arms, to locations over short distances (=10m), and for distance. Technique should be driven by trunk rotation and not purely elbow extension.
- Able to throw underarm to location over very short distances (=5m), using both right and left arms.
- Able to catch with two hands, and with their preferred hand, over very short distances.
- Able to strike balls - rolling and bouncing - with implements (supported by both two-handed and one-handed grips) to the right and left.

Physical proficiency abilities

Improve coordination, body awareness and balance. Enhance movement frequency.

- Able to coordinate hand-eye and foot-eye relationships in the three planes of motion.
- Able to maintain balance on different bases of support (i.e. straight leg, bent leg, and when seated).
- Capable of adjusting posture to assume most stable positions.
- Able to control body in air and in controlled manner (i.e. during/after a jump/hop); landing, ready to change direction.
- Able to perform repetitive upper- (i.e. bouncing balls) and lower-body (i.e. foot tapping) actions at high speed.
- Able to throw, catch or pick up balls while running.
- Able to adjust running speed to intercept, strike or catch.

Flexibility

Players are introduced to basic principles of stretching.

- Able to control trunk and limbs in performing upper and lower-body dynamic stretches/mobility exercises.
- Understand that mobility exercises help to ready the body to play, have fun.
- Able to perform light static stretching as part of a cool-down.

Speed/Agility

From 6, an opportunity presents to realise significant improvements. There will also be some performance transfer from improved physical proficiency.

- Able to accelerate from a variety of start positions (i.e. standing still, staggered stance, lying down).
- Increasingly able to start and stop quickly. Able to change direction off either foot.

Strength

Bodyweight exercise and supports should develop strength endurance or maximum strength capabilities.

- Able to support bodyweight in climbing/swinging vertically and horizontally.
- Capable of performing sit-ups, cartwheels, (supported) handstands and (modified) push-ups.

Endurance

Although not overtly trainable, challenge aerobic metabolism through other sports characterised by a high level of physical activity.

Multi-sports/activity experience

Participation in a variety of sports and physical activity should be encouraged.

- Involved in gymnastics and dance (increase coordination, strength, and balance), and/or football, soccer and hockey (increase hand/foot-eye coordination, speed, and endurance), and/or athletics (increase locomotor and fundamental movement skills).

Footwork

Able to or visibly trying to position themselves up to and around the ball (i.e. cover the ball), particularly when moving forward.

Ancillary capacities

Understand to take fluid regularly, before, during and after practice.

Physical Activity Time (PAT)

30% or 2-4 hours tennis - 70% or 5-7 hours non-tennis.

Technical development

Core Characteristics

Developing a coordinated link between perception and action

- Able to judge and respond to different ball trajectories (high, low, short, deep).
- Able to respond to differential ball speeds.

Assumes sound support / hitting positions

- Able to use square and semi-open stances as appropriate, transferring weight from back to front foot.
- Maintains balanced, neutral shoulder-head alignment.

Uses acceptable grips

- Forehand: eastern forehand to semi-western.
- 1H Backhand: eastern backhand. 2H Backhand bottom hand in eastern backhand, top hand eastern forehand.
- Serve and net game: eastern forehand.

Acquires basic tennis technique

- Groundstrokes: Employs swings that are simple, compact, yet not restricted; with consistent contact points to the side and in front. Follow throughs are across the body and of appropriate length.
- Forehand and backhand volleys characterised by short strokes, racquet head being above the wrist, and a forward punch/block contact.
- Serve: able to use a simple overarm service action.
- Smash: able to contact ball from a side-on position and in line with front foot.

Tactical development

Core Characteristics

Implements basic singles tactics in all five game situations (serve, return, baseline play, approach the net, and passing the net player).

- Able to hit ball over and in (consistency).
- Able to move player (accuracy).
- Able to assume optimal court positions for contact and for competition.

Understands how to attack and defend, and ideally counter-attack.

Mental development

Motivation

- Intrinsically motivated.
- Visibly working on doing things well.
- Willing to solve problems and seek answers.
- Enjoys activity, has fun (which is primary reason for participation).

Concentration

- Able to direct attention to variety of stimuli.
- Able to create images through gameplay.

Control of thoughts

- Displays positive thinking and self-esteem in supportive environments.
- Experiences and enjoys technical, tactical and/or physical success.

Other psychological competencies

- Shows discipline through improved understanding of outcomes of different behaviours.
- Able to follow basic game rules and scoring.
- Demonstrates positive attitude toward learning.

Social development

Social development skills

- Able to interact with peers in a variety of different sports settings.
- Able to work with and help other players - co-operation in pairs and in a team.
- Enjoys interacting with / learning from a number of coaches or instructors.
- Able to work, cooperate and play with both boys and girls.
- Displays respect for other players and coaches.
- Understands and capable of fair play.

Parental role and support

Parental role and support tips

- Initially get their children interested in sport and allow them to sample a wide range of enjoyable activities without focusing on intense training.
- Provide opportunities and access to facilities where children can experience unstructured play (fun activities) and sport play.
- Emphasise the importance of school.
- Reinforce good behaviour and sportspersonlike conduct.

Education

Importance of education

- Enjoy school.
- Participate in school camps and excursions where possible.
- Actively involved in unstructured and sport play opportunities at school.

Competition and tournaments

Competition / Tournaments plan

- Actively participate and enjoy team/fun challenges.
- Able to enjoy competition against themselves, and then others, in simple scored games.
- Not yet exposed to organised, structured tennis competition.
- Participation in a variety of ball sport skills competitions.

DEVELOP (7 - 10 years)

Physical development

Locomotor Skills

Continue refinement.

- Able to move proficiently perform the basic locomotor skills such as jumping, hopping, skipping, side-stepping, and running.
- Able to coordinate upper- and lower-body during karioke steps and lunge variations.
- Able to transition in to and out of all locomotor patterns (i.e. side-step to run to side-step).
- Displays 100% effort most of the time.

Fundamental motor skills

Marked improvements in precision.

- Able of throw overarm, with their preferred arms, to locations over longer distances (>15m). Technique should be driven by trunk rotation, and internal rotation of the upper arm.
- Able to perform a single-handed catch (right and left hands).
- Able to strike balls - rolling, bouncing and projected - with implements (supported by both two-handed and one-handed grips) to the right and left.

Physical proficiency abilities

Coordination including balance, differentiation and rhythm should improve markedly. Enhance movement frequency and movement time.

- Able to differentiate actions between upper- and lower-body and right to left side.
- Displays improving rhythm (or timing) in all striking and movement tasks.
- Able to maintain balance on increasingly challenging bases of support (i.e. on toes, on unstable surfaces).
- Able to control body in air and in controlled manner when using at higher speeds (i.e. during/after a jump/hop). Landing as if ready to change direction.
- Able to perform repetitive upper- (i.e. bouncing balls) and lower-body (i.e. foot tapping) at higher speeds.
- Able to skip at high speed, with at least two footwork combinations.
- Able to move in response to a variety of sensory stimuli (i.e. predominantly touch and sound) as quickly as possible.

Flexibility

Able to perform basic static and dynamic stretches.

Speed/Agility

Improvements will be largely garnered through developments in running technique and physical proficiency.

Strength

Able to perform bodyweight exercise and supports to develop strength endurance capabilities.

Power

Able to perform sidearm and overarm throws of an appropriately weighted and sized medicine ball.
Able to jump and hop repetitively with control.

Endurance

Able to compete in other sports characterised by a high level of physical activity for up to 30 minutes without getting overtly fatigued.

Multi-sports/activity experience

As from 4-7 years.

- Involved in gymnastics and dance (coordination, strength, and balance), and/or football, soccer and hockey (increase hand/foot-eye coordination, speed, and endurance), and/or athletics (increase locomotor and fundamental movement skills).

Footwork

- Better able to position themselves up to and around the ball (i.e. cover the ball), particularly when moving forward.
- Increasingly able to synchronise footwork (i.e. split step) to incoming ball from the baseline and on return of serve.
- Able to maintain or regain own position on baseline after executing serves, returns and groundstrokes from different court positions.

Ancillary capacities

- Able to distinguish between healthier food options.

- Able to take fluid regularly, before, during and after practice.

