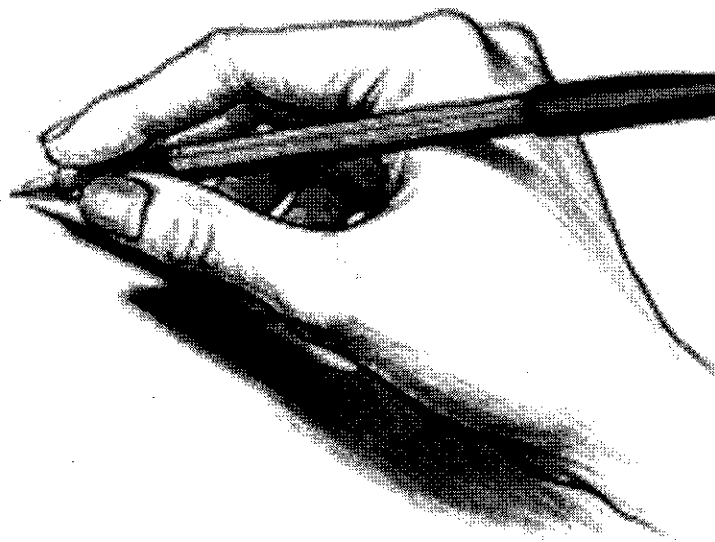


An Occupational Therapist's Guide To
IMPROVING HANDWRITING



Composed By:
Amanda Atkinson MS: OTR/L
Occupational Therapist

Foreword

Handwriting is no longer a subject. The days of “penmanship workbooks” are long gone. Children are expected to learn how to make letters DURING other academic tasks, such as phonics and reading.

“Here’s the letter, here’s the sound, here’s a word it makes, now write it!”

This is not the classroom teachers fault; there are only so many hours in a school day. But no wonder children struggle. Handwriting is such a complex task. It involves mastery of fine motor skills, letter memory skills, visual perceptual skills and visual motor skills. To assume that it can be “learned” in conjunction with two, three, four other just as complex skills, is absurd. You would never teach Spanish while teaching Calculus.

“Bad” handwriting does not always mean a child needs Occupational Therapy intervention, although a huge percent of OT referrals are for “bad handwriting”. This guide was written to assist teachers in understand why children have “bad” handwriting, and how to fix it, without seeking out direct OT service. After all, 30 minutes in the OT room is 30 minutes out of the classroom.

I hope that this guide will help you, as a classroom teacher or parent, do the following:

1. *Find some useful activities to do during “center time”, so that “fine motor skills developmental” and “handwriting basics” can be integrated into your day without taking away from academic time.*
2. *Find some useful activities to do during transition time or choice time, where children can get up and use some “big muscles”.*
3. *Recognize why a specific child is having a “handwriting” issue.*
4. *Identify ways YOU can help improve handwriting, without pulling the child from the academic setting.*

Remember that handwriting CAN NOT be learned, if it is not taught.
Good luck in your handwriting adventures.

Amanda M. Atkinson MS; OTR/L

Amanda M. Atkinson MS; OTR/L

An Occupational Therapist's Guide

Improving Handwriting

ISSUE #1: POOR SHOULDER STRENGTH AND FINE MOTOR SKILLS

Printing involves controlled movements of the fingers to produce fluid letter strokes that are the correct size, directional and connect to each other in the right places. In order to have good dexterity (movement) and control at the fingers, a person must have good shoulder girdle stability, adequate hand strength and controlled movement of each finger individually. If the child's printing issues are related to shoulder girdle instability or fine motor weakness, the following activities will assist in improving these skills:

Shoulder Girdle Strengthening Activities:

Shoulder girdle strength is important to provide stability for your hand when you are doing fine motor tasks.

- ☆ Weight bearing activities
 - Working on stomach while propping self on elbows
 - Supporting self with arms to wheelbarrow walk
 - "Animal walks": crab walking, bear walking, commando crawling, etc.
 - Riding on a scooter board on belly using arms to navigate
- ☆ Working on an incline
 - Taping worksheets on a wall or blackboard
 - Using a 5-inch binder as "incline board" at desktop
- Writing on a blackboard
- Painting on an easel
- ☆ Resistive activities using arms
 - Erasing/washing a blackboard
 - Washing a table
 - Vacuuming or sweeping
 - Chair, wall or floor push ups
 - Pushing, pulling or carrying
 - Tug of war
- ☆ Playground Activities
 - Monkey bars
 - Climbing

Fine Motor Activities:

Fine motor skills are the skills needed for you to use your fingers & hands for smooth, quick, accurate movements. Strength, Stereognosis, Grasp & Precision are all a part of good fine motor skills.

