INTRODUCTION

The LTA has worked with Dr Vanessa King and early years specialists at the Association for Physical Education to develop a set of activities designed specifically for children aged 2 to 5. The activities are tennis themed but help children build the foundations for all kinds of physical activity, not just tennis.

The content is centred on movements that stimulate brain development and build rudimentary and fundamental movement skills to grow motor competency in young children. Activities have been selected to strengthen neurological connections between the left and right hemispheres of the brain. This improves coordination, balance and motor development. These movements also help integrate primitive reflexes, which has a positive impact on posture, visual tracking, and hand-eye coordination. The repeated movement experiences throughout the scheme strengthen neural pathways, helping children improve focus, body control, and sensory processing. An example of this would be the movement activities that help integrate the palmar reflex, so that children will have greater fluidity and control of their grip, which transfers to learning in the classroom, controlling a pencil with handwriting, and also to tennis in terms of holding the racket correctly.

The movement skills in this scheme are essential for children's wider development such as following instructions, practising social skills and building confidence. By supporting physical, social, emotional, cognitive, and neurological development together, movement-based learning helps young children develop lifelong skills through tennis.

There are 12 sessions designed to introduce children to tennis-based activities based on movements that stimulate brain development and build motor competency for children. Each session is divided into four distinct sections as outlined overleaf. The content is mapped to the **Early Years Foundation Stage (EYFS)** supporting gross motor skills (e.g. jumping, balance) and fine motor skills (e.g. hand eye coordination and tool use) which are essential for physical literacy and classroom learning. The guidance also includes how activities can be adapted to meet different needs to be fully inclusive.

All the sessions and activities are flexible and can be adapted for the children you are working with and the time and space available. For example, with 2-year-olds you might only deliver the Warm Up and Body & Ball activities, processing on to incorporate the Racket & Ball and Game for the older children. The STEP framework provides a range of ideas on how activities can be adapted for different abilities. The equipment listed for each activity is an overview, for example where balls are listed, use the relevant ball size / type for the children to achieve, and children in the group might use different balls for the same activity. Where possible provide children with a choice of ball and hitting implement so that they can select the most accessible for them. It is important to meet the children where they are at so that they grow in confidence and enjoy their first experience of tennis.

Each session has a theme with a storytelling narrative to engage children's imagination! The QR codes on the activity pages link to a video of the activity in action with a group of children.

WARM UP

These activities centre on developmental activities that stimulate brain development and develop movement patterns through moving in different ways and learning to control their body. They are introduced in a fun way through games, which help to encourage children to develop self-confidence and motivation as the first introduction to tennis-based activities.

BODY & BALL

In this section children develop body control alongside controlling a variety of ball types. They will explore the first initial steps of moving with the ball, beginning to adjust to the flight and bounce of the ball. Children will learn how to use their body to begin simple ways to send and receive the ball.

RACKET & BALL

In these activities children further develop movement patterns, beginning by using their hands as rackets. Gradually they build up to holding and hitting with different forms of rackets in simple games that build motor competency and confidence.

GAME

In this section the children apply the skills learnt earlier in the session to fun games. Where pair work is indicated this may be best done with an adult depending on the ability of the children.

SKILL UP

For every activity an idea on how to extend learning and provide further challenge is included. This could be given as an extension task to more able children individually or delivered as an activity in itself for the whole group.

CONTENT BASED IN RESEARCH

There is the recognition that some children are entering school facing motor competency challenges which affect learning. Based on the research conducted by Dr King and Dr Howells (2023) and the Early Years Motor Screening Programme (**Early Years Screening Programme – Association for Physical Education**), the LTA Early Years content was created to include targeted movements and help integrate primitive reflexes to enable young children to develop functional and fundamental movements.

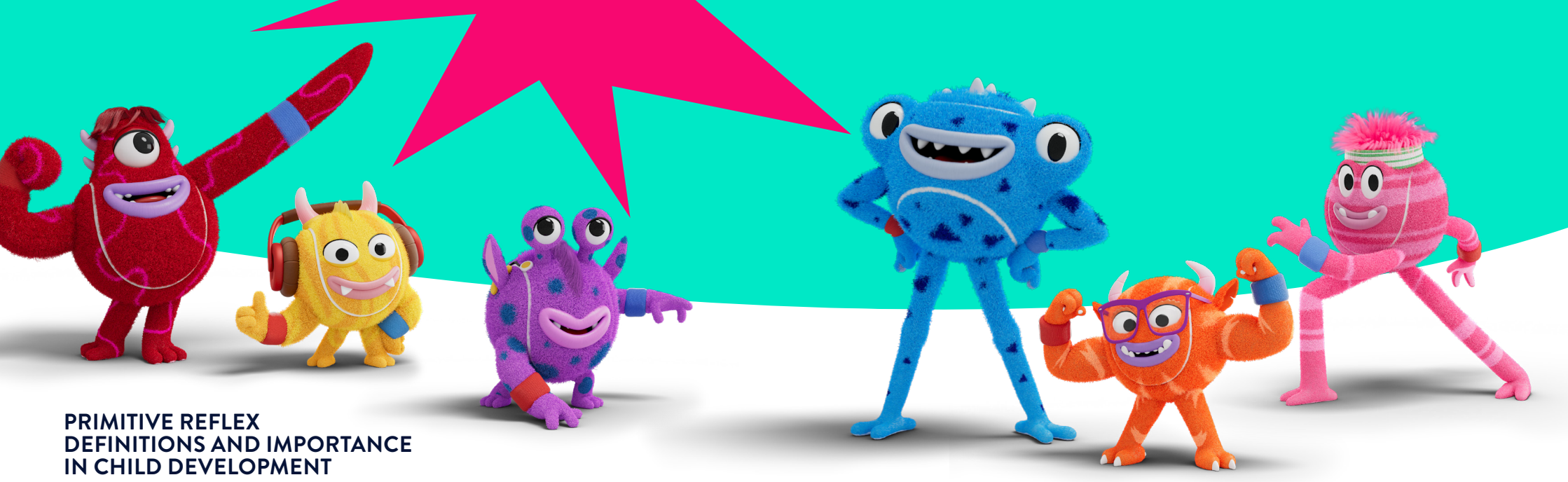
BRAIN FOCUS ACTIVITIES - WHAT ARE PRIMITIVE REFLEXES?

