

Children, Young People and Families Occupational
Therapy Team

HANDWRITING DEVELOPMENT

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Pre-writing Skills

Development of Postural Control

In order to write, a child needs to be able to maintain their own balance in sitting without using their hands. They need to have good control of their trunk and shoulder muscles and be able to reach forward in a controlled way.

Firstly, the child should have access to a chair and table of the correct height or their ability to stabilise themselves for writing will be compromised.

When sitting on a chair, the child's feet should be flat on the ground, their bottom should be right back in the seat and their knees and hips should be bent to approximately 90°.

The desk should be just above the height of the child's elbows.

Even with the correct sized chair and table, a child with poor postural control may:



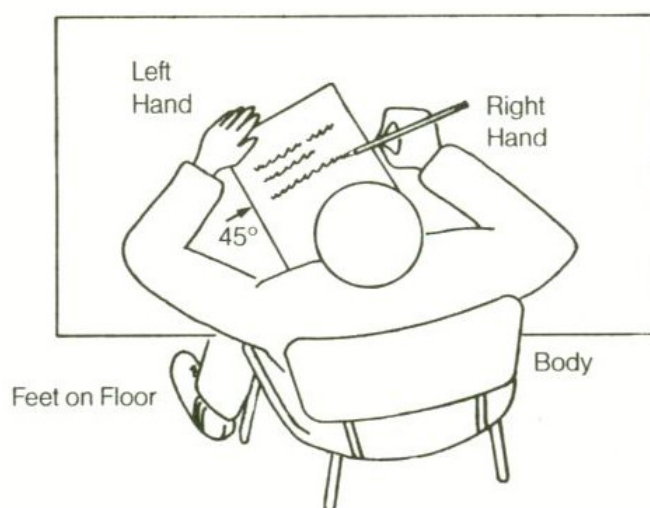
- Fidget constantly
- Wrap their feet around the legs of the chair
- Slide forward in their seat
- Lean to the side
- Lean forwards onto the desk or even rest their heads on the desk
- Use their arms to prop themselves up
- Keep their arms pressed tightly into their sides.

Things to be aware of

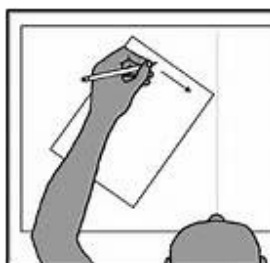
- If your child bends over their work or leans their head on the table, you could ask the school to try a slope board or sloping desk to help him/her stay upright. This will also help with wrist position.
- Check the child's position in the classroom. The child should be close to the front, facing forwards to help with looking at the teacher and the board.

- The page or book should be tilted rather than straight on in front of the child. For a right-hander the page should be closer to their right arm and the top should be tilted to the left. It should be opposite to this for a left-hander with even more tilt.

Paper Position for Right-Handers



Paper Position for Left-Handers



Activities to develop Postural Control

- Playing on playground equipment such as swings, climbing frames and merry-go-rounds
- Construct obstacle courses that require crawling and climbing
- Play 'Twister' or 'Simon Says' (using odd body parts such as standing on one leg, or balancing on one foot and one hand)
- Play with balls or beanbags whilst the child is sitting, kneeling, half-kneeling, squatting and standing
- Jumping on a trampoline
- Dancing: either at home or dance classes
- Play tug-of-war
- Kicking a ball in the back garden or park
- Skateboarding
- Martial Arts such as Tai Chi, Tae Kwon-do, or Karate
- Swimming, Gymnastics or organised play gyms
- Play "What's the time Mr Wolf?" where the child has to stop quickly and not move
- Encourage the child to complete activities that involve leaning on their arms and putting weight through their arms and shoulders, for example, completing puzzles in side sitting
- Roll out dough/pastry with a rolling pin
- Press cutter shapes into a dough
- Hand prints/potato prints/sponge painting etc
- Wiping tables, cleaning windows with straight arms
- Painting on an easel/paper pinned to wall
- Wall press-ups or chair push-ups.

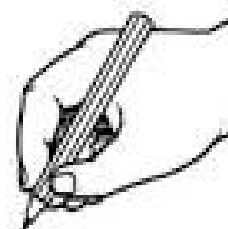
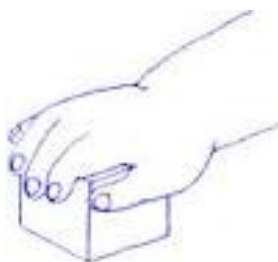
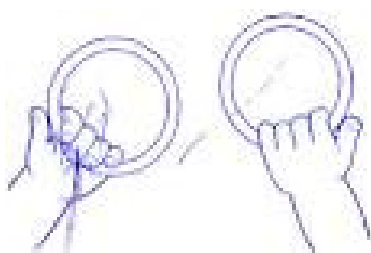


Development of Grasp and Fine Motor Skills

A child needs to have well-developed hand use, grasps and fine motor skills in order to control a pencil accurately. Check to see whether the child is able to:

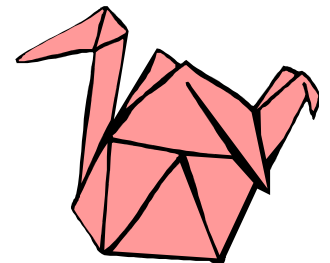
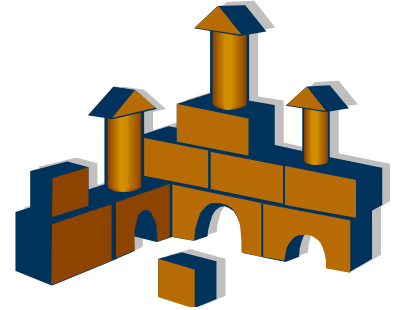
- grasp objects with their whole hand
- manipulate objects such as turning them over, moving them around in their fingers using one hand and two hands together
- pick up small objects using a pincer grip (tips of thumb and index finger)
- pick up objects or manipulate them using a tripod grip (thumb, index and middle fingers)
- use co-ordinated fine motor skills during play.

