



HANDWRITING

This booklet is for parents. It explains how handwriting skills develop and has advice on how to develop skills and manage handwriting difficulties.

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Handwriting Development

Development of Pencil Grasp

Pencil grasp usually follows stages. This happens as the fine motor skills develop. To begin with, a child holds a pencil with the whole hand and then turns the hand with the palm facing down. Eventually the pencil is held between the thumb and fingers. The age that a child starts to write or is ready to write varies.

TYPICAL PENCIL GRASP DEVELOPMENT FOR HANDWRITING



From www.growinghandsonkids.com

Development of Handwriting Skills

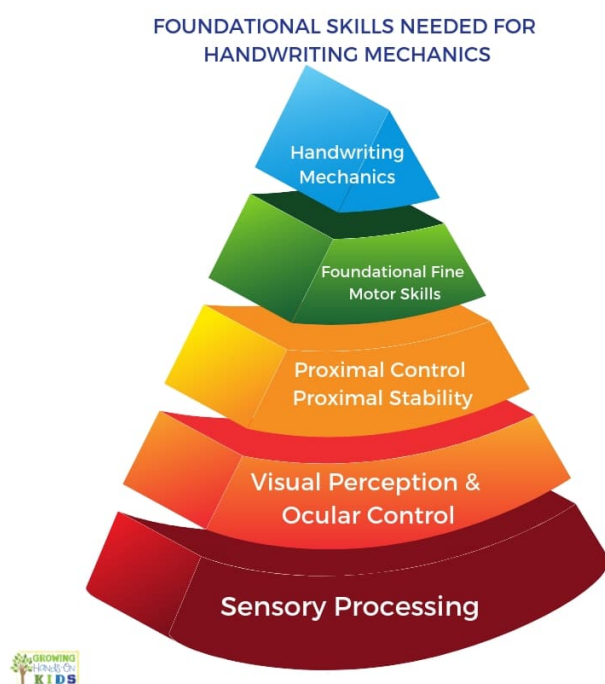
Writing is an important part of our lives from childhood to adulthood, e.g. to write lists, copy telephone numbers, fill out forms. At school, writing is often used to measure learning. Children with difficulties may avoid writing, struggle to copy from the board, and have difficulty keeping up in class. Their writing may not show what they know.

Writing usually develops in the following way.

Age	Skills
1-2 years	Scribbles Copies vertical lines, horizontal lines, circular scribbles after being shown
2-3 years	Copying vertical line, horizontal line, circle Copies cross after being shown
3-4 years	Draws circle without a model.
4-5 years	Copies square after being shown Copies cross, square, right and left diagonal lines, X shape, some letters and numbers May be able to write own name Draws a recognizable face with eyes, nose, mouth Draws a basic stick figure with 2-4 body parts Colours inside a circle and filling it at least halfway
5-6 years	Copying triangle Printing own name Copying most capital and lowercase letters Drawing a person with at least 6 body parts

Skills Needed for Handwriting

Handwriting is complicated and involves many skills. The pyramid below shows the importance of basic skills. Foundation skills (at the bottom) affect skills higher up. For example, sense of touch (sensory processing) will affect how well the hands work (fine motor skills) and how tightly a child will hold their pencil (handwriting mechanics).



From www.growinghandsonkids.com

Sensory processing is the way the body uses information from the senses. Information is sent to the brain from different parts of the body, e.g. skin, eyes, ears, muscles, joints. Sensory processing is important for all tasks, including handwriting.

The body uses 8 senses to help it function:

Vision



Sound



Taste



Smell



Touch

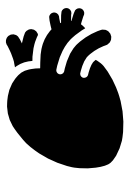




Proprioception - muscles and joints have tiny sensors that tell the brain the position of the body and how it is moving. During movement, a person does not need to look at what they are doing. It is the sensors that give this information.

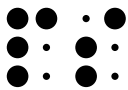


Vestibular – sensors in the inner ear are filled with fluid. When a person moves their head the fluid moves. The sensors pick up information on movement and send it to the brain, e.g. forwards, backwards, side to side, tilting our head, turning around, moving up and down, spinning. The brain uses this to plan movements, coordinate the body, and balance.



Interoception - is how the body tells the brain what is going on inside the body, e.g. feeling hungry or full, thirsty, heart beating fast, sensation of butterflies in the stomach.

A child with sensory processing difficulties can have problems with their coordination, hand-eye coordination, attention, behaviour, emotions, play and school activities. Handwriting difficulties may include pencil grip, hand-eye coordination, writing on the line, pencil control, holding the paper when writing, and attention.



Visual perception is how the brain makes sense of visual information (from the eyes). It is made up of different skills.

- Visual discrimination – identifying difference between objects or shapes.
- Position in space – knowing where you are compared to things around you.
- Figure-ground - identifying an object amongst a cluttered background.
- Visual closure – seeing an object or word when part of it is hidden.
- Form constancy – finding objects when they are different in size, orientation or colour.
- Visual memory – remembering information about objects or shapes.
- Visual sequential memory – remembering a sequence.



Ocular-motor control is how we control our eyes to focus on something. It is important for reading and handwriting.



Visual-Motor Integration (also known as VMI) is how the eyes and hands work together so that we can copy, draw or write what we see. Children need good skills to copy basic shapes (diagonal lines, circles, squares, triangles, crosses) before they can form letters correctly.



Proximal control and proximal stability are the strength and control in the core muscles, i.e. trunk, hips and shoulders). Children this to sit correctly (not slouch), hold their arms and shoulders steady as they write, hold their head up, look at the board, and read and copy information. A child with difficulties will struggle with smaller movements such as handwriting.



Fine motor skills involve movements of the hands and fingers. The skills needed for writing are:

- Coordinating both sides of the body (bilateral integration). This involves movements that are the same (e.g. jumping) or opposite (e.g. tapping head and rubbing tummy).
- Wrist position. This involves resting the hand on the table with the wrist slightly extended (bent backwards) as the fingers move the pencil for writing.
- Hand and arm strength.
- Palmar arches. There are several arches within the palm of your hand that make it possible for the hand to grasp objects of different sizes and shapes. These arches help with movements of your fingers and grip strength.
- Thumb opposition (touching the tips of the thumb to each fingertip). This is important for pencil grip and leaving an open space between the thumb and index finger.
- In-hand manipulation (moving objects inside the hand).
- Separation of two sides of the hand. The thumb, index and middle fingers move, whilst the 4th and 5th fingers are used to steady the hand, so it can slide along the page.

Writing Readiness

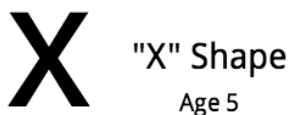
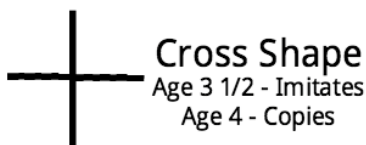
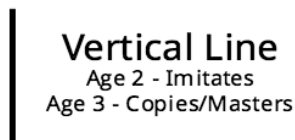
To form letters, a number of skills are needed:

- Hand and finger strength.
- Hand-eye coordination.
- Upper body strength.
- Manipulative skills or dexterity of the hands.
- Pencil grip.
- Using two hands together (bilateral integration), i.e. one hand to write and the other to hold the paper steady.
- Crossing the midline.
- Hand dominance, i.e. using the same hand to write.
- Separation of both sides of the hand, i.e. using the thumb, index and middle finger to hold the pencil and the 4th and 5th fingers to rest on the table.
- Forming strokes, e.g. circles, lines and shapes.
- Identifying letters and their differences.
- Visual perception, i.e. interpreting what is seen.



Children need to develop prewriting skills before they can form letters. Prewriting shapes are the strokes that most letters, numbers and early drawings are made of. They usually develop in the following way, based on how old the child is.

PRE-WRITING LINE DEVELOPMENT FOR KIDS



From www.growinghandsonkids.com

Handwriting Problems



Handwriting problems can cause frustration, distress and anxiety. A child may be reluctant to write.

Specific issues may include the following:

- Quality of writing, i.e. legibility, how neat and tidy it is, spaces between letters and words, formation of numbers and letters, writing on the line, fluency, size of letters, writing without looking at every letter.
- Comfort when writing, i.e. pain, discomfort, sweating.
- Pencil grip, i.e. awkward grip, holding the pencil tightly or too loose, too much pressure or too little, tiring easily.
- Speed of handwriting, i.e. too slow, too fast.
- Organisation on paper, i.e. how space is used.
- Enthusiasm, motivation, enjoyment, reluctance, frustration, anxiety, difficulty coping with mistakes.
- Poor attention, distraction.
- Difficulty using many skills together, i.e. thinking and writing, listening and writing, copying and writing.

Occupational Therapy Assessment and Intervention

Occupational therapy helps a child or young person manage or cope with a difficulty or disability. The aim is to improve skills, increase independence, and learn new skills. Handwriting assessments identify the areas of handwriting that the child or young person is struggling with, and the difficulties that cause them.