Physical Activity Time (PAT)

7-8 year olds - 40-50% or 4-5 hours tennis & 50-60% or 5-7 hours non-tennis; 9-10 year olds - 50-60% or 7-9 hours tennis & 40-50% or 5-7 hours non-tennis

Technical development

Core Characteristics

Developing a coordinated link between perception and action

- Able to judge and respond to different ball trajectories (high, low, short, deep) from all areas of the court.
- Able to adjust and respond to differential ball speeds and spins.
- Attempts to take balls on the rise as often as possible.

Assumes sound support / hitting positions

- Able to use open and semi-open stances.
- Able to hit off different supports (i.e. particularly back leg and two legs) but still largely endeavour to transfer weight forward.
- Integrates greater horizontally leg drive (transfer of weight forward) in groundstroke production.
- Maintains balanced, neutral shoulder-head alignment.

Swing and ball control

- Able coordinate racquet trajectories to apply observable slice and topspin to groundstrokes, and slice to serves.
- Demonstrates 'feel' in groundstrokes, volleys and overhead in mini-tennis settings.
- Improving racquet-ball handling through control of basic half-volley and drop shot swing patterns.

Uses acceptable grips

- Forehand: eastern forehand to semi-western.
- 1H Backhand: eastern backhand. 2H Backhand: bottom hand in eastern backhand, top hand eastern forehand.
- Serve and net game: eastern forehand to continental.

Acquires stroke fundamentals such that foundation for quality stroke production is laid

- Able to serve wide, to T, and body on both sides (i.e. ad and deuce), with an action that is rhythmical and co-ordinated, possesses a high contact point, and a follow through across body.

- Use of a small knee bend can be incorporated after the basic action has been learned. Able to impart some slice with the serve.
- Able to hit forehands characterised by a smooth action with shoulder turn, racquet positioned at a comfortable distance for the player, preferential use of a semi open stance. Forward swings should be simple, from low to high, with a consistent contact point to side and in front, and a longer follow through dependent on ball hit.
 - Able to hit 1H backhand using a shoulder turn to activate a long rhythmical stroke with a looped take back where both arms work together. A square stance should feature and the player should rotate forward to contact in line with but to the side of the front foot. The follow through should be above shoulder height and toward the centre of the court.

Acquires stroke fundamentals such that foundation for quality stroke production is laid

- Executes 2H backhands using a compact action with a usually straight or looped take back, evident trunk rotation, arms close to the body, more prominent use of the top hand, and the front foot angled down court. Players load on back foot transferring weight to the front foot through contact.
- When returning serve, able to direct ball down-the-line and cross-court, with forehand and backhand, on both sides, and assume good court position (i.e. near the baseline) and complete the necessary positioning skills.
- Able to volley with a short stroke, the racquet head above the wrist, sufficient trunk rotation and footwork, bodyweight moving towards the ball, and a forward punch/block contact with the racquet head moving from high to low. Reliance on hitting backhand volleys with two hands should be reduced.
- Smash: able to move to contact ball in a side-on position and in line with front foot. Consistently able to direct the ball into the court.
- Able to pass with a drive or lob.
- Able to execute basic shape and consistent contact points in backhand slice and drive volley.

Tactical development

Core Characteristics

Implements basic singles tactics in all five game situations.

- Proficient at hitting the ball over and in (consistency).
- Able to move player (accuracy) using both width and length of the court.
- Tries to maintain and re-assume a ready position just behind or in front of the baseline.

Able to execute simple attack, defend and counter-attack.

Able to construct points by understanding cause and effect relationships between.

- What is likely to happen when balls are hit to certain parts of the court?
- Taking the ball early and the pressure imposed on an opponent.
- The need to play specific sequences of shots to achieve desired outcomes.

Understands different players' roles and concept of team play in doubles.

Play in five games situations

Serve

- Able to direct ball to locations that trouble or make their opponent move.

Return-of-serve

- Able to return to challenge opponents' movement or court position.
- Proficient in creating deep or short angles from wide serves.

Baseline play

- Capable of keeping ball in play but also deep in opponent's court during baseline exchanges.
- When rallying can move opponents along the baseline by hitting accurately.
- Identifies and successfully executes opportunities to hit higher and deeper balls to maintain good court position but also to put opponents under pressure.

Approach the net

- Able to hit earlier balls and move forward.

Passing

- Chooses to pass with a drive but more frequently lob (due to lack of power and spin).

Mental development

Motivation

- Intrinsically motivated.
- Visibly working on doing things well.
- Willing to solve problems and seek answers.
- Enjoys learning and playing, has fun (which still very much drives participation).
- Displays 100% effort most of the time.
- Able to set simple goals.

Concentration

- Adjusts attention to variety of stimuli.
- Creates more specific images through game play.

Control of thoughts

- Displays positive thinking and self-esteem in supportive environments.
- Experiences and enjoys technical, tactical and/or physical success.
- Tries to implement what has been practiced in game-play.

Emotional Control

- Able to relax through games and activities.
- Able to enjoy activity, regardless of outcome.

Other psychological competencies

- Shows discipline through further understanding of outcomes of different behaviours.
- Follows basic game rules and scoring.
- Demonstrates positive attitude toward learning.
- Familiar with Grand Slams and Davis and Fed Cups.

Social development

Social development skills

- Able to interact with peers in a variety of different sports settings.
- Able to co-operate in pairs and teams.
- Able to and enjoy interacting with / learning from a number of coaches or instructors.
- Able to work cooperate and play with both boys and girls.
- Displays respect for other players and coaches.
- Understands and capable of fair play.
- Able to identify role model sportspersons.

Parental role and support

Parental role and support tips

- Provide opportunities and access to facilitates where children can experience unstructured play (fun activities) and sport play.
- Emphasise the importance of school.
- Place winning and losing into a healthy perspective.
- Continue to encourage children to participate in a variety of sports and other physical activities.

- Reinforce good behaviour and sportsperson-like conduct.

Education

Importance of education

- Understand that school is a priority throughout their childhood and adolescent lives.
- Participate in school camps and excursions where possible.
- Actively involved in sport play at school.
- Participate in school sports carnivals / inter-school sports.
- Displays sizeable specific sports knowledge.

Competition/Tournaments

Competition / Tournaments guidelines

- Actively participate and enjoy team/fun challenges and round robin tournaments.
- Able to compete against boys and girls in most activities, and particularly in doubles.
- Presented with the opportunity to participate in, on average, 2 hours of competition per week.
- Compete in 6-8 tournaments annually, playing ~ 3 'matches' per tournament such that players experience both positive and negative outcomes.
- Per year, children should play around 15 singles and 25 doubles matches.
- No age group ranking lists or national championships exist.

ENCOURAGE (10 - 12 years)

Physical development

Locomotor Skills

Refine basic locomotor skills such as jumping, hopping, skipping, side-stepping, and running.

- Able to perform acquired locomotor skills at higher speeds, while maintaining correct form.
- Displays improving coordination and fine motor control in all movement patterns (i.e. during ladder work).

Fundamental motor skills

- Able to throw overarm accurately at high speed and for distance.
- Displays athleticism in single-handed catch (right and left hands) of tennis balls and frisbees. Able to land safely when required to jump or dive.
- Able to strike balls to position, in virtually a 360° arc.

Physical proficiency abilities

- Able to differentiate high-speed actions between upper- and lower-body and right to left side.
- Displays excellent rhythm (or timing) in all striking and movement tasks.
- Able to maintain balance on increasingly challenging bases of support (i.e. on toes, on unstable surfaces).
- Able to control body in air and in controlled manner at higher speeds (i.e. during/after a jump/hop), landing as if ready to change direction.
- Able to skip at high speed, with at least three footwork combinations.
- Able to move in response to a variety of sensory stimuli, most particularly sight and sound, as quickly as possible.

Flexibility

- Follows structured static and dynamic stretching routines that address all important muscle groups.

Speed/Agility

Prior to peak height velocity (PHV), trainability heightens.

- Able to pivot in any direction and accelerate similarly off right and left leg.
- Visibly improving acceleration over 5-10 metres.
- Maintains stable balanced posture when cutting or changing direction.
- Realises improvements in agility and speed fitness test scores.

