Mighty Fine Motor Fun

by Christy Isbell
Dedication
This book is dedicated to my mother. I love you—Christy

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Mighty Fine Motor Fun

Fine Motor Activities for Young Children

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What Are Fine Motor Skills and Why Are They Important?

Introduction

Young children are naturally curious. They learn about the world by interacting with their peers and by exploring objects and materials with their hands. During their early years, children develop the hand skills (fine motor skills) they will need in order to be successful at play and work for the rest of their lives. In addition, young children learn to use their hands for important self-care skills, such as feeding and dressing themselves.

Preschoolers use fine motor skills throughout the day. At circle or group time, a preschooler may use her hands to clap along with the music, do fingerplays, or point at a picture. During learning center time, she may use her hands to put on dress-up clothes, wash a doll, turn the pages of a book, stack blocks, draw, cut with scissors, or pick up toys. At snack time, she may use her hands to eat dry cereal, pour milk, and drink from a cup. In short, a quality preschool classroom offers a young child many opportunities to explore and develop her fine motor skills.

Research-based teaching practice incorporates a wide range of strategies to help children develop fine motor skills in preschool classrooms. Many states have set standards for Pre-K programs, with guidelines that include fine motor development. Teachers use these state standards to guide their decisions about which activities, tools, and materials to introduce to young children before they enter kindergarten. State Pre-K standards typically suggest that a successful learning environment gives children opportunities to use age-appropriate tools as well as have the chance to write, draw, and experiment with a variety of art materials.
Preschoolers need daily experience with developmentally appropriate fine motor activities so they can build the confidence and skills they will need later in life (Bredekamp & Copple, 2009). In a high-quality preschool, teachers provide ample opportunities for children to participate in drawing, cutting, gluing, stringing, and manipulating objects with their hands. In elementary school, children further refine their fine motor skills as they participate in handwriting, computer keyboarding, science experiments, and more complex art projects.

**What Fine Motor Skills Should Preschoolers Have?**

By the time they arrive in preschool, most children should be able to perform the following basic fine motor actions (Exner, 2005):

* **Reach:** Moving her arm forward to grasp or touch an object.
* **Grasp:** Using her fingers to get an object into her hand.
* **Carry:** Using her hand to move an object from one place to another place.
* **Release:** Letting go of an object she holds in her hand.
* **In-Hand Manipulation:** Using her fingers to adjust an object inside her hand.
* **Bilateral Hand Use:** Using her two hands together in an activity.

Several factors influence the development of a child’s fine motor skills. Young children need good vision to be able to see the materials they use in fine motor activities, as well as to understand the movements involved in the activities. The term **eye-hand coordination** describes this strong relationship between vision and fine motor skills. Preschoolers also use their **tactile** (touch) sense and their **proprioceptive** (body position) sense to help learn how to use their hands. A child’s cognitive development affects her ability to manipulate objects and explore how to use new tools and materials. If a child has delayed or impaired cognitive, visual, or tactile awareness, that delay may have a significant effect on her ability to develop her fine motor skills.
What Are Fine Motor Skills and Why Are They Important?

How Do Young Children Develop Their Fine Motor Skills?

Preschoolers develop fine motor skills through play with appropriate materials and objects. Preschoolers also learn through repetition and experimentation. A learning environment with a wide variety of open-ended materials such as paper, drawing utensils, glue, clay, and small blocks provides a young child with a variety of opportunities to explore her own interests. Preschoolers who have the chance to construct their own knowledge and who can work at their own levels will be more engaged in learning and more capable of developing their fine motor skills (Bredekamp & Copple, 2009).

When a young child participates in an activity that helps develop her fine motor skills, the product of that activity is not as important as the process. A preschooler must be free to express herself through her exploration of new materials. For instance, giving a four-year-old child a blank piece of paper, a choice of several different paintbrushes, and a set of watercolor paints will provide more interesting ways for the child to practice her fine motor skills than offering the child a coloring book and crayons. It is important to remember that each child creates differently. When a class of preschoolers finishes a fine motor activity, their products should not all look alike. Variety in finished products shows that teachers are encouraging the children to participate in fine motor activities as unique individuals; this describes developmentally appropriate practice.