An assessment will look at:

- Pencil grip and pencil control.
- Handwriting quality, i.e. letter and number formation, speed and fluency, spacing, alignment, size, legibility.
- Pre-writing and copying skills.
- Gross motor skills, i.e. posture, coordination, balance.
- Fine motor skills, i.e. manipulative skills, hand dominance, grip strength.
- Visual perceptual skills.
- Visual-motor skills.
- Classroom skills, i.e. following instructions, coping with demands, organisation to tasks.
- Sensory processing skills.

Assessments will involve talking to the child, their parents or carers, school/college and other professionals that work with the child. An assessment will involve observations in class and working with the child on a 1:1 basis.

Activities to Develop Handwriting Skills



Information in this section

This part of the booklet looks at different areas of difficulty and suggests activities and ideas to manage them. You will see the following symbols:



Helpful information.



Difficulties that the child may have.



Some ideas to try.

Practicing skills



- It is best to practice skills every day, even if it is for a short time.
- Build tasks into everyday activities and use them as part of the child's routine.
- Think about the position that a child is in.
 - If they are seated, make sure they can place their feet on the floor, i.e. that they are seated at a table of suitable height and the chair is the right size.
 - Working on the floor on the tummy will be more challenging but will offer more opportunity to use different muscles. Lying on the floor gives more pressure and movement input, so it is good for self-regulation.
- If the child is frustrated, change use objects that are larger (e.g. chunky beads instead of small beads), or shorten the time and allow a break.
- Make sure activities are interesting and fun.
- Take into account any sensory issues. For example, if a student is sensitive to touch, avoid using very textures that they are uncomfortable with.
- Allow extra time to practice skills.
- Practice skills when there is less stress on the child, e.g. at weekends, after school.
- Each section that follows has advice for skills that are needed for writing.

Early Fine Motor Skills

Fine motor skills are needed for a child to learn self-care skills (e.g. brushing teeth, eating, dressing), play skills and handwriting.

Signs of a problem may include:

- Dropping items
- Difficulty holding cutlery, toothbrush or a pencil
- Trouble writing, colouring, or using scissors
- Do not show an interest in fine motor activities
- Preference for physical activities
- Poor hand-eye coordination
- Clumsiness
- Difficulty with play skills



Activities to Develop Early Fine Motor Skills

- Play doh – rolling, moulding and cutting.
- Clothes pegs – hanging up doll's clothes or pictures on a line. Attach clothes pegs to a shoebox, piece of card or a paper plate (may need to be double thickness). To make this more challenging, match colours or letters or make a word from pegs that have letters on.
- Nuts and bolts – these are available in play sets.
- Sewing or lace cards.
- Thread beads, cotton reels, small pieces of straw, or pasta. Try chunky threading activities (available from special needs suppliers) for students with more significant difficulties, e.g. apple and worm, mouse and cheese.
- Thread pipe cleaners through a colander.
- Pushing pasta into play doh and then removing it.
- Peg boards.
- Duplo and chunky Lego.
- Toys that link together, e.g. unifix cubes, monkeys, clips.
- Sorting activities, e.g. sorting toys into different colours, shapes or sizes.
- Using tweezers to pick up small objects, e.g. pompoms, marshmallows or sweets, small pieces of straw or pipe cleaner.
- Hungry monster game – make a slit in a tennis ball. Fill it with sweets. Remove with a pincer grip (pinch grip) or tweezers.
- Mosaic pictures.
- Making pictures with dried food, e.g. lentils, pasta, dried peas and beans.
- Painting with pipettes.
- Paper clips – use different colours and match to coloured paper or card.
- Dot to dot.
- Tracing pictures or patterns.
- Sand pictures. Put glue on a picture and use a pincer grip (pinch grip) to sprinkle sand on to the picture. Add powder paint for colour.
- Pouring activities, e.g. water, pasta, beads.
- Inset puzzles or jigsaws with large pieces.
- Using a spoon to move small objects into another container, e.g. marbles, water beads.
- Building blocks.



Arm and Hand Strength

Problems with the large and small muscles of the forearm and hand can cause weakness and problems with coordination. A child may have difficulty:

- Picking up small objects using the tips of the fingers and thumb, e.g. food, coins.
- Holding a pencil or pressing too light or too hard.
- Holding and using cutlery.
- Fastening buttons, zips or shoelaces.
- Using scissors.
- Manipulating small objects within the hands, e.g. moving coins from the inside of the hand to the fingertips.



Activities to Increase Arm and Hand Strength

- Store any resources in a small container with a lid.
- Play doh – moulding, squeezing, rolling, pushing and pulling. Try hiding small objects (beads, pennies, beans) inside and then pull them out.
- Theraputty.
- Squeeze a stress ball.
- Lego.
- Water play with spray bottles, water guns, squirty toys, or sponges.
- Spray bottles: help water plants or spray the windows to clean or play with it outside. Add food colouring to make spray bottle pictures in the snow.
- Sponges: squeezing to wring out the water. Help wash the car, wash toys, or use in water play.
- Clothes peg games
 - Use the pads of the thumb and index finger to open the peg rather than pinching it open against the side of the index finger.
 - When pinching open, try alternating each finger to squeeze opposite the thumb.
 - Place pegs along the top of a container and then on top of each other to construct a design.
 - Pick up small objects with the peg, e.g. cotton balls, pompoms, crumbled paper, beads, pegs.
 - Place pegs around an index card.
 - Hang up pictures or toys on a string, like a clothesline.
- Hole punch
 - Punch holes along strips of paper (1 to 2 inches wide) or along the edges of a sheet of paper or paper plate.
 - Use hole punch clippings to make confetti or 'snow' to glue on paper for pictures.
- Helping the teacher, e.g. stapling paper together.
- Pop bubble wrap by pinching with thumb and index finger or by pushing down on bubbles when the sheet is placed on a hard surface.
- Squeezing a tennis ball.
- Hungry monster game. Make a slit on the ball to make a mouth. Fill with sweets or small objects. Remove with pincer grip (pinch grip) or tweezers.
- Theraputty.
- Pipette or turkey baster to squirt water or have a race to blow cotton balls and pompoms across a finish line.
- Craft activities that use squeeze bottles, e.g. glue, glitter glue, puffy paint, fabric paint, etc.
- Tongs, tweezers, connected chopsticks - use these to pick up small objects for sorting, e.g. beads, marbles, beans, pompoms and cotton balls.



Complex Hand Skills

The following are skills used for in-hand manipulation:

Translation - moving an object from the fingertips to the palm of the hand or from the palm back to the fingertips.

Shift – moving an object in a straight direction, e.g. posting a coin, threading a needle, separating the pages of a book before turning them, fanning cards, changing the position of a pencil in the hand. The fingers either work together or in a different way.

Rotation - turning an object around with the thumb and fingers. This can be simple (e.g. rolling a clay snake, removing a jar lid) or complex (e.g. turning a coin over with the thumb and fingers, turning a pencil over to use the eraser).

Stabilisation - holding an object inside the palm (with the 4th and 5th fingers) whilst carrying out movements at the same time (with the thumb, index and middle finger) e.g. holding a coin in the palm of the hand while putting a coin in a money box.

Signs of a problem may include:

- Dropping items.
- Difficulty holding cutlery, toothbrush or a pencil.
- Trouble writing, colouring, or using scissors.
- Avoidance or no interest in fine motor activities.
- Preference for physical activities.
- Poor hand-eye coordination.
- Clumsiness.



Activities to Develop Complex Hand Skills

- Crumpling paper with one hand.
- Walk a ball - use the fingers to “walk” a small ball up and down the legs. The students can walk the ball up one leg, across the tummy and down the other leg. To make it harder, ask the student to use just the tripod fingers (thumb, index and middle fingers) to walk the ball.
- Twirl a Beanbag - using a beanbag, position the fingers under the beanbag, holding it level. Slowly turn the beanbag, using the fingers and thumb.
- Lego.
- 3D puzzles.
- Playing a musical instrument.
- Styling hair.
- Juggling.
- Building models.
- Cooking and baking.
- Making a hot or cold drink under supervision.
- Cat’s cradle.
- Board games.
- Jenga.
- Ball games.
- Weaving with paper or wool.

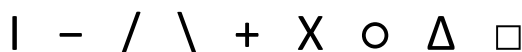


- Sewing.
- Making a pompom with two circles of card and wool.
- Posting coins into a money box.
- Pick up 3 coins one at a time and hold them inside the hand. Place them down one at a time (like counting out money).
- Roll play doh into small balls using the thumb, index finger and middle finger.
- Jigsaws.
- Card games – deal the cards to each player. Try shuffling them.
- Making models out of pipe cleaners or clay.
- Making jewellery.
- Make up and nail varnish.
- Chaining paper clips together.
- Table top football games, e.g. Subbuteo, pompom football (flick with fingers).
- Origami.
- Making paper aeroplanes.
- Pick up sticks game.
- Meccano or Knex.
- Hama beads.
- Using tweezers or chopsticks to pick up small objects.
- Decorate cakes.
- Rubik's cube or logic puzzles.
- Scrunch up paper in one hand – hand in the air, do not use the table!
- Tear up double thickness paper.