If the child struggles with any of these areas, please refer to the Children, Young People and Families Occupational Therapy Team's Fine Motor Booklet.



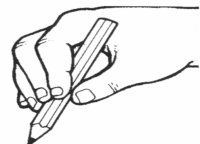
Activities to Develop Grasp and Fine Motor Skills

- Building blocks
- Pegboard activities
- Lacing or threading activities
- Using tweezers or tongs to pick up small objects
- Craft activities, including collages, paper mache, glueing and cutting
- Card games
- Puzzles
- Games such as checkers, pick-up sticks, marbles, jacks
- Family games such as Jenga, Kerplunk, Operation, Tumbling Monkeys, Wiggly Worms
- Lego, Duplo, K'nex and other construction toys
- Keyboard activities (computer or piano)
- Playing with spring-loaded pegs
- Origami
- Weaving
- Finger painting
- Dressing up using clothes with buttons, press-studs, zips and shoelaces
- Playing with playdough
- Mixing ingredients and helping during cooking.



Development of a Tripod Grasp

Even when a child has good fine motor skills and well-developed grasp patterns, holding a pencil is a new and complex task. You may need to check the child's grip on the pencil while they are colouring or drawing. The pictures below show the developmental stages that a child may go through when learning to hold a pen.

			
1-1½ years Palmar Supinate Grasp	2-3 years Digital Pronate Grasp	3½-4 years Static Tripod Grasp	4½-6 years Dynamic Tripod Grasp

(Erhardt, 1994)

A child should be able to use a static or dynamic tripod grasp for writing. This means that:

- the pencil is held between the tips of the thumb, index and middle fingers
- the pencil is held in a relaxed way without too much pressure on the shaft of the pencil
- the pencil rests on the hand between the thumb and index finger (webspace)
- the webspace gap should be open (ie the thumb and index fingers form a circle)
- the ring and little fingers are held away from the pencil bent slightly into the palm.

It is important to encourage the child to hold the pencil using a dynamic tripod grip.

If your child does not use this grip, you could try using a Pencil Grip, such as the Soft Pencil Grip as these may help your child to develop the correct grip.

Fine motor activities will help to strengthen your child's hand muscles and help to develop a tripod grip, such as tiddlywinks, sorting coins, playing Connect Four. Please refer to the Children, Young People and Families Occupational Therapy Teams Fine Motor Booklet for more information.

Activities to Develop a Tripod Grasp

- Placing clothes pegs/bulldog clips around the edge of a container
- Picking up small objects using tongs and then tweezers
- Threading beads
- Picking up cards
- Fill a medicine dropper (or mini turkey baster) with paint and drop onto paper
- Playing with squirt gun or squirt bottles with a trigger action. Drawing on a brick wall with chalk and then using a squirter and water to remove the chalk marks.
- Posting coins into a box with a slot in the lid
- During craft activities, use stickers or mini stampers, holding with the thumb, index and middle fingers only
- Transfer water from one container to another using a turkey baster
- Popping bubble wrap
- Placing pegs in and out of a pegboard
- Making paper clip chains
- Playdough modeling
- Playing with construction toys such as Lego
- Use felt-tips and crayons that are thicker and shorter. Very short crayons cannot be held with a whole hand grasp
- Ask the child to hold a small sponge or eraser in their hand with their little and ring fingers and then hold a pencil with the other fingers
- Use a moulded pencil grip to help the child position their fingers on the pencil, such as The Soft Pencil Grip.



