Yes,
You Can Teach
Cursive!

Lesson Plans
For Introducing
And Improving
Cursive Handwriting

Peterson Directed Handwriting
Since
1908
New Alexandria, Pennsylvania

Yes, You Can Teach Cursive
Lesson Plans For Introducing And Improving Cursive Handwriting

Step-by-step lessons guide movement instruction for introducing cursive to children and for improving cursive fluency at any age. The teaching method uses a unique strategy to include fluent movement as a goal. The movement-based strategy has been successful for more than a hundred years, and is also supported by modern, digital, motor-control research.

CONTENTS

PREFACE

Teaching Cursive was created to provide teachers, therapists and parents with a logical, easy-to-use plan for teaching the skills needed for fluent application of cursive handwriting. The manual incorporates new under-standings reveled by recent motor science into the well established and widely used method developed by P. O. Peterson in 1908. This program recognizes the students' need for automatic, legible handwriting as a tool for learning and guides thorough process instruction aimed directly at automation. It makes it easy for you to recognize and teach the fluent type of movement from the beginning. The movement-based sequence of instruction can be applied to teach or improve cursive fluency at any level.

The value of handwriting instruction has been greatly underestimated for many years. This is in part due to the fact that fluency has not been included as a goal for instruction by the most widely used programs. A web presentation explaining the potential impact of handwriting *fluency* on language skills is available on the internet. Please invest 20 minutes to digest this presentation.

The Impact Of Handwriting Fluency On Language Skills
http://mrpencil.adobeconnect.com/handwriting_impact/

This teaching plan includes procedures and techniques for assessing legibility, for developing critical thinking in self-evaluation and for measuring fluency as the indicator of success. A number of tools for coaching will be referenced in the lesson outline and are available to you through our web site.

Our site is dedicated to providing you with unmatched support and service. We are proud to say that presentations and videos we make available offer more information on teaching handwriting than any other single source. Many free tools for coaching and evaluation can be downloaded. Usually the PDF documents are printable using Acrobat Reader version 7 or higher. Please invest some time to discover the support we have made available.

We also use Adobe Connect Meeting to provide live support via the internet. The interface supports virtually all of the various types of presentation tools a person might use in any conference hall. We welcome the opportunity to meet live with you or your group to answer questions, collaborate on problem-solving, and to develop specific solutions when possible. You will find a link to *Meet Live* on the web site and can arrange for private meetings easily. E-mail or call and we will do our best to accommodate your schedule.

www.peterson-handwriting.com

INTRODUCTION

Everything about our symbolic language is invented and must be learned. This program is unique because it directly involves teaching the student how to use fluent movement from the beginning. The inclusion of smooth, rhythmic movement as a goal in each lesson is the major difference between this method and the other handwriting programs available. The movement goal creates the need for all of the more visible differences seen when comparing the various "fonts" used as models in various handwriting programs on the market.

Our models are based upon The American Standard Cursive Alphabet, but they are modified to exaggerate the movement process and improve student understanding. We do not show a font designed to look like the handwriting of a fluent adult. After all, each fluent adult produces a distinctive version of the letters. Our models are designed to allow a pupil to develop control of fluent movement so that the handwriting process can be used with ease for composition.

FLUENT MOVEMENT

The automatic type of movement we seek to enable has some key characteristics. It is goal-oriented, smooth and can be consistently rhythmic. You will use these characteristics to identify the type of movement used by students, as evidence of mastery, and as the basis for lessons that are aimed specifically at the system we need to program.

We will create a demand for smooth, rhythmic movement by using the voice as a template. A grammar of action will be chanted aloud to create a beat. We provide several alternatives; "Action Words," "Count" and Color/Rhythm. You simply teach the child to move the pen or pencil with the voice.

MOTOR SKILL DEVELOPMENT

This manual will guide instruction at any age level. However, there are obvious differences in motor control ability between age groups. This fact is well recognized. However, many people do not realize that the gross system is the best way to effectively "collect and transfer" dynamic information to the fine motor level.