- ☆ Strengthening
 - PlayDoh activities (hiding small objects in PlayDoh then finding them)
 - Cutting through thick paper, like Oak Tag or Cardboard
 - Using a manual pencil sharpener
 - Making cookies/pizza out of dough
- ☆ Stereognosis (the ability to recognize what an object is JUST by feeling it)
 - "Mystery" Box/Bags: Place various small items (coins, toy cars, blocks, keys, paperclips, cotton ball, etc.) into a box or bag. Have the child reach inside & feel the object with their hands. Have the child try to guess what the mystery object is without looking at it.
 - "Hidden" Objects: Place various small items (coins, toy cars, blocks, keys, paperclips, cotton ball, etc.) into a container of rice, sand and/or beans. Have the child dig through the container to find hidden objects with their hands. Have the child try to guess what the hidden object is without looking at it.
- ☆ Grasp (the ability to handle medium to large objects) Skills
 - Stacking blocks
 - Legos & Tinker Toys
 - Using PlayDoh & Sandbox tools (i.e. shovels, rakes, "pasta" makers, rolling pins)
 - Water Toys
 - Dominoes
 - Using rubber & sponge stamps
- ☆ Precision (the ability to handle small objects) Skills
 - Opening & closing markers, twist containers (i.e. Bubble bottles or soda bottles)
 - Using tweezers
 - Manipulating clothespins
 - Playing with toy/real tool sets (screws, bolts, washers, etc.)
 - Playing with marbles

- Using push pins to make “designs” in paper (place flashlight behind paper & turn off lights to create “star designs”)
- Using “Cheerios”, macaroni, small beads or sequins for making necklaces.
- Games that focus on finger movement
 - “Connect 4”
 - “LiteBrite”
 - “Checkers”
 - “Chinese Checkers”
 - “Hungry Hippos”
 - “Ants in the Pants”
 - “Don’t Break the Ice”
 - “HiHo CherryO”
- Creating candy sculptures with toothpicks
- Popping “Bubble Wrap” (packaging wrap)
- Placing coins into a piggy bank
- Mosaic Tile crafts & Parquetry designs
- “Pick Up Sticks”
- “Trouble”
- “Sorry”
- “Jenga”
- “Operation”
- “Bed Bugs”

ISSUE #2: INEFFICIENT PENCIL GRASP

How you hold your pencil is important for many reasons. First, it determines how much control and movement you have on the pencil. Grasps that are too loose will result in poor control, jagged strokes and lines that are too long. Grasps that are too tight will result in limited movement, heavy pressure and slow work production. Grasps with fingers wrapped around the pencil shaft will limit the available visual field, making it difficult to see a writing line. However, not all inefficient grasp patterns are problematic. Many people use “funny” grasp patterns, and their ability to produce legible written work is completely appropriate. Don’t fix something that isn’t broken. If the child is having difficulty printing and you notice that they use an inefficient grasp pattern, then use strategies to adjust it. However, if you notice an inefficient grasp pattern in a child whose writing is age appropriate, then leave it alone.

Strategies for Improving Pencil Grasp:

- ☆ Using a “shortened” writing or coloring utensils
 - Broken crayons
 - Crayola “Pipsqueak” brand crayon and markers
 - Pencils broken in half
 - Golf Pencils (available at Staples®)
- ☆ Consult with your Occupational Therapist about an appropriate pencil grip
 - Avoid using “generic” pencil grips (found at Walmart, Target, etc.) because they often do not remediate the underlying problem
 - The C.L.A.W pencil grip® (available through www.amazon.com or www.writingclaw.com) is a useful pencil grip that addresses most inefficient grasp patterns

ISSUE #3: POOR LETTER MEMORY

In order to print a letter, a child must recall how that letter is formed. Letter Memory is the child’s ability to recall what the letter looks like and how to make their letter using correct lines and connections. It does not involve being able to make it the right size, or place it correctly on a writing line – these are both separate skills that CANNOT be master until Letter Memory is mastered. Just because a child can recognize a letter on a visual model, that DOES NOT mean he/she can break the letter down into its line components. For example, to make the letter “A”, a child must:

1. Recognize and name it as “A” consistently, regardless of size or font
2. Understand that “A” is made up of three lines
3. Understand that two of the lines are diagonal and one is horizontal, and what each of these “directionality” terms means
4. Understand where to start and where to end each of the lines (“line sequence” or “letter formation”)
5. Understand how the three lines connect to each other

Strategies to Improve Letter Memory:

- ☆ Explain size concepts (big, small) **BEFORE** introducing letters/numbers
- ☆ Explain directionality concepts (top, middle, bottom, left, right) **BEFORE** introducing letters/numbers
- ☆ Explain parts of a writing line **BEFORE** introducing letters/numbers. **Model using a writing line for ALL tasks involving handwriting.**
- ☆ Use paper with exaggerated spaces between each line.

