



Handwriting – Developing Pencil Skills and an Efficient Grasp

The focus of handwriting is for the child to have grade-appropriate functional writing. Legible and functional handwriting requires skilful fine motor coordination, precise force regulation, cognitive and perceptual skills and language skills. There is evidence that there are a range of pencil grasps that are functional, including but not limited to the tripod grasp. Evidence does not support changing a student's grasp provided a student has grade-appropriate functional writing. Where a student requires refinement of their grasp (e.g. using an immature or inefficient grasp) a range of strategies including pencil grips may be used, as a temporary aid, to retrain finger position.

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Handwriting Development

The usual developmental sequence for handwriting is that drawing, with at least some level of proficiency, precedes writing. Activities that practice prewriting patterns of movements, with and without a pencil, build skills and motor plans related to writing. For example, tracing circular objects or making circles in an anticlockwise direction.

Automated skills occur as a result of specific, deliberate and meaningful practice to establish the neural networks. This automaticity allows the student to think less about how to make the movement and shape on the page and more about other aspects of the task. Key patterns include left to right, top to bottom, clockwise and anti-clockwise circles, diagonal lines, curved lines and zig zags. Practice should include shapes, vertical lines, horizontal lines, circles and crosses. There are many opportunities to practice movements including during art, sand play, activity worksheets (e.g. colouring, mazes, dot to dot, etc.).

Students develop their ability to draw a shape or pattern in the following order:

1. Imitate someone drawing the shape - As they see the shape being drawn, they are able to simultaneously copy the motor plan
2. Copying an image, they can see – they may need visual prompts such as dotted lines or start and finish points (e.g. use green and red dots)
3. Draw from memory

Many students with language difficulties also experience motor difficulties, impacting on their handwriting ability. Therefore, it is important to focus on early development of the visual motor skills that underpin handwriting.



Seated Posture

Research suggests that the seated posture and core stability of a student can significantly impact on their pencil grasp and handwriting. Students who present with an inefficient pencil grasp and poor pencil skills should be encouraged to engage in activities that promote the development of postural stability and ultimately, pencil grasp and pencil control skills. See the *SALDA Handwriting Posture Handout* for further information.

Developing Fine Motor Coordination

A combination of thumb, finger and wrist movements are required to allow a student to control their pencil and regulate the amount of pressure they are using to grasp. Fine motor activities for hand development include activities that develop the palmar arches, wrist extension, separation of two sides of the hand, the web space and intrinsic muscles of the hand. Refer to the *SALDA Fine Motor Skills Handout* for fine motor activity suggestions.

Grasp

For a grasp to be considered functional for writing, a student must be able to efficiently create a legibly written output for a required duration. There is growing evidence to suggest that students may no longer require intervention based solely on an “incorrect” pencil grasp if their written output is legible. When learning how to write in the early years, students should be encouraged to hold the pencil appropriately; however, they will change and adapt their pencil grip several times before settling on what works best for them. Concerns around handwriting should be raised with a therapist if a student is struggling to produce the same volume of output as their peers or if their handwriting is illegible.

Strategies to develop a functional pencil grasp:

- Trial a range of different sized and texture pencils. Thicker pencils are easier to grasp and pencils with dark lead do not require much pressure to make the page.
- Tactile and visual prompts on the pencil may help to cue the correct positioning of the fingers.
- Trial a pencil grip to support the correct position of fingers.
- Incorporate a rhyme or songs to remember how to hold the pencil correctly.
- Have visual prompts on the classroom wall demonstrating how to hold a pencil (e.g. SparkleBox’s *How to hold a pencil* poster).



Strategies to trial when a student is pressing too hard:

Pencil pressure affects a student's control, efficiency, flow and written output. Suggested strategies to support a student to control pencil pressure include:

- Teach the student to self-monitor. For example, encourage them to turn over their page during writing tasks and ask the student to look at and feel the back of their page for imprinting.
- Avoid the student writing on a single sheet of paper on the table or desk. Use a laminated sheet underneath or work in an exercise book. It is worthwhile to provide the child with both a A4 and A3 laminated sheets. The A3 sheet is to use on their desktop for working on printed worksheets. The A4 sheet is to put between pages of an exercise book to minimise imprinting on next page.
- Trial using an angled surface.
- Trial using a pencil with a larger barrel and/or cushioned grip.
- Use a softer lead to make a movement and transfer of lead to page easier.
- Do warm up exercises such as weight bearing through hands and hand exercises to increase awareness within the hand.
- Practice writing with carpet tile/mouse pad/or fleece under the paper to practice not pressing too hard and breaking through the paper.*
- Use a self-propelling pencil, the lead breaks if they press too hard (e.g. a pacer) or a pen that retracts if you press too hard.*

*Note: The last two may be frustrating and require the child to concentrate hard. Use these when specifically practicing writing with less pressure, not during general work.

Strategies to use when a student's wrist is too flexed:

A flexed wrist increases the effort to control the pencil movement and maintain an efficient grasp. Suggested strategies to support a student to maintain a straight/neutral wrist position include:

- Ensure the student is using furniture appropriate for their size and seated in an upright, forward facing posture.
- Explicitly teach the student the correct position for their wrist and support the student to self-monitor and check their wrist position during writing tasks.
- Trial using an angled surface.
- Practice writing on vertical surfaces such as whiteboards, painting on easels etc. to develop wrist extension.



Want to learn more?

To learn more about Language Disorder and how to support children and young people for whom language is their primary disorder, please contact Speech and Language Development Australia (SALDA). SALDA provides holistic, innovative and effective therapy, education and support services and has a transdisciplinary team of speech pathologists, occupational therapists, educators, psychologists and physiotherapists.

Contact: 1300 881 763 or hello@salda.org.au

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