The lesson plans can be used with entry level children as effectively as with an adult. The expectations for output must be adjusted to meet the developmental motor ability. A primary child should be allowed to learn fluent movement by writing at large size until smooth movement can be controlled. Once smooth control of large writing is evidenced we can begin to work on reducing the size. We won't know for sure when the pupil can handle execution with the fine system until we try.

The most effective procedure for coaching a student at any age, is to work for mastery at a larger output size first. We then work to reduce the writing size gradually, using fluent movement as evidence of success. This approach offers the best chance for successful transfer of movement-control information to the fine system as the skills emerge. When an intermediate level pupil or adult needs to improve outcomes at adult size, he or she should first establish effective gross motor patterns. We can usually expect an older student to be able to achieve control at adult size much sooner than a young child, given regular opportunity to practice. The trick is to lead the practice of fluent movement. Independent work will rarely include the challenge to move with smooth rhythm unless the student understands how to use the voice as a movement template without the guidance of a coach. Many adults trying to improve their handwriting skill, have espressed the feeling that having a coach to lead movement practice would be very helpful.

Getting Started

General Objectives

1. To develop good physical position skills:

   a. Paper and arm placement
   b. Pencil holding
   c. Desk posture

2. To develop control of smooth, rhythmic arm movement:

   a. Left-to-right sliding
   b. Goal-oriented movement
   c. Slanting movement consistency

3. To develop skill in producing the basic strokes that create lowercase letterforms:

   a. Rocker curves for sharp and loop tops
   b. Rainbow curves for round and roll tops

Activity 1

Lesson Objectives

The student will be able to:
1. Hold the paper and pen in good writing position.
2. Use arm movement to slide traces across the page toward a target.
3. Move the pen or pencil smoothly in time to a verbal chant.

Procedure

1. Using a ruled sheet of paper, direct the student to number the first four spaces at the left margin and add target shapes in each space at the right margin.
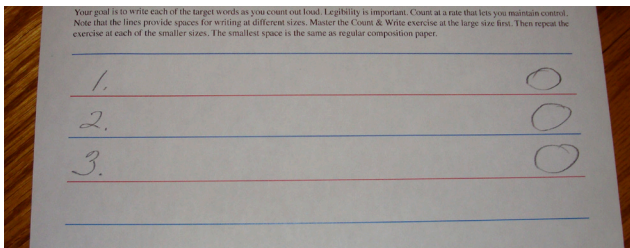
2. Explain the command sequence.

   "On Your Mark" = touch on the number.
   "Get Set" = Look at the target.
   "Say It" = Chant and move.

3. Demonstrate finger-trace practice of the long, sliding movement by chanting, "Slide To The Right" as you slide your pointer finger toward the target.
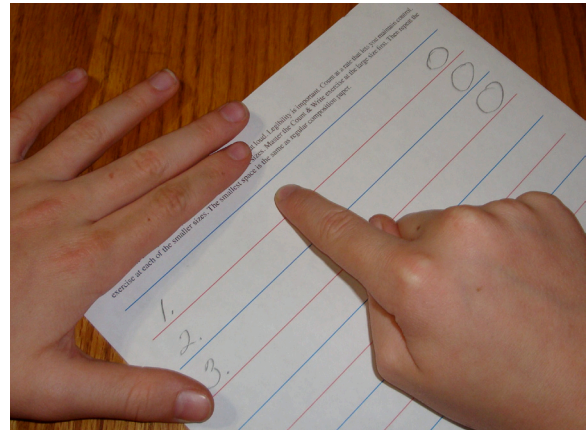
4. Direct the student to finger-trace & chant using space #1.

The student will need several finger-trace practice trials to get the timing and distance in sync with the vocal.