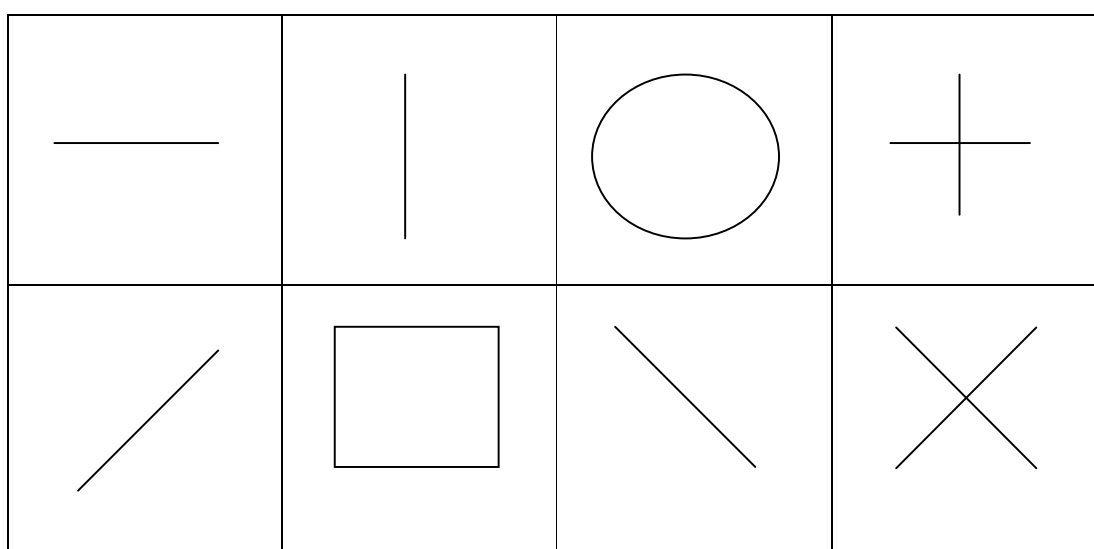
Development of Letter Formation

Letter formation is part of the development of fluent handwriting and forms the foundation for joining letters in the later school years. It needs to become automatic so the child can concentrate on the content of their writing rather than having to use a lot of energy on how to write the letters. Lots of practice is the best way to help letter formation become automatic.

A child should learn to copy basic pre-writing patterns and shapes.

Beery (1997) proposed that a child will be ready for formal instruction in handwriting if they manage to master the first 8 figures of the Developmental Test of Visual-Motor Integration (VMI).

Focus on precision of the following shapes:



Activities to Develop Visual Motor Integration and Copying of Basic Pre-writing Shapes

Developing Copying Skills

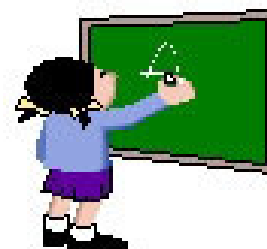
- Copy patterns using building blocks, matchsticks, coins, buttons, pegboards. Make it harder by taking away the original and asking the child to copy it from memory
- Copy basic shapes and patterns using playdough, drawing in sand, using pipecleaners
- Mazes
- Tracing activities.



Developing Copying of Pre-Writing Shapes

Use the pre-writing shapes (above) for the following activities:

- Walk along a rope, string, or taped line
- Follow-the-leader in different shapes
- Making your own body look like the different shapes
- Finger painting with shaving cream, paint, cornflour and water
- Sand drawing with sticks, fingers, rakes, spades or even feet
- Make the shapes out of pipe cleaners, Wikkistiks or string
- Water painting on a brick wall using a paintbrush or a squirter bottle
- Tracing with stencils using finger paints, marker pens or crayons
- Join the stars/stickers to make the shapes
- Drawing in the air with a ribbon stick or wand
- Games with matching the different shapes
- Use an upright chalkboard or paper pinned to a wall.



Early Writing Skills



These ideas are helpful for children who have difficulties with shape drawing and writing patterns. They will help children to reach information through another channel, they are fun and children may not know that they are 'working'.

Always try to teach these skills by starting with large movements before small ones. For example, practice drawing a large circle on the blackboard or large piece of paper taped to the wall before attempting it with paper and pencil at the table. Secondly, you should try to involve as many of the other senses as possible.

To learn new or difficult shapes and letters follow this progression:

1. Have the child trace the shape first, either on top of the shape with his/her finger or in a different texture e.g. sandpaper letters. Then progress to using a pencil to trace over the shape.
2. Once he can trace competently, use dots for him/her to 'target' while doing the shape.
3. The next step is to draw the shape after watching a demonstration first (imitating).
4. Copying is the last step, where the child can copy a shape from a model without demonstration.

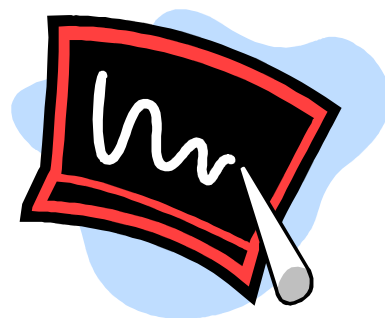
To make learning fun and to involve multiple senses, try the following:

1. Use a variety of tools:

- Wax crayons, thick and thin
- Chalk on paper or blackboard
- Felt tip pens
- Paint with brushes, fingers, sponge pieces, rollers, etc.
- Fingers in shaving foam wet sand, flour, etc.
- Shaving Foam.

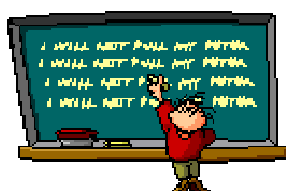
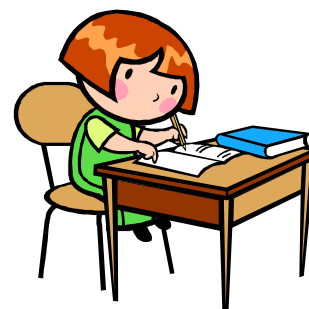
2. Use a variety of surfaces:

- Paper – white, coloured, black
- Blackboard
- Shiny card
- Textured wall papers
- Tracing paper
- Paper over textured surfaces – corrugated card, sand paper, coins, etc.