Strength

Integration of base muscle endurance and control as a precursor to periodised, individualised strength training and injury prevention. Improvements in core control and strength a priority.

- Able to perform a variety of modified but preferably full bodyweight exercises with correct form.
- Able to perform and stabilise themselves in increasingly challenging (i.e. complex) exercises and postures.
- Demonstrates sound core control and strength (sensitive to development).
- Able to follow specific strength and injury prevention programs and are attuned to (somatic) feedback.

Power

- Able to jump, hop and throw repetitively with control.
- Display increasingly short catch-release time in sidearm medicine ball throws. Able to coordinate trunk and lower and upper-bodies when throwing for distance.
- Prioritises and visibly improves horizontal jumps (single and consecutive standing) for distance.

Endurance

Able to compete in other sports of extended duration (i.e. = 40 minutes) and three set matches without fatigue visibly impairing performance.

Multi-sports experience / Cross training

Participation in sports that may transfer more directly to improved on-court performance.

- Participates in football, soccer and hockey (increase hand/foot-eye coordination, speed, and endurance), athletics (increase locomotor and fundamental movement skills), and/or cycling (increase lower body power, endurance).

Footwork

- Able to cover balls in all court locations.
- Able to synchronise footwork (i.e. split step) to incoming ball from all court positions and situations.
- Effectively employs specific recovery movement patterns depending on point situation.
- Able to move to use best shot on the 2nd serve return and during rallies.

Fitness testing / Screening

- Performs a battery of tennis-specific field tests at least twice annually.
- From 12, participates in a physiotherapy screening annually.

Ancillary capacities

- Familiar with all ancillary capacities. Understands the role of warm-up and cool-down.
- Understands that different physical skills can be developed at different times (i.e. periodisation).
- Practices proper hydration pre, during and post-match.
- Identify appropriate quantities and types of food for a healthy diet.

Physical Activity Time (PAT)

60-65% or 10-12 hours tennis - 30-35% or 6-8 hours non-tennis.

Technical development

Core Characteristics

Refining a coordinated link between perception and action.

- Able to perceive and use cues related to player's court position and racquet preparation/swing.
- Responds earlier to differential ball speeds and spins.
- Takes or visibly working on taking a larger number of balls on the rise.
- Able to volley consistently in short volley exchanges.

Assumes sound support / hitting positions.

- Able to adjust stance according to tactical intention and grip.
- Able to hit off all supports (i.e. two feet, back foot, front foot, outside foot, inside foot), using their feet's interaction with ground favourably.
- Employs aggressive horizontal leg drive, with increasingly vertical component in groundstroke and serve production.
- Maintains balanced, neutral shoulder-head alignment.

Swing and ball control.

- Able to generate sufficient racquet head speed and trajectory to create crosscourt angle from on, behind, and in front of the baseline.
- Able to adjust racquet trajectories to hit with varying amounts of topspin / slice. Capable of flattening out a stroke.
- Able to hit through as well as around (i.e. angled groundstroke) and across (i.e. high 1H backhand) the ball.
- Displays improving control of half-volley and drop shots.
- Able to direct them to variable court widths.

Uses acceptable grips.

- Forehand: semi-western.
- 1H Backhand: eastern backhand. 2H Backhand: bottom hand in eastern backhand to eastern forehand, top hand eastern forehand.
- Serve and volleys: continental. (High FH and BH volley may shift to eastern forehand and eastern backhand respectively).

Able to sequentially and dynamically rotate segments (i.e. to derive benefits from musculotendinous storage of elastic energy).**Utilises appropriate segment rotations, introducing potentially more degrees of freedom, to enhance stroke production (i.e. differentiation of internal rotation and horizontal adduction in the forehand).****Stroke technique should allow for future development of power, possess no major weakness and present two potential (stroke or movement) weapons.**

- Able to serve with increasing spin, especially on the second serve. Displays increased rotation of hip and shoulders, amplified knee bend to help rotation and co-ordination. Lands on the front foot. Able to place serve to T, body and wide in both courts.
- When returning, assumes a good court position for both serves and performs necessary footwork to optimise impact position. Able to return deep to either side, short angled to either side. Able to efficiently adjust to body serves and employ a compact swing pattern for faster serves.

Core Characteristics

- Able to hit forehands using a still smooth but increasingly dynamic stroke. Able to employ a variety of stances, and coordinate increased lower body drive and trunk rotation. Uses a compact looped backswing, transitioning to a low to high forwardswing, with the contact point increasingly specific to grip but still in front and to the side. Longer follow-throughs with actual finish points determined by the type of shot. Able to move around backhand and effectively use topspin.
- 1H Backhand: Employs a looped take-back with both arms working together. Shoulder rotation should precede backward movement of racquet, with an observable separation angle at the end of backswing. Forward rotation should be characterised by trunk rotation and an unwinding of the arm (through abduction and extension) to provide a contact point in front and aligned to the side of the front foot. The follow through should be over shoulder height and out in front.
- 2H Backhand: Able to use a straight or looped take back, and drive racquet speed with observable trunk/shoulder rotation. Front foot should be angled down the court.
- Able to volley with a short stroke, the racquet head above wrist, observable trunk rotation, coordinated footwork with bodyweight moving towards ball, and a forward punch/block contact.

Core Characteristics

- Able to play one-handed backhand volleys.
- Able to play a BH slice, controlling the racquet head at impact and using the non-racquet arm to help maintain and consistent swing-path.
- Smash: Able to coordinate footwork to move forward, backward and to the side to contact ball overhead and out in front. Able to perform basic jump from back leg to front leg (i.e. scissor action) in moving backwards.
- Increasingly proficient at passing with a drive or lob. Able to play both offensive and defensive lobs.
- Demonstrates improved precision and consistency in drive volleys and drop shots. Able to execute basic shape of a backhand smash.

Tactical development

Core Characteristics

Builds on basic singles tactics in all five game situations.

Able to attack, defend, and counter-attack in and from a variety of game situations.

Able to construct points by understanding

- What they do well and uses those strengths accordingly. Able to move to maximise opportunities to use their weapon.
- Opponents have weaknesses. Able to exploit them.
- The continued need to play specific sequences of shots, and potentially adapt those sequences, to achieve desired outcomes.

- The benefits of playing the ball early rather than just trying to hit hard.

Develops tennis intelligence

- Able to distinguish between strategy and tactics.
- Knows how to pressure by position.
- Adapts to play on different surfaces.
- Able to map out and execute a specific game plan.
- Able to perform basic match analysis.

Play in five games situations

Serve

- Able to create an increasing number of problems for the opponent with the serve.
- Able to direct serve to position with a view to playing a specific second shot.
- Able to perform a basic serve and volley movement pattern.

Return-of-serve

- Able to anticipate returns based on cues like ball toss.
- Proficient in opening the court off wide and T serves.
- Chooses to vary the pace / spin of the return.
- Able to plan and implement different two-shot combinations (i.e. big X).
- Uses best groundstroke (i.e. weapon) to take point control on second serves.

Baseline play

- Able to open the court when hitting crosscourt, and accelerate down-the-line. Able to make appropriate decision (based on perception and/or anticipation) regarding when to change direction of a crosscourt exchange.
- Able to maintain attacking position on the baseline but can adjust court position based on opponent's displacement.
- Selects appropriate times to vary rally tempo.

Approach the net

- Understands when to vary approach shots with slice and/or drive (i.e. with respect to ball height/speed, opponent position, ...)
- Tries to play balls increasingly early, attacking mid and 3/4 court balls, including those of shoulder-height.
- Understands that first volley does not necessarily have to be winner.

Passing

- Makes better decisions regarding the use of drives or lobs based on their as well as their opponent's court position.

Doubles

- Able to move quickly to the net and into appropriate position after a weak serve.
- Chooses to vary the return (i.e. short crosscourt, lob, ...)
- Able to decide and implement poach when both teams playing one up-one back

Mental development**Motivation**

- Intrinsically motivated.
- Shows pride in performance.
- Willing to solve problems and seek answers.
- Enjoys learning and playing, has fun (which remains the primary motive for participation).
- Displays 100% effort, and the determination to fight and successfully execute each shot or intention. Shows the desire to impose their strengths on an opponent.
- Able to set measurable performance-related goals with a time-frame (i.e. short-term, intermediate and long-term).