5. Move ahead to "Write & Chant" using a pencil or pen. The important goal initially, is to move smoothly with the voice.
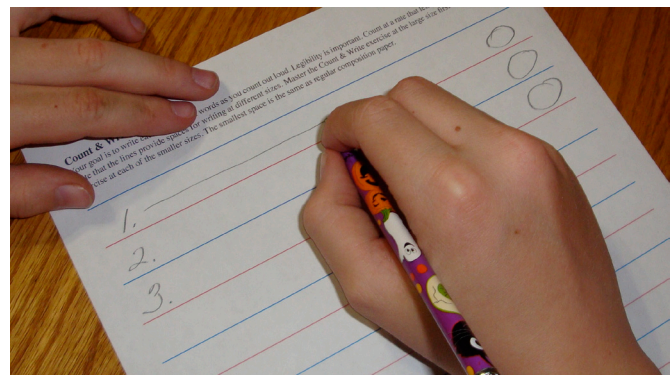
• The student is learning how to position the paper and writing arm to accommodate lateral movement.

• The student is learning how to look ahead to a goal rather than watching the pencil as the trace is produced. Accuracy of the smooth, sliding movement will get better as timing and rhythm improve.

• The student is learning how to grip the pencil in a position that will allow the arm to slide.

We do not need to hit the target, but we do want to practice until we can consistently come close. It will be fun to "test" the muscle memory (and the paper position) by trying with the eyes closed.

Sliding a simple trace straight toward the target will soon be too easy. Maturity and attention span will determine how far you can go with the various exercises. With a young child, you may need to break these suggestions into several lessons.

Keep it interesting by adding new challenges. Ask the pupil to make a big rainbow or rocker, sliding over then back to the number at the left.
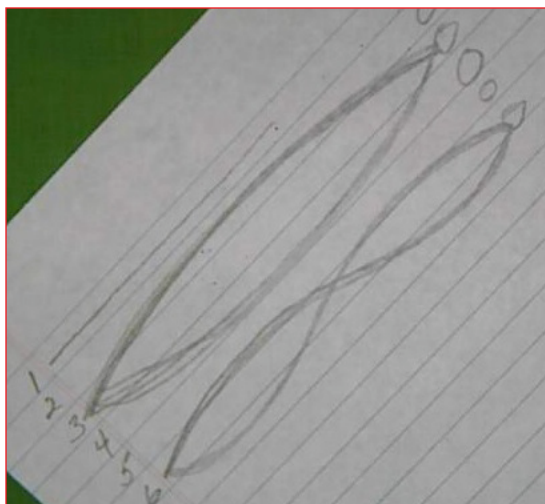
Combine a shorter rainbow and rocker to produce a long "Twist Stroke." Roll then rock to the right, then back to the left producing a large propeller shape.

• The student can learn a better pencil grip.
We are not demanding precision guidance so these exercises can be done even when a good pencil grip feels very strange. The various exercises provide opportunity for the brain to establish connections with muscles that could not participate because of a tight, cramped grip. The long sliding curves for rainbow and rocker allow development of coordination between arm and fingers. You will also notice that a student who tends to roll the wrist outward will be stimulated to keep the wrist in a better position.

If you are working to change grip, wrist or paper holding habits, use one of the exercises as a warm-up activity each day until good position skills become automatic. If you are working with an older student, you might also want to include another old exercise which combines the three movements used for lowercase letters and capitals as well. It was commonly called a "Push-Pull."