Although preschoolers typically develop their fine motor skills while interacting with their peers, they also can learn crucial fine motor skills from adults. Adults can “teach” or demonstrate to a young child how to use a new tool, such as an eyedropper or a 1-hole punch. When you introduce a new tool to a child, keep your instructions simple and brief. Clearly demonstrate the basic ways to use the tool or material, then give the child time to explore how she can use the tool.
If there are safety precautions that relate to using a certain object or material, it is important that you include a brief discussion of the safety procedures before sharing the activity. Generally, one or two “safety tips” are all that a preschooler can remember. Try to keep the suggestions positive in nature. Simply explain how the child can use the tool or material safely. See Chapter 2 for more information on selecting appropriate tools and materials for preschoolers. Here are some examples of how to introduce appropriate safety tips for different materials:

- **Glue**
  
  *Today, we will use glue to stick _____ (tissue, cardboard, and so on) to _____ (paper, and so on).*

- **Stapler**
  
  *We use a stapler to fasten papers together.
  Watch your fingers! Keep them on top of the stapler.*

- **Scissors**
  
  *We use scissors at the table.
  Today, we are cutting _____ (paper, string, and so on) with scissors.*

---

**Developmental Sequence of Fine Motor Skills**

Young children develop their fine motor skills in a general sequence. This sequence begins during the third month of life and progresses until the child develops mature fine motor patterns (typically during the later elementary-school years). Here is the basic sequence of fine motor development:

**Large to Small:** An infant can grasp large objects like a rattle (5 months) before she learns to grasp small objects like a small peg (12 months).

**Palm to Finger:** An infant begins by grasping objects in the palms of her hands. She then progresses to holding small objects with her fingertips. Most two-year-old children hold markers in the palms of their hands, whereas most five-year-old children can hold a pencil with their thumb and fingertips.

**Hands Together to Hands Separately:** At first, a child’s two hands do the same thing at the same time. A nine-month-old baby can clap her hands together; by age three, she is starting to develop reciprocal hand skills, where one hand does one thing while the other hand does something different. For example, a four-year-old child can hold paper in one hand and cut a straight line through that paper with the other hand.
Because each child develops at her own pace, you will see differences in children’s rates of development. Several factors may influence a child’s fine motor development, such as muscle tone, body build, and temperament. However, the above sequence of fine motor development is typical for the majority of young children (Henderson & Pehoski, 2006; Thelen & Smith, 1994).

### Cultural and Gender Considerations

Children across all cultures will ultimately develop similar fine motor abilities. However, culture can have an impact on the speed at which a young child acquires different motor skills. Some cultures place a greater emphasis on active play and gross (large) motor activities than on fine (small) motor activities such as drawing or cutting with scissors. Children of some cultures may not have access to toys or the opportunity to use materials such as writing and drawing tools that would facilitate fine motor development. As a result, it may take some preschoolers longer to develop their fine motor skills or specific tool use (Case-Smith, 2005; Trawick-Smith, 1997).

Other cultures place a high value on young children’s fine motor development. For example, Chinese preschool programs routinely provide activities that encourage young children’s use of scissors, writing utensils, and painting tools. Some Chinese three-year-olds have such advanced fine motor skills that they can cut intricate snowflakes out of thin paper and participate in very small origami projects.

Research suggests that gender differences also exist in the way children acquire fine motor skills. Girls are frequently more competent than boys of the same age at performing fine motor skills, such as drawing and cutting with scissors. Discrepancies between the genders exist in handwriting particularly. Girls are more likely to write faster and more legibly than boys of the same age (Trawick-Smith, 1997; Tseng & Cermack, 1993; Tseng & Chow, 2000).

### The Foundations of Fine Motor Skills

Three- and four-year-old children should spend more time playing with manipulatives than practicing writing skills. Some schools and/or families may push for children to begin formal handwriting before the children are developmentally ready to participate in this activity. If families or educational programs push young children to write before their hands are physically ready, it...
may have a negative impact on the children’s interest in writing. In addition, preschoolers who have yet to develop the precursors for higher-level fine motor skills are at risk for developing poor pencil grasp, illegible handwriting, and slow handwriting (Benbow, 1990; Bredekamp & Copple, 2009; Case-Smith & Pehoski, 1992; Exner, 2005).