Prewriting Skills

Before students are taught to write, they need a good understanding of shapes and the differences between lines, letters, numbers and symbols. Prewriting activities use a range of different materials, as well as pencils or crayons, to learn or copy shapes. Activities help children develop their hand skills, coordination, pencil control and sense of direction.



Activities to Develop Prewriting Skills



- Use sponges or paintbrushes to create pictures.
- Use food instead of finger paint, e.g. angel delight, whipped cream.
- Listen to music. Use scarves or ribbon and move them as the tempo of the music changes. Move them up, down, left, right and around in circles. Place a scarf or ribbon in each hand. Cross over in lines (across or up and down), or in circles (forward, backwards). Try opposite movements.
- On plates or food trays make up some Gloop (corn flour mix). Use the fingers to draw shapes or pictures.
- Use different textures on a tray to practice letters, e.g. shaving cream, sand, flour, icing sugar, rice, couscous.
- Use water outdoors to paint on the ground or walls.
- Roll out play doh. Use tools to make horizontal, vertical and diagonal lines.
- Encourage scribbling first, then move onto copying horizontal, vertical and diagonal strokes. Finally move on to copying shapes, e.g. circle, square and triangle. Once the child can complete this, move on to tracing over letters.
- Stand while mark making or colouring on a piece of paper on a wall, chalk board or whiteboard. This will help to promote pencil grip and correct positioning of the wrist.
- When colouring, use finger crayons or short pieces of crayon. This will help promote a tripod grip, not a "fist grip" (wrapping the whole hand around the crayon).
- Draw shapes with fingers on different textures e.g. sandpaper, cardboard, crepe paper, foil.
- Draw around objects, templates or blocks to reinforce their shape, e.g. square, triangle, circle.
- Squishy bags – fill resealable zipper storage bags with flour, water, and food colouring. Use the finger to draw shapes, lines, and letters on the bag.
- Bubble wrap - write letters on sheets of bubble wrap with a Sharpie pen. Ask the student to pop the bubbles over the letter.
- Play doh letters and shapes.
- Play doh and drinking straws - flatten out a piece of play doh on a flat surface and draw a letter on it. Cut plastic straws into small pieces. Ask students to push the straws into the play doh shape.
- Dots – trace lines with dots, using a felt pen or a cotton bud dipped in paint.
- Make letters out of Lego
- Tracing over patterns, e.g. zigzag, loops. Use pens, glitter glue or small beads to trace over them.
- Squeeze bottle – fill it with sugar to trace over letters.

Crossing Midline

Crossing the midline involves one hand moving over to the other side of the body to work there. Before this, a child uses the left hand on the left side of the body and the right hand on the right. Midline crossing develops with bilateral (two sided) coordination. A child learns to coordinate a hand that is doing something skilled (e.g. cutting) and a hand that is helping (e.g. holding the paper). If a child avoids crossing the midline, then developing a dominant hand may be delayed.



Some children develop a dominant hand, but alter the way they do things, which can make some skills awkward. For example, a child may turn the paper sideways so they can write from bottom to top, instead of reaching over to the left side with the right hand to write from left to right. Another child may shift their body to the left, so the right hand does not have to reach over.

Activities to Promote Crossing Midline




- Play Simon Says (“touch your left elbow”).
- Blow bubbles and reach with both hands to pop them.
- String beads to make a necklace
- Making sandwiches - spreading the butter, cutting the sandwich in half
- Painting on large piece of paper or drawing on a chalkboard. Make the paper/board big enough so when it's in front of the child he/she has to reach either side to fill it. Draw horizontal lines without swapping hands.
- Practice ball skills where the child is expected to catch towards the middle of the body or reach across the middle of the body with two hands.
- Roll a ball with a partner using two hands, both within midline and to one side.
- Aiming games. Throw a ball or beanbag at a target placed within midline range or to one side.
- Play follow the light. In a dimmed room, lie on your back and hold a torch using both hands. Ask the child to follow the torch beam with their own torch. Make sure the light is moved to opposite sides so that the midline is crossed.
- Encourage the child to help wash the car, carrying out large movements with their arms whilst holding the sponge with two hands. Similar movements can be completed when washing windows or wiping the table.
- Picking up games. Put a container either side of the child. Ask him/her to pick a toy/object up from their dominant hand side and drop it into a container on the opposite side, making sure they don't pass it through the hands. Then change hands using the same idea.
- Pick up small objects using tweezers in the dominant hand. Move them into a container on the opposite side. Swap hands.
- Draw a path on a large piece of paper. Place it on the floor and ask the child to follow the path with their finger, an animal, toy or car. Encourage use of each hand.
- Draw a very large figure of eight, turned on its side, on a chalk board or piece of paper. Ask the child to draw over it.
- Baking and cooking - mix up ingredients in the bowl in circular motions, holding the bowl with the other hand. Swap hands throughout.
- Rub your tummy and tap your head. Swap hands.
- Passing relays (like pass the parcel party game).
- Back to back passing – sit on the floor back to back. Pass a beanbag or toy behind you to the other person using two hands.
- Two handed pencil activities - hold a pencil in each hand.
 - Drawing circles or lines at the same time. Change the direction.
 - Move the pencils in opposite ways, e.g. one up and one down, one goes left and the other goes right, opposite circles.

Hand Dominance

When one hand is used more than the other hand and is more skilled at tasks than the other hand, it is called the dominant hand. This is also known as hand preference. Hand preference begins to develop between ages 2 and 4 years. Most children have a definite hand preference by 5-6 years.


Some people are good at using both hands (ambidextrous) but it is usually better for a child to develop strength and dexterity in one hand. This helps them with fine motor tasks, especially handwriting. The other hand has an important role to play as the assistant hand, or 'helper' hand, e.g. holding the paper steady when writing, or holding and turning the paper when cutting.

General advice

- If a child does not use one hand as their preferred hand, do not choose or force them to use one hand. 
- Encourage a child to participate in a wide range of activities to develop their hand skills.
- Position toys or activities in front, and to the centre (midline), so that they can choose which hand to use rather than using the hand closest to the toy or object.
- Once a child has developed a preferred hand, encourage them to consistently use this hand. Encourage them to finish an activity with the hand they started with.
- Regular breaks may be required until a child builds up the strength and skill to consistently use their preferred hand.
- Give lots of praise and encouragement.
- Encourage activities where both sides of the body move in the same way, e.g. rolling doh, clapping games. This will encourage both sides of the brain to communicate with each other.

Activities to Promote Hand Dominance (also see bilateral skills)

Gross Motor Activities

- Sand or water play activities – digging, pouring, driving cars or trucks, container play.
 - Painting on a large piece of paper.
 - Painting with water with a large brush outdoors.
 - Throwing balls or beanbags into a basket or at a target.
 - Playing skittles or bowls.
 - Hitting a suspended balloon or ball with a bat, holding it with two hands.
 - Play bat and ball games (cricket, rounders, tennis).
 - Wash the car, wash windows, or wipe tables. Use two hands to hold the cloth or sponge.
 - Reach across the body for objects e.g. balls, bean bags.
 - Popping bubbles with two hands.
- 

Fine Motor Activities

- Drawing, colouring or writing. Try using a crayon or pencil in both hands.
- Art and craft activities – ink stamps, stickers, card making, mask making, stencils, tracing.
- Sharpening pencils.
- Building with blocks or Lego.
- Playing board games and card games.
- Cooking activities – stirring, measuring, and sifting.
- Playing musical instruments – recorder, keyboard, xylophone, trumpet, guitar.
- Computer games.
- Puzzles.
- Threading activities such as beads or lace cards.
- Cutting activities.
- Opening jars, containers or packets.



Bilateral Skills and Motor Coordination

Bilateral integration is the ability to coordinate both sides of the body at the same time with control and timing. Good skills show that both sides of the brain are communicating with each other and are sharing information. Coordination is needed for a number of activities on a daily basis, e.g. dressing, writing, colouring, cutting, physical activities.

‘Crossing the midline’ and body awareness are skills that are related to bilateral skills. Crossing the midline involves one hand moving over to the other side of the body to work there (see information on crossing midline). A child who avoids crossing midline can have difficulty with their coordination and often has delayed hand dominance.

Body awareness is knowing where the body is in space without using the eyes, e.g. walking up stairs. It involves proprioception, which is feedback from muscle and joint sensations. Children who have poor body awareness may appear clumsy, cautious, fearful with their feet off the ground, be rough with others or their toys, or have problems with their coordination, e.g. putting on socks and shoes, throwing and catching a large ball with two hands.

A child with poor coordination skills may:

- Struggle with gross motor skills, e.g. jumping, catching a ball, or drumming with rhythm.
- Have difficulty with fine motor tasks such, e.g. drawing a line with a ruler, threading beads, using scissors.
- Use one hand only, rather than both hands together.
- Appear awkward in certain tasks.
- Not hold the paper steady when they write.
- Struggle with self-care skills, e.g. tying shoelaces, fastening buttons, using a knife and fork together, putting on socks and shoes.



