

Pencil grasp development

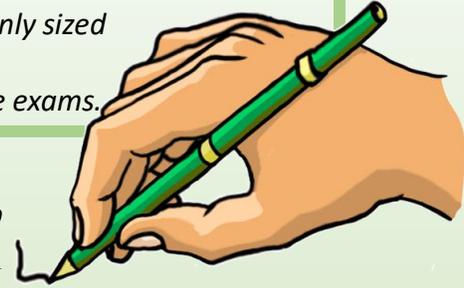


Handwriting is a skill we use every day. It allows us to express ourselves, display our learning, and communicate with others. At school, where most work is written by hand, it is vital. Handwriting difficulties can have a major impact on a child's progress.

Therefore, it is important to develop a writing style that meets two main needs.

1. Legibility – It should be easy to read, with well formed letters that are on the line, evenly sized and well spaced.
2. Speed – Writing should be fast enough to keep up in class, express ideas and complete exams.

Handwriting Development



Identifying handwriting difficulties:

Posture – slouched over desk, head lying on arm, feet wrapped around chair legs, rocking on chair, frequent falling off chair.

Pencil grasp – several fingers on barrel of pencil, pencil held too tightly, too much or too little pressure when writing.

Arm movement – whole arm moving from shoulder, little or no finger or wrist movement when forming letters, shoulders may be tense and elevated.

Endurance – fatigue and pain after short periods of writing, shaking or squeezing hands, complaining.

Hand use – swapping hands during writing, slow to choose hand for tasks, may not cross midline of body.

Eye movements – slow to copy from board or book, looking up more often than others, frequent errors, leaving out letters or words, losing place often.

Perception – inconsistent sizing, spacing or line placement, incorrect or changing starting points for letters.

Some of the factors affecting handwriting:

Physical factors include

- poor eyesight
- low muscle tone
- reduced body awareness
- lack of eye-hand coordination
- limited attention span
- illness
- tiredness

Psychological factors include

- stress at home
- low confidence
- lack of motivation

Environmental factors include

- Inappropriate furniture
- Poor position i.e. back to board
- poor lighting
- noise or sensory distractions

When children do not have a stable base and their feet grounded it causes increased challenges with their fine motor control. This is because they use excess energy to try to maintain their stability and balance. This can affect how they function as there is little energy left over to concentrate on fine motor tasks, play, or even simply to listen. The following students may need more support:

- Students with low muscle tone
- Students learning to stay focused/fidgety
- Students learning to write or progress with writing
- Students using a computer



Perception:

The child needs to make sense of what is seen, match the same objects, tell apart similar objects.

Environment:

Ensure there is a good light source for the writer. It should come from the other side to the writing arm, to stop shadows being cast over the work. Remind children to clear desks of all other items.

Paper position

The paper should be on the right side of the body for right handers, and the left side for left handers at a 45 degree angle. This allows arm movement without blocking the writer's view. The paper should be held in place by the other hand.



Shoulder Stability:

The shoulder needs to be stable to support smooth arm and hand movement for writing.

Pencil Grasp

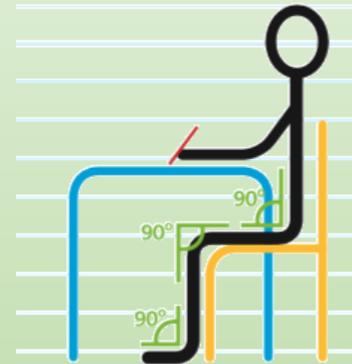
The dynamic tripod grasp is the ideal grasp, and young children who are starting to write should be taught this way. However, many people have very different holds that work well for them. Therefore grasp in older children should only be changed if it is causing problems.



Handwriting advice

Correct sitting posture:

- Knees should be bent at 90 degrees approximately 1-2 inches away from the edge of the chair.
- Feet should rest flat /firmly on the floor with their ankles at 90 degree angles.
- Hips should be placed at the very back of the seat, again at 90 degree angles.



Wrist and finger isolation:

The wrist and fingers need to move independently to form letters.

Hand dexterity:

The fingers need to hold and manipulate objects precisely for pen control.

