



2020 -2021

# FINE MOTOR AND HANDWRITING POLICY

**Policy Author– Jolene Carter – English Lead**

Review date: September 2021  
Created: November 2020

## INTRODUCTION & AIMS

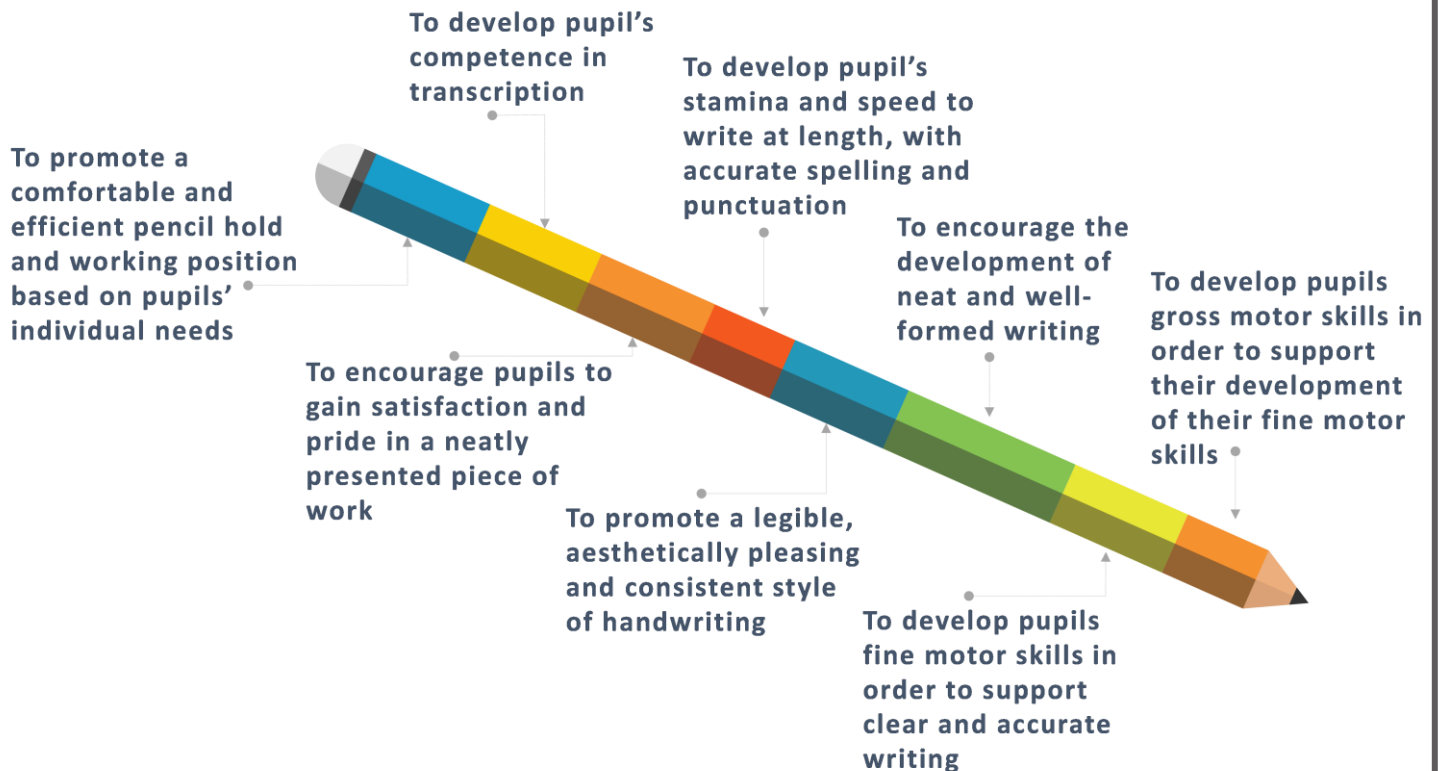
At Esteem South Academy we consider handwriting to be an important functional life skill that requires formal and structured teaching and regular opportunities to practice. All pupils at Esteem South Academy will receive support directly correlated to their current abilities and support needs, both discretely where required as well as across the curriculum.

This support will be delivered in a variety of ways; gross motor support, fine motor support, a structured early writing programme, the Read Write Inc script guidance, overwriting or underwriting.

Esteem South Academy follows the 'Write from the start' early writing programme in order to support the development of the fine motor and perceptual skills necessary to progress successfully onto letter formation. Letter formation at Esteem South Academy follows the Read Write Inc script guidance.