Preschoolers should be adept at several basic fine motor skills before they attempt more challenging activities like pre-writing and using scissors. Here is a list of the foundations of basic fine motor skills:

**Developmental Readiness:** Building, stacking, and putting things together all fascinate young children. Preschoolers begin to understand shapes and sizes and begin to differentiate between the “part” and the “whole.” For instance, when you give a child a basket of play fruit that contains all apples and one banana, the child can recognize that the banana is not the same, even though it is one “part” of the “whole” fruit basket. Activities that give children the opportunity to build and construct using blocks and other similar objects also help them become developmentally ready to participate in activities such as drawing, cutting, and stringing beads.

**Good Posture/Balance:** Fine motor activities are easier to complete when a child sits with her feet firmly on the floor and with her back straight. A child should be able to give her full attention to her fine motor task rather than worrying about falling off her chair. The child should be able to use her arms to manipulate objects rather than using her arms to hold herself steady at the table.

**Shoulder Strength:** A child’s shoulder strength provides her with a stable base of support for her hand function. Young children who do not regularly participate in large motor activities such as climbing, crawling, pushing, and pulling may not develop good upper-body strength. When these children attempt fine motor activities, their arms and hands may be shaky and uncoordinated because they are unable to hold their shoulders steady and in alignment.
What Are Fine Motor Skills and Why Are They Important?

Grasp: A child should be able to hold a writing tool (for example, a crayon, marker, or pencil) before pre-writing skills can develop. The grasp should be strong enough to hold the writing tool, but flexible enough to allow the child to move the tool across the paper. The strength and quality of a child’s grasp will develop over time. While most three-year-olds hold a crayon with all of their fingers, the majority of five-year-olds use their thumb, index, and middle fingers to hold the crayon. Most typically developing children will have a mature grasp of a writing tool by the time they reach first grade.

Forearm and Wrist Control: To effectively participate in fine motor activities, a child should be able to swivel her forearm so that her palm is up and then down. A child’s ability to hold her wrist firm while moving her fingers is particularly important for activities such as cutting and lacing or stringing. These skills improve dramatically between the ages of three and five years.

Bilateral Hand Use: Using two hands together to complete an activity is essential for successful participation in fine motor activities. By age three, a child should be able to stabilize an object with one hand and move her other hand. For example, she should be able to hold down a piece of paper with one hand while drawing on that paper with her other hand. By age five, a child should begin developing reciprocal hand use where she can cut with one hand and turn the paper with the other hand to create large, simple shapes.

Eye-Hand Coordination: Effective interaction between visual and hand skills is important. The child needs to be able to use vision to coordinate the movement of her shoulders, elbows, wrists, and fingers as she learns to use a new tool or participates in a new fine motor activity. (Case-Smith & Pehoski, 1992; Klein, 1996)

This book includes activities that facilitate the development of these fundamental fine motor skills for three- and four-year-olds. Many five-year-olds have achieved adequate skills in these fundamental areas; therefore, a majority of the activities for five-year-olds address the fine motor skills of writing and manipulating small objects with two hands.
Development of Pre-Writing and Pre-Scissor Skills

As with all other motor skills, a developmental progression of pre-writing and pre-scissor-use skills exists. Each component of pre-writing and pre-scissor use builds upon the previous skill. Acquiring these skills will help young children to develop mature scissor and handwriting skills in the elementary grades (Exner, 2005; Klein, 1990).

Sequence of Pre-Writing

In addition to the precursors of effective fine motor skills described here, a young child must be able to scribble independently on paper before beginning pre-writing activities. The developmental stages of pre-writing include the abilities to:

- Copy a horizontal line.
- Copy a vertical line.
- Copy a circle.
- Copy a cross.
- Copy a right-to-left diagonal.
- Copy a square.
- Copy a left-to-right diagonal.
- Copy an “X.”
- Copy a triangle.
- Copy a diamond.

**Note:** “Copy” here means that the child can look at a picture or drawing of a particular form, and without a demonstration of how to make the line or shape, be able to create an imitation of the drawing.