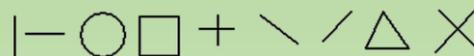
Writing Implements

Different pens suit different children. Trial several to find the one that suits the child best. Consider the thickness of the point, type and flow of ink, and width and shape of the barrel.

Larger writing styles suit a thicker nib, whereas very small styles need a fine nib for clarity.

Pre-writing shapes:

Children need to master these simple shapes before learning to draw letters.



Use verbal prompts such as “down, up and over” as appropriate. Keep these consistent. Determine which prompts work best for the child



Squeeze a water bottle to rub out letters in chalk (ideal for spellings)



Form letters out of coloured pipe cleaners, pieces of string, sand, talcum powder on black paper, shaving foam on a mirror

Write the letters in the air with arm movements/ ribbon stick



Draw with vehicle wheels

Using a multi-sensory approach



Cut letters out of paper

Have the children make letters with their bodies, using trunks and limbs, either standing up or lying down



Make letter collages by sticking tissue paper, pasta, cotton wool, inside letter outlines, paint letters with glue and sprinkle with sand or glitter



Tell stories linking letters to characters and actions e.g. “a” the ant walked around the apple and down the tree



Construct feely letters cut out of sandpaper, corrugated cardboard, identify by feel only (eyes closed)

Trace stencils using correct starting points



Draw around each others shadows

Walk around letter shapes on the ground, starting in the right place



Trace letter tracks in sand or talc and move toy cars or marbles in them



Feely bag games with solid letters, trace them with fingers, etc.

Extra Handwriting Tips



Tension or Pressure

Tension is the tightness of the grasp on the pencil. Pressure is the force applied from the pen to the paper. Both lead to fatigue and reduced fluency of movement.

- Do hand exercises before starting work, to increase hand and finger awareness.
- Place mouse pad, cloth or other soft material under paper. This provides extra cue when too much pressure is applied
- Practice patterns while aware of pressure and tension
- Ensure the child is using a pen with easy flowing ink or a soft pencil (2B or higher)
- Work on both light and heavy to highlight the difference.
- Place a sheet of carbon paper under a sheet of writing paper. Produce clear copy with heavy pressure, then “invisible” copy with light pressure.
- Use darkness of pencil to monitor pressure. draw heavy, light and “just right” lines at top of page and refer to these when working.

Spacing

- Check the child understands the difference between letters and words.
- Place a stamp, lolly pop stick or sticker after each word.
- Place a dot or dash after each word. Phase this out, first doing lighter dashes, then doing “air” dashes over the space.

Encourage different positions not just on a chair

Reversals

These are common until the age of 7.

- Reversals are reduced when letter forms are taught in groups.
- Use prompt words to help with tricky letters. E.g magic “c” letters – dog
Jumping letters – bump
- Teach the thumbs up rule to help with b and b reversals

Build gross motor skills before developing fine motor skills

Sizing

- Group tall, middle and tail letters and teach these as families. i.e.
-Middles: a, c, e, i, m, n, o, r, s, u, v, w, x, z
-Talls: b, d, f, h, k, l, t
-Tails: g, j, p, q, y
- Use paper with coloured guidelines. Place cue words at top of page as a guide.
- Use highlighter to mark where middle part of letter sits or trial raised line paper to give sensory feedback.
- Only try and adjust overall sizing if writing is too small to read or too large to be practical.

Pencil Grasp:

- Use visual cues for finger placement such as stickers, blue tac worm or permanent marker spots on pencil/ pen.
- Use tactile cues such as a rubber band on pencil barrel
- Trial a pencil grip for more support. There are several types. Trial a range of grips to find the one that suits the child best.
- Some pens and pencils come with built in grips, and these may be easier to use for some children, particularly if they have joint hypermobility within their thumb.

Meet sensory needs first to build attention and focus



Copying

- Learn to “chunk” – copy several words at a time. Use verbal rehearsal to help remember.
- Face the board so no turning is required when working. Sit in the front third of the class in the middle.
- Use a slope board to reduce distance eyes travel from board to work.
- Alternate chalk or marker colours when writing on the board, to provide extra visual cue.

