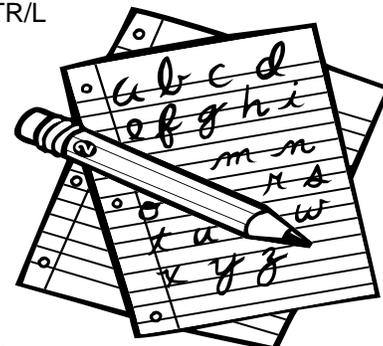


Handwriting Needs Perceptual and Visual Motor Skills

by Amber Swearingen, MOT, OTR/L and Tara Calder, OTR/L

Have you ever thought about the skills that it takes to write the letters in your name? Writing is a fundamental skill that we use every day to communicate with others and the world around us. While most people are aware that handwriting requires fine motor skills, they are unaware of two other important skills that must be in sync.



What are Visual Perceptual Skills?

Successful handwriting requires the development of visual perceptual skills. Visual perceptual skills help children obtain and organize visual information from the environment and interpret what they see. These skills include:

- **Form Constancy** – the ability to identify a form even if it is different in size, orientation, color, or texture.
- **Figure Ground** – the ability to distinguish a form from the surrounding background.
- **Spatial Relations/Position in Space** – the ability to understand the position of objects in relation to each other and to one's self.
- **Visual Discrimination** – the ability to perceive the differences and similarities in forms.
- **Visual Closure** – the ability to identify a form even though part of it is not visible.
- **Visual Memory** – the ability to remember what one sees.

Visual perceptual skills play an important role in learning how to form letters. These skills are also important for copying, sizing, spacing, and orienting letters and words correctly.

What are Visual Motor Skills?

Visual motor skills help children guide their movements based on visual information. These skills develop sequentially. Children learn to imitate forms and letters first. Imitation is when the child draws the form or letter after he/she sees an adult draw it. Once a child can imitate a form or letter, he/she learns to copy it. Copying is when the child draws a form or a letter from a predrawn model. Shortly after learning how to copy a form or letter, most children can draw a form or letter from memory. The following table gives details on the developmental sequence.

*Please note: the ages are approximate and may vary based on the child's developmental process.

The Developmental Sequence of Visual Motor Skills

Age Level	Skill
• 12-16 Months	Scribbles on paper
• 16-20 Months	Imitates vertical and horizontal scribbles
• 20-24 Months	Imitates circular scribbles as well as single vertical and horizontal lines
• 2-3 Years	Imitates single circle; can copy vertical and horizontal lines
• 3-4 Years	Imitates cross, square, and diagonal lines
• 4-5 Years	Copies cross, square, oblique lines; imitates and copies "X"; imitates some letters and numbers; may begin imitating and copying name
• 5-6 Years	Copies a triangle and most letters, writes name and some letters from memory



How Can I Help My Child Develop Visual Perceptual and Visual Motor Skills?

Many traditional children's games and activities promote visual perceptual and visual motor skills. Some examples are puzzles, cutting construction paper with scissors, and card games such as *Go Fish*, *Memory Matching*, and *Slap Jack*.

If you think your child may have a delay in his/her visual motor or visual perceptual skills or handwriting, contact your child's physician or school for more information regarding a developmental screening or occupational therapy services.

Resources

- Beery, Keith E., and Natasha A. Beery. *The Beery-Buktenica Developmental Test of Visual Motor Integration*. Minneapolis: NSC Pearson, 2006.
- Folio, M. Rhonda, and Rebecca R. Fewell. *Peabody Developmental Motor Scales, 2nd Edition*. Austin: Pro-Ed, 2000.
- Retherford, Kristine S. *Normal Development: A Database of Communication and Related Behaviors*. Greenville, SC: Super Duper Publications, 1996.