Where typing is the more appropriate choice for pupils to support their academic progress, this shall be supported whilst offering discrete sessions that continue to work on developing pupils gross and fine motor skills to better enable them to complete self-care activities in their daily lives.

### AIMS:



## RANGE & APPROACH

### Range

Pupils in the early stages of gross/fine motor development will receive discrete handwriting support sessions in order to further develop their skills as part of their English lessons or interventions during their focussed learning sessions.

Pupils developing their handwriting and able to form letters legibly will be given support where needed to further develop their skills, increase stamina and consistency.

Handwriting development will be supported across the whole curriculum and across all departments.

### Whole School Approach/Implementation:

Handwriting is of fundamental importance to educating pupils and Esteem South Academy takes a holistic approach to handwriting, developing pupils' skills from gross motor to fine motor to pre-writing to handwriting. No pupil is expected to complete activities before they are developmentally ready for it and are supported as individuals at their current ability level and with their specific developmental needs in mind.

## GROSS MOTOR

Building physical manoeuvrability and strength underpins handwriting and concentration. This bodily knowledge informs the working positions that children use for writing and the strengthening targets they work on. Developing the ability to navigate our bodies on a grand scale directly correlates to eventually developing fine motor skills.

**Exercises to build gross motor skills provided by school Occupational Therapist**

### Activities to improve core strength:

- **Crab walk**

Ask the child to sit on the ground with their hands and feet on the floor, fingers pointing behind them, raise their bottom off the floor to make a table shape. In this position get them to walk backwards, like a crab, to a destination and back again. Put a beanbag or soft toy on their tummy - make sure they keep their bottom up otherwise the toy will fall off.

- **Tummy skittles**

Get the child to lie on their stomach, lift their head up and then lift their arms above their head. Throw the ball at the skittles, then lower the body gently back to the floor, ready to throw again.

### Activities to improve balance and coordination:

- **Step ups**

Ask the child to face the step and then step up first with the left foot followed by the right foot. Still facing the same way ask them to step down first with the left foot followed by the right foot. Repeat this a couple of times and then ask them to start with the right foot followed by the left.

To help them to remember their left and right you could tie a ribbon or place a sticker on their right or left hand to help.

Introduce side steps to pupils asking them to step to the left and close their feet together and then step the right and close their feet together, Repeat this process up to 10 times per session.

*Continued...*

## GROSS MOTOR *Continued...*

- **Maze lines**

Draw a mixture of straight and curved lines with chalk and ask the child to march along the line. Slowly at first so that they focus on marching skills and then this can be turned into a time trial, setting rules about how high the knees have to be raised in the march. Remember when marching the opposite arm should swing forward to the raised knee, so left arm and right knee together.

Set out cones in a line spaced at an equal distance apart and ask pupils to move in and out of them.

- **Chair push ups**

Put your hands on either side of your chair and push until your bottom raises off the chair. Hold for a count of five. Ask the child to copy you. If this is too easy ask the child to lift their feet off the floor and hold them off while raising their bottom and hold for a count of five.

- **Simon says games**

Play the game asking the child to touch, point or move different parts of the body. As they become confident in this game try adding in phrases that relate to left and right, such as 'Simon says touch your left knee with your right hand.

- **Cross pass ball**

Ask the child to hold the ball out in front of them with both hands. The aim of the activity is to move the ball from one side to the other so that both hands cross the mid-line.

- **Mazes**

Make a maze out of series of toys, using the language for placement and direction, talk through how you are moving the toy. Then either give instructions or ask the child to give you instructions on how to get to a location in the maze. Only give one instruction at a time where possible and increase the number of instructions as their ability and confidence grows.

*Continued...*

## GROSS MOTOR *Continued...*

### Activities to improve sensory processing skills:

- **Messy play**

If the child is fearful of any material have them play with it in a less threatening way. For example, they can use your hands to start touching it, they can put objects in or out of the "messy" materials, or they can push toy cars or plastic animals through it etc. After they begin to feel safe, slowly encourage them to try other fun ways which you model, for example splatting it, poking, pulling, rolling etc. Eventually encourage the use of the whole hand (including palm).

- **Cooking**

Try a simple recipe that requires mixing with hands and kneading such as those that need pastry, pizza dough or bread making. Or if you have no cooking facilities try salt dough.