Concentration

- Able to focus when confronted with potential distractions.
- Starts to use rituals and routines between points and games.

Control of thoughts

- Displays positive thinking and self-esteem in supportive environments.
- Experiences and enjoys technical, tactical and/or physical success.
- Tries to implement what has been practiced in game-play.
- Uses self-talk to facilitate skill acquisition/refinement, and concentration.
- Maintains positive body language on-court. Uses power walk.

Emotional Control

- Able to enjoy activity, regardless of outcome.
- Learns to deal with tension and environmental influences on performance during match play.
- Beginning to use strategies like breath control on-court.
- Able to manage mistakes on-court through effective mistake management routines.

Other psychological competencies

- Possesses self-discipline. Well-behaved in match play and practice.
- Demonstrates positive attitude toward learning.
- Displays sizeable specific sports and tennis knowledge.
- Able to distinguish between effort and ability. Understand the relationship between effort and outcome.
- Displays greater understanding of what is required in committing to tennis.
- Developing independence through self preparation for matches (i.e. own warm-up and stretching).
- Coachable

Social development

Social development skills

- Able to interact with male and female peers and adults in a variety of different sports settings and at tournaments.
- Proficient at working in pairs and as a team toward common goals.
- Able to and enjoy interacting with / learning from a number of coaches or instructors.
- Able to participate in a large number of social events outside tennis.
- Able to display tenderness, admiration and appreciation.
- Understand the influence of the peer group on values and attitudes.
- Respect family values.
- Displays respect for officials, coaches and other players.
- Understands and capable of fair play.
- Able to identify role models that are tennis players.
- Progressively copes with the changes that accompany puberty.

Parental role and support

Parental role and support tips

- Provide opportunities and access to facilities where children can participate in a variety of sports.
- Emphasise school and sport achievement.
- Keep winning and losing in a healthy perspective.
- Positive, yet realistic, in their belief of their child's talents.
- Support any decision to continue to be involved in selected sports, but do not pressure children into specialising in tennis.
- Reinforce good behaviour and sportsperson-like conduct.

Education

Importance of education

- Understand that education is a priority throughout their lives.
- Participate in school camps and excursions where possible.
- Actively involved in sport play at school.
- Participate in school sports carnivals / inter-school sports.
- Able to identify role sportspersons that have achieved academic and sporting success.
- May develop an interest in a second language.
- Receptive to teachers and coaches that create positive environments in which skills can be developed and flow experienced.

Competition/Tournaments

Competition / Tournaments Guidelines

- Actively participate in 'feed-in' and some 'knock-out' tournaments.
- Age-group competitions will become increasingly gender-specific.
- Presented with the opportunity to participate in, on average, no less than 3 hours of competition per week.
- Compete in 10-15 tournaments (comprising 2-3 National; 5-7 State; 2-3 International; 2-3 Team/Club) annually.
- Per year, children should play 35-45 singles and 15-25 doubles matches.
- Players should only play up when they have the very real prospect of experiencing victory.

ENHANCE (12 - 15 years)

Physical development

Locomotor & fundamental movement skills

May need to revisit some of the earlier competencies during potential periods of 'adolescence awkwardness'.

Physical proficiency abilities

- Maintains balance on challenging bases of support (i.e. on unstable surfaces) and on all court surfaces.
- Displays excellent rhythm.
- Able to control body in air and in controlled manner at higher speeds (i.e. during/after a jump/hop), landing as if ready to change direction.

Flexibility

- Follows increasingly individualised static and dynamic stretching routines that address all important muscle groups.
- Able to implement active and passive static stretching techniques, and as growth begins to slow (i.e. post peak height velocity) PNF stretching.
- Able to perform self-administered stretching sessions.

Speed/Agility

Regularly integrated as part of warm-ups.

- Able to move efficiently at high speeds in a linear, lateral and multi-directional (i.e. agility) fashion.
- Maintains stable balanced posture when cutting or changing direction at higher speeds, off right and left feet.

Strength

Strength training should intensify at or slightly after PHV. Injury prevention importantly addresses any imbalances or deficits in motor control.

- Able to perform single-joint and a variety of multi-joint exercises with appropriate resistances and correct form.
- Capable of safely performing appropriate (closed / open-chain) exercises using both machine and free weights. Able to perform exercises correctly with therabands and swiss balls.

- Able to follow an individualised resistance training program and work toward related goals.
- Demonstrates sound core (i.e. abdominal and lower back muscle) strength and shoulder/scapula control.
- Possesses or working to develop acceptable bilateral and antagonist: agonist strength ratios.

Power

Integration of base muscle endurance and control as a precursor to periodised, individualised strength training and injury prevention. Improvements in core control and strength a priority.

- Visibly improving vertical jumps and hops. Proficient at horizontal jumping and hopping progression.
- Generates higher velocities and covers larger distances in sidearm and overarm medicine ball throws.

Endurance

Coinciding with or after PHV, concerted endurance training is performed.

- Able to complete both specific on-court and off-court endurance training sessions aimed at elevating VO2 max.

Multi-sports experience / Cross training

Adds variety to training while also having specific physical transfer to performance. May be prescribed to facilitate recovery.

Footwork

- Able to cover all balls.
- Moves effectively to execute and recover from inside-out shots.
- Visibly improving movement and positioning through approach and to volley.

Fitness testing / Screening

- Perform a battery of tennis-specific field and laboratory tests at least twice annually.
- Participates in a physiotherapy screening annually.

Ancillary capacities

- Individually responsible for warm-ups and cool-downs.
- Able to follow individualised programming and periodisation for all physical abilities.
- Meets specific athlete dietary requirements, and follows individualised pre-, during and post-match nutrition and hydration strategies.
- With the help of the coach, able to develop strategies to recover mentally and physically from intense training and competitions.
- Monitors and is aware of significance of Peak Height Velocity, as well as opportunities or windows of trainability that present.
- Keeps daily training and well-being diaries.

General movement training

3 hours/week. Specific conditioning 1 hour on-court, 2 hours off-court.

Physical Activity Time (PAT)

12-13 year olds - 60-70% or 12-14 hours tennis & 30-40% or 6-8 hours non-tennis; 14-15 year olds - 65-75% or 16-20 hours tennis & 25-35% or 6-8 hours non-tennis.

Technical development**Core Characteristics****Cementing a coordinated link between perception and action.**

- Better able to perceive and use cues related to player's court position and racquet preparation/swing, and beginning process those related to body alignment.
- Responds earlier to differential ball speeds and spins.
- Takes a larger number of balls on the rise, off both sides and on returns.
- Able to hold shot and play behind moving opponent.

Assumes sound support / hitting positions.

- Adjusts stance according to tactical intention.
- Able to hit with increasing velocity off all supports (i.e. two feet, back foot, front foot, outside foot, inside foot).
- Visible increase in involvement of lower body in stroke production, especially vertically.
- Maintains balanced, neutral shoulder-head alignment.

Swing and ball control.

- Able generate appropriate racquet head speed and trajectory to create cross-court and inside-out angle from on, behind, and in front of the baseline.
- Able to adjust racquet trajectories to hit with varying amounts of topspin / slice. Capable of flattening out a stroke at higher speeds.
- Able to hit through as well as around (i.e. angled groundstroke) and across (i.e. high backhand, inside-out forehand) the ball with increasing topspin and speed.
- Displays improving control of half-volley and drop shots.
- Able to direct them to variable court locations.
- Able to hold court position and stance so as to experiment with swing paths to hit groundstroke half-volleys.

Uses acceptable grips.

Forehand: semi-western to western.

1H Backhand: eastern backhand. 2H Backhand bottom hand in eastern backhand to eastern forehand, top hand eastern forehand to semi-western forehand.

- Serve and volleys: continental. (High FH and BH volley may shift to eastern forehand and eastern backhand respectively).

Able to sequentially and dynamically rotate segments to derive benefits from musculotendinous storage of elastic energy, and increased lever length.