Chant, "Rock, Slant, Roll." Move the pen with your voice as you write large and small iterations.
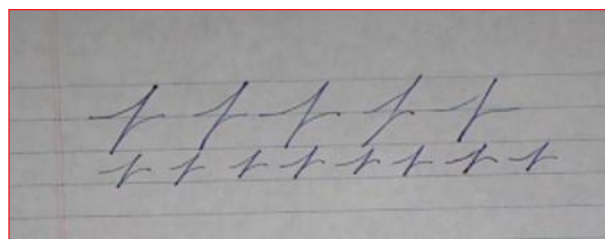
Left-handers rotate the page the other way. They pull strokes to the right and push back to the left.
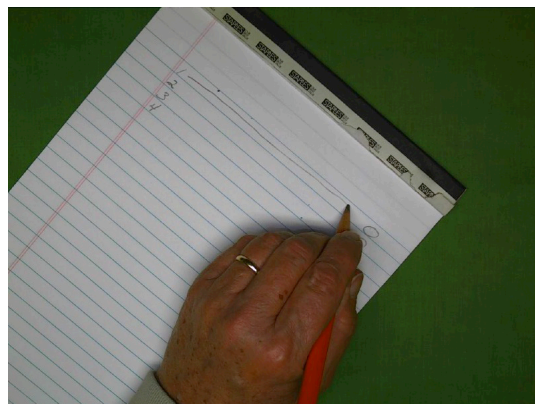
Position Skills Are Critical
There is specific information about position skills in the back of this manual. If you are not sure about goals for pencil grip, paper holding and sitting posture, please refer to that section. There are also very detailed video demonstrations available through our web site.

Types Of Lessons

We want to "Develop" patterns in muscle memory, "Practice" to improve timing and control of the smooth, rhythmic movement sequence, and, we want to "Apply" letter patterns with others in words as they are learned. Application is the critical step and we want to provide as much opportunity for application of the skills as possible. Taking the directed strategy into your spelling program is one of the best ways to provide as much application practice as possible.

Check your spelling list for words that use the letters that have been learned to that point. Direct cursive practice of those words during spelling class. Count is the best grammar of action for directed word practice.

Therefore, the "Regular Lesson Procedure" used for handwriting lessons should include preparation for that correlation effort. As we develop patterns, practice to improve control and apply new letters in simple words, we will use all three grammar-of-action conventions. The pupils will thereby, learn how to use count as a movement template and be ready to practice the technique with appropriate spelling words.

Regular Lesson Procedure

Step 1 - Illustrate & Describe

Use the color/rhythm model of the target form to carefully illustrate and describe the process. Point out the start point and endpoint of each stroke. Explain the color sequence as students refer to the color rhythm model on their desk. Teach the "action words" that will be chanted to guide smooth movement.

Illustrate the voice-guided movement by pointing at the start point and finger-tracing or writing in air in time to the chant of the action words. Repeat the demonstration while chanting the colors and again while counting. Note that there is one count for each color.

With action words there will be a word for each movement. When you move to color/rhythm and count there will be only one word for two movements. We chant with the upstrokes. The difference puts emphasis on the pulsing, rhythmic movement process; out-right, back left, that will enhance control and legibility later on.

There are three exceptions among the lowercase forms. The 'o' needs two moves for the green roll top, but there is no downstroke following the brown upstroke. The same is true with the "tail" upstroke in 'f' and 'q'.' This rhythm pattern usually presents a need for a little extra practice of words using the letters.

Step 2 - Air Writing

Ask students to point at the model and write in the air with you. Three repetitions may not be enough to get everyone moving and chanting in sync. Repeat the activity until everyone is moving to the beat.

Step 3 - Finger Trace

With the desk model in writing position, lead the students to chant as they trace the strokes with the pointer finger. Repeat here also and go through the sequence with action words, color/rhythm and count.

Be sure to explain the joining concept. Written alone, the letter needs a finish stroke to space it in a sentence. But when joining, there is no need for a "spacing stroke."

Step 4 - Write & Say

We recommend the following write and say process which takes into account the need for gross mastery first. Use unlined paper, a chalkboard, or even a "sand tray" to elicit large writing.

Explain that the goal is to chant aloud and move with the voice to write & say 4 large iterations before stopping. Choose the best from the four. Then write four more that are as good or better.