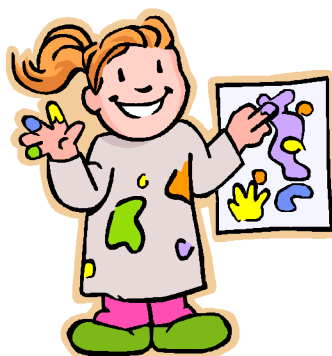
3. Use a variety of positions:

- Sitting at a table
- Standing at a table
- Vertical easel
- Large sheets of paper stuck to a wall
- Standing or kneeling
- On all four's working on the floor, weight bearing through non-dominant hand using paper flat on the floor.



4. Other fun ideas:

- Write letter on another person's back with a finger and guess what the shape is
- Practice letters in the air with large arm and hand movements – can be practiced with 2 hands together or one arm at a time
- Attach a piece of ribbon to a stick or use a torch and 'draw' letters in the air
- Use finger paints or shaving foam with rice or other materials added to give extra texture – use whole hands then individual fingers, e.g. large circular motions, vertical, horizontal and zig-zag lines
- Make letters and shapes with play dough – encourage the child to feel the shape and trace its outline with their fingers
- Pastry or biscuit mixture – make shapes and bake them
- Star tracking: put stick-on stars onto a large piece of paper at the beginnings, end or corners of a shape and encourage the child to draw from star to star to make the shape
- Use a plastic bottle with water to spray on or squeeze shapes onto the outside pavement or walls.



Setting up good working positions in the classroom

- It is important that the desk and chair are the right size for the child.
- Feet should be fully supported on the floor or a footrest.
- Hips and knees should be bent to 90°. When seated knees are about the same height as the hips with the feet slightly forward, thighs should be well supported by the chair and parallel to the floor.
- When seated the height of the desk should be at the same height as their elbows. (This also applies if completing work at a desk in standing).
- With elbows bent, forearms should be straight, parallel with thighs and the floor.
- If your child bends over their work or leans their head on the table, you could ask the school to try a slope-board or sloping desk to help him/her stay upright. This will also help with wrist position.



Starting Letters

It is often useful to teach letters in family groups. This helps prevent reversals of letters and allows the child to practice one type of movement for several letters. There are several different ways of grouping letters into families depending on the particular programme you are following. One common example is:

- Anti-clockwise letters (a, c, d, e, g, o, q)
- Clockwise letters (b, h, k, m, n, p, r)
- Straight letters (i, j, l, t)
- Under arch letters (u, y)
- Diagonal letters (v, w, x, z)
- Curvy letters (f, s).

Another method of grouping letters comes from the Handwriting without Tears (Olsen) programme. This programme recommends that capital letters should be taught before lower case as they are easier for children to learn.

- Frog jump capitals (F, E, D, P, B, R, N, M)
- Starting corner capitals (H, K, L, U, V, X, Y, Z)
- Centre starters (C, O, Q, G, S, A, I, T, J).

Once these have been mastered children can progress onto lower case letters.

- Capital partners (c, o, s, v, w)
- First ascender (t)
- Magic C letters (a, d, g)
- Vowels (u, i, e)
- Transition group letters (l, k, y, j)
- Divers (p, r, n, m, h, b)
- Infrequent (f, q, x, z).

Once you have chosen a group to start with you can teach those letters by:

- Be consistent in the way you describe letter formation. E.g. for the letter B start at the top, big line down, frog jump to the top, little curve to the middle, little curve to the bottom.
- Get the child to say the direction as they are drawing it. This gives them auditory feedback as well as visual and kinaesthetic information to help them remember correct letter formation.
- Drawing the letters in sand, shaving cream, paint, cornflour, etc.
- Make the letters out of pipe cleaners, string, playdough or Wikistiks
- Make letters from wooden/cardboard pieces
- Use an upright surface such as a whiteboard, blackboard or large sheets of paper stuck onto the wall. Use chalk, felt tips and paint to form the letters. This way 'up and down' really mean up and down
- Using a multi-sensory approach (see attached) (Chu, 2003)
- Use the wet-dry-try method (Handwriting without Tears)
- Draw letters on chalkboards with an edge to prevent reversals
- Move to drawing letters on blank paper on the table using thick pens, felt-tips, paint and chalk
- Introduce a pencil and write letters onto smaller pieces of paper
- Then have one line on the paper and ask the child to write the letters on the line
- Move to lined paper
- Play skywriting games where you write letters or short words in the air and the child has to guess what it is.

Fluency and Speed

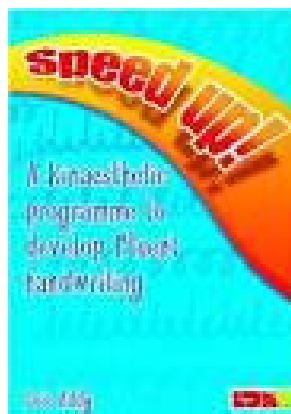
When the child has started learning the letters and correct letter formation you can start to improve the fluency of their writing by:

- Getting them to use big arm movements to draw patterns, such as wavy lines, zigzag lines or loopy patterns, on upright surfaces, such as whiteboards, blackboards or paper attached to the wall
- Draw patterns on big flat surfaces e.g. tables, floor, carpet
- Use large and small sheets of paper to draw patterns and pictures using different patterns
- Experiment with different markers and surfaces
- Nearly all the letters of the alphabet can be joined up to make letter patterns, e.g. a row of joined up a's
- Practice letter patterns on upright surfaces, tabletops and paper using paint, chalk, felt-tips, crayons and pencils
- Move to containing patterns between lines or drawing patterns in time to music.