Able to optimise number and magnitude of segment rotations (i.e. degrees of freedom).

**Able to generate high racquet and ball speeds off of balls with no pace.
Possesses at least one weapon to dominate the point.**

Stroke technique provides for enhanced power development, and sound defence.

- Serve: Able to increase use of legs and trunk rotation. Displays fully developed co-ordination chain. Able to hit serves with increased slice and topspin. Capable of readying themselves quickly after the serve.
- Return of Serve: Displays visibly improving placement and preparation for the next shot. Able to use more open stance returns.
- Forehand: Able to generate or employ greater ground reaction forces and additional shoulder and hip rotation. Capable of loading on outside or back leg to drive forward/upward into the stroke. Exhibits balance and control in leaving the ground. Adjusts preparation to the situation with a variety of footwork options. Robust technique allows for consistent contact points when hitting balls on the rise.
- 2H BH: Able to use a shorter, higher preparation depending on grip. Employs preparation and stance appropriate to the situation. Displays consistent stroke pattern and loads increasingly on the back or outside leg to drive forward and upward.
- 1H BH: Better use of hip and shoulder rotation. Higher (amplified) backswing with improved leverage during the forwardswing. Preparation appropriate to situation.

- Volley: Able to volley for depth and angle. Able to cope with balls of different height and thus execute different racquet trajectories. Able to lower centre of gravity through active knee bend. Ensures contact point is out in front and to the side with the weight transferring forward. Exhibits good use of non-racquet arm to support a compact swing. Uses one-handed backhand volley.
- Smash: Able to smash to position. Able to coordinate footwork to move forward, backward and to the side to contact ball overhead and out in front. Able to perform a smash moving backward. Able to execute a backhand smash.
- Able to play BH slices at different speeds.
- Approach Shots Able to drive and slice approach shots from varying court locations.
- Able to play topspin forehand and backhand lobs on the run.
- Able to play drive volleys precisely (i.e. to different court widths).

Tactical development

Core Characteristics

Implements advanced singles tactics in all five game situations

Able to anticipate opponent's shot tendencies based on court position (particularly during baseline play).

Developing own game-style

- Able to better use own strengths
- Plays specific sequences of shots to achieve desired outcomes.
- Visibly tries to implement their own game-style irrespective of court surface.
- Able to attack, counter-attack and defend against various styles of play.

Displays improved decision-making

- Able to adapt during match play to (formulate alternate methods to) exploit weaknesses of an opponent.
- Plays percentages: chooses to use certain sequences of shots that give them the best chance to win the point.
- Chooses appropriate times to vary rhythm or lift tempo.
- Correctly decides to play behind opponents.

Exhibits developing tennis intelligence

- Able to actively analyse opponents during match play
- Able to map out and execute a specific game plan
- While developing a game style, recognises need to come up with 'plan Bs'
- Performs insightful match analysis
- Able to adept to different weather conditions
- Able to discount opponent's shot options based on certain technical limitations.
- Able to interpret basic match statistics.
- Begin to use video-based simulation training to facilitate decision-making.
- Understands court geometry.
- Understands value and need for sustained deliberate practice of all skills.

Play in five games situations

Serve

- Able to use serve to maximise chances of immediately using weapon.
- Uses serve and volley as a viable tactical option.
- Able to implement specific serve and second shot combinations when serves are directed wide, T and body.
- Beginning to disguise serve placement.

Return-of-serve

- Able to anticipate returns based on ball toss and some body cues.
- Plans and implements different two-shot combinations (i.e. big X). Uses best groundstroke (i.e. weapon) to take point control on second serves.
- Capitalises on opportunities to attack first and second serves.
- Appropriately decides to vary the pace / spin of the return.

Baseline play

- Able to open the court when hitting crosscourt, and inside-out, and correctly decide when to change rally/shot direction.
- Able to disguise drop shots.

Approach the net

- Correctly decides when to vary approach shots with slice and/or drive
- Able to hit mid-court and 3/4 court balls to different locations and move to net to finish the point (i.e. use specific 2 shot combinations).
- Selectively and correctly decides to hit first volley to position rather than to win the point. Able to set up and win points with two volleys.
- Better able to surprise opponent. Improved ability to synchronise and disguise 'sneak in' (i.e. after a good serve, groundstroke or drop shot that has opponent on the stretch).

Passing

- Makes better decisions regarding the use of drives or lobs.
- Able to disguise intent on passing shots (particularly lob).
- Able to implement two ball pass combinations.

Doubles

- Able to serve and volley to a plan.
- Able to plan and adjust return and second shot combinations.
- Able to decide and implement poach when both teams playing one up-one back
- Able to make appropriate decisions when playing against different combinations of opponents at the net.
- Understands and exploits advantages of serving with a high 1st serve percentage and playing down the middle.

Mental development

Motivation

- Intrinsically motivated.
- Shows pride in performance.
- Willing to solve problems and seek answers.
- Enjoys learning and playing.
- Displays 100% effort, and desire to impose their strengths on an opponent regardless of match score.
- Sets performance (short, medium and long-term) goals, centred on developing physical, technical, psychological or tactical skill. Also able to set and work to specific and measurable long-term outcome goals.

Concentration

- Uses specific concentration strategies in practice and in match play.
- Uses rituals and routines between points and games.
- Able to maintain or shift concentration when confronted with distractions (i.e. disputes with umpires, noisy crowd or practice environment, poorly-behaved opponents, ...)

Control of thoughts

- Displays positive thinking and self-esteem in supportive environments.
- Experiences and enjoys technical, tactical, physical or psychological success.
- Willing to try in game-play what has been practised with a view to achieving their performance goals.
- Uses visualisation to facilitate technical refinement but also 'mental toughness' and tactical skill.
- Maintains positive body language on-court. Uses power walk.
- Able to use cognitive reframing techniques (i.e. changing negative self-talk to positive self-talk).
- Displays positivity in sustaining a lead and works to overcome any fear of failure.

Emotional Control

- Better able to deal with tension and environmental influences on performance during match play.
- Able to control breathing patterns.
- Accepts mistakes are part of learning and is able to manage mistakes on-court through effective mistake management routines.
- Understands how arousal is linked to performance and able to use strategies to approximate optimal performance state.
- Follows on-court and off-court performance routines, using relaxation and visualisation techniques before, during and/or after practice and matches.
- Able to deal with any pressure associated with national and international competition.
- Able to prepare for different environments (i.e. heat, cold, altitude, rain, etc).

Other psychological competencies

- Self-disciplined. Well-behaved in match play and practice.
- Able to review performance.
- Demonstrates positive attitude toward learning and is generally optimistic.
- May show adaptive perfectionist tendencies but able to accept results and moves on.
- Possesses insightful analytic abilities. Understands gamestyles and match plans. Able to independently detect and correct performance mistakes.
- Capable of maintaining intensity of training without supervision.
- Displays greater commitment to tennis.
- Developing independence through self preparation for matches (i.e. own warm-up and stretching) and arrangement of own practices.
- Able to effectively manage time.
- Coachable
- Competitive
- Respects and does not under-estimate opponent's ability.

Social development

Social development skills

- Able to separate their own self-worth from their results in competition or their ranking.
- Male players recognise that female athletes may face a problem of femininity versus sport development.
- Female players recognise that male athletes may face problems relating performance to masculinity.
- Displays respect for officials, coaches and other players. Aware of posture and need to make eye contact with tournament officials and helpers.
- Enjoys and participates in other sports, social and academic activities outside of tennis.
- Able to give a post-match speech, thanking people and speaking positively about opponents.
- Shows sportsperson-like conduct.
- Displays sound interpersonal skills and appreciative of the resources required to achieve optimal performance.
- Feels team spirit and a sense of responsibility and belongingness in team competitions and doubles play.
- Beginning to display leadership skills.
- Respects cultural diversity.
- Progressively copes with the changes that accompany puberty.