Unlined paper can be used to good advantage for these initial trials.
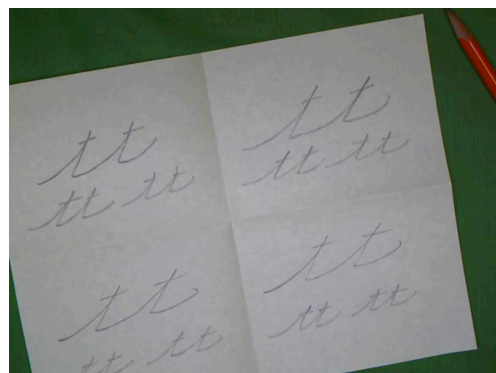
THE DESIGN OF THE LOWERCASE CURSIVE ALPHABET

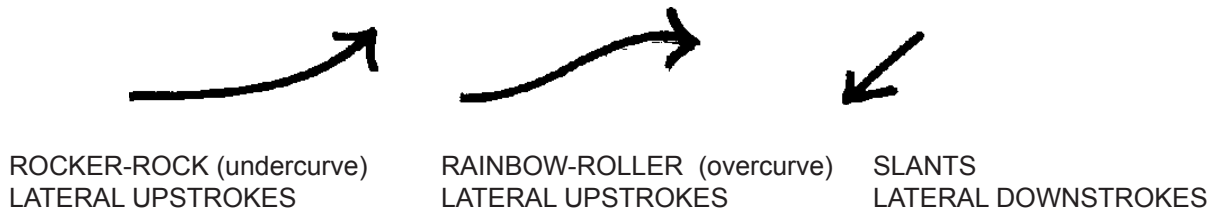Lowercase letters will be introduced in a sequence of instruction that is based on learning very simple muscle movements. This process has been thoroughly verified in the computer-assisted research <u>plus</u> our unparalleled teaching experience. Analysis of the cursive letters reveal some interesting facts.

Fact one: cursive writing is designed to "fit" the human body. Lowercase letters are formed by three simple strokes:

ROCKER-ROCK (undercurve)   RAINBOW-ROLLER (overcurve)   SLANTS
LATERAL UPSTROKES   LATERAL UPSTROKES   LATERAL DOWNSTROKES

The best movement process slides out to the right and then back to the left resulting in shapes that lean forward (to the right). The advantage relates to applied legibility. When the student learns how to slide the lateral upstrokes sideways far enough to allow the following downstroke to travel back to the left, control of the movements can be handled by one group of muscles. This will translate to better shapes when the process is eventually applied automatically.

When lateral upstrokes travel upward too quickly, the needed shape can still be achieved, but additional muscles groups are needed. It is more difficult to effectively coordinate movements of the additional groups so control suffers. Forward slant is a very important objective in the beginning. People can read well-shaped, vertical cursive letters, but to make those shapes easy to read, the writer must execute with greater attention to transcription process. Have you heard this comment? "I can write neatly when I take my time." The statement indicates drawing, rather than fluent, efficient writing.

The pulsating movement process lends well to rhythm. One of the main characteristics measured digitally in good handwriting, was consistent rhythm indicated by acceleration/deceleration cycles. The four shapes below essentially create all twenty-six lowercase letters with very few exceptions. These "basic stroke" shapes are each made one rhythmic pulse.

Sharp Top   Loop Top   Round Top   Roll Top

When using this one track muscle pattern cursive movements are actually easier than the multi-directional movements used for printing. The cursive alphabet is surely an ingenious invention. Incidentally, the names we use for the shapes refer to the tops of the letters which provide the primary clues to a reader.

Can you see 3 sharp tops, 4 loop tops, 4 round tops and 1 roll top?

Some letters have one top, some have two and two letters have three.

Fact two: cursive letters are designed to join.
All twenty-six lowercase letters can be learned in a time-efficient manner by focusing on the formation of the tops of letters, smooth, rhythmic movement and how to control the joining of letters.