Children may benefit from completing the following Handwriting Programme:

Speed Up! A kinaesthetic programme to develop fluent handwriting. By Lois Addy

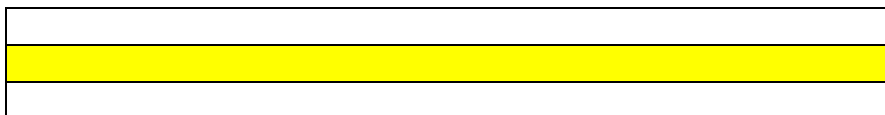
This programme is aimed at 8-13 year olds and helps to increase the fluency and flow of their handwriting. It can be run as an individual programme or as a small group programme.



Improving Legibility

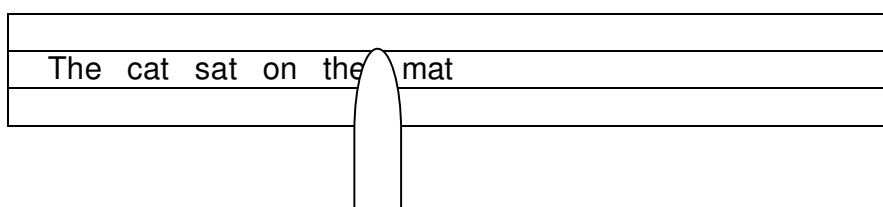
1. Writing needs to be written on the line

- Use paper with raised lines so that the child can feel when they are writing on the line
- Get the child to practice placing stickers or an ink stamp onto a line so that they just touch it
- Ask the child to practice writing on narrow strips of paper
- Use paper with coloured zones or a highlighter mark and ask the child to write within the coloured area



2. A space needs to be left between words

- Ask the child to practice leaving spaces by placing their left index finger at the end of the last word then starting the next word on the other side of their finger (this is difficult for a left-hander to do, therefore use the following ideas for a left-hander)
- When demonstrating writing exaggerate your spacing between words.
- Get the child to mark their own work at the end using an ink stamp. They should be able to fit one stamp between each word.
- Use a lolly stick with a face drawn on it to mark a space between each word while they are writing

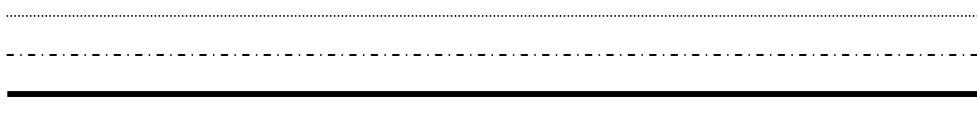


3. Ascending and Descending letters needs to be the correct height

- Use the concept that some letters are tall letters and some have tails that go below the line. Practice letters in their groups:
 - tall letters (b, d, f, h, k, l, t)
 - small letters (a, c, e, i, m, n, o, r, s, u, v, w, x, z)
 - letters with tails (g, j, p, q, y)
- Practice writing on graph paper to encourage correct sizing and spacing
- Prepare writing pages with coloured zones to indicate where the letters should be placed



- Use coloured/bold/dotted lines to indicate where letters should be



- Use just two lines, the upper being a size guide for lower case letters as some children may find lots of lines confusing.
- Use whichever method works for the child.

Pressure & Hand Fatigue

Your child may need to teach themselves how to monitor the pressure they apply to the pencil or to the page.

Heavy Pressure

Heavy pressure through the writing instrument can slow writing output significantly. We know that many children struggle to monitor pressure through their limbs due to what is termed poor proprioception, therefore we need to help the child to develop an awareness of the amount of pressure placed through the limbs, the upper limbs in particular.

- Have short breaks between long periods of writing will help relieve the tension in hand muscles.
- Exercises can be done to help relax the hand.
- Regularly undertake a series of exercises whereby pressure is placed through the upper limbs, i.e. crawling games, wheelbarrows, ladies press-ups, elephant walks etc. these should ideally be incorporated into a daily schedule.
- Provide a light-up pen which can be bought cheaply from stationery shops. Challenge the child to write so that the light does not come on.
- Use carbon paper underneath work to write without making a carbon copy.
- Play a game of MI5; provide a pad created by placing a layer of paper alternately with carbon paper. Ask the child to write a secret message so that only one agent can read it. Initially the pressure may make the child write so that the message can be seen on 3 or 4 copies, but by encouraging the child to self-monitor, pressure will reduce.
- Practice using refillable lead pencils as the lead will break if too much pressure is used.
- Larger barreled pencils will reduce strain on finger joints.
- Use mouse mat underneath paper. If pressure is excessive, the pencil will make a hole in the paper.
- Use different paper textures to encourage pressure awareness.