Gross Motor Activities

- Trampoline.
- Walk sideways with the feet facing forwards.
- Animal walking; crab (on all fours backwards), rabbit (bunny hop with 2 feet), seal (commando crawl), and bear (walk on all fours).
- Target games.
- Reach across the body for objects e.g. balls, bean bags.
- Keep a balloon up in the air with two hands or alternate hands.
- Pop bubbles with two hands.
- Use a stick or a bat, held in both hands, to keep a balloon up in the air.
- Jump with two feet together. Try over a bean bag, through hoops, or over a skipping rope laid on the floor.
- Swimming.
- Push an exercise ball or a large ball around obstacles with 2 hands.
- Wheelbarrow races.
- Catch or roll a ball with two hands.
- Pass a ball around the tummy or under the legs.
- Pushing or pulling activities, e.g. tug of war, pushing a cart or trolley, wheelbarrows.



- Bat and ball games.
- Dance or march to music.
- Running, skipping and hopping.
- Hopscotch.
- Hoop games – hoopla, stepping inside a hoop and lifting it above the head, rolling it along the floor.
- Clapping games.
- Simon says.
- Playground activities, e.g. climbing, slide, swing.
- Star jumps, jumping jacks, cross overs (touching opposite knee and then switching), squats, standing and touching opposite foot.
- Stepping-stones game – Use two pieces of paper to move to the other side of the room. Stand on one piece and place the other on the floor in front. Step on to this piece and pick up the other. Place it on front and repeat until you reach the other side of the room. Make this more complex by placing obstacles or challenges in the way, e.g. toys that are sharks or monsters.



Fine Motor Activities

- Make patterns in a sand tray using two hands.
- Pouring activities e.g. watering flowers, water play.
- Lacing cards.
- Stringing beads.
- Sewing.
- Card games.
- Cutting activities.
- Plaiting string.
- Roll play dough between two hands or with a rolling pin.
- Tap a balloon or bounce a ball with alternate hands.
- Draw lines (horizontal, vertical, diagonal) or circles with a crayon or pencil in both hands at the same time.
- Opening jars, containers or packets.
- Duplo or Lego.
- Baking activities, e.g. cutting out cookies, rolling dough, measuring.
- Slinky springs – passing it from one hand to another.
- Passing a ball from one hand to the other.
- Drawing with stencils.



Core Stability and Strength

Core stability is the ability to control the position and movement of the central portion of our bodies, i.e. trunk, hips and shoulders. It is important for our posture and provides a stable base for leg and arm movements.



Poor core strength can affect gross motor and fine motor skills, as a person will use more effort to hold their position e.g. poor sitting can affect activities such as handwriting and cutting. Children with difficulties tend to slump with their shoulders rolled forward when seated, have poor stamina, and may have poor balance.

Activities to increase strength in the core (trunk) and proximal stability (hips and shoulders)

- Encourage good sitting.
 - Regular stretching as this will prompt children to return to a good sitting position.
 - Frequent movement breaks to wake up the muscles, e.g. standing up, shaking the arms and legs, stretching, brain gym activities.
 - Make sure a child's feet are on the floor. Check the table and chair are a suitable height.
- Kneeling – make sure the knees are in line with the hips. Avoid 'w' sitting. Start with the bottom on the knees and then move on to high kneeling (bottom raised). Try activities in this position, e.g. rolling or catching a ball with a partner, playing a game.
- 4-point kneeling – this position can be used to play games on the floor or try crawling round an obstacle course.
- Balancing dog – start in four-point kneeling. Raise one arm or leg. Then raise one arm and the opposite leg. To increase the difficulty, increase the length of time the position is held.
- Half kneeling – start in kneeling and move one foot in front (hips and knees at 90 degrees). Remember to switch legs.
- Wheelbarrow walks.
- Crawling.
- Walking on the knees.
- Animal walks, e.g. bear, snake, dog, bunny, frog, monkey.
- Crab walk - sit on bottom, with knees bent, feet flat on the floor, and hands flat on the floor beside or slightly behind. Lift the bottom off the floor, taking the weight through the hands and feet. Walk forwards, backwards and sideways. Try crab football.
- Stepping-stones. Take two pieces of paper. Stand on one piece and place the second in front. Step on to the second piece. Keeping both feet facing forwards turn and pick up the first piece and place it in front. Continue this activity to a chosen point.
- Sit on cushions placed on the floor. Play catching games, e.g. ball, balloon.
- Bridging. Lie on the back with the knees bent and feet placed on the floor. Lift up the bottom. Try placing or rolling an object underneath, or place objects on the tummy.
- Exercises on a therapy ball or peanut ball
 - Sitting - bounce up and down a few times to recruit and activate the core muscles.
 - Sit and bounce.
 - Lie on the tummy and lean through the hands. The time can be extended by placing an activity on the floor or playing a game.
 - Sit on the floor, with the ball behind you (positioned against a wall or supported by an adult). Push against it with the body.
 - Lie on the floor and place both feet on the ball (positioned against a wall or supported by an adult). Push with the feet.



- Place the lower legs on top of the ball. Lift the bottom up into a bridge position. Place beanbags or cushions around it to keep it stable.
- Sit on the ball to catch a ball.
- Lie on floor on the tummy. Lift the arms and legs off the floor (like a superhero).
- Lie on floor on the tummy. Prop on the forearms and lift the head and upper body from the floor.
- Lie on floor on the tummy. Roll a ball to a partner using both hands.
- Lie on the floor on the back. Curl into a ball.
- Lie on the floor on the back with the knees bent and both feet on the floor. Reach towards the knees. Place a toy on the knees. If the position is unstable the toy will fall off.
- Lie on the floor on the back with knees bent and both feet on the floor. Throw a ball for the child to catch. Encourage him/her to lift up slightly to catch it.
- Lie on the floor on the back with knees bent and both feet on the floor. Pass a ball between the hands and feet. Then reverse.
- Static cycling – lie on the floor on the back. Pretend to cycle.
- Wall sit – stand against the wall (back to the wall) and pretend to sit down. Hold this position for as long as possible.
- Stand next to a chair. Place the fingertips on a chair for support and stand up. Change the lead leg.
- Squats.
- Push ups - against the wall or on the floor on the knees.
- Arm circles – forwards, backwards or opposite movements. To make it harder, do small circles with the arms out to the side.



Pincer Grip

A pincer grasp enables a child to pick up small items using the thumb and index finger. The pincer grip usually develops at 9-12 months of age. A child will use a pincer grasp for a number of tasks, e.g. finger feeding, using cutlery, holding pencils or crayons, manipulating small objects in the hands, and fastening buttons and zips. Developing a pincer grasp is a key foundation skill for writing.

Activities to Develop Pincer Grip

- Tongs, tweezers, connected chop sticks – use these to pick up small objects for sorting, such as beads, marbles, beans, pompoms and cotton balls.
- Corn cob holders, toothpicks or large push pins (thumb tacks) – place a picture over a sheet of craft foam or a cork board. Use them to punch holes along the lines of a picture. Hold it up to let the light shine through.
- Posting coins.
- Small pipette – use with paint, coffee or coloured water to make pictures.
- Spinning tops.
- Make shapes and letters using rubber bands on geoboards.
- Games – pick-up sticks, Jenga, Ker Plunk, Tiddly Winks, Pop Up Pirate.
- Pegboard activities.
- Games with tongs or tweezers – Operation, Crocodile Dentist, Bedbugs.
- Ziplock bags – use the fingertips to press and seal.
- Dress up dolls or practicing dressing skills, i.e. buttoning, snap fastenings, zips.
- Threading beads.
- Sticker books or wall stickers.
- Crumple small bits of tissue paper using fingertips, dip in glue and paste onto a picture.
- Tear small pieces of paper with fingertips and paste them on to a sheet of paper to make a picture.
- Games with pegs:
 - Use the pads of the thumb and index finger to open the peg rather than pinching it open against the side of the index finger.
 - When pinching pegs open, alternate each finger to squeeze opposite the thumb.
 - Place pegs along the top of a container and then on top of each other to construct a design.
 - Pick up small objects with the pegs: cotton balls, pompoms, crumbled paper, beads.
 - Attach several pegs along the bottom hem of shirt and then pull them off.
 - Place pegs around an index card or a paper plate.
 - Hang up pictures or toys on a string, like a clothesline.
- Play doh, Theraputty, or modelling foam
 - Break off small pieces, then roll the putty or clay between the pads of the thumb and index finger to make small balls.
 - Flatten small balls by pinching them between the pads of the thumb and index finger.
 - With a large ball, wrap the thumb and index finger around it, and try to pinch the fingers together.
- Construction toys
 - Mega Blocks or stickle bricks.
 - Legos or Knex.
 - Linking toys, e.g. clips, animals.