- ☆ Explain and orient the child to left and right **BEFORE** introducing letters/numbers. Give plenty of exposure to left and right sides – i.e. of the classroom, of the desk, of a piece of paper, etc.
- ☆ Use visual reminders to designate left and right.
- ☆ Always reference the “left” when explaining where to start a letter (unless the letter starts in the “middle”, obviously).
- ☆ Teach commonly reversed letter separately and at very different time frames (i.e. d and b; g and q)
- ☆ Use teaching materials that “block” moving from the left to right (i.e. a chalkboard, an 8x11 piece of paper, pretend paper template).
- ☆ Use worksheets/activities that have the child identify and correct letters that are reversed.
- ☆ Use poems for formation of numbers
- ☆ Teach letters in groups:

CAPITAL LETTER GROUPS:

“Frog Jump Letters”: F E D P B R N M

- ☆ All of these letters begin with a big line down and “frog jump” back to the top
- ☆ Examples:

Capital Letter **F**

Step #1: “Big Line down to the bottom and STOP!”

Step #2: “Frog Jump back to the top! [Ribbit!]”

Step #3: “Little Line across the top, Little Line across the middle.”

“Magic C Letters”: C O Q G

- ☆ All of these letters begin with a “magic C”
- ☆ Examples:

Capital Letter **O**

Step #1: “Big Curve (Magic C) to the bottom.”

Step #2: “Another Big Curve back to the top.”

“Silly S”: S

- ☆ Easiest to teach by itself, two little curves.

Capital Letter **S**

Step #1: “Little Curve to the middle.”

Step #2: “Backwards Little Curve to the bottom.”

“Big Line” Left Letters: L H K

- ☆ All of these letters begin with a big line down, but DO NOT “frog jump” back to the top.
- ☆ Examples:

Capital Letter **H**

Step #1: “Start left. Big Line down to the bottom and STOP!”

Step #2: “Start right. Big Line down to the bottom and STOP!”

Step #3: “Little Line across the middle.”

“Big Line” Middle Letters: T I J

- ☆ All of these letters begin with a big line down the middle of the “paper”
- ☆ Examples:

Capital Letter **T**

Step #1: “Start middle. Big Line down to the bottom and STOP!”

Step #2: “Little Line across the top.”

“Diagonal Line Letters”: A V W X Y Z

- ☆ All of these letters begin with diagonal components
- ☆ Example:

Capital Letter **V**

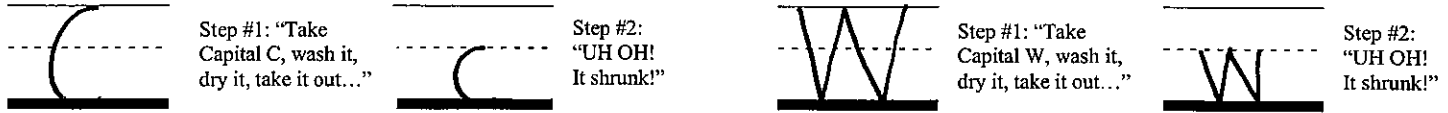
Step #1: “Diagonal Big Line slide to the right!”

Step #2: “Back to the top. Diagonal Big Line slide to the left!”

Lower Case Groups

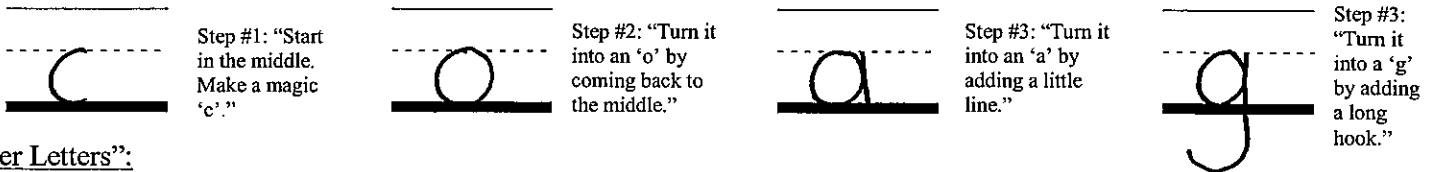
“Shrinking Letters”: c o s v w x y z

☆ All of these letters “look” the same as their capital counterparts, but just “shrunk”. Since the child already knows how to make the capital letter, they just need to make it smaller in order to form the lower case version correctly.