In general, the pre-writing sequence begins sometime around age two. Most children will be able to copy a triangle and a diamond by the time they are four-and-a-half years old. Once a child can copy all forms and shapes, that child should be ready to begin writing letters (Beery, 1997; Gardner, 1996; Klein, 1996; Weil & Amundson, 1994).
Developmentally appropriate preschool programs offer children various opportunities and materials with which to explore copying forms and shapes. The most effective fine motor activities are those that allow a young child to explore her own interests at her own pace. Best practice for young children does not include using worksheets to copy forms repetitively (Bredekamp & Copple, 1997).

Sequence of Pre-Scissor Use

A young child with well-developed scissor skills should be able to hold a piece of paper with one hand and use scissors in the other to cut the paper. The developmental stages of pre-scissor use that lead to well-developed scissor skills include the abilities to:

- Hold scissors appropriately (one hand, thumb on top).
- Open and close scissors.
- Snip paper.
- Cut forward through a sheet of paper.
- Cut in a straight line.
- Cut out a square or triangle.
- Cut out a circle.
- Cut non-paper material (such as yarn, tape, or fabric).

**Note:** A child begins by cutting large simple shapes and progresses to cutting smaller shapes.

The pre-scissor skills sequence typically begins when children are about two-and-a-half years old. Many young children first attempt to hold scissors with their thumbs down or using two hands.
By age three, a preschooler should be able to hold a sheet of paper in one hand and manipulate the scissors in her other hand well enough that she can snip the paper. By age five-and-a-half, most children can cut out simple shapes and use scissors to cut non-paper materials for creative activities.

These descriptions of how children develop their pre-writing and pre-scissor-use skills are guidelines, not rules. Each child will have her own interests and skill level. As a result, preschoolers will progress through the sequence differently as they develop these fine motor skills.

Chapter 2 addresses the impact of the learning environment on young children’s ability to develop fine motor skills. The chapter describes a fine motor center and includes suggestions for layout, materials, and props. The chapter also describes the role of the teacher in guiding preschoolers’ fine motor skills, giving careful consideration to the developmental sequence of learning. In addition, the chapter focuses on selecting tools and materials to best meet preschoolers’ fine motor needs.
Between infancy and age seven, young children develop more fine motor skills than at any other period in their lives. The preschool years are an especially explosive time for motor development. It is vital that preschoolers spend time in well-designed learning environments that offer ample opportunities for exploration and play. In the preschool classroom, children interact with teachers, peers, objects, and materials. Each interaction contributes to the development of a young child’s fine motor skills.

It is impossible to overstate the role of the teacher in a child’s fine motor development. A responsive and caring teacher helps establish a preschooler’s sense of trust and security, and a child who feels nurtured and supported is more likely to try new things. Teachers should be careful observers of young children, in addition to being knowledgeable about typical preschool fine motor development. A knowledgeable teacher can watch a young child play and then join in to scaffold the child’s development in new directions. Teachers can also select materials, tools, and activities that will best stimulate preschoolers’ fine motor skills in enjoyable and developmentally appropriate ways.
How to Guide Pre-Writing Skills

Handwriting is an important life skill that the majority of young children begin learning during the preschool years. However, it is important not to push children to participate in writing activities that are physically, cognitively, and perceptually too challenging for them. If a child feels unsuccessful, he may lose interest in writing or develop poor handwriting habits that will follow him throughout his life. Young children who are not developmentally ready to begin writing are especially at risk to develop poor pencil grip and illegible handwriting.

Children learn pre-writing skills best by participating in play and daily life activities (Benbow, 1990; Case-Smith & Pehoski, 1992; Exner, 2005). With knowledge of the developmental steps that children typically follow in learning to write, teachers can help ensure that each preschooler will advance through the appropriate stages of pre-writing development.

Developmental Steps for Learning Pre-Writing

**Modeling/Imitating:** An adult or peer shows the child how to draw a line or shape. The child imitates it.

**Tracing:** The child traces over a line or shape. Some children are able to skip the tracing step, as they will be able to copy a shape after modeling/imitating.

**Copying:** The child looks at the completed line or shape and copies it.

**Creating:** The child creates his own lines and shapes.

The time that a child spends at each developmental step depends on many factors. Each time a child attempts a new form or shape, he will most likely need to go through these same steps. Expose young children to a wide variety of print, art, and writing tools during play so that the children have many opportunities to imitate and model pre-writing and can make the early connections necessary to begin writing.