- **Tracing**

This can also help build a child's understanding of how much pressure is required. Using tracing paper ask the child to trace a simple shape or picture. Then turn the tracing paper over onto another piece of paper. Draw over the lines that show through the tracing paper, quite a bit of pressure is needed for this. When the tracing paper is lifted a copy of the shape or picture will be left on the paper. If the child is pressing too hard and tearing the tracing paper try doubling it over, you will however have to use quite a bold coloured shape or picture underneath for them to be able to see it. As the child's ability to use the correct pressure to achieve the best results for the task improves, reduce the thickness of the tracing paper

## FINE MOTOR

The different components of writing are mastered initially through fine motor activities before being used to form letters and legible script. In learning to manipulate items on a continually decreasing scale pupils can mimic and master the movements necessary to develop a clear and consistent handwriting script.

Activities to build fine motor skills provided by school Occupational Therapist

- Theraputty – locating a bead hidden within with 2 hands, then with 1
- Threading – developing hand-eye coordination and accuracy
- Peg boards (of decreasing size) - developing triangle pencil grip
- Manipulating screws with full turn motion (in decreasing sizes)
- Tweezers – pincer movement transferring smaller items
- Pegs – pincer movement
- Balancing stones – developing coordination
- Puzzles – Manipulating small objects and altering their direction
- Manipulating buttons, zippers, laces and snaps – Dressing and undressing skills

## HANDWRITING

At Esteem South Academy we believe that handwriting is a skill that needs to be taught formally and practiced regularly. Support will be given to pupils as and when required across the curriculum as well as in discrete handwriting lessons if deemed necessary, this support may take the form of overwriting or underwriting.

Correct pencil hold is taught as soon as the tri-pod grip is developmentally appropriate for their fine motor ability, however, pupils with specific physical needs and therefore for whom it is more appropriate, adapted pen holds are supported.

Posture is important in developing the correct position for handwriting and so students are taught how to organise their working position and paper position to enable comfort and fluent writing from the start.

In moving on from mark making and before letter formation, pupils are supported in developing their fine motor and perceptual skills by being led through a programme that assists in the development of legible script. Staff will lead pupils through the 'Write from the start: Unique programme to develop the fine motor and perceptual skills necessary for effective handwriting' before then moving on the discrete handwriting sessions.

Letters are learnt as movements, not as visual shapes and movement remains central to developing automaticity in letter formation, flow and fluency.

Letter formation should be based on the agreed handwriting script set out in Read Write Inc's guidance. This is to coincide with the texts that pupils are exposed to whilst learning to read. Pupils will be taught the un-looped k until they are able to form clear enough script to develop their writing to joined script. Joined script is taught where appropriate and where pupils have developed the consistent and legible script necessary to enable a successful and legible transition.

### **Contexts for Gross Motor/ Fine Motor/ Handwriting:**

#### **Handwriting/print in the environment**

All classrooms should have examples of clear print/font in order to promote neat and legible script within pupil's writing. Students should be encouraged to take note of the handwriting and print around them and to consider its clarity and legibility. Teachers should also demonstrate clear print within their own writing, forming all letters correctly when modelling on the board or when scribing for pupils in order to offer a positive example to pupils.

All pupils will be provided with opportunities to practice and apply their handwriting skills within different contexts, this may take the form of discrete gross motor/fine motor/handwriting lessons, notetaking where appropriate, general writing exercises as well as neat write ups.



## HANDWRITING *Continued...*

The different components of writing are mastered initially through fine motor activities before being used to form letters and legible script. In learning to manipulate items on a continually decreasing scale pupils can mimic and master the movements necessary to develop a clear and consistent handwriting script.

Activities to build fine motor skills provided by school Occupational Therapist

- Theraputty – locating a bead hidden within with 2 hands, then with 1
- Threading – developing hand-eye coordination and accuracy
- Peg boards (of decreasing size) - developing triangle pencil grip
- Manipulating screws with full turn motion (in decreasing sizes)
- Tweezers – pincer movement transferring smaller items
- Pegs – pincer movement
- Balancing stones – developing coordination
- Puzzles – Manipulating small objects and altering their direction
- Manipulating buttons, zippers, laces and snaps – Dressing and undressing skills

### **Assessment:**

Teacher assessment will be utilised to monitor and assess the ongoing handwriting progression of pupils during English lessons. Pupils will be tracked through their individual progression through gross motor and fine motor activities, their development through the 'write from the start' programme and finally their progression through the Read Write Inc agreed handwriting script set out in their guidance. Marking of work by teachers will be positive and self-correction by pupils will be encouraged.