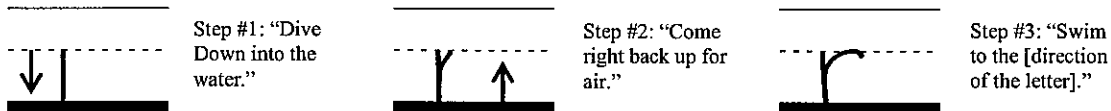
“Magic c Letters”: c o e a d g q

☆ All of these letters begin with a “magic c”. Most “turn into an ‘o’”, and then add a little line (a) or tail (g and q) to form the new letter.



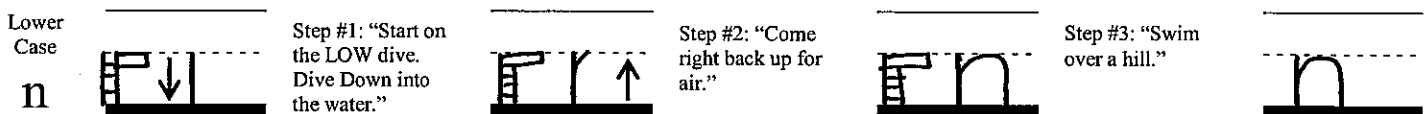
“Diver Letters”:

☆ Diver Letters are tricky because they require “retracing” (or “diving down, then coming back up on the same line that you just formed”)



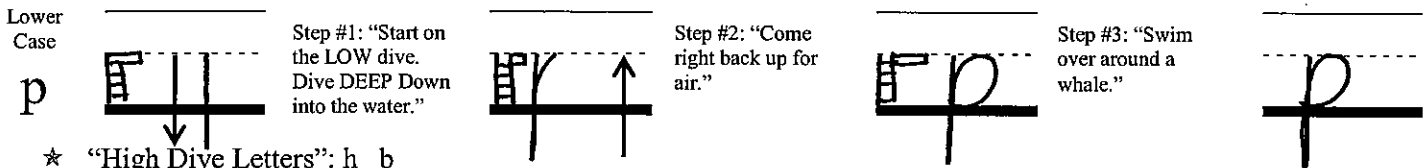
☆ “Low Dive Letters: r n m

○ All of these letters start on the “middle” line (or the “LOW” diving board).



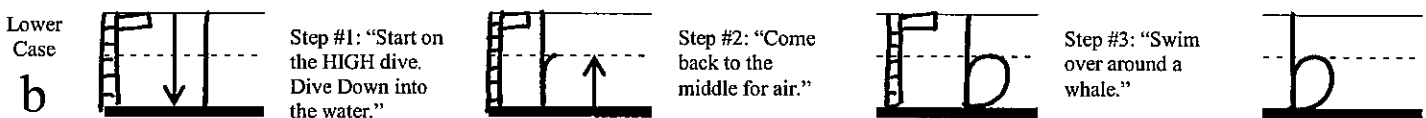
☆ “Deep Sea Dive Letters”: p

○ All of these letters start on the “middle” line (or the “LOW” diving board) but dive under the bottom line (or in the “deep sea”).



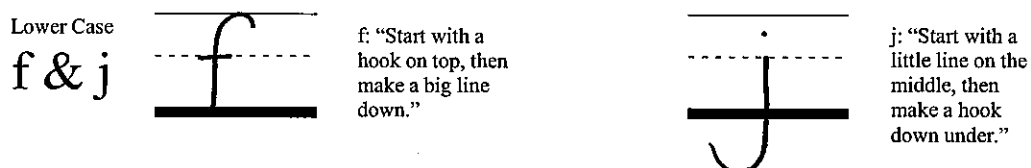
☆ “High Dive Letters”: h b

○ All of these letters start on the “top” line (or HIGH diving board).



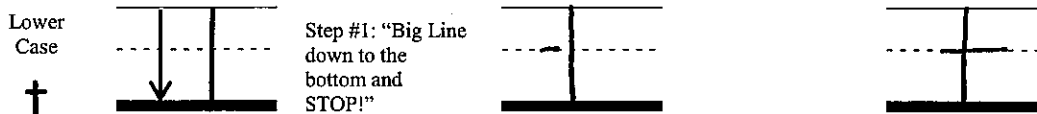
“Hook” Letters: f and j

☆ Both of these letters involve a long hook. One points up, one points down. Emphasize the directionality of the hook.



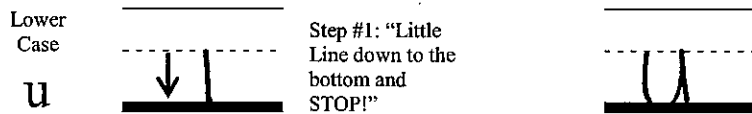
“Big Line” Letters: k l t

☆ All of these letters begin with a “big line” down.



“Little Line” Letters: u i

☆ All of these letters begin with a “little line” down.