Parental role and support

Parental role and support tips

- Support children's decision to specialise in tennis.
- Show great interest in child's sport.
- Keep winning and losing in a healthy perspective.
- Positive, yet realistic, in their belief of their child's talents.
- Content to have their children focus solely on school and sport achievement, alleviating any pressure on players to find part-time work.
- Assist children fight setbacks that hinder training progression.
- Make a financial and time commitment to their child.
- Aware of different modes of scholastic fulfillment (i.e. distance education).
- Help guide child in their potential involvement with player agents.
- Evaluates what's best for child's tennis and education. Agrees with coach/teachers as to merits of distance education vs continued schooling vs relocation.
- Reinforces appreciation of different cultures.

Education

Importance of education

- Understands that education is a priority.
- Participate in school camps and excursions where possible.
- Participate in school sports carnivals / inter-school sports.
- Learns more about sportspersons that have achieved both academic and sporting success.
- May pursue an interest in a second language (i.e. may enhance international junior tournament experience).
- From teachers, learn academic work ethic, ability to relax effectively, and separation of their sense of identity from tennis.

Competition/Tournaments

Competition / Tournaments plan

- Periodisation featuring peak performances (~3 per year) planned.
- Presented with the opportunity to participate, on average, ~4 hours of competition per week.
- Compete in 12-17 tournaments (comprising 4-5 National; 2-3 State; 4-6 International; 2-3 Team) annually.
- Per year, children should play 50-60 singles and 20-30 doubles matches.
- 33% rule should apply 33% of matches against weaker, comparable, and stronger opponents.

CULTIVATE (15 - 17 years)

Physical development

Locomotor skills

- Able to perform acquired locomotor skills at higher speeds, while maintaining correct form.

Fundamental movement skills

- Visibly improving throw, jump and hop for distance and speed.
- Able to maintain correct throwing, catching, jumping, and hopping under/with additional load.

Physical proficiency abilities

- Maintains balance on challenging bases of support (i.e. on unstable surfaces) and on all court surfaces. Able maintain balance on unstable surfaces with external load.
- Displays excellent rhythm (or timing) in all striking and movement tasks.
- Shows fully integrated and near optimal dynamic balance.
- Able to simultaneously coordinate most locomotor and fundamental movement skills.

Flexibility

- Undertakes an individualised stretching program on a daily basis.
- Able to implement - at appropriate times - dynamic mobility exercises, active and passive static stretching techniques, and PNF stretching. Understands neural desensitisation exercises and able to perform as instructed.
- Able to perform self-administered stretching sessions or participate in yoga or Pilates sessions, where appropriate.

Speed/Agility

Sensitive to improvements post PHV.

- Able to or visibly working to move efficiently at higher speeds in linear (particularly forward), lateral and multi-directional (i.e. agility) fashions.
- Able to run to set movement patterns on-court (i.e. in practise and in match play).
- Capable of maintaining movement form when using speed-resisted and -assisted training methods.

Strength (including injury prevention)

- Able to perform all single and multi-joint lifts with appropriate resistances and correct form.
- Capable of safely performing closed / open-chain exercises using both machine and free weights with increasing resistances. Able to perform exercises correctly with therabands, swiss balls, balance boards and the Pilates reformer with increasing loads.
- Able to coordinate Olympic lifts with appropriate loads.
- Able to follow an individualised resistance training program and beginning to have input into related goals.
- Maintains sound core (i.e. abdominal and lower back muscle) strength and shoulder/scapula control.
- Possesses or working to develop acceptable bilateral and antagonist: agonist strength ratios.
- Able to complete RM tests and work to RM ranges or %RM.

Power

- Visibly improving jumps and hops for distance and height.
- Generates higher velocities and covers larger distances in sidearm and overarm medicine ball throws.
- Capable of safely performing contrast or complex training sessions (i.e. loaded repetition followed unloaded repetition).
- Able to maintain correct form in performing loaded (through drop height or weight) plyometric exercise.

Aerobic endurance

- Able to complete both specific on-court and off-court endurance training sessions aimed at elevating lactate threshold and VO2 max.
- Able to use heart rate monitors and RPE scales to monitor workload.

Anaerobic endurance

- Able to tolerate lactate through repetitious high-intensity efforts on- and off-court.
- Able to use heart rate monitors and RPE scales to monitor workload.

Multi-sports experience / Cross training

Adds variety to training while also having specific physical transfer to performance. May be prescribed to facilitate recovery.

Footwork

- Able to more quickly cover and recover from all balls, especially inside-out shots.
- Uses feet to allow weapon to be consistently used from 66-75% of the baseline.
- Visibly improving movement and positioning through approach and to volley.
- Able to move and jump backward efficiently and effectively to both overhead and backhand smashes.

Fitness testing /screening

- Perform a full battery of fitness tests, including all appropriate laboratory or diagnostic tests, at least twice annually.
- Participates in annual physiotherapy screenings and regular medical check-ups. Receives frequent massage and physiotherapeutic treatment.

Ancillary capacities

- Individually responsible for warm-ups and cool-downs.
- Able to follow individualised linear and undulating periodisation for all physical abilities.
- Better understands and endeavours to implement concept of peaking and tapering.
- Meets specific athlete dietary requirements, and follows individualised pre-, during and post-match nutrition and hydration strategies. Understands and implements specific carbohydrate loading strategies.
- Able to make educated food choices when travelling.
- Able to implement strategies to recover physically (i.e. hot-cold treatments) from intense training and competitions and plane travel.
- Performs more sophisticated self-monitoring, especially of training workloads (i.e. heart rate, RPE scales).
- Keeps daily training and well-being diaries.

Physical Activity Time (PAT)

65-75% or 16-20 hours tennis & 25-35% or 6-8 hours non-tennis

Technical development**Core Characteristics****Linked perception - action coupling.**

- Able to perceive cues related to player's court position, racquet preparation/swing and body alignment.

- Responds earlier to differential ball speeds and spins.
- Takes a larger number of balls on the rise, off both sides and on returns.
- Able to better hold shot and play behind moving opponent (especially from inside-out / inside-in forehand set-up).
- Able to perceive and more quickly respond to high speed serves.
- Able to adjust shot in response to surprise approach to the net (i.e. serve and volley or poach in).

Assumes sound support / hitting positions.

- Automated stance-tactical intention relationship.
- Able to hit with increasing velocity off all supports (i.e. two feet, back foot, front foot, outside foot, inside foot).
- Optimises use of lower body in stroke production.
- Maintains balanced, neutral shoulder-head alignment.

Swing and ball control.

- Able generate appropriate racquet head speed and trajectory to create shorter cross-court and inside-out angles from on, behind, and in front of the baseline.
- Able to hit heavy topspin and slice shots and serves, as well as flatten out strokes at high speed.
- Able to create more acute angles by hitting through as well as around (i.e. angled groundstroke) and across (i.e. high backhand, inside-out forehand) the ball with increasing topspin and speed.
- Able to control half-volleys to all court widths and lengths and drop shots to all court widths.
- Able to hold court position and stance, hitting half-volley groundstrokes.

Uses acceptable grips.

- Forehand: semi-western to western.
- 1H Backhand: eastern backhand. 2H Backhand: bottom hand in eastern backhand to eastern forehand, top hand eastern forehand to semi-western forehand.
- Serve and volleys: continental. (High FH and BH volley may shift to eastern forehand: eastern backhand respectively).

Able to generate higher racquet and ball speeds off of balls with no pace.**Possesses at least one weapon to dominate the point.****Core Characteristics****Optimising stroke technique (i.e. adding velocity, adaptability to court surface and situation) to compete on the professional tour.**

- Possesses a powerful serve. Developed ability for all three trunk rotations to contribute positively to stroke velocity. Optimal use of legs. Able to hit serves with increased slice and 'kick'.