LESSONS - LOWERCASE GROUP ONE - LETTERS BEGINNING WITH SHARP TOPS

OBJECTIVES

The student will be able to write, legible joined pairs and sets of each target form while chanting the action words, or colors aloud:

A. at a large size on unlined paper, chalkboard, marker board or in sand tray.
B. at a large size on ruled pages using lines as targets for proportion, place in space and alignment.

The student will be able to explain the relevance of the finish stroke and when it is used to space letters.

The student will be able to demonstrate and use good paper holding and pencil grip.

The student will be able to apply the target letters by combining them as mastered, to form simple words.

The student will be able to write simple words while counting aloud as letters are written.

LESSON SEQUENCE

1. Sharp Top
2. Cross

Introduce "t" using the regular lesson procedure. Work on sliding the beginning stroke far enough to the right to allow the slant to travel back to the left. When the paper is returned to "reading position" the forms will slant forward.

For the Write & Say activity direct the joining of at least a pair of letters to emphasize where the first letter ends and the next begins. Emphasize that the crossing strokes are added after the finish stroke ends the pair or set. Work for consistent form, slant and spacing with smooth rhythm.

Direct writing of sets while chanting colors and counting. Action words contain one word for each each stroke. Color/rhythm and count elicit combination of the two moves in time to one word. Chant slowly at first. The goal is smooth rhythm.

Proceed depending upon age, attention span and mastery indicated by acceptable accuracy and movement control.

1. Sharp Top
2. Dot

Introduce 'i' using the regular lesson procedure. When sets are well controlled with smooth rhythmic movement, apply the two letters and master writing of the word "it" to count.

1. Rock
   Slant, Curve

Introduce the "s" with the same process. When mastery is evidenced by controlled, rhythmic sets, apply the letter to master the words that are now possible.

is, sit, its, it's

1. Sharp Top
2. Sharp Top

Introduce "u" with the usual procedure. This will be the first "two-count" form. Work to emphasize spacing of the the two sharp tops. We need to produce two sharp tops that are relatively close together compared with the space between joined letters. With mastery apply to words with the count & write activity.

us, suit, suits

1. Rock,
   Roof, Slant

Introduce "r." The extra downstroke which creates legibility of the "r", will require extra practice to achieve mastery with rhythmic movement, and will demand a slight delay when using count because we count only for the upstroke.

With mastery of control in sets, apply with other letters in words with the count & write technique.

rut, rust, trust

1. Rock, Hook,
   Slant

Introduce "c" with the usual procedure. The "hook" on the c is the primary legibility characteristic. Because it requires an extra downstroke the rhythm is once again tricky. Don't worry about the odd, exaggerated shape produced by stopping at the baseline. That will disappear as joining patterns and words are automated.

cut, crust,

OBJECTIVES

The student will be able to write, legible joined pairs and sets of each target form while chanting the action words, or colors aloud:

A. at a large size on unlined paper, chalkboard, marker board or in sand tray.
B. at a large size on ruled pages using lines as targets for proportion, place in space and alignment.

The student will be able to explain the relevance of the finish stroke and when it is used to space letters.
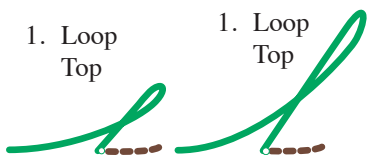
The student will be able to demonstrate and use good paper holding and pencil grip.

The student will be able to apply the target letters by combining them as mastered, to form simple words.

The student will be able to write simple words while counting aloud as letters are written.

LESSON SEQUENCE

1. Loop Top
1. Loop Top

Introduce "e and l" using the regular lesson procedure. Work on sliding the beginning stroke far enough to the right to allow the slant to travel back to the left. Size is the only distinguishing characteristic.
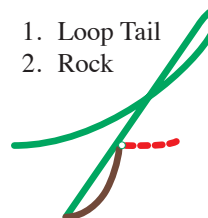
Direct practice of sets of each and combinations of both (lel and ele) to emphasize and pattern the size difference. Work for consistent slope of downstrokes for the forms. Emphasize the rhythmic end point on the baseline, particularly if your student has learned cursive using a trace and copy strategy previously.