Activities to Promote Letter Memory

- ☆ Activities listed are adaptations from *Handwriting Without Tears*® Program.
- ☆ Other useful resources available at www.hwtears.com
- ☆ Please see attached templates for *Pretend Paper* and *Line/Curve Templates* to build letters using HWT protocol.

1. Building Letters/Numbers

Supplies Needed:

- ☆ Line/Curve Templates (See Attached)
- ☆ Pretend Paper Template (See Attached)

Procedure:

- ☆ Make templates out of laminated paper, construction paper, cardboard, foam paper.
- ☆ Practice making each capital letter and/or number out of the templates using the letter formation guide.
- ☆ Talk about the “kinds of lines” the letter is made up of (big lines, little lines, big curve, little curves) and how many of each.

2. Wet-Dry-Try® (HWT Technique) Letters/Numbers

Supplies Needed:

- ☆ Small Chalkboard
- ☆ Chalk
- ☆ Small pieces of sponge

Procedure:

- ☆ Make a letter/number on the chalkboard for the child
- ☆ Have the child “wash off” the letter/number by using a small wet piece of sponge to go over the letter. Make sure that the child is “washing it off” just ONE stroke at a time, NOT the entire board.
- ☆ Have the child “dry” the strokes with a small dry piece of sponge.
- ☆ Talk about the “kinds of lines” the letter is made up of (big lines, little lines, big curve, little curves) and how many of each.
- ☆ Have the child attempt to make the letter/number using the “image” left on the chalkboard from wetting and drying.

3. Playdoh Letters/Numbers

Supplies Needed:

- ☆ Playdoh
- ☆ Tactile Activity Letter “Card” (see attached)
- ☆ Model of letter/number on paper

Procedure:

- ☆ Place the paper model of the letter/number in front of the child.
- ☆ Talk about the “kinds of lines” the letter is made up of (big lines, little lines, big curve, little curves) and how many of each.
- ☆ Have the child form the letter/number out of playdoh. First, have the child form it ON the paper model. As the child becomes more familiar with how the letter/number is formed, have him/her form it on a tabletop/surface while just looking at the paper model.

4. Magician Letters/Numbers

Supplies Needed:

- ★ Paper
- ★ Writing Utensil

Procedure:

- ★ Have letters/numbers already written on small pieces of paper and placed into a hat.
- ★ Select a letter/number out of the hat without showing it to the child.
- ★ Encourage the child that he/she can “read your mind to figure out what letter you selected”
- ★ Have the child turn around and trace a letter/number onto his/her back with your finger.
- ★ Have the child attempt to guess the letter/number either verbally or by drawing it himself on writing paper.
- ★ See if the child’s letter matches the letter/number you selected

Other Activities:

- ★ Using letter/number flash cards
- ★ Making letters/numbers with paint, markers, crayons, in shaving cream, in sand, out of macaroni/cotton balls/other craft items.
- ★ Practice letters/numbers ON three-lined writing paper (even if the child can’t get size/alignment correct).
- ★ Alphabet Bingo

ISSUE #4: POOR LETTER ALIGNMENT

Letter Alignment is a visual perceptual skill. It refers to a child’s ability to position a letter correctly on the writing line. Alignment is a very complex skill that involves many components. First, the child must have good shoulder girdle stability and good fine motor skills (issue #1) and good letter memory (issue #3). These are the foundational skills. In addition, a child must understand ALL of the following:

1. *Where one “writing line” ends and another begins*
2. *The components of a writing line (i.e. “top, middle, and bottom lines” for three-lined paper, “top and bottom lines for two-lined paper).*
3. *That ALL capitals touch the top and bottom lines*
4. *That lower case letters vary in size (“tall, small and fall”)*
5. *Verbally identifying the alignment of lower case letters (i.e. what letters are “tall”, what letters are “small”, what letters “fall”) with AND without a visual model*

**If a child does not understand these concepts,
they will be unable to utilize a writing line, even if they have adequate motor skills.**

Strategies to Improve Letter Alignment

- ★ **ALWAYS USE LINED PAPER WHEN COMPLETING HANDWRITING TASKS.**
- ★ **HIGHLIGHT THE LINES.** It takes a while, but is WELL worth it!
- ★ Explain and orient the child to top, middle and bottom **BEFORE** introducing letters/numbers. Give plenty of exposure to top, middle and bottom – i.e. of their body, of the desk, of a piece of paper, etc.
- ★ Emphasize that capital letters always start on the top and stop at the bottom
 - Use “Where Do We Start Our Letters” – as warm up activity for Capital Letter formation
- ★ Explain that lower case letters can be “upstairs, middle, or downstairs” or “tall, small or fall” **BEFORE** introducing letters. Be sure to apply this concept to a writing line. Give LOTS of examples before asking the child to apply this concept independently when writing.
- ★ Teach and use the Lower Case Alphabet Stretch
- ★ Explain how letters/numbers NOT touching the bottom line are “floaters”
- ★ Always reference the starting and ending points when forming a letter/number
- ★ Use additional visual cues to show child the different lines (i.e. highlighting each a consistent color)
- ★ Use worksheets/activities that have the child identify and correct alignment of letters/numbers