Light Pressure

Some children will have the opposite problem to that described above in that they will not apply enough pressure through the writing instrument. This will affect control and will make writing appear 'spidery' and poorly formed. To help with this:

- Provide an angled board. The angle should be approximately 25°. This will ensure that the wrists are positioned on the writing surface.
- Provide weighted wrist-bands which would provide additional sensory feedback to the wrist area, increasing the child's awareness of their hand, wrist and arm position.
- Lower the table slightly so that the hips are flexed more than 90°. This enables the child to obtain the assistance of body weight to assist with pressure through the writing instrument.
- Use softer leaded pencils such as 2B so writing appears darker.

Proprioceptive Activities

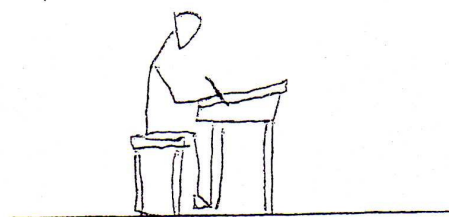
These activities would stimulate the joint muscles and provide feedback to the child's brain regarding the movement they are making. They incorporate weight or resistance to the movement.

- Use a weighted brush to paint with or a heavy pencil.
- Use a rolled up magazine as a wand to draw the letter in the air using both hands.
- Use wrist weights.
- Use a wobbling pen that is available from Boots, Asda or other shops.
- Draw on paper placed over sand paper or a textured surface to give a "bumpy" feel.

Helpful Hints on Handwriting

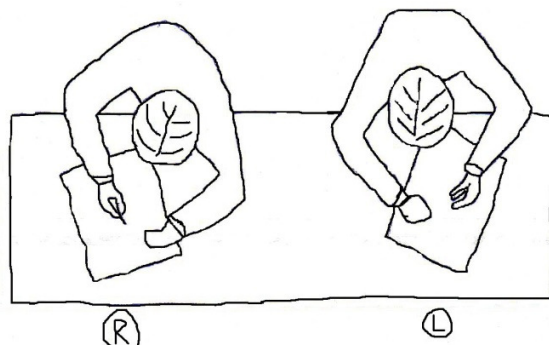
Sitting Position

Ideally the pupil should be sitting on a chair, which allows them to have their feet flat on the floor. Thighs should be well supported and the forearm should rest comfortably on the desk. The head should be a reasonable distance from the paper, approximately 12-16 inches away. This should encourage good posture and concentration.



Position of Paper

The paper should be placed on the same side of the body as the writing hand. The bottom of the paper then tilts down at the point, which is nearest to the person.

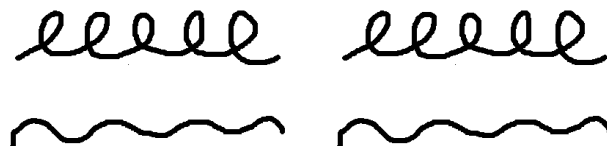


Fluency of Writing

In case of difficulty with fluency of writing, pre-writing patterns can be practiced. These should be performed in 'word' length sections.



Relaxing scribbles can help a pupil loosen up.



Younger children can practice writing letters in a variety of mediums

- Wet and dry sand
- Plasticine
- Chalk on a blackboard
- Large crayons on the floor

Light

Writing should not be obscured by shadow from the head or hand. Where the source of light is particularly strong ensure the left-hander has the source of light from their right side and the right-hander from the left side.

Writing Angle

Some pupils may benefit from having a sloping surface to work on, to encourage a good body and hand position.

Writing Surface

Ensure the pupil writes on a pad of paper, to avoid surfaces that are too rough or hard.

Writing Space

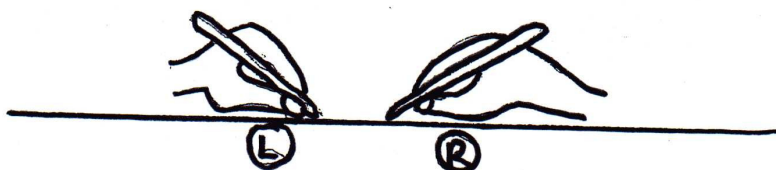
Ensure the child's desk is not cluttered. A right-hander will need space to the right and a left-hander to the left.

Writing Script

A cursive script can often help with handwriting difficulties, particularly those with motor and spatial problems.

Pencil Hold

A tripod grip, using the thumb and first two fingers should be encouraged. The position at which the fingers should be placed may be helped by the use of commercially produced pencil grips. Or a rubber band wound round the pen or pencil. Older children experiencing difficulties may find it hard to alter their grip, but should be encouraged to experiment with alternative grips. An unsatisfactory pencil grip can cause pain, unduly distort letters and prevent the child from writing fast enough.



Types of Pen

Some children are able to write better or faster with fiber tip or roller ball pens. Different types of pens should be investigated.

Pressure

Too light a pressure makes work difficult to read. Too heavy a pressure will cause the hand to tire easily and possibly cause pain. Excessive pressure is lessened if writing tools are held further from the point. If the child grips too tightly they should be encouraged to shake and flex the hand to relax the muscles. Pens and pencils with shiny barrels should be avoided, as they are slippery and encourage too tight a grip.

Tension

Some pupils become very tense when writing. Encourage them to sit with a straight back and relax the arm and hand by shaking until floppy. Uncross legs, relax hunched shoulders and take deep breaths.

