

DEVELOPMENTAL PROGRESSION OF HANDWRITING SKILLS

As a pediatric occupational therapist, I often receive questions from concerned parents and teachers about whether their child is on track with their handwriting development. So today I wanted to share with you about the developmental progression of handwriting skills so you can keep these milestones in mind when tracking your child's handwriting



development!

DEVELOPMENTAL PROGRESSION OF PENCIL GRASP

Pencil grasp is usually the most obvious fine motor marker of how a child's handwriting development is coming along, and it's often the one I get asked about the most by concerned adults. Though [handwriting development begins to take place well before a](#)

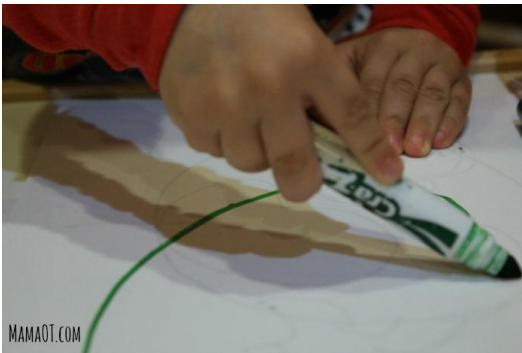
[child ever picks up a pencil](#), these are the milestones to keep in mind when looking at how your child is holding their crayon, marker, or pencil.

1 to 1.5 years – Palmar Supinate



The crayon or marker is held in the palm (“palmar”) with the thumb on top in a slight forearm-up (“supinated”) position. This is considered a “primitive” grasp and typically accompanies the “scribbling” stage. Scribbling movements are typically initiated by the shoulder and elbow, which involve larger muscle groups and a relatively low level of precision.

2-3 years – Digital Pronate



The child transitions to holding the crayon or marker with the whole hand while the pointer finger (“digit”) points to the tip and the forearm rotates to point down toward the paper (“pronated”). This is considered a “transitional” grasp and is typically present when little ones are learning to make lines and circles. Coloring and early drawing movements still come from the larger muscle groups and typically involve large strokes, however, there may be a higher level of control over the tool compared to the Palmar Supinate grasp.

3.5 to 4 years – Static Tripod



The child can now hold the crayon or marker with the thumb and index finger while resting it on the knuckle of the middle finger. This means there are a total of three fingers controlling the tool (“tri” = “three”). Movements during coloring and drawing are initiated from the larger joints of the arm such as the shoulder and elbow, while the fingers remain “static” and the hand moves as one unit. This grasp is typically present around the same age that kids are becoming “pre-writers” and learning to make shapes such

as a cross and square.

When the Static Tripod is first developing, you may see the wrist flexed (bent forward) and “floating” above the writing surface, whether the child is working on paper flat on a table or coloring on a vertical chalkboard (as pictured above). However, as kids become more comfortable and confident in this position, they are then usually able to transition to resting their forearm on the table as they color or draw. Interestingly, research has found that nearly 50% of three-year-olds are already able to use a tripod grasp, and grasp maturity at this age tends to be higher for girls than for boys. Regardless of when it occurs, the shift from Digital Pronate to Static Tripod occurs is a BIG one! It means kids have moved from a “toddler” grasp to a “big kid” grasp, and that is a HUGE deal in the world of fine motor development!

You may see kids use a grasp similar to this one, called the “Static Quadrupod.” It is similar to the Static Tripod, but there is just one extra finger pinching the marker. So three fingers pinch and one supports the tool, for a total of four (“quad” = “four”). This Static Quadrupod grasp is just as functional and age-appropriate as its Static Tripod counterpart, and is pictured below for your reference.



4.5 to 5 years – Dynamic Tripod



The child continues with the same grasp pattern of pinching with thumb and index finger while resting the crayon, marker, or pencil on the knuckle of the middle finger. However, the pinky and ring fingers can now tuck themselves securely into the palm to stabilize the arch of the hand and the middle finger, the wrist is consistently positioned in slight extension (bent back), and the forearm and pinky-side of the hand (the “ulnar” side) are

comfortably stabilized on the table. This means movements are now able to be initiated from the first three fingers and wrist while making vertical and horizontal strokes, rather than from the elbow and shoulder.