Activities to Improve Letter Alignment

The activities listed under “Letter Memory” (Building Letters/Numbers, Wet-Dry-Try Letters/Numbers and Playdoh Letters) will also work on improving Letter Alignment.

1. Lower Case Alphabet Stretch

Supplies Needed:

- ★ Visual model of lower case alphabet on three lined paper

Procedure:

- ★ Explain top, middle and bottom of the child's body and have them identify each area on themselves.
- ★ Explain how some lower case letters are "upstairs"/"tall" and reach the "top"; some are "middle"/"small" and reach the middle; and some are "downstairs"/"fall" and go all the way under the bottom line.
- ★ Go through each letter modeling the body movements (See Attached)
- ★ Get creative – have "stretch-offs" between students, go fast, go slow, stretch to music, etc. (*This is a GREAT sensory warm up activity to do before writing*)

2. Fishing for Letter/Numbers

Supplies Needed:

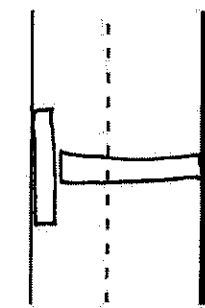
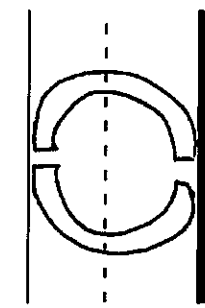
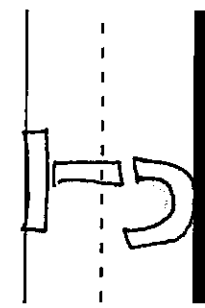
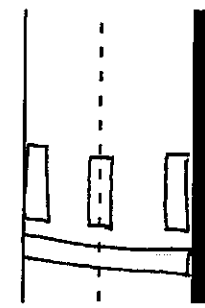
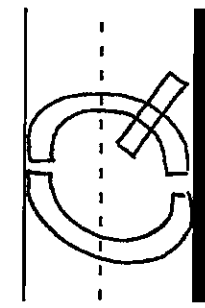
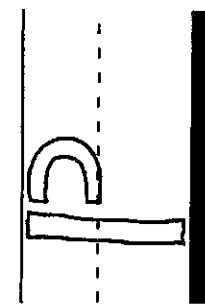
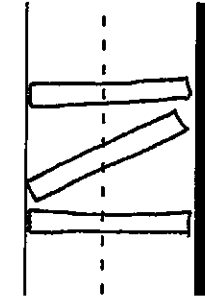
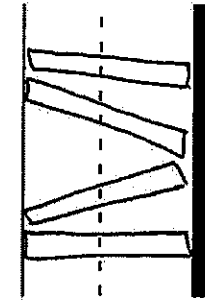
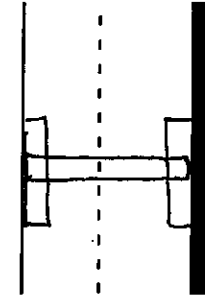
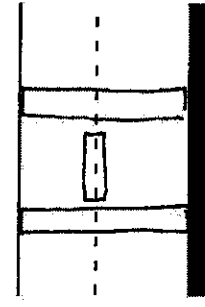
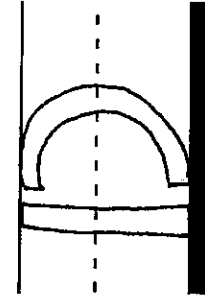
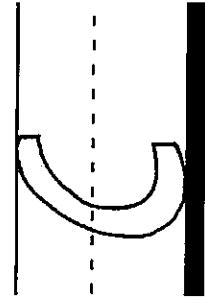
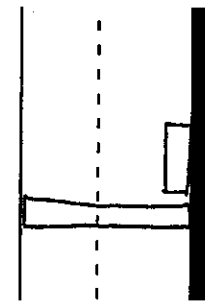
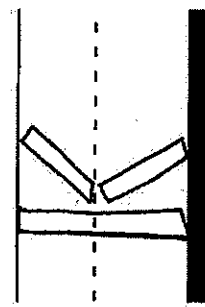
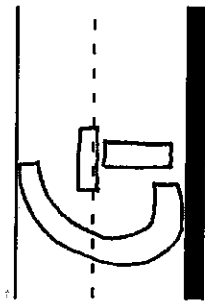
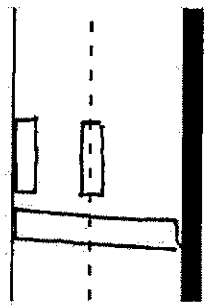
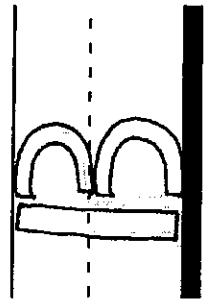
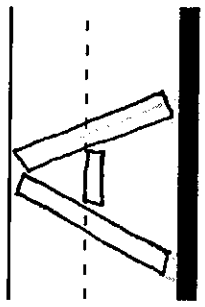
- ★ Clear paper (i.e. laminating paper or sheet protectors)
- ★ Writing Line
- ★ Paperclips
- ★ Magnet/Magnetic Wand