Weakness of Wrists and Fingers

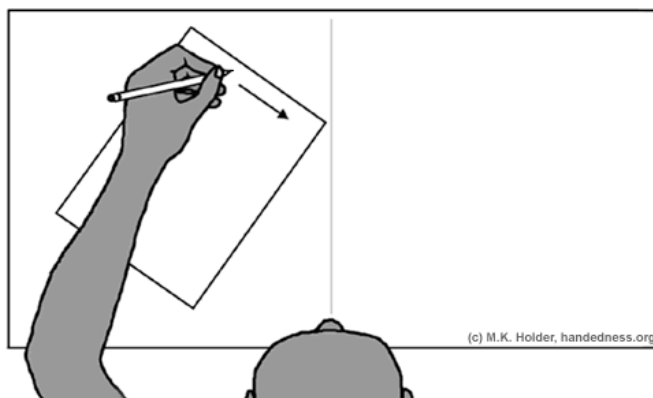
Some pupils experience difficulties with writing due to weak wrists or fingers. Exercises designed to improve general wrist and hand strength, and finger dexterity will help with writing.

Left Handedness – Handwriting Grip and Arm Position

Teaching a child to write with his or her left hand is *not* just the opposite from teaching how to write right-handed. Languages that are written left-to-right, like English, are more difficult to write with the left hand -- a right-hander writes away from his body and pulls the pencil, while a left-hander must write toward his body and push the pencil (Holder, 2003).

AIM: To teach to write so that letters and words are visible at all times and hand does not drag across letters, smearing pencil or pen

1. Child places paper with left side “lined up with” (parallel to) the left forearm and the entire sheet paper to the left of the child’s midline. Many children can see their writing better if paper is slanted to as much as 45 degrees.



2. Child rests little finger side of the hand on paper and uses index finger to trace from left to right across the top line. The position of the child elbow and the slant of the paper is adjusted until the left elbow can stay in one place while the forearm moves in a smooth arc as the index finger traces the line. The hand always remains below or to the left of the line so that the full length of the line is clearly visible.
3. Child repeats this for each line on the page using smooth movement of the forearm and maintaining the entire line in sight. The elbow is moved back after each line, but the arc remains the same. When the elbow moves back so far that the forearm is not supported by the desk, child moves paper up.
4. When this is accomplished easily and feels similar, child repeats the activity using a pencil or marker.
5. Child grips the pencil in a mature tripod grip (a pencil grip may be used if this helps), about 1" - 1½" from the tip, and positions the hand so that it is below or to

the left of the line to be traced. Child and adult work together to find the best position so child's hand remains below or to the left of the line and the line is clearly visible as it is traced from left to right.

6. Child traces all lines, starting at the top and working toward the bottom.
7. When this is accomplished easily, child uses this position of paper, arm, and hand for writing letters on another sheet of lined paper.

Variations and adaptations

Once the ideal paper position is determined, paper can be taped to the desk until the child becomes accustomed to writing in this way.

Have child help you make a frame for writing paper by putting tape on the desk around the paper. This outline reminds the child how to position the paper. Even a taped outline of one corner can provide a valuable cue.

Most children can see their writing best if the paper is slanted between 35 – 45 degrees; however, this is an individual preference. If child can't see the lines or the letters, try increasing the slant of the paper, moving the grip farther back from the tip of the pencil, moving the elbow farther away from the body, moving the paper closer to or farther away from the child, and leaning the trunk forward so child can more easily look over the hand.

If child is unable to use mature grasp pattern due to weak grasp pattern due to weak finger movement or habit, you can still work on keeping the writing line and letters visible above or to the right of the hand.

Handwriting Tips for Older Children

Content versus presentation

If the content of a child's work is the important factor (i.e. imaginative and descriptive ideas, understanding of concepts etc.) then should the use of alternatives (computers, handouts, scribes) be encouraged to reach that aim. If however, the aim is to produce a neat and well presented piece of handwriting then the use of alternatives may not be so relevant.

Compensatory versus mechanics of writing

Compensatory

- This may involve the use of equipment such as laptop computers or Dictaphones to aid the child in the classroom so less emphasis is put on handwriting.
- Other compensatory techniques may include the use of handouts and worksheets to reduce the necessity to write.
- Letters on desk and rulers.

Mechanics

1. Seating position

Ensure child sits appropriately during handwriting activities.

A good seating position:

- Right height chair with feet firmly on floor and knees flexed at 90 degrees
- Bottom squarely in the chair
- Arms resting lightly on the table
- Tummy should make slight contact with the desk.

2. Position in class

- Facing the blackboard, near the front in a centralised position.
- It is also important to ensure the child is in sight of the teacher.

- When right handed and left handed children sit next to each during writing activities they may bump into each other. To prevent elbow bumping it may be advisable to ensure that plenty of space is left between left and right handed children. If a confined space prevents this then it may be advisable to move the children.
- Shadows and glaring light may also make it difficult for children to see the teacher and blackboard so it is important to consider these factors during writing activities.

3. Position of Paper

- Right handers: Paper to the right of the mid-line tilted in and anti-clockwise direction (slanted towards the dominant elbow).
- Left handers: Paper to the left of the mid-line and tilted in a clockwise direction (slanted towards the left elbow)

4. Writing equipment

Texture of paper

- Shiny paper helps the flow of the handwriting.
- Rougher textured paper gives more sensory feedback providing feedback to the child's brain regarding the movement they are making.