- Return of Serve: Generates increasing racquet head speeds and improved differentiation/use of block and drive returns. Better able to adjust body position to deal with body serves.
- Forehand: Optimal use of lower body and truncal rotations. Capable of loading on outside or back leg to drive forward/upward into the stroke. Exhibits balance and control in leaving the ground. Adjusts preparation to the situation with a variety of footwork options. Robust technique allows for consistent contact points when hitting balls on the rise.
- 2H BH: Able to use a shorter, higher preparation depending on grip. Employs preparation and stance appropriate to the situation. Displays consistent stroke pattern and loads increasingly on the back or outside leg to drive forward and upward.
- 1H BH: Fully integrated use of legs and optimal use of hip and shoulder rotation. Higher (amplified) backswing with improved leverage during the forwardswing. Preparation appropriate to situation. Able to hit open stance backhand returns, passing shots, and higher balls.
- Volley: Able to volley for depth and angle, inside-out and crosscourt. Able to cope with balls of different height and coordinate grip changes / footwork accordingly. Manipulates centre of gravity and base of support to maximise net coverage. Ensures contact point is out in front and to the side with the weight transferring forward. Exhibits good use of non-racquet arm to support a compact swing. Uses one-handed backhand volley.
- Smash: Wins points. Able to smash with higher velocities and to position. Able to smash from all court positions. Exhibits increasing control and generates higher racquet velocities with backhand smash.
- Able to play BH slices to position at different speeds and with different trajectories (i.e. able to cup, block, knife.).
- Approach Shots: Able to drive and slice approach shots from varying court locations.
- Able to play drive volleys at higher speeds while maintaining precision.

Tactical development

Core Characteristics

Able to formulate and implement advanced singles tactics in all five game situations.

Able to anticipate opponent's shot tendencies from tactical (based on court position, racquet preparation and body alignment) as well as technical (based on technical limitations) standpoints (particularly during baseline play and on return of serve).

Able to detect/anticipate preferred plays (i.e. tendencies) by their opponents on big points.

Developed his/her own game-style.

- Able to implement their preferred game-plans on all surfaces.
- Improving use of individual strengths. Able to serve and immediately attack with their preferred groundstroke or volley.
- Plays sequences of shots to achieve more specific desired outcomes.
- Better able to attack, counter-attack and defend against all styles of play.
- Able to dictate play, winning or losing on their terms.

Displays improved decision-making.

- Exploits weaknesses and ceases on hesitation of an opponent in match play.
- Plays percentages but selects appropriate times to take educated risks.
- Chooses appropriate times to vary rhythm or lift tempo.
- Correctly decides to play behind or at opponents.

Exhibits developing tennis intelligence

- Actively analyses opponents during match play.
- Able to execute but adapt specific game plans.
- Develops and implements effective 'plan Bs'.
- Performs increasingly insightful match analysis.
- Able to play in all weather conditions.
- Completes a tactical log book, 'scouting' opponents and developing tactics to counter all game styles.
- Exploits court geometry.
- Able to interpret most important and player-specific match statistics (i.e. percentage of errors made when attempting to hit a forcing shot, winning percentage on second serves).
- Proficient at using video-based simulation training to facilitate decision-making.
- Understands value and need for deliberate practice of all skills.

Play in five games situations**Serve**

- Able to use serve to provide free points.
- Able to adapt serve (and second shot) strategies - varying placement, spin and speed - to enhance unpredictability.

Return-of-serve

- Able to anticipate returns based on server's body cues.
- Implements and adjusts different two-shot combinations (i.e. big X).
- Proficient at attacking first and second serves.

Baseline play

- Makes better decisions regarding when to change rally/shot direction.
- Proficient at disguising drop shots.

Approach the net

- Able to vary approach shots with slice and/or drive.
- Able to optimise net coverage through understanding of court geometry and opponent's position.
- Able to win point with first volley or with a combination of volleys-smashes.
- Increasingly proficient at surprising opponents with 'sneak in' after powerful serves and groundstrokes.

- Correctly decides when and where to hit or chip and charge.

Passing

- Makes better decisions regarding when and where to pass with a drive, lob or angled dink.
- Proficient at disguising intent on passing shots.
- Effectively implements a variety of two ball pass combinations.

Doubles

- Makes appropriate decisions regarding first volley after serve and return.
- Able to use different serving and returning formations to good effect.
- Able to implement poach (per reaction, anticipation and command) as part of any serving or returning formation.
- Able to use signals.
- Plays percentages.

Mental development**Motivation**

- Intrinsically motivated.
- Shows pride in performance.
- Willing to solve problems and seek answers.
- Loves learning and playing.
- Displays 100% effort. Equipped with the philosophy of making opponent earn the point.
- Able to independently set and work towards SMARTER performance and outcome goals. Able to formulate tennis-specific and life goals.
- Motivated to use visualisation to solve tactical problems, enhance self-confidence.

Concentration

- Individualises use of concentration strategies in practice and in match play.
- Able to sustain concentration in match play over the course of consecutive tournaments.
- Adjusts and individualises use of rituals and routines between points and games.
- Proficient at maintaining or shifting concentration when confronted with distractions (i.e. disputes with umpires, noisy crowd or practice environment, poorly-behaved opponents, ...).
- Able to work in the 'here and now'.

Control of thoughts

- Displays positive thinking and self-esteem.
- Experiences and enjoys improvement in technical, tactical, physical, psychological or competitive performance.
- Willing to try in game-play what has been practised with a view to achieving their performance, and long-term outcome goals.
- Subconsciously maintains positive body language on-court. Uses power walk.
- Proficient at using cognitive reframing techniques (i.e. changing negative self talk to positive self talk).
- Displays positivity and assertiveness in sustaining a lead.

Emotional Control

- Proficient at dealing with pressure associated with international competition and regular travel.
- Able to control breathing patterns.
- Automates mistake management.
- Aware and able to control their optimal performance state.
- Individualised use of on-court and off-court performance routines before, during and/or after practice and matches.
- Able to prepare for different environments (i.e. heat, cold, altitude, rain, etc) and adapt to unexpected weather changes during match play.
- Understands and able to use or neutralise momentum.

Other psychological competencies

- Self-disciplined.
- Formulates, follows and reviews match plans. Able to independently detect and correct performance mistakes.
- Demonstrates positive attitude toward learning and general optimism.
- Capable of maintaining intensity of training without supervision.
- May show adaptive perfectionist tendencies but able to accept results and moves on.
- Increasingly independent and responsible.
- Able to effectively manage time.
- Maintains a success file.
- Coachable
- Optimistic
- Competitive
- Respects and does not under-estimate opponent's ability.

Social development

Social development skills

- Displays continued respect for volunteers, officials, coaches and other players. Aware of posture and need to make eye contact with tournament officials and volunteers.
- Proficient at giving post-match speeches, thanking people and speaking positively about opponents.
- Shows sportsperson-like conduct.
- Appreciative of the resources required to achieve optimal performance as well as the benefits received from tennis. Willing to give back to the development of young players.
- Enjoys responsibility and spirit of team competitions and doubles play.
- Displays leadership skills.
- Able to deal with social problems (i.e. peer pressure, illicit substances, etc).
- Possesses a support network.
- Able to speak to and look at interviewers. Capable of developing some rapport with reporters, and reveal personality during interviews.
- Achieves appropriate balance between school, sport and social activities.
- Respects cultural diversity.

Parental role and support

Parental role and support tips

- Respond to the various demands and expectations placed on their child by fostering an optimal learning environment rather than creating new demands or pressures.
- Keep winning and losing in a healthy perspective.
- Content to have their children focus solely on school and sport achievement, alleviating any pressure on players to find part-time work.
- Assist children fight setbacks that hinder training progression.
- Make a continued financial and time commitment to their child.
- Prepared to make sacrifices in their personal and/or family lives to afford their child optimal training conditions, without creating additional pressures.
- Help guide child in their potential involvement with player agents.
- Evaluates what's best for child's tennis and education. Agrees with child and coach/teachers as to merits of distance education vs continued schooling vs relocation.
- Awareness of advantages and disadvantages of university scholarships.

Education

Importance of education

- Understands education remains a priority but considers/pursues distance education options.
- Displays competent computer/internet use for leisure and education.
- Awareness of advantages and disadvantages of university scholarships.
- Familiar with the education/self-improvement options tabled by the professional tours.
- May be presented with additional opportunities to refine a second language.