These two letters offer quite a few new words when combined with the group one forms.

Count and Write

tie, tire, till, tile, list, still, site, letter, little, luster

1. Loop Tail
2. Rock

Introduce "f" and work for mastery of the two-count rhythm in joined sets. The rock upstroke brings the movement back to the baseline end point allowing the tail letter to be one of easy-to-join baseline group.

Some programs show a sequence for "f" which rolls clockwise from the bottom of the tail to the baseline. That process would remove the "f" from the baseline control family and move it into the below-line joining group with j, g, y and z.

Count and Write

if, fit, elf, fill, file, turf, fire, cuff, fluff, sift, fist, first

Introduce the Letter Tops self-evaluation technique and begin an effort to do some critical thinking about legibility and the qualities of writing that make it easy for others to read.

Cover the bottoms of the letters with a sheet of paper or ruler. Check for consistent slant and spacing between letter tops. If letter tops are leaning in different directions or too close together, focus on control of the joining movement to correct the outcome.

Pencil grip and paper position can both retard lateral movement for joining. If the position skills are nominal, rhythm practice with a focus on one goal will generally allow improvement fairly quickly once the student understands how to fix the outcome.

1. Round Top
2. Cross

Introduce 'x' using the regular procedure. Work for mastery with joined pairs and sets as usual.

Emphasize that the joining stroke needs to slide along the baseline before rolling for the round top. This is a new joining concept and movement. It will require some extra practice to develop control of the Slide-roll joining stroke.

We also need to explain that the crossing stroke is added after the word is finished as we did with the "t.." Practice pairs or sets with exaggerated spacing between the round tops to allow room for the crossing stroke to be added. Mastery of this joining movement here, will also make the next target group easier to learn.
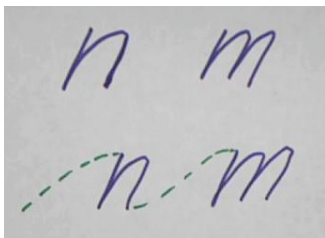
Apply in words with the count and write technique.

Count and Write (x)

exit, exile, flex, text

Students who have been using print can be a bit confused by 'n' and 'm' initially, because they perceive two round tops as the print letter "m." It will usually help understanding to show how the print forms are "cursive cousins."

1. Round Top
2. Round Top

Introduce "n" using the regular procedure. Work for mastery with joined pairs and sets as usual.

Count and Write (n)

in, line, next, nut, ten, nice

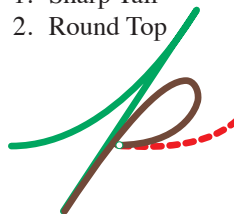1. Round Top
2. Round Top
3. Round Top

Introduce "n" using the regular procedure. Work for mastery with joined pairs and sets as usual.

Count and Write (m)

me, met, meet, time, mine, mice, mist

1. Sharp Tail
2. Round Top

Introduce "p" using the regular procedure. Use of the the tall sharp top during development is an exaggeration that will result in in improved legibility later on in applied work. It that will diminish naturally but the taller sharp top on a 'p' aids in recognition.

Work for mastery with joined pairs and sets.

Count and Write (p)

pet, tip, sip, flip, pill, pen, pest, piece, pile

1. Loop Top
2. Round Top
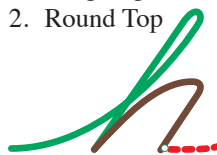
Introduce "h" using the regular procedure. Work for mastery with joined pairs and sets as usual.