### **Role of the Co-ordinator:**

The English Co-ordinator is responsible for co-ordinating handwriting throughout the school. Please refer to the English Policy.

## HANDWRITING *Continued...*

### **Role of the Class Teacher:**

- To aim to develop gross motor/fine motor/handwriting skills with pupils using the whole school approaches outlined above: Gross motor activities as provided by the school occupational therapist, fine motor activities as provided by the school occupational therapist, fine motor progression following the 'write from the start' programme, the Read Write Inc handwriting guidance, cross curricular handwriting opportunities and discrete gross motor/fine motor/handwriting sessions.
- To provide and regularly update a classroom environment that facilitates the development of student's handwriting development.
- To develop and update own skills, knowledge and understanding of gross motor/fine motor/handwriting.
- To identify inset needs in handwriting and take advantage of training opportunities.
- To monitor and assess pupil's progression in gross motor/fine motor/handwriting skills.
- To plan effectively for handwriting, liaising with co-ordinator when necessary.
- To inform parents of students' progress, achievements and attainment

### **Equal Opportunities:**

We incorporate gross motor/fine motor/handwriting opportunities into a wide range of cross curricular subjects. All pupils have equal access to the curriculum regardless of their learning need, gender or ethnicity. This is monitored by analysing pupil performance throughout the school to ensure that there is no disparity between groups.

### **Theoretical Context and Reference for Policy as Provided by School Occupational Therapist**

Handwriting is a complex perceptuo-motor based skill that requires simultaneous processing of a range of visual and auditory stimuli, whilst also producing controlled, precise gross and fine motor movements. Handwriting is comprised of several different components which collectively integrate in order for a child to produce accurate and legible penmanship. Anatomically the biological requisites of handwriting development are innately embedded within the cephalocaudal developmental sequence of the child. This describes the postnatal developmental process in which a child normatively develops in a head-to-toe progression relative to both physical and functional development. Initially the greatest development takes place in the head, namely in the brain, before physical development moves gradually

## HANDWRITING *Continued...*

downwards through the neck, shoulders, and trunk etc. This development occurs in tandem with proximodistal development, where development begins at the core of the body travelling outward towards the extremities. For example, muscular control of the trunk and arms develops prior to the development of muscular control in the hands and fingers.

In this way children normatively develop in a gross to fine manner with regards to the development of motor skills. Which are both essential prerequisites of proficiency in handwriting skills for a child. During handwriting development large muscle groups are required to work together in a coordinated way in order to support the pelvis, trunk, shoulders and arms. This co-ordination of the differing but related aspects of the body are referred to as gross motor skills. Gross motor skills are a fundamental requisite of handwriting development and are required to provide a good stable base from which the child can balance and stabilize in order to demonstrate the appropriate posture which is facilitative of handwriting development.

In this manner control and stability originates from the trunk and progress towards the outer extremities, such as the elbow and wrist before terminating in the hand. This is reflective of the interplay and directional development of fine motor skills from gross motor skills. For example, children need to develop the muscles of the trunk and shoulder girdle in order to use the distal muscles of the fingers and hands. However, it is important to recognise that some children may not develop gross motor skills following a normative developmental pathway, which may later inhibit the development of fine motor skills further down the line. This can be due to a variety reasons ranging from medical conditions or developmental disorders. However, there are simple exercises which can be completed by the child in order to progress the development of fine motor skills, which focus on developing core strength, balance and stability, and also co-ordination (see attached sheet at end). This as a whole seeks to provide the foundational basis of handwriting development through ensuring that a child adopts the appropriate postural balance and stability which is conducive to proficiency in penmanship.

Moving on, a further developmental requisite of handwriting in children is embedded within development of bilateral co-ordination. This refers to a child's ability to move in an easy and well-coordinated way, in such a manner which allows both sides of the body to work in unison in order to develop handwriting skills. The development of competency in bi-lateral coordination is crucial for children attempting to develop handwriting skills, as children must develop and demonstrate body awareness in order to correctly and accurately discern their left from right side, how these parts of the

## HANDWRITING *Continued...*

body move, and how these movements relate to one and other.

Pointedly, a lack of competency in bi-lateral coordination skills is counterproductive to the development of handwriting skills, as a child may not be able to identify a dominant hand or identify the appropriate hand required to stabilise the paper. Equally appropriate bilateral coordination skills are facilitative of proper posture, and body awareness, both of which are essential during handwriting development. Collectively many gross and fine motor skills required during handwriting are reliant upon bilateral coordination. For example, bilateral coordination is closely linked to one of the sensory systems that a child uses during the development of handwriting skills, namely the vestibular system.

