

Pre-Handwriting

Foundational skills of handwriting:

Handwriting is very complex and requires the coordination of many different skills!

- Functional grasp
- Fine motor skills (control, coordination, pressure gradient)
- Oculomotor skills
- Visual perceptual skills
- Visual motor integration skills
- Cognition
- Sensory processing skills

Why is handwriting important?

In a digital world, why is handwriting important? Handwriting involves and combination of many different performance skills. These skills are so important to address even in the early intervention setting. These skills impact many other occupations related to performance in self care, social, and academic areas!

According to research,

- the physical and cognitive act of writing supports the retainment of new learning
- different areas of the brain are engaged when we feel the movements of our hands while writing
- physically writing letters can support language development

Grasp Development:

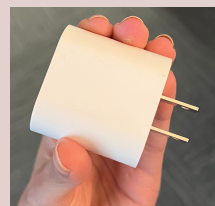
Throughout our development, we go through a progression of functional grasp patterns. Every thing we hold in our hands, requires a functional grasp in order to be properly utilized (a ball, a button on a shirt, a fork, a toothbrush, a pencil, cheerios, etc.) Functional grasp increases independence in everyday activities!



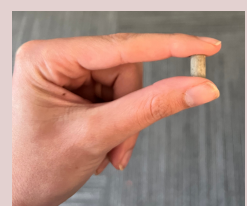
Palmar grasp
4-6 months



Radial palmar grasp
6-8 months



Radial digital grasp
8-10 months

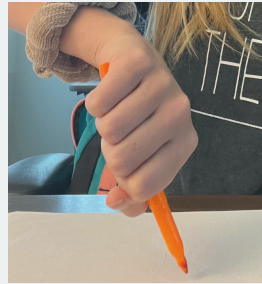


Pincer grasp
~12 months

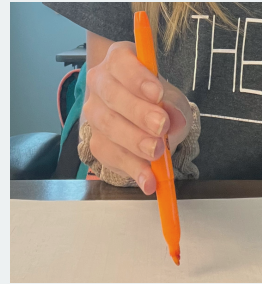
Pencil grasp progression:



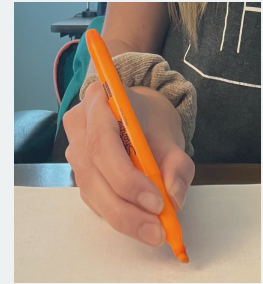
Palmar grasp
12-18 months



Pronated grasp
2-3 years



Gross 5-fingered grasp
4-5 years



Tripod grasp
~5 years

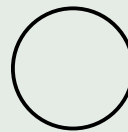
Pre-writing skill progression:



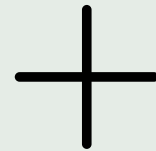
2 years



2.5 years



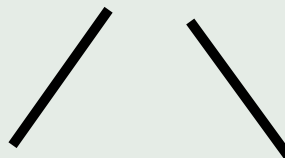
3 years



3.5-4 years



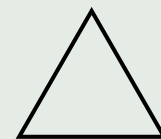
4 years



4.5 years



5 years



5+ years

How can we help support these skills?

According to research, there is strong evidence that play and occupation-based intervention that takes place within a child's home and school environment supports development. Below are a few examples of how we can support pre-handwriting and the underlying performance skills at home:

- Play doh, theraputty, tweezers, *squidz* for hand-strengthening
- Encourage the use of different sized writing utensils (broken crayons)
- Practice coloring or writing on a vertical surface
- Weight-bearing or playing on the floor to increase important gross motor stability
- Utilize multi-sensory strategies (writing in sand, shaving cream)
- Incorporate tactile, verbal, or visual cues for line start and termination
- Read to your child (point to animals, numbers, letters, follow with your finger)
- Play with different toys or foods to facilitate functional grasp
- Tracing activities, mazes, etc.
- Repetition of new skills



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