- Water play with spray bottles, water guns and squirty toys.
- Popping bubble wrap.
- Place a soft toy in the hand. Alternate pinching each finger toward the thumb using the toy as resistance.
- Squeezy bottles for craft activities, e.g. glue, glitter glue, fabric paint.
- Place strips of duct tape on the kitchen floor, outside, or on walls. Pull them off the surface.
- Cutting activities.
- Drawing or writing on the pavement with chalk. Erase it with a spray bottle of water.
- Build sculptures with mini-marshmallows and toothpicks.
- Remember grip strength activities as these will increase overall strength in the hands.



Hand Arches and Separating Both Sides of The Hand


Children who have difficulty with fine motor tasks may need to work on separating the two sides of the hand: the skill side and the power side. This skill is essential for fine motor activities. The 'skill side' refers to the side of the hand with the thumb, index and middle fingers. The little and ring fingers involve the 'power side' of the hand. The 'power side' provides stability while the 'skill side' moves freely to manipulate objects. For example, when a child holds a pencil in a tripod grasp, the skill side moves the pencil, while the little and ring fingers are tucked inside the palm to steady the hand on the table.

There are several arches within the palm of the hand that enable the hand to grasp objects of different sizes and shapes. They support skilled movements of the fingers and control the power of the grasp. The hand arches develop over the first few years of life. Crawling helps a child develop the muscles and hand arches on the power side of the hand. The arches on the thumb side of the hand develop as a child learns to hold objects of different sizes and shapes.

Activities to Develop the Hand Arches and Separation of Both Hands

- Write or manipulate objects whilst holding a small object under the ring and little finger, e.g. small piece of sponge, pompom, cotton ball.
- Cutting with scissors.
- Using squirt guns or spray bottles.
- Using a hose sprayer to wash the car.
- Snapping the fingers.
- Unscrewing small caps, such as toothpaste or a small bottle.
- Transferring small objects in and out of the palm, e.g. coins, paper clips.
- Rolling tiny balls of play doh with the fingertips; keep the ring and little fingers in the palm.
- Use large tweezers to pick up cotton balls, marshmallows or pompoms.
- Use small pipettes to make pictures, e.g. paint, coffee.
- Flipping coins.
- Posting coins into a moneybox.
- Tie a knot in shoelace.
- Fill a tub with beans, pasta or rice. Hide sweets or small toys. Try to pick them up with tweezers or salad tongs. Add counting activities or colour matching activities.
- Draw pictures on the ground with chalk, then 'erase' it with water by using a mini spray bottle. Make sure the 'skill side' of the hand squeezes the trigger, while the 'power side' holds the bottle steady.
- Spread shaving cream on to a tray or table and use a squirt bottle to wash it away.
- Use large pushpins or a pencil to create pictures on thick cardboard.
- Pick up small objects with one hand and put them into container with a small opening, e.g. small sweet, pasta, coins, buttons, paper clips.
- Pick up small objects and move them inside the hand, one at a time, without dropping them or using the other hand. Then move them into a pot one at a time.
- Stickers – pull off and place small stickers to create a picture. Make specific marks on the paper where the stickers need to be placed to 'cover up' the mark. This needs more precision and accuracy.
- Pegboard activities.
- Sewing or lace cards. Laminate a favourite picture and use a hole punch to make holes.
- Games with small pieces, e.g., Jenga, Tiddly winks, pick up sticks, board games.



- Scooping sand, rice and beans with the hands cupped.
 - Spinning tops.
 - Wind-up toys.
 - Cup the hands to shake a dice.
 - Tong games, e.g. Operation, Crocodile Dentist, Bedbugs
 - Ziplock bag – use the fingertips to press and seal.
 - Practice fastening buttons, zips and snap fasteners.
 - Threading beads.
 - Crumple small bits of tissue paper using fingertips, dip in glue and create a picture.
 - Tear small pieces of paper with the fingertips and paste them onto a sheet of paper to create a picture or collage.
- 
- Clothes peg games
 - Use the pads of the thumb and the index finger to open the peg rather than pinching it open against the side of the index finger.
 - When pinching open, try alternating each finger to squeeze opposite the thumb.
 - Place pegs along the top of a container and then on top of each other to construct a design.
 - Pick up small objects with the peg, e.g. cotton balls, pompoms, crumbled paper, beads, pegs, etc.
 - Place pegs around an index card.
 - Hang up pictures or toys on a string, like a clothesline.
 - Hole punch
 - Punch holes along strips of paper (1 to 2 inches wide) or along the edges of a sheet of paper or paper plate.
 - Use hole punch clippings to make confetti or 'snow' to glue on paper for pictures.
 - Pop bubble wrap by pinching with thumb and index finger or by pushing down on bubbles when the sheet is placed on a hard surface.
 - Squeezing a tennis ball.
 - Hungry monster game. Make a slit on the ball to make a mouth. Fill with sweets or small objects. Remove with pincer grip (pinch grip) or tweezers.

Visual Motor Skills

Visual-Motor Integration (VMI) is communication between the visual systems and the motor systems. VMI involves the eyes and the hands working together so that you are able to copy, draw or write what you see. Children need good skills to copy basic shapes (diagonal lines, circles, squares, triangles, crosses) before they can form letters correctly. Difficulties can cause issues with letter and number formation, and untidy and disjointed writing.

Activities to Improve Visual Motor Skills

- Threading activities, e.g. beads, lace cards.
- Colouring in.
- Copy pre-writing shapes (see pre-writing information). As well as pencils or crayons, use various materials, e.g. wool, pipe cleaners, straws.
- Draw around stencils, shapes and objects.
- Etch-a-sketch or Magnadoodle.
- Putting small items into small containers or through lids with slots in them, e.g. posting coins, posting letters game.
- Catching a ball and throwing bean bags at a target.
- Tracing pictures or shapes.
- Drawing patterns, e.g. zigzag, loops. See free internet resources.
- Dot to dot pictures and mazes.
- Form letters and numbers with Wikki Stix or play doh.
- Practice writing on a vertical surface to put the wrist in a good position for writing.
- Trace over shapes and designs with different coloured crayons, markers or chalk to create a 'rainbow' design.
- Puzzles, e.g. dot-to-dots, follow the line, mazes, word searches.
- Draw within 1 cm paths involving curves and angles. Reduce the size gradually.
- Copy shapes and designs and models with blocks, Lego, Wikki Stix, pipe cleaners and play doh.
- Copying pictures that have dots and grids.
- Make pictures out of shapes and lines, e.g. caterpillar out of circles, ice cream out of a triangle and a circle.
- Add detail to pictures, e.g. features on faces, fur or faces on animals, scales on a fish, patterns on t-shirts, bricks on a house, tiles on a roof, teeth on a shark, hair, rain, cloud shapes, decorating cookies or cakes.
- 'How to draw' activities.
- Shape sorters or inset puzzles (for younger children).
- Jigsaws.
- Memory games, e.g. pairs, Kim's game
- Games that involve sequences and memory, e.g. card games (Snap, Uno, Dobble, Spot it), Guess Who, Cluedo.
- Matching patterns with beads, blocks, plastic shapes (copying and from memory).
- Patterns, e.g. pegboard designs, bead patterns.
- Geoboard design copy (copy design on to another geoboard, then on to a dot map).
- Sequence items from left to right and top to bottom.
- Play 'I Spy' around the classroom, on walks, or on the playground. Emphasize the left and right sides.



- When outdoors, count numbers of people or objects, e.g. number of people with hats, number of red cars.
- Draw shapes with a tool or the finger in different textures, e.g. sand, shaving foam, rice.
- Sorting activities, e.g. shapes, colours, objects.
- Copy shapes on a large scale. Draw over in different colours and then copy.
- Ball games – rolling, catching and throwing
- Aiming and target games.
- Keeping a balloon up in the air.
- Cup stacking games.
- Simon says or Hokey Cokey. Emphasize the left and right sides.



Visual Perceptual Skills

Visual perception is how the brain uses information from the eyes to recognise, remember and understand what is seen. Visual perception develops as a child moves about and explores their environment. It is made up of different skills:

- Visual discrimination – identifying difference between objects or shapes.
- Position in space – knowing where you are compared to things around you.
- Figure-ground - identifying an object amongst a cluttered background.
- Visual closure – seeing an object or word when part of it is hidden.
- Form constancy – finding objects when they are different in size, orientation or colour.
- Visual memory – remembering information about objects or shapes.
- Visual sequential memory – remembering a sequence.

The problem is not with the child's eyesight but with the way the brain processes visual information. However, it is important that an eye test is carried out to make sure there are no other difficulties.

Difficulties Associated with Visual Perceptual Skills

There are numerous effects of visual perceptual problems and these may not be obvious. Problems can lead to issues with anxiety, poor self-esteem, frustration, confidence and learning.

Self-care and independent living skills

- Difficulty dressing independently.
- Unable to fasten buttons, zips or fasteners when dressing and undressing.
- Difficulty tying shoelaces.
- Problems matching, sequencing or ordering clothes.
- Difficulty finding cutlery, clothing or tools in a cupboard and drawer.
- Messy eater.
- Difficulty following instructions, e.g. recipes.
- Issues with time management or organization of tasks.
- Sorting and organizing personal belongings.
- Managing money.
- Road safety.
- Poor attention.
- Frustration.
- Avoidance or behaviour issues.
- Motor difficulties, i.e. gross motor skills, fine motor skills.