Where the movements involved in the development of handwriting require input from the vestibular system in order to organize, coordinate and guide the relevant extremities to task. A further example of how the significance of bilateral coordination is during the crossing of the mid-line. This refers to the child's ability to move one extremity across the mid-line of the body; essential during handwriting development in order to promote communication and coordination between the left and right hemispheres of the brain. Despite this some children present with an inability to cross the mid-line, which is evident when a child will often demonstrate a propensity to switch hand during handwriting development, whilst also exhibiting little to no hand dominance. Both of which are clear signs of poor bilateral coordination, which may hold development of handwriting significantly. However, there are simple exercises which seek to target the development of bilateral coordination in order to ensure that a child demonstrates competency in this ability (see attached sheet at end).

Furthermore, alongside the use of gross and fine motor skills coupled with bilateral coordination, a child must demonstrate adequate sensory perception in order for them to produce accurate and legible handwriting. Sensory perception, or sensory processing refers to the ability of the child's central nervous system to effectively register sensory information derived from the environment, filter out the unnecessary components, organize and interpret what to do with the sensory information and then modulate the attention level of the nervous system as appropriate. Where impaired sensory processing skills lead to disorganization and frequent tendency to become distracted, specifically within handwriting development, the child must organise several different types of incoming sensory information, including: tactile input, visual input, auditory input, proprioceptive input, and vestibular input.

Moreover, the ability of a child to exercise effective sensory processing is key within

## HANDWRITING *Continued...*

the development of handwriting.

For example, the child must determine the appropriate tactile pressure to put through the pen, they must also accurately discriminate the shapes of letters against the lines on the paper through use of visual perception, they must also appropriately sit to task in the appropriate postural position using their vestibular and proprioceptive senses, both of which are facilitated by the visual sense in order to balance and understand the relative position of various extremities of the body relative to the environment. Where Successful coordination of all of these senses is conducive with handwriting development.

However, some children present with sensory processing issues, such as poor processing of proprioceptive and vestibular senses, which can lead to a child having a poor reaction to the environment, leading to the child withdrawing or over-responding to auditory and visual information which may significantly inhibit their focus to task. A further example of a sensory processing issue is found in those children diagnosed with sensory processing disorder, such as sensory modulation disorder. Where a child suffers from an inability to modulate sensory input, thereby making it difficult for them to regulate the appropriate level of alertness required to inform function. Despite this there again exists simple exercises which target the development of sensory processing skills in order to enable this building block of handwriting development to form properly within children (see attached sheet at end).

Thus far the integral components required during the development of handwriting skills in children have been outlined individually. However, these components do not work in isolation. Instead these components collectively unite in order to form basis of motor planning. Which refers, to the ability of a child to plan and execute both gross and fine motor skills in a coordinated manner in order to produce accurate and legible handwriting. Specifically, during the development of handwriting skills, a child will draw upon motor planning in order to organize differing muscle groups involved in both gross and fine motor skills alongside sensory input.

This is carried out in a sequential manner, referred to a motor sequencing. In this way a child will utilize motor planning in order to bilaterally coordinate muscle groups so that they work together alongside their sensory perceptual abilities in order to determine the proper force, timing, and action in order to produce accurate and legible handwriting. Which gives rise to the appropriate hand-eye coordination skills that will enable them to develop proficiency in penmanship. Specifically, handwriting development requires proficiency in hand eye coordination, for example, a child will draw upon their visual and auditory systems in order to co-ordinate information

## HANDWRITING *Continued...*

received through their eyes and ears, from which the child will control, guide and direct the hands through both gross and fine motor movement in order to produce letters that flow and are legible.

However, motor planning during handwriting is a complex process and not all children develop this ability at the same rate. Some children may present with a decreased ability to motor plan the necessary movements required to motor plan handwriting, due to sensory processing issues embedded within how incoming sensory information is registered, filtered, and organized. For example, children with a slow processing speed may face difficulty during the development of handwriting as a consequence of an ability to correctly integrate sensory information coming in from the environment. This can significantly impede a child's ability to motor plan. Nonetheless, if the appropriate steps and actions are taken in order to ensure that child has proficiency in gross and fine motor skills, bilateral coordination and sensory processing, a child's output should coincide with accurate and legible handwriting.