Primitive reflexes are automatic movements that babies are born with. They are controlled mainly by the brainstem and help babies survive, move, feed, and respond to their environment during the early stages of development.

These reflexes develop during pregnancy and are usually present at birth. As a child grows and the brain matures, these reflexes should gradually integrate, meaning they become inhibited and are replaced by more controlled, voluntary movements.

Primitive reflexes play an important role in:

- Brain development
- Movement and coordination
- Balance and posture
- Sensory processing
- Learning and attention
- Emotional regulation



PRIMITIVE REFLEX DEFINITIONS AND IMPORTANCE IN CHILD DEVELOPMENT

The activities included in this scheme of work help with neurological development and a selection of primitive reflexes have been chosen to illustrate this.

TLR (Tonic Labyrinthine Reflex)

The TLR is a primitive reflex present from birth that helps infants develop balance, posture, muscle tone, and body awareness. The position of the head affects the body's muscle tone, helping babies learn how to move against gravity. As the reflex integrates, children develop better head control, coordination, and balance needed for sitting, crawling, and walking.

Why it is important

- Supports balance and posture
- Helps develop muscle tone
- Assists body awareness and movement control
- Prepares the body for coordinated movement

STNR (Symmetrical Tonic Neck Reflex)

The STNR develops later in infancy and helps babies transition from lying on the floor to crawling. When the baby lifts their head, the arms straighten and the legs bend. When the head lowers, the opposite movement occurs. This reflex helps develop upper and lower body coordination.

Why it is important

- Supports crawling development
- Helps posture and coordination
- Assists hand-eye coordination
- Prepares the body for sitting at a desk and coordinated movement

ATNR (Asymmetrical Tonic Neck Reflex)

The ATNR occurs when a baby turns their head to one side, causing the arm and leg on that side to straighten while the opposite side bends. This reflex supports early movement and visual development.

Why it is important

- Helps hand-eye coordination
- Supports reaching and grasping
- Encourages visual tracking
- Assists development of left and right body awareness

Plantar Grasp Reflex

The Plantar Grasp reflex occurs when pressure is applied to the sole of a baby's foot, causing the toes to curl downward. This reflex helps develop the muscles and sensory awareness in the feet.

Why it is important

- Supports foot development
- Helps prepare for standing and walking
- Assists balance and posture development
- Encourages sensory awareness in the feet

PRIMITIVE REFLEX DEFINITIONS AND IMPORTANCE IN CHILD DEVELOPMENT (continued)

Moro Reflex

The Moro reflex, also known as the startle reflex, occurs when a baby experiences sudden movement, loud noise, or loss of support. The baby throws their arms outward and then brings them back in.

Why it is important

- Helps babies respond to danger
- Supports early survival responses
- Assists development of the nervous system
- Helps infants seek comfort and security

Spinal Galant Reflex

The Spinal Galant reflex occurs when one side of the lower back is stroked, causing the hips to move toward that side. This reflex is important during birth and early movement development.

Why it is important

- Assists movement during labour
- Supports hip mobility
- Helps trunk movement and coordination
- Supports early motor development

Please note, there are other primitive reflexes including fear paralysis reflex, rooting reflex, sucking reflex, babkin reflex and babinski reflex which are also important for child development.

Palmar Grasp Reflex

The Palmar Grasp reflex occurs when an object touches a baby's palm, causing the fingers to automatically close around it.

Why it is important

- Helps develop grip strength
- Supports hand and finger development
- Prepares for fine motor skills
- Assists future writing and hand control

Landau Reflex

The Landau reflex develops as babies gain head control. When held horizontally, the baby lifts their head, chest, and legs into a "superman" position.