Procedure:

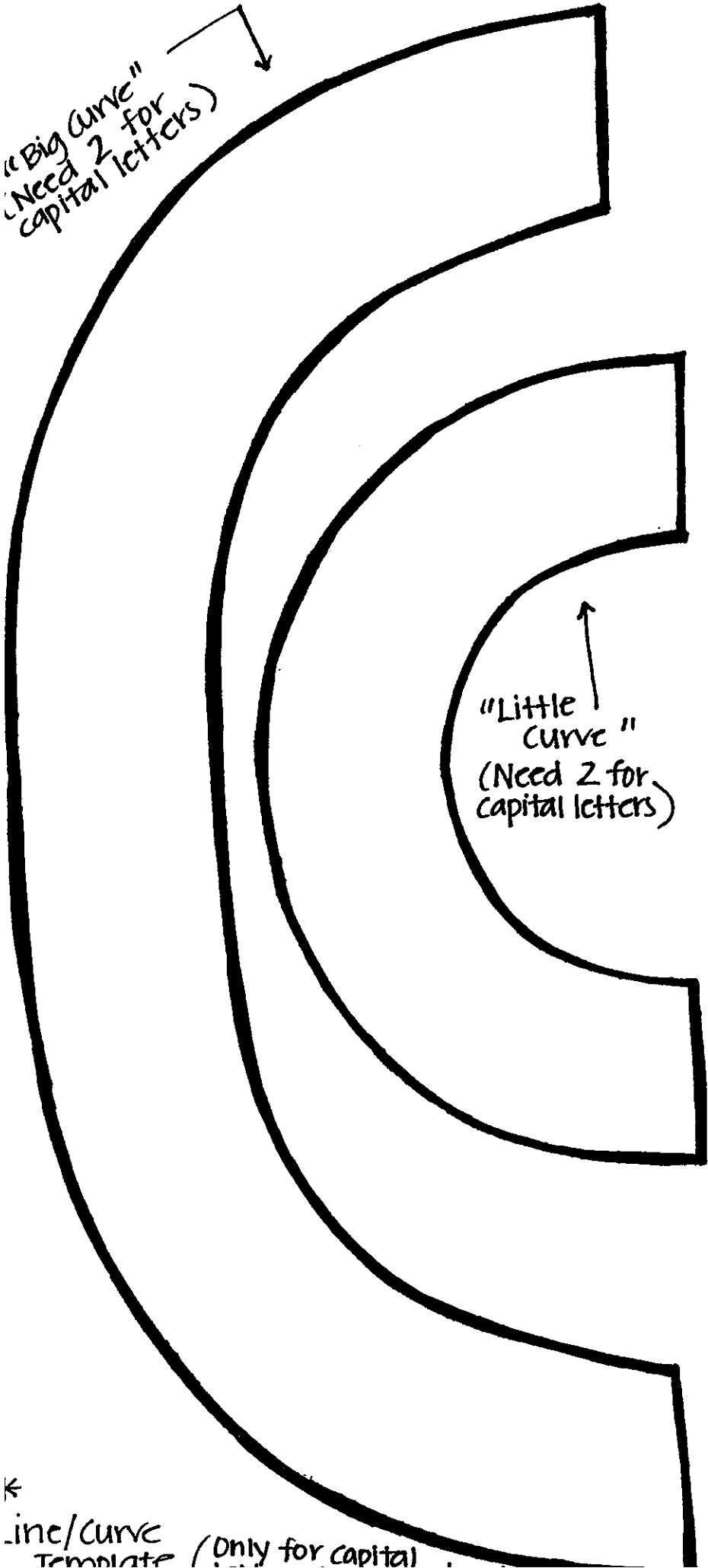
- ★ Print letter/numbers onto clear paper and cut into small squares.
- ★ Attach paperclip onto each square.
- ★ Have the child "fish" for a letter/number using the magnet (it will attach to the paperclip)
- ★ Once the child retrieves the letter/number, have them position it the correct way on the writing line.

