

Handwriting is a complex task and therefore the selection of writing equipment should be made only after careful assessment of the person's abilities and needs.

For people with hand function difficulties, adaptive equipment, such as pen grips, holders and pens with special features are available to help them to be as independent as possible with the daily tasks of writing and creative drawing. If these items are not appropriate for the needs of the individual, assistive technology such as a computer with appropriate input devices should be considered.

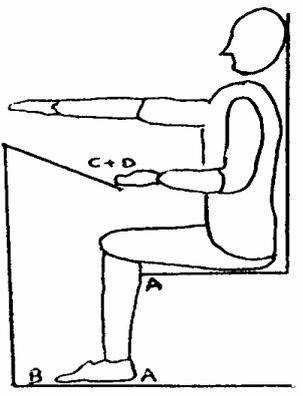
Factors to consider

1. Writing problems

It is important to identify the cause of the writing problem in order to establish whether the adaptive writing equipment will help the problem. Researchers have observed that problems of cognitive origin may not be improved by adaptive writing equipment.

2. Positioning

The individual should be seated in the best position possible before they commence writing. Attention should be given to:

A. Posture of individual, especially support for back, thighs & feet	 <p>The diagram shows a person sitting at a desk, writing. Label 'A' is at the bottom of the chair, indicating the seat height. Label 'B' is at the bottom of the feet, indicating the footrest or floor position. Label 'C+D' is at the desk surface, indicating the paper and writing instrument position.</p>
B. Height of desk, table and chair	
C. Position of paper	
D. Adequate lighting	

3. Hand Function

Many factors contribute to an individual's ability to use a writing instrument. Consider:

- Hand preference
- Muscle strength in arm, hand and fingers
- Sensory status of arm, hand and fingers e.g. tactile, kinaesthetic and proprioceptive senses
- Range of movement in arm, hand and fingers

4. Pencil Grasp

The manner in which the individual grasps the pencil is important. While many teachers and therapists recommend the 'tripod' position, this is a matter for debate. However, the pupils' grasp should always be comfortable and energy efficient for the writing task.

5. Pencil Control

Factors such as finger tension when holding the pencil (tight or loose), writing pressure (heavy or light), and clarity of strokes (without tremor) should be assessed by a teacher or occupational therapist.

Resources available	Details	Supplier
Aremco BK 4032	A soft, round rubber grip	Aremco
Triangular Pencil Grip	A soft vinyl triangular grip which fits onto a writing instrument	Phillip and Tracey; LDA; Nottingham Rehab; Early Learning Centre
Plastazote	A firm light-weight foam tubing, which yields to pressure when gripped, into which a writing instrument can be inserted	Nottingham Rehab
Stetro or Grippy pencil grip	A moulded plastic grip with indentation, which fits onto a writing instrument. Indentations enhance finger position and grip.	Philip and Tracey; LDA
Tri-Gro Grips	Moulded for left and right handers letting fingers touch the pencil.	LDA
Deluxe Grip	A moulded plaster grip which is soft and comfortable to hold.	LDA
Writestart pencils	A larger diameter triangular wooden pencil.	LDA; Galt; Hope Education
Maxi pencil	A larger diameter hexagonal shaped wooden pencil.	Philip + Tracey.
Hand huggers	large, triangle shaped pens and pencils	Berol.
Jimnie Ballpoint Pen	a see through tough plastic pen with a rubberised cushion in the pen hold position.	Staples Stationers
Weighted Pen	Oversized pen designed for easy grip and stability.	Aremco
Range of pens and pencils many with a larger diameter for easier grip		Berol
Trial of various pens of differing thickness and tips, available in stationery shops might lead to a pen that suits and improves handwriting.		

6. Paper, pen, writing surface

Considerations should include:

- Stabilising of writing paper
- Blank paper, or closely/widely spaced lines
- Soft lead pencil or free flowing tip versus hard lead or ball point pen
- Flat or sloping desk top/writing surface.

Resources available:	Details	Supplier
Dycem	Non-slip material: - helps hold paper securely on the writing surface	Nottingham Rehab.
Magnetic writing board	Magnetic writing surface so paper can be secured and angled to suit the user	Toys for the Handicapped Philip & Tracey Ltd Nottingham Rehab Ltd
<p>The Writing Angle: Plastic desk top to fit on to normal tables</p> <p>Midi Slope: Height Adjustable Writing Slope: Posturite Writing Slope: All writing slopes of various sizes:</p> <p>Beesneez Board and Bookstand A lightweight sloping board or bookstand that folds into a flat pack</p> <p>Posture Pack This pack contains a seat wedge for sitting which is housed in a folder which converts into a writing slope</p>	<p>Studies have shown that the use of a sloping desktop significantly improves an individual's written work.</p>	<p>LDA</p> <p>Advance Seating Designs</p> <p>Beesneez</p> <p>Children's Seating Centre</p>

7. Pupil Preference

If the pupil does not like the look or feel of the proposed piece of writing equipment or anticipates that peers will not like it, then it is unlikely the equipment will be used consistently in the classroom. Where possible, the pupil should be given the opportunity to try out various products and consider the following points:

- Product shape, size colour
- Comfort
- Effect on pencil control and writing
- (Anticipated) social acceptance
- Potential use in class.

8. Review

When the most suitable solutions have been selected they should be carefully monitored with respect to potential pressure areas, ease and comfort of writing. The need for continued use of any piece of writing equipment should be re-evaluated at regular intervals. If problems persist the individual should be assessed for appropriate assistive technology to enable effective recording.

References

Disability equipment assessment no A7 (Nov 1993) - Writing Equipment (for pupils with disabilities) - A Comparative Evaluation. (Available from Medical Devices, Directorate, Room 2/FOS Crown Buildings, Kingston By Pass, Surbiton, Surrey KT6 5QN Tel: 0181 3984166)

Handwriting Review, Journal of Handwriting Interest Group. Secretary: Felicity Barnes, 6 Fyfield Road, Ongar, Essex CM5 0AH

Keyboard, Graphic and Handwriting Skills: Helping people with motor disabilities. Dorothy E Penso, Chapman and Hall, Therapy in Practice 15

Basics to Back Technology - An introductory guide to non-electrical access equipment for computers writing: ACE Centre, Oxford

Special Access technology; Paul Nisbet and Patrick Poon; CALL Centre

Provision of Portable Writing Aids within Mainstream Education: Guidelines to good Practice: ACE Centre-North (available from The ACE Centre – North)