This “dynamic” grasp allows for more precision and detail during tasks such as coloring within the lines or within smaller spaces, drawing with more detail, and tracing or writing letters with more precision. It is around this age that children demonstrate an emerging ability to form diagonal strokes when coloring and/or drawing shapes. Once kids

can consistently utilize a Dynamic Tripod grasp, it means they are one step closer to being ready for formal writing instruction!

A similar grasp you may see kids this age use is one we refer to as the “Dynamic Quadrupod” grasp. Like I mentioned earlier, one extra finger is used for pinching and controlling the pencil (for a total of three pinching fingers and one stabilizing finger), and it is just as effective and age-appropriate as the Dynamic Tripod. I have included a picture of the Dynamic Quadrupod below for your reference.



Now, before you tell me that your child’s grasp doesn’t seem to match any of these pictures, let me say it is common for pre-writers to experiment with a variety of grasps as their hands and pre-writing abilities develop. And it is also common for young kids (e.g., ages 1-3) to demonstrate different grasps on different types of tools, based on whether they are fat, skinny, long, short, or even how they are positioned in front of them.

Below are examples of a few other grasps you may see during the toddler and preschool years (these are not *all* the possibilities, but should give you the idea that variety isn’t uncommon in the early years):



Research has found that the Dynamic Tripod and Dynamic Quadrupod grasps aren’t the *only* functional grasps out there. The Lateral Tripod and Lateral Quadrupod are also just as effective. [Click here](#) to see a side-by-side comparison of all four grasp patterns.

DEVELOPMENTAL PROGRESSION OF PRE-WRITING STROKES

Did you know children tend to follow a fairly predictable pattern of when they develop the ability to draw various shapes at different ages, known as “pre-writing strokes”? While pre-writing strokes are often thought of as the lines and circles needed for later learning how to *write* letters and numbers (that’s why they’re called “pre-writing” strokes, right?), they also prepare kids for being able to draw, which is another great indicator of pre-writing development!

Though pre-writing development is typically an area of early childhood development that is less familiar to parents and teachers as compared to pencil grasp development, I would argue that it is just as (if not *more*) important for helping prepare children to learn how to write. Kids’ writing and reading skills often develop alongside one another, and kids who are able to produce pre-writing strokes will often have an easier time learning how to write letters and numbers. Pre-writing development is important!

I want to make a quick note about some important terminology.

In pre-writing development, there is a difference between “imitating” and “copying.” “Imitation” means the child first watches a demonstration of the shape being formed, and then they immediately try to do what they just saw. “Copying” means the child is simply shown a picture or a model of the shape, and then they try to reproduce it on their own. Developmentally speaking, kids typically learn how to *imitate* drawing shapes before they learn how to *copy* them. Once they’ve learned how to copy those shapes, they can then begin to form a visual memory of them and draw them without a visual model. As with all developmental milestones, keep in mind that there is a wide range of “average” and children’s acquisition of these milestones can be influenced by their level of interest and attention.

1-2 years

- **Scribbling**
- **Imitating vertical lines, horizontal lines, circular scribbles**

2-3 years

- **Imitating cross**
- **Copying vertical line, horizontal line, circle**

3-4 years

- **Drawing circle without a model**

4-5 years

- **Imitating square**
- **Copying cross, square, right and left diagonal lines, X shape, some letters and numbers**
- **May be able to write own name**
- **Drawing a recognizable face with eyes, nose, mouth**
- **Drawing a basic stick figure with 2-4 body parts**
- **Coloring inside a circle and filling it at least halfway**

5-6 years

- **Copying triangle**
- **Printing own name**
- **Copying most capital and lowercase letters**
- **Drawing a person with at least 6 body parts**