Letter

Formation



"Big Curve"
(Need 2 for
capital letters)

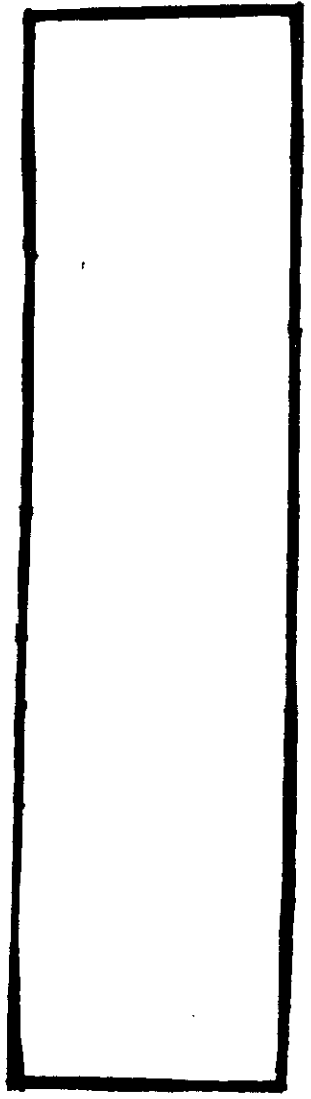


"Little
Curve"
(Need 2 for
capital letters)

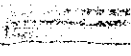
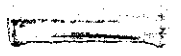
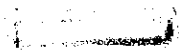
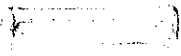
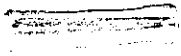
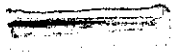
"Big Line"
(Need 4 for
capital letters)

* Use only for
capital letters
and numbers.

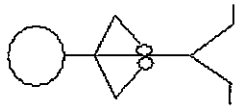
"Little Line"
(Need 3 for
capital letters)



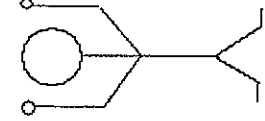
*
ine/curve
Template (only for capital



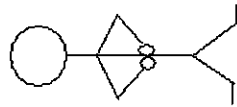
Lower Case Alphabet Stretch



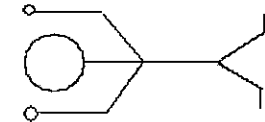
a



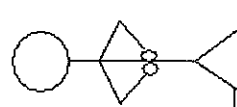
b



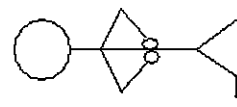
c



d



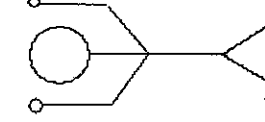
e



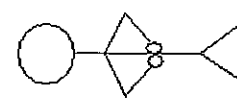
f



g



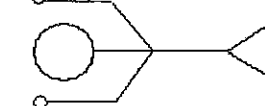
h



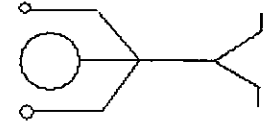
i



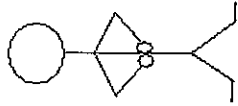
j



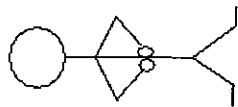
k



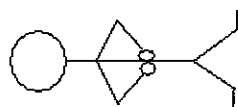
l



m



n



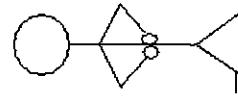
o



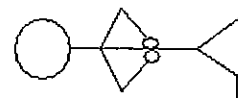
p



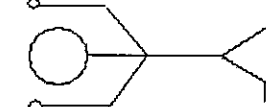
q



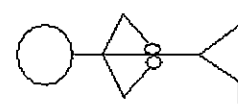
r



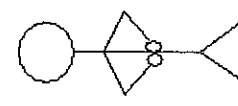
s



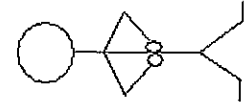
t



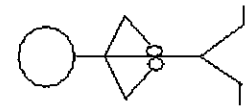
u



v



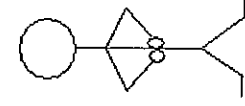
w



x



y



z

Instructions: Highlight each line a different color (i.e. top = green; middle = yellow; bottom = red). Laminate the page. Cut out a square for each child. Use tactile manipulatives to "build" lower case letters on the square (for example: playdoh, dry erase markers, Wikki Sticks or cooked spaghetti noodles).