Competition/Tournaments

Competition / Tournaments guidelines

- Periodised tournament schedule (including surface considerations, prioritisation of events,) with 3-5 peak performances planned.
- Presented with the opportunity to participate in, on average, no less than 5 hours of competition per week.
- Compete in 18-22 tournaments (comprising 4-8 International juniors, 2-3 National juniors, 4-5 National prize money, 3-5 Futures (M)/\$10,000 (F), 1-4 Challengers (M)/\$25,000-\$75,000 (F), WTA/ATP as appropriate, 1-2 Team) annually.
- Per year, children should play 65-80 singles and 25-45 doubles matches.
- Girls more likely to make more immediate transition to pro tour. Boys should play 50% age group; 50% above age group or professional/open tennis.

PERFORM (17+ years)

Physical development

Locomotor and Fundamental Movement Skills

- Possesses excellent locomotor and fundamental movement skills.

Physical proficiency abilities

- Displays excellent balance and rhythm.
- Maintains coordinative proficiency through scheduling appropriate warm-up activities and cross training initiatives.
- Able to reprogram (or belatedly adjust) movement patterns having anticipated incorrectly.

Flexibility

- Undertakes an individualised stretching program as needed on a daily basis.
- Able to implement - at appropriate times - dynamic mobility exercises, active and passive static stretching techniques, and PNF stretching. Able to perform neural desensitisation exercises.
- Participates in yoga or Pilates sessions when appropriate and/or as desired.
- Exhibits appropriate levels of muscle and connective tissue flexibility, and joint laxity, such that power development in both stroke and movement production can be maximised.

Speed/Agility

Sensitive to improvements post PHV.

- Able to move efficiently at higher speeds in linear (particularly forward), lateral and multi-directional (i.e. agility) fashions.
- Dynamic balance optimal.
- Able to run to set movement patterns at higher speeds on-court (i.e. in practise and in match play).
- Capable of maintaining movement form and benefit from using speed-resisted and -assisted training methods.
- Able to complete a variety of speed and agility exercises as part of a warm-up.

Strength (including injury prevention)

- Able to perform all multi-joint, single-joint, closed-chain, and open-chain exercises with appropriate resistances and correct form.
- Performs Olympic lifts with appropriate loads.
- Able to perform all exercises safely unsupervised.
- If necessary, possesses sufficient strength training knowledge to select mechanically-similar exercises based on facilities.
- Maintains sound core (i.e. abdominal and lower back muscle) strength and shoulder/scapula control.
- Continues to monitor and work to acceptable bilateral and antagonist: agonist strength ratios.
- Able to complete all RM tests and work to RM ranges or %RM.

Power

- Visibly working toward maximising upper- and lower-body rates of force development and peak and average power outputs.
- Capable of safely performing contrast or complex training sessions (i.e. loaded repetition followed unloaded repetition) and integrating it as appropriate with on-court training sessions when on the road.
- Maintains correct form in performing loaded (through drop height or weight) plyometric exercise.
- Familiar with analysis tools that provide for quantitative determination of power expression.
- Able to integrate improvements into stroke production.

Aerobic endurance

- Completes both specific on-court and off-court endurance training sessions aimed at elevating lactate threshold and VO2 max.
- Uses heart rate monitors and RPE scales to monitor workload.
- Tolerates lactate through repetitious high-intensity efforts on- and off-court.
- Uses heart rate monitors and RPE scales to monitor workload.

Multi-sports experience / Cross training

Adds variety to training while also having specific physical transfer to performance. May be prescribed to facilitate recovery.

Footwork

- Proficient footwork to and from all court positions, and to execute all strokes.
- Uses feet to optimise weapon use.

Fitness testing / Screening

- Perform a full battery of fitness tests, including all appropriate laboratory or diagnostic tests, at least twice annually.
- Receives regular massage and physiotherapeutic treatment.
- Receives treatment from select physiotherapists when on the road and same physiotherapist when at home.

Ancillary capacities

- Individually responsible for strength and conditioning program when travelling.
- Able to follow individualised linear and undulating periodisation to maximise (i.e. in preparatory phases) and maintain (i.e. during lengthy competition phases) improvements.
- Adept at peaking and tapering.
- Optimises nutrition and hydration.
- Accustomed to performing physical training on match days.
- Regularly implement strategies to facilitate physical recovery (i.e. hot-cold treatments).
- Maintains workload monitoring (i.e. heart rate, RPE scales) and keeps daily training and well-being diaries.

Physical Activity Time (PAT)

entirely individualised; influenced by tournament schedule.

Technical development**Core Characteristics**

- Technical excellence achieved. All skills are robust, whereby no mechanical flaws exist to jeopardise their performance under stress.
- Able to develop high racquet velocities (horizontal and vertical) but able to vary rhythm and manipulate tempo from all court positions and on all surfaces.
- Able to improvise irrespective of situation or surface.
- Able to direct all strokes to all court locations.
- Able to adapt to all court surfaces.

Tactical development

Core Characteristics

- Generally tries to implement their preferred game-plans on all surfaces.
- Optimises use of own weapons.
- Able to independently formulate, implement, evaluate and - if necessary - adapt advanced singles tactics in all five game situations.
- Able to effectively adapt tactics to all court surfaces, weather conditions, opponents and situations (i.e. in presence of unexpected physical impairment/cramps).
- Better able to anticipate opponent's shot tendencies from tactical (based on court position, racquet preparation and body alignment) as well as technical (based on technical limitations) standpoints (particularly baseline play and on return of serve).
- Proficient at detecting/anticipating preferred plays (i.e. tendencies) by their opponents on big points.
- Maintains scouting diary.

Mental development

Complete Mental Performer

- Automated, individualised and effective psychological performance enhancement routines (i.e. for concentration, emotional control, motivation, and control of thoughts to bring about optimal performance state).
 - Intrinsically motivated.
 - Able to plan and prepare. Sets and achieves SMARTER goals. (Goal Dedication and Drive).
 - Individualised use of all post-match strategies to optimise practice, match and tournament performance.
 - Possesses general and sports confidence.
 - Possesses good imagery ability.
 - Able to cope with all forms of pressure and adversity inherent to professional tennis
 - Able to review mental performance (i.e. monitor lapses in concentration and link to performance outcomes).
 - Able to independently formulate, follow and review match plans, as well as detect and correct performance mistakes.
 - Positive, optimistic and realistic.
 - Able to accept results and moves on.
 - Independent and responsible.
 - Self-disciplined.
 - Able to effectively manage time.
 - Able to maximise resources.
 - Methodical/Routine-oriented.
 - Able to tolerate pain.
-
- Self-aware and continues emphasise self-improvement.
 - Productive training attitude and approach.
 - Competitive
 - Respects and does not under-estimate opponent's ability.

Social development

Social development skills

- Able to balance career, relationships, continued education.
- Displays continued respect for ,and deals appropriately with volunteers, officials, coaches and other players.
- Proficient in giving post-match speeches and interviews.
- Increasingly proficient at dealing with the media.
- Possesses good morals and sportsmanship.
- Appreciative of the resources required to achieve optimal performance and endeavours to 'give back'.
- Good teammate.
- Deals with agents and support network with honesty and integrity.
- Respects cultural diversity.

Parental role and support

Parental role and support tips

- Supports child's decision to play full-time professional or collegiate tennis.
- May need to support resolve and strength of character in light of slower than expected transition to the top of the professional game.
- Able to continue financial support of their child, if needed.
- Continues to foster an optimal learning environment rather than creating new demands or pressures.
- Keep winning and losing in a healthy perspective.
- Continue to offer assistance/support during setbacks that hinder training progression
- Continue to help guide child in their involvement with player agents.
- Equipped to deal with child's decision to move out of home.

Education

Importance of education

- Makes and reviews major decision on career (tennis) and education.
- Familiar with mature-age distance education alternatives.
- Undergoes media training.
- Displays competent computer/internet use for leisure and education, as well as to assist skill analysis, maintain diaries, and perform video-based tactical or anticipation training.
- Participates in education/self-improvement/mentoring options tabled by the professional tours.
- Refines second language and/or attempts to improve lingual skills.

Competition/Tournaments

Competition / Tournaments plan

- Periodised tournament schedule (including surface considerations, prioritisation of events) with no less than 5 peak performances planned.
- Competes in 20-30 professional tournaments annually.
- Per year, players should take part in 80-100 singles matches.
- Participation in doubles will be at the discretion of each player/coach. Occasional doubles play may positively transfer to certain aspects of singles performance.