School

- Difficulty learning and keeping up with work.
- Delays in learning to write or handwriting difficulties.
- Dislikes or avoids writing.
- Work is messy and incomplete. Some parts may be crossed out or rubbed out.
- Difficulty remembering shapes of letters and numbers.
- Letter and number reversals.



- Uneven spaces between letters and words.
- Misses letters from words and words from sentences.
- Difficulty copying from one place to another. Problems copying diagrams and drawings.
- Poor spelling.
- Cannot spot errors in own work.
- Difficulty preparing outlines and organizing written work.
- Difficulty organizing workspace and resources needed.
- Difficulty remembering techniques used, i.e. story or essay structure, maths techniques.
- Confuses similar looking letters e.g. b and d, p and q.
- Difficulty recognizing and remembering 'sight' words but can sound out words phonetically.
- Frequently loses place when reading.
- Confuses similar looking words, e.g. bread and beard.
- Reverses words, e.g. reads 'was' for 'saw'.
- Has trouble finding letters in words or words in sentences.
- Loses place or skips lines.
- Poor memory for printed words, number sequences, diagrams and drawings.
- Poor understanding of main ideas and themes.
- Difficulty with higher-level maths.
- Difficulty understanding spatial concepts, e.g. in, out, on, under, next to, up, down, in front of.
- Problems remembering left and right.
- Poor attention and problems filtering out visual distractions.
- Sorting and organizing personal belongings.
- Difficulty with exams and tests.



Helping a Child with Difficulties

Although visual perceptual problems can make life difficult for children, much can be done to help them. Try the following:



- Decrease distracting information. If a room is 'busy' it is difficult to screen for important information.
- Make sure the child is sitting correctly with a chair and desk/table of appropriate height.
- Check levels of light and control glare. Avoid sitting them next to a window or pull the blinds down.
- Reading – use a ruler, bookmark or a finger to point.
- Use a computer to type homework to reduce the amount of writing.
- Use a multisensory approach to learn skills, e.g. feeling letter shapes, or using different textures to learn writing (shaving cream, play dough).
- Use colour or high contrast materials to make some sections of books or worksheets stand out, e.g. highlight keywords, coloured titles or important information.
- Cover any information that the child does not need.
- Give one instruction or piece of information at a time. if need be, split handouts up by cutting them up into smaller sections.
- Headphones or ear defenders to reduce distractions from sound.
- Pastel coloured paper to reduce glare.
- Think about how your child learns and use this to help them, e.g. auditory (using sound), visual (seeing information as opposed to talking through), tactile (touching, manipulating, drawing), kinaesthetic (learning by doing, practical activities).

Activities to Develop Visual Perceptual Skills

- Gross motor activities, e.g. scooters, relay race, follow the leader, jumping, playground equipment, obstacle courses, climbing, running.
- Activities that focus on the space behind the body, e.g. crawling backwards, walking backwards, throwing or rolling a ball behind you to hit a target.
- Activities in different positions to change the perspective, e.g. sitting, standing, lying on the floor.
- Puzzles, e.g. dot-to-dots, word search, mazes, kriss kross, spot the difference, guess the object (picture of object at a different angle or show only a small part of the object), counting overlapping shapes, hidden pictures.
- Jigsaws.
- Building or copying designs from a model.
- Stacking cups.
- Lego, Knex, Duplo, building blocks.
- Thread beads, peg board patterns, coloured blocks – copy patterns.
- Sort objects according to size, texture, shape and colour.
- Find objects in pictures, around the room, or outside e.g. a treasure hunt
- Finish words with missing letters, sentences with missing words, and number sequences with missing numbers.
- Finish the picture, e.g. symmetry.
- Talk about and identify spatial concepts, e.g. in, out, over, under, or through.
- Recall details of a picture from a book, items in a room, or identify what is missing.
- 'I Spy'.
- Memory games, e.g. matching pairs, Kim's Game.
- Card games, e.g. snap, pairs, Uno, Dobble, Spot It.
- Board games.
- Computer games.
- Hidden picture activities, e.g. Where's Wally.
- Drawing pictures. Practice partially completed drawings.
- Use different textures and materials to form shapes or letters, e.g. pipe cleaners, straws, pasta, play doh, shaving foam, sand, rice, flour.
- Identify objects by touch – place objects, shapes or plastic letters in a bag.
- Colour by numbers using paint, crayons or pencils.
- Matching activities.
- Copy drawings or 'learn to draw' pictures.
- Word games, e.g. making words, matching words to pictures, scrabble.
- Memory game, e.g. Guess Who, remembering four things from a walk, open a book and remember four things from a picture, odd one out puzzles.



Specific Writing Issues



Letter Formation

Letter formation involves using the correct movements to produce letters. If correct movements are not established at the beginning, problems may occur as writing progresses.

If tracing and copying letters are difficult for a child, it helps to teach them in a different way. Practicing in different ways will reinforce the shape.

Activity ideas to develop letter formation

- Roll play doh into snakes and then make letters.
- Make letters with pipe cleaners or wool.
- Paint letters with the fingers.
- Use a vibrating pen or a light up pen.
- Trace letters in lots of different textures, e.g. sand, rice, couscous, porridge oats, flour, sandpaper or a carpet tile.
- Smear shaving cream on a tray or mirror and write letters using the finger.
- Use a resistive surface to practice writing on a large scale, e.g. sandpaper, carpet tile, on the carpet. This gives more motor and sensory feedback.
- Draw letters in the air with the finger.
- Sort plastic magnetic letters into groups of which ones have straight lines and which ones have curved lines.
- Use wooden/cardboard letters and numbers to reinforce the visual formation of a number/letter. Ask the child to trace around them.
- Trace over dotted or ordinary letter with a coloured pencil. Write over in different colours.
- Practice letters on a large scale first
 - Drawing on a large piece of paper. Draw over with different colours.
 - Use water and a paintbrush outdoors.
 - Draw on the whiteboard.
 - Use a chalk board – write with chalk, rub out with a small piece of cloth or sponge, write again. Write in different colours.
- Fill a Ziplock bag with shampoo, shower gel, paint, or flour, water and food colouring. Practice writing letters.
- Use the whole body to make shapes, in standing or by lying on the floor.
- When practicing writing use a visual cue, e.g. letters on a card or an alphabet strip.
- Use a dot to show where the letter starts.
- Use internet resources to practice letter formation, e.g. twinkl, activity village.
- Use a visual cue for letters that are reversed.
- Use actions songs to remember letter formation.
 - Hold both hands in front with the thumbs up. Say,
 - Give a thumbs-up to the left hand. It looks like a 'b'.
 - Give a thumbs-up to the right hand. It looks like 'd'.
 - Left b, right d, b comes before d in the alphabet.
 - Hold both hands in front with the thumbs down. Say,
 - Give a thumbs down to the left hand. It looks like a 'p'.
 - Give a thumbs-down to the right hand. It looks like a 'q'. Left p, right q, p comes before q in the alphabet.



Alignment, Spacing and Size of Writing

After children develop letter formation, they need to keep their writing within a specific space on the page and learn to write letters of the right size. Size, spacing, and writing on the line are all essential skills. Children become more fluent writers by the age of 8-9 years. With time they can complete longer work tasks and keep up with demands in the classroom.

Activities to Help with Alignment (writing on the line)

- Teach the ideas of top, middle, and bottom with movement games. Then work on moving this on to handwriting paper, by identifying the top, middle, and bottom writing lines.
- Use colour as a guide to assist with correct alignment e.g. mud (brown), grass (green), and Sky (blue). Colour in on 3 separate lines of A4 paper
 - Sky Zone (letters with ascending strokes) d, b, f, h, k, l, t.
 - Grass Zone (mid zone letters) a, c, e, m, n, o, r, s, u, v, w, x, z.
 - Mud Zone (letters with descending strokes) g, j, p, q, y.
- Use mid zone prompts e.g. dots placed in the middle of a line -----
- On a practice sample of a child's writing, use a highlighter to trace the baseline of letters, following along the bottom of each one. Talk about how it looks and how writing is easier to read if the baseline is smooth and flat. Then highlight the bottom handwriting line on the paper before he/she writes to show where the baseline should be.
- Try handwriting paper with raised lines or try sticking Wikki Stix to the baseline of the handwriting paper to give a tactile cue to 'bump into' with pencils.
- Colouring in to increase pencil control.
- Puzzles, e.g. dot to dots, mazes, word searches.