### **Standard Age Gross-Fine Motor Development:**

1. Cephalocaudal Development begins in utero. Where during prenatal growth, the head is seen to grow more than the body. However, by birth, the growth of the head slows, whilst the growth of the limbs and trunk quickens. This development occurs in tandem with proximodistal growth where the foetus grows from the inside of the body outwards. However, both of these developmental trends continue postnatally.
2. By three months, as the strength of an infant's muscles allow for primitive forms of gross motor movement. Such as the lifting of their head when held at the shoulder, the lifting of their head and chest when lying on their stomach, or the turning of their head from side to side as they lay on their stomach. As confidence and muscle tone increases, patterns of motor movement begin to extend into the extremities through primitive patterns of fine motor movement. Such as, the grasping of a rattle when given to her/him.

Sensory behaviours are also observable at three months old as the brain continues to develop and neural pathways continue to grow in order to link different sensory systems. At three months old neonates can be seen to respond to visual stimuli and auditory, such as when turning their head towards bright colours or lights, or when turning towards their head towards the sound of human voice.

## HANDWRITING *Continued...*

3. By six months old, gross motor skills continue to develop, muscular tone is now a lot stronger, and more supportive of posture, meaning that gross motor ability is also increased. For example, infants will now hold their head steady when sitting with you help, they will also sit with only a little support, roll over, and also bounce when held in a standing position.

This increase in gross motor ability is further conducive with the development of fine motor ability. Where at six months old, infants can be seen to reach and grasp for objects, play with their toes, move toys from one hand to the other, or shake a rattle.

At this stage symmetrical bilateral integration begins to develop, where both sides of the body mirror each other. Where you may see an infant clap their hands together, or swing both legs at the same time.

Further sensory development has also occurred, infants can now visually discriminate between objects and access motor planning in consequence. Such as when opening their mouth for a spoon, or imitating familiar actions that parents perform. In this way visual-motor integration begins to develop at a steady pace.

4. By twelve months old, gross motor skills have developed significantly, muscle tone now supports a greater number of actions, neural pathways continue to develop and grow between sensory systems, and fine motor skills also now support a greater number of abilities. Such as feeding his/herself finger foods such as breadcrumbs, using first finger to poke or point, sitting well without support.

At this stage children also begin to develop reciprocal bilateral integration skills, where one side of the body does the exact opposite to the other, such as when crawling or walking with their hand being held.

The sensory system continues to develop alongside these new gross and fine motor abilities, infants now show improved sensory integration abilities and can now process auditory information in order to copy sounds or respond to music with body motion. Infants can also visually track and look for an object which has fallen out of sight, as well as try to accomplish simple goals, such as seeing then crawling to a toy.

5. By two years old, infants enter the age of curiosity and mobility. Infants begin to explore their surroundings and examine new sensory experiences as a result of their new-found ability to exhibit sequences of gross and fine motor skills.

## HANDWRITING *Continued...*

At this stage infants can now process and organize a variety of sensory stimuli such as visual, auditory, and tactile stimuli and then integrate this sensory information with motor planning in order to perform the appropriate movement or action in consequence.

Infants can now walk unassisted, follow simple instructions, feed themselves, throw or kick a ball, carry toys whilst walking or climb on furniture.

Lots of these new abilities are borne out of the development of asymmetrical bilateral integration, where each side of the infant's body learns to perform a different and separate task, whilst collectively still co-operating on the same activity. Such as when kicking a ball, the other foot plants on the ground in order to balance the body. This is an important developmental landmark for infants, which represents that the brain is now able to co-ordinate two streams of skilled thinking.

6. By four years old, young children are able to exhibit a vast array of motor skills, which feature a combination of both gross and fine motor skills. By this stage the primary sensory areas of the brain are almost fully developed in order to support this. The occipital lobe responsible for visual processing is almost fully formed, the cerebellum which is responsible for balance and coordination is now also fully formed. However, some areas of the brain such as the parietal lobe which is responsible for tactile processing, and the temporal lobe which is responsible for auditory processing, will both continue to develop until around six years old.

In consequence at this stage young children should now demonstrate the ability of being able to cross their midline. Crossing the midline equates to the extremities or senses by crossing an imaginary line down the body, dividing it right from left. This demarks a significant developmental milestone for children, namely the development of bilateral integration skills. Where children are now able to use both sides of the body together in a coordinated way in order to carry out skills which requires both gross and fine motor skill in a set sequence or pattern, such as when learning to ride a bike, or develop handwriting skills.