Why it is important

- Supports posture development
- Helps strengthen neck and back muscles
- Assists balance and coordination
- Encourages body control and movement development

If primitive reflexes do not fully integrate, they may continue to affect a child's development. Retained reflexes can sometimes contribute to:

- Poor balance and coordination
- Difficulty sitting still
- Weak core strength
- Poor handwriting
- Reading difficulties
- Sensory sensitivities
- Focus and attention challenges
- Delays in motor skills

Vestibular Stimulus

The vestibular system is the body's balance and movement system located in the inner ear. Vestibular stimulation occurs through movements such as rocking, spinning, swinging, or changes in head position. Whilst it is not a primitive reflex it is an essential part of a child's development.

Why it is important

- Supports balance and coordination
- Helps spatial awareness
- Assists posture and muscle control
- Supports focus, attention, and body awareness

STEP FRAMEWORK FOR TENNIS

STEP is a framework designed to adapt and differentiate activities to meet the needs of all participants. STEP stands for Space, Task, Equipment, People. By adapting one of these elements, or a combination of elements, activities can be made easier or more challenging.

Adaptations can be made for individual children or for a whole group to ensure that learning is progressive, inclusive and enjoyable for all. This guidance gives ideas on how you can adapt and apply the STEP framework for tennis.

STEP

SPACE

Adjust the spacing of an activity, the space it is happening in or the positioning of the children.

Where is the activity happening?

- Indoors or outdoors, what type of playing surface?
- Can the area or distance in the activity be modified?
- Can the level from which the task is being completed be changed?
- Can the surface be altered or changed?
- Can the positioning of the children be changed (e.g. all seated)?

Using a defined space:

- Make the space larger, smaller, wider, narrower
- Provide target areas or zones

Using a wall area:

- Basic wall space to provide a rebound, wall with a low line marked gradually increasing the height

TASK

Adapt the way in which a task is completed

What is happening?

- Can the approach / technique be changed?
- Can the rules, scoring or time allocation be modified?
- Can the speed of the activity be altered to allow more time to react?
- Can the individuals/group do different tasks at the same/different times?

Sending:

- Roll the ball
- Throw the ball underarm or overarm
- Use a racket to roll the ball
- Use a racket to hit the ball

Receiving:

- Splat the ball when rolled then roll back
- Catch the ball then place on the floor and roll back
- Catch the ball then self-feed and hit back
- Hit the ball straight back

EQUIPMENT

Adapt the equipment that is being used, including the size, colour, texture or weight.

What is being used?

- Can the type of racket and/or ball being used be changed?
- Can the size or type of targets being used be changed?
- Can the height or type of the net be altered?
- Can additional or alternative equipment be used to support e.g. catching nets or hitting tees?
- Can the length or weight of the ball/racket be altered?

Rackets:

- Use hands as rackets
- Hitting pads or mitts
- Short handled rackets

Balls:

- Balloons
- Bean bags
- Fluff balls
- Scarves
- Larger balls
- Low compression balls
- Consider using brightly coloured balls
- Sound balls with bells inside assist with concentration for all children not just those with a visual impairment

Nets:

- Line on the floor
- Skipping rope on the floor
- Cones
- Bench
- Barrier tape
- Pop-up net

PEOPLE

Adapt who is involved in an activity and their roles, including level of adult support

Who is involved?

- Are children working independently, in pairs or with an adult?
- Do all children have the same roles?
- How are children grouped i.e. age, size, ability or friendships?

SESSION DELIVERY

The points below are general top tips for delivering to children in early years and can be applied to all themes within the scheme. In addition to this general guidance additional adaptations are suggested for each session.

- The sessions are designed to be flexible. Some activities may take more than one lesson to master; establish competence with fundamental skills before moving on.
- Give children plenty of processing time for room layouts, distances, equipment and instructions.
- Provide a range of sizes, colours and textures of equipment.
- Make sure all equipment is large and bright and contrasts with the colour of the floor and walls.
- Display equipment / items you wish children to choose from in an uncluttered space.
- Use clear concise language with as few key words as possible.
- Give verbal instructions in an area with as little sound clutter as possible.
- Offer small groups in a quieter setting as children may find the noise and visuals of a large group or busy area overwhelming.

- Display the components of the session to give structure and predictability, meaning the children know what is going to happen and when.
- Support instructions with visuals such as pictures, videos and sequences of pictures showing actions.
- Where relevant, full-length mirrors can give children additional feedback on their body position.
- When children are working with a partner let them get into pairs, themselves, they will work better with friends they know and trust.
- When children are working in pairs match positioning (e.g. if one child is a wheelchair user their partner will also be sitting).
- If children are lipreading or following signing use videos or demonstration after instructions.
- Give a verbal description of the layout of the room, with a guided tour, before starting an activity for children with visual impairment.
- Use appropriate levels of lighting, children with visual impairments can find processing information in an environment that is too bright or too dim difficult. Work with them to adjust lighting to meet their needs.
- Use noisy balls, such as bell balls, to support children with visual impairments.
- Consider hand-under-hand support to teach movement patterns, with consent, for children who may not access visual demonstration or verbal description.