Activities to Help with Spacing

- Use a prompt to ensure consistent and correct spacing in between words e.g. lolly stick, finger spacer or using the finger. Gradually reduce the amount of times a prompt is used.
- Practice writing letters on squared paper. Use the square as a prompt for correct and consistent spacing.
- Practice parting sentences in the correct places e.g. the dog ate my homework.
- Practice re-writing sentences and place the correct letter with the rest of the word to make the full sentence e.g. the cat sat on the mat.
- Use magnetic or foam letters and place them along a line to form sentences with correct spacing.
- Increase awareness of spacing by being a 'writing Detective'. During this activity ask the child to correct a poorly spaced paragraph or sentence that you have written.
- Review the child's own work. Indicate with one colour the spaces that are too close. Indicate with another colour the spaces that are too far apart. This reinforces the correct space.
- Draw smiley faces or place small stickers in each space to see how many "points" a child can pick up (1 point for each smiley face).
- Read a child's writing out loud to him/her. If she/he has forgotten to leave spaces between words, read it just as it is written so it sounds jumbled and does not make any sense.



Activities to Help with Size

- Practice tracing correct sizing of letters.
- Practice fluency patterns and letter formation on a larger scale then on a smaller scale using a whiteboard, chalkboard or a large piece of paper.
- Use raised line paper to prompt correct letter sizing.
- Practice writing letters on squared paper which will give prompts for boundaries.
- Use colour as a guide to assist with correct alignment e.g. mud (brown), grass (green), and Sky (blue). Colour in on 3 separate lines of A4 paper
 - Sky Zone (letters with ascending strokes) d, b, f, h, k, l, t.
 - Grass Zone (mid zone letters) a, c, e, m, n, o, r, s, u, v, w, x, z.
 - Mud Zone (letters with descending strokes) g, j, p, q, y.
- Highlight the middle zone of a line to give a visual cue for the correct size of letters e.g. ----- placed in the middle.
- Try a long rectangular 'window' to represent the height of letters that will fit in the writing lines on a page. Place it on the writing paper where the child should write. The window provides a boundary for the child to 'bump into' with his/her pencil.
- Draw boxes for individual letters. Gradually move to larger boxes to contain words and then sentences. Worksheets with big, blank spaces are difficult for children who struggle with size and spatial awareness.
- Use maths paper.
- Make sure handouts have clearly defined spaces to work in, e.g. line or box.



Pencil Pressure

If pencil pressure is too light, words can be difficult to see. If pencil pressure is too hard, the pencil breaks, lines are smudged, and mistakes cannot be rubbed out.

Activities to Reduce Pencil Pressure

- Trial chunkier pens and pencils or use a pencil grip.
- Rub the back of paper after writing. If less pressure is used, a child will not be able to 'feel' the letters.
- Write a word on the paper and erase it to see if there are any marks. If there are, repeat it until no marks are left.
- Write on tissue paper. If too much pressure is used it will tear.
- Practice colouring in with a pencil. Use dark, medium and light shading.
- Use carbon paper or foil underneath the paper to see what mark it leaves. Then ask the child to try and apply less pressure to decrease the mark.
- Use a mechanical pencil. If the child presses too hard the lead will break.



Activities to Increase Pencil Pressure

- Practice colouring in with different levels of pressure, e.g. heavy, medium, and light. Think about the writing tool. Colouring with crayons needs more pressure.
- Write a word on the paper and erase it to see if it has left any marks. If it has, keep on repeating it until normal pressure marks are left.
- Use carbon paper or foil underneath the paper to see what mark it leaves. Then ask the child to try and apply more pressure to increase the mark.
- Try a heavier pen/pencil which will give more resistance and pressure when writing.



Avoiding Writing Pain

Many children experience hand pain when writing. It can be caused by awkward posture, holding the pencil too tightly, or weak hand muscles. The following are some ideas to help decrease hand pain.

- Be aware of posture. If the elbow is too high and the wrist is extended too much, it can cause pain. Check the height of the desk and chair. The correct posture is:
 - Feet flat on the floor.
 - Chair tucked in under the table with a space between the tummy and the table.
 - Thighs parallel to floor and knees at a 90°.
 - Back up straight, inclined towards the desk and pivoted from the hips.
 - Forearms resting on desk with elbows level with the desktop at 90°.
 - If the chair is too deep for the child, place a cushion behind their back.
 - Try a writing slope and/or a seat wedge if their posture is still poor.
 - Paper stabilised with non-dominant hand.
 - Neck and shoulders relaxed.
 - Body faces desk squarely so non-dominant arm can support the body weight.
 - Paper tilted to up to the right (if right-handed) or up to the left (if left-handed).
- Try to hold the pen or pencil a little looser.
- Try a pencil grip to soften the pressure that is used.
- Every few sentences, take a five second break by trying one of the following:
 - Wiggle the fingers around and shake the hands.
 - Allow the hands to rest down by your side.
 - Stretch the fingers and rub the hands together, i.e. push the hands together (like prayer), stretch the fingers and thumb back, push down on the sides of the chair, stretch the arms high.
- Try writing a little slower. Writing too quickly can cause the muscles of the hand to tighten.
- Grip strength exercises, e.g. squeezing a stress ball or a foam ball.
- Think about how comfortable the pen or pencil is, i.e. weight, how wide it is, how smoothly it glides across the paper, type of pen (roller ball, biro, felt pen). When pencil grips are first used, use them slowly and gradually.
- Take regular breaks, i.e. take movement breaks, put the pen down when not writing.
- Mix activities up so that it is not all writing, e.g. build in practical activities, group discussions.
- Think about the writing task. Break it up into small tasks instead of one large work task.



Handwriting Warm-Up Activities

Handwriting warm up activities help children prepare for writing by warming up the fingers.

Complete them before writing tasks.

- If needed, these activities can be used halfway through a writing task.
- Choose two activities from both the shoulder section and the finger and wrist section.
- Repeat the activities 2-3 times and hold each stretch for 10 seconds (unless otherwise

Shoulder warm-ups

- Desk push ups – Stand next to the desk. Place hands on top of the desk. Lower down to the edge of the desk and then push back to the starting position.
- Chair push ups – Sit on a chair. Grip the sides of your chair with the hands. Use the arms to push up slightly, lifting bottom off the chair.
- Palm warm up – Sit on a chair and bring the palms together. Push the palms together and hold for a few seconds. Next interlock the fingers and try to pull the hands apart.
- Reach the sky – Raise the right arm up towards the sky. Stretch it high and then switch to the left arm. Alternate the arms 5 times.
- Shoulder shrugs – Shrug the shoulders up and down. Repeat 5 times.



Finger and wrist warm-ups

- Wrist rolls – Place the arms in front and make a fist with each hand. Turn them in one direction and then swap direction. Repeat 5 times.
- Shake out the hands for 5 seconds.
- Spider dance – pretend that each hand is a spider. Place the fingertips together. Bend and straighten them while pushing the fingertips against each other.
- Wiggle the fingers.
- Try finger aerobics (available on YouTube).

Crossing the midline

- Draw a line across a large piece of paper without turning the body. Swap hands.
- Draw a figure of eight in the air.
- Draw a large number 8 on its side. With each hand (pointer finger) trace the pattern. Make sure that each hand has a turn and switches directions by going clockwise and anti-clockwise.
- Try brain gym activities.



Finger and wrist warm-ups with play doh

- Squeeze the doh, pull it apart, roll it, flatten it, and squash it with two hands.
- Press individual fingers into the play doh to make holes.
- Roll small balls between the thumb and index finger. Then flatten them using the thumb and index finger.
- Push small objects into the play doh and then remove them.
- Cut play doh with craft scissors.
- Try Doh Disco (available on YouTube).

Pencil Olympics

Weightlifting

- Keep the whole arm and hand still.
- Place the index finger and thumb together in a pincer grip. Move the pencil in and out.
- Hold the pencil as though you are going to write. Move the pencil in and out.

Pencil Relay

- Use a pencil with a rubber on the end.
- Draw a line of dots.
- Draw a circle around one dot. Turn the pencil over and walk the fingers down to the bottom. Rub the next dot out and so on.
- Try a timer or race against another child.

Baton Twirling

- Hold the pencil as if you are going to write.
- Twirl the pencil between the thumb and first two fingers.
- Change direction.



Javelin Throwing

- Hold the pencil as if you are going to write.
- Turn it over and walk the fingers down to the end.



Rock Climbing

- Hold a ruler using only one hand at the bottom.
- Walk the fingers up the ruler and then back down again.

Adapting Writing Tasks

Children who struggle with handwriting problems often need different approaches to writing. Every child is different. What works with one child may not work with another. Try any changes over a period of time.