Writing activities for older children - children who are expected to be writing

Activities chosen must be achievable but also present an appropriate level of challenge.

- A warm up activity may be useful to relax tired hands and allow the child time to focus on the use of their hands.
- Dot to dots
- Colouring – colour and paint by numbers
- Stencilling
- Spirographs
- Doodles and squiggles
- Writing with eyes closed
- Writing games – ask the child to close their eyes and draw a letter on their hand using your index finger. Ask them to identify the letter. Alternatively, ask them to turn around and draw the outline of a letter on their back and ask them to identify it.
- String writing
- Dot games



Multi Sensory Teaching Procedure – Sidney Chu, 2003

General Guidelines

- Identify the type of writing style being taught in the school
- Decide on the order of letters selected in teaching, eg in alphabetical order, in family groups, or letters of the child's name

Materials

- Free-standing chalkboard, Coloured chalk, Duster

Procedures

- The letter to be taught is drawn in large size on the chalkboard. At the same time the trainer explains the way to form the letter (ie where it starts, how many stops it has and where it ends) and says the name and sound of the letter
- The child traces the letter three times (with chalk or finger), verbalises the direction and sequence of the strokes, and says the name and sound of the letter
- The child 'skywrites' the letter three times in the air, verbalises the direction and sequence of strokes and says the name and sound of the letter
- The child copies the letter with chalk on the chalkboard three times
- Trainer erases the letter
- The child draws the letter from memory
- With eyes closed, the child draws the letter on the chalkboard to indicate that the letter is visualised
- If this is successful, the child draws several letters on the chalkboard with eyes open
- Ask the child to select their best one
- The child then practices on lined paper

This should only take a couple of minutes. You can learn one letter per day but make sure you go back and check that letters already learnt have not been forgotten. You can then revise and join letters into short words.

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Erhardt, R.P. (1994). Developmental hand dysfunction: Theory, assessment and treatment (2nd Ed.). Tucson, Arizona: Therapy Skills Builders.

Holder, M.K. (2003). Teaching left-handers how to write. Handedness Research Institute papers. URL: handedness.org/action/leftwrite.html

Further Reading and Resources

- Hands at Work and Play: Developing fine motor skills at home and at school (1994)
By Janice Miller Knight and Mary Jo Gilpin Decker
ISBN: 0761643567
Therapy Skill Builders
- Developmental Coordination Disorder: Hints and tips for the activities of daily living (2002)
By Morven F. Ball
ISBN: 1-84310-090-8
Jessica Kingsley Publishers
- How to understand and support children with dyspraxia
By Lois Addy
ISBN: 1 85503 381 X
LDA
- Making Inclusion Work for Children with Dyspraxia: Practical Strategies for Teachers
By Gill Dixon and Lois Addy
ISBN: 0 41531 489 5
RoutledgeFalmer
- Pre-writing Skills (1990)
By Marsha Dunn Klein
ISBN: 0761620893
Therapy Skill Builders
- Speed Up! A kinaesthetic programme to develop fluent handwriting
By Lois Addy
ISBN: 1 85503 386 0
LDA
- Write Dance: A progressive music and movement programme for the development of pre-writing and writing skills (2000)
By R. Voors
ISBN: 1 873942 03 6
www.luckyduck.co.uk
- Write from the Start: The Teodorescu Perceptuo-Motor Programme (1996)
By Lois M. Addy and Ion Teodorescu
ISBN: 1 88503 245 7
LDA

Equipment

Soft Pencil Grips

Help reduce fatigue caused by writing pressure. These soft writing grips have a non slip surface and are contoured to fit comfortably in the hand. May be used with either a pen or a pencil. Assorted colours.

Supplier: Taskmaster
 Contact details: Tel: +44 (0)116 270 4286
 Fax: +44 (0)116 270 6992
 Email: info@taskmasteronline.co.uk
 Cost: From £1.00

Supplier: Homecraft Rolyan
 Contact details: Tel: 08444 124 330
 Fax: 08448 730 100
 Email: homecraft.sales@patterson-medical.com

Cost and codes: 4026 Pack of 3 From £6.64
 402601 Pack of 12 From £20.55



Slope Board / Angled Writing Board

The PAW board is designed to reduce the stresses and strains caused by working on flat surfaces. We sell 4 brightly coloured versions which are ideal for children at school and can help avoid unnecessary strain on their developing spines.

The PAW Board has rubber feet and overhangs the desk to prevent it sliding. It also incorporates a ledge at the top to store pens and pencils. It is made from virtually indestructible, safe, acrylic.

The PAW Board is ideal for people working in a confined space.

Supplier: The Sunshine Company
 Contact Details: Tel: 0808 120 3898
 Fax official orders to 0121 474 6318
<http://www.thesunshinecompany.co.uk/sloped-writing-board/>
 Cost: From £32.00



Printable

Crib Sheets

- Print Out
- Cut to size
- Laminate
- Keep visible on Child's desk

a b c d e f g h i j k l m n o p q r s t u v w x y z

1 2 3 4 5 6 7 8 9 10

Letter Groups

Long ladder letters



l i u t y

Curly caterpillar letters



c a d g q o e s f

One-armed robot letters



r n m h b k p

Zig zag monster letters



z x v w y k