Altering homework tasks

- Remember warm up activities and regular rests (see handout on reducing writing pain).
 - Regular movement breaks and drinks. Keep activities short.
 - Use a mix of practical and writing tasks.
 - Make sure the workspace is tidy, e.g. pot or a small box to keep pencils.
 - Reduce distractions, e.g. quiet area to work, no background noise.
 - Check understanding of questions and work tasks.
 - Use Dycem (non-slip mat) to keep books steady.
 - Rulers - use a ruler with a handle or attach a piece of Dycem or anti slip material underneath to stop it moving, e.g. non-slip material for caravans.
 - Use a computer or iPad for long pieces of work.
 - When copying from a book, use a ruler or a folded-up piece of paper to line up with the work. This helps a child focus on what they need to.
 - Scribe answers or write down ideas for the child to copy.
- 
- Seating and posture
 - Check the height of the desk and chair.
 - Seat wedge and/or writing slope (available online). This helps with posture.
 - Sensory resources (seek advice from the child's occupational therapist)
 - Sensory cushion – can be placed on the chair to sit on, behind the back or in front of the tummy, or place the feet on it (without shoes). This allows a child to move.
 - Weighted products, e.g. wrist weights, weighted vest, weighted blanket or lap pad, weighted snake.
 - Pressure products, e.g. pressure vest, squeeze vest.
 - Theraputty, stress ball, play doh or a rubber ball to squeeze.
 - Fidget toys, e.g. tangle, Koosh ball, click toys, bendy man.
 - Ear defenders.
 - Chewing products, e.g. chewy buddy, chewy pencil top.
 - Fidget toys that fit on the pencil.
 - Different pencils and pens
 - Chunky pencils, mechanical pencil, triangular shaped pencils, harder or softer lead.
 - Wide pen, heavy pen, pen with rubber grip, felt pen, rollerball pen.
 - Specialist pens, e.g. stabilo pen, frixion pen, yuopen, Penagain Twist and Write Pencil or pen.
 - Change the grip on a pencil
 - Wrap a rubber band around a pencil.
 - Plastazote tubing – useful also for paintbrushes.
 - Abiligrp (available online – Amazon UK or Dyslexia Shop).
- 

Pencil grips – there are a wide range available. Some are listed here.

Triangular pencil grip



Claw pencil grip



Comfort or soft grip



Ridged comfort grip



Cross guard ultra grip



Dolphin grip



Large ultra pencil grip



Skittle grip



Grippit



There are lots of suppliers of pencil grips. The pictures above are sourced from the following companies:

Amazon UK

Sensory Wise

Sensory direct

TTS Group

The Dyslexia Shop

Learning Space

Cheap Disability Aids

Living Made Easier

Ryman

Left-Handed Writer

Left-handedness is the preference to use the left hand for daily activities such as writing or using tools. More people are right-handed than left-handed. Left-handed children may have difficulties with daily tasks, as equipment is generally designed for right-handed people, and many skills are taught right-handed.

Common problems with writing

Left-handed writers often experience one or all of the following difficulties:

- Awkward or 'hook' handwriting grip – the hand is hooked around the pen and is positioned above the writing line. This makes handwriting very uncomfortable and slow.
- Tight pencil grip – this leads to tiredness when writing, untidy writing and poor letter formation. It can be caused by:
 - poor desk posture.
 - not enough space on the desk to position the paper properly if the child is seated next to a right-handed writer.
 - tension if they are worried about their writing.
 - pencil or pen that is used.
- Mirror writing – left-handed writers can sometimes work across the page from right to left. They write in reverse until they learn the direction of reading and writing.
- Smudged work – as the hand moves along the writing line, it smudges the writing.



Helping the Left-Handed Writer

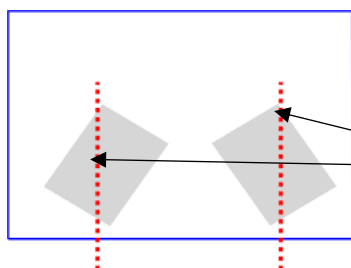
Pencil grasp

- Ideally left-handers should hold the pen or pencil 2-3cm from the point. This will help them see as they write and avoid problems with their posture or pencil grip.
- Try marking the position of the fingers with stickers, a line of nail varnish, or a small elastic band wrapped around the pencil (this can be removed once the child's grip is okay).

Posture



- Check that the desk and chair are a suitable height for the child.
- Check for awkward posture when writing. Place the paper to the left of midline (centre line of the body) and tilt the top clockwise up to a maximum of 45 degrees, i.e. move the top of the paper to the right. This should automatically bring the hand into the correct writing position underneath the writing line. Allow the child to experiment until they are comfortable.



This picture shows the ideal position for a left and right-handed writer.

Midline

From Pinterest. www.pinterest.co.uk

- Mark the desk with masking tape or use a left-handed writing guide to help the child remember the position of the paper. You can find these online.
- Left-handed children will require more space when sharing a desk or table. Ideally they should be seated on the left side of a double desk, or next to another left-handed child. This will avoid their elbows clashing and give them enough space.
- Writing on a sloped surface can help the child see what they have written, e.g. on a writing slope.



Writing tools

- Encourage the child to try different pens and pencils to find one that feels comfortable and flows smoothly across the page.
- Consider the width of the pencil (pencil shaft) and the grade of the lead. A chunky pencil may help. Soft lead will reduce pressure.
- Try a pencil grip to promote correct positioning of the thumb and fingers. There are many pencil grips available. Triangular pencil grips and soft pencil grips are suitable for left or right-handed children. For others, ensure that a grip is left-handed. Some pens have a rubber grip which prevents the fingers from slipping.
- Try pens or pencils that are left-handed as these will sit comfortably in the child's hand, e.g. left-handed stabilo pen or pencil.
- It can be harder for a left-handed child to write with a pen that has a very fine nib. Offer pens and pencils with broader and more flexible nibs, e.g. Bic pen. Avoid using pens that have wet ink as it is more likely to smudge as they write.



Writing tasks

- Left-handed children will cover up any work with their hand as they write and will struggle to copy information on the left side of the page. When a child is practicing handwriting, make sure any information that they are copying is on the right side or above their work so that they can see it. On worksheets or in their handwriting books, place model letters or words on the right side of the page and in the middle of the writing line.
- If a child is writing from right to left, use a sticker in the left margin to indicate where they start. Or draw a green line in the left margin and a red line in the right margin.
- Left-handed sharpeners and scissors are available from most retailers or online.



Information and resources are available from:

Left Handers Club	www.left-handersclub.org
Anything Left-Handed	www.anythinglefthanded.co.uk
Teaching Ideas	www.teachingideas.co.uk
Left-Handed Children	www.lefthandedchildren.org
National Handwriting Association	www.nha-handwriting.org.uk

Resources and Websites

Writing Programmes

Some schools use different programme to develop handwriting. Here are some of them.

Write from the Start. The Teodorescu Perceptuo-Motor Programme. Ion Teodorescu and Lois Addy. Published by LDA. This has photocopiable sheets that can be made into booklets for pupils, parents and teachers. It includes activities that develop pencil control and the shapes that are needed to form letters.

Handwriting Without Tears uses activities to teach pencil grip, letter formation, and literacy skills that are needed for handwriting. Programmes include foundation learning, handwriting skills and keyboard skills. www.lwtears.com

Write Dance focuses on movement so children can develop the physical skills needed for handwriting skills, i.e. balance, coordination, flexibility and stamina. The programme uses music during activities. www.writedancetraining.com

Speed Up. A Kinaesthetic Programme to Develop Fluent Handwriting. Lois Addy. Published by LDA. This is for children aged 8-13 years, whose handwriting is slow, illegible or lacking in control. Speed up is an eight-week programme.

Think Write focuses on the thinking skills that are needed for handwriting. Skills are taught using play, games and movement, e.g. letter formation, size, and writing on the line. The programme takes students through different levels of learning, i.e. writing readiness, learning to write, fluency and control. www.thinkwrite-learning.co.uk

Write Well develops pupils' handwriting from Reception to Year 6. It allows every child to move on at their own pace. Learning is split into four stages: shape; space, size and sitting on the line; stringing together and slant; and speed and style. Each skills encourages children to try, practice, and apply skills. There are free downloads on the website. www.schofieldandsims.co.uk

Twinkl Handwriting Scheme has activities that include activity sheets and booklets. www.twinkl.co.uk

Penpals for Handwriting is for children aged 3–11 years. It moves through developmental stages: physical preparation for handwriting; securing correct letter formation; beginning to join along and securing the joins; practicing speed and fluency; and developing a personal style. www.cambridge.org

Squiggle Whilst You Wiggle 2nd Edition is for early writing. Children use movement with music to develop their motor skills in preparation for writing. www.spreadthehappiness.co.uk

Websites

Dyspraxia Foundation	www.dyspraxiafoundation.org.uk
Dyslexia Foundation	www.dyslexia-help.org
National Handwriting Association	www.nha-handwriting.org.uk
Growing Hands on Kids	www.growinghandsonkids.com
The OT Toolbox	www.theottoolbox.com
Therapy Street for Kids	www.therapiststreetforkids.com
Pinterest	www.pinterest.co.uk
Kid Sense	www.childdevelopment.com.au
Teach Handwriting	www.teachhandwriting.co.uk
The School Run	www.theschoolrun.com
The Inspired Treehouse	www.theinspiredtreehouse.com
Mama OT	www.mamaot.com
Therapy Fun Zone	www.therapyfunzone.net
The Pocket OT	www.pocketot.com
Left Handers Club	www.left-handersclub.org
Anything Left-Handed	www.anythinglefthanded.co.uk
Teaching Ideas	www.teachingideas.co.uk
Left-Handed Children	www.lefthandedchildren.org
National Handwriting Association	www.nha-handwriting.org.uk