Count and Write (h)

he, him, hill, hit, hex, the, this, heal, heel

1. Loop Top
2. Round, Hook Slant

Introduce "k" using the regular procedure. Work for mastery with joined pairs and sets as usual.

Count and Write (k)

kick, kit, ink, keel, thick, trick, think, kink

LESSONS - GROUP FOUR - ROLL TOP BASELINE LETTERS

You will quickly notice that two roll top letters are not included in the grouup. Th 'o' and the 'g' both begin with roll tops, but do not "end on the baseline. They will be introduced with the above-line and below-line joining families. Explain that these letters are also combination tops. They begin with roll tops but also use sharp tops.
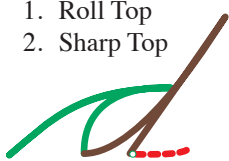
1. Roll Top
2. Sharp Top

Introduce "a" using the regular procedure. Work for mastery with joined pairs and sets. Emphasize again the slide-roll joiner for good spacing.

Count and Write (a)

a, at, ate, tax, all, take, make, map, pat, hat

1. Roll Top
2. Sharp Top

Introduce "d" using the regular procedure. Work for mastery with joined pairs and sets. Emphasize again the slide-roll joiner for good slant and spacing.

Count and Write (d)

ad, add, dad, did, lad, made, dull, had, pad, said

1. Roll Top
2. Sharp Tail
3. Rock

Introduce "q" using the regular procedure. Work for mastery with joined pairs using "qu."

Count and Write (q)

quit, quite, quiet, quack, quake, quill

You have now completed the introduction of 2/3 of the lowercase alphabet. All eighteen letters have "ended" on and joined from the baseline with two relatively simple joining movements.

APPLICATION AND FLUENCY

There are now a plethora of words that can be practiced and internalized. It would be a good idea to spend some time in application by working to internalize many of the more common words that can now be written. Additional word integration should enable improved fluency as well. If you have not yet collected a second fluency score, you should before moving on.

A list of high frequency words is provided in the back of this manual. The list is divided into sections based upon joining families. The largest group of words is in the baseline joining group. Use the Write and Count technique to internalize patterns for as many of these words as possible. Work for mastery at a large size first.

The next target group will involve mastery of two new joining movements for virtually all of the letters. The rhythm patterns are very different because the letters "end" above the baseline.

The new joining patterns will reduce fluency scores a bit until the new joining-control patterns have been automated.

If you would like a convenient reference for high frequency words, Peterson offers a word integration tool that may be of interest. The product is called Word Masters and is available in hard-copy black-line master sets for a copier, or in E-Workbook form which allows you print the practice pages from your computer as often as necessary.

SIZE REDUCTION

This would be a good time to revisit lessons and work on reducing the size of writing for all of the forms and words mastered so far. Working to pattern all of the high frequency words will be a thorough review. But, remember to return to the regular procedure and gross motor patterning when you decide to move on to the above-line joiners.

Consider a routine that incudes a lesson on the new letter followed by word practice using the baseline word group. Exercises with one   or two words each day will keep patterns fresh.

Lessons - Group Five - Above-Line Joiners

The "Tarzan" Letters

In the We Write To Read pupil books we refer to the above-line joiners as Tarzan letters because the joining strokes swing above the baseline to the following letter. Actually two new joining movements will be used. In essence, the rhythmic end point of these four letters creates the need for virtually all letters to begin in a new place.

So far each of the forms began at the baseline. Couple this new start point with the change in movement rhythm and it becomes clear that a bit of extra process instruction and practice will probably be needed.

1. Roll Top
2. Rock

Introduce "o" using the regular procedure. Work for mastery with joined pairs and sets. Emphasize the end point and the need to start the following letter in a new place.

To join "o" to sharp and loop top letters we use a relatively simple rocker and call it a "swing" stroke. To join "o" with round and roll top letters we use a combination of rock and roll strokes called a "sway" joiner. Practice joining "o" with various other letters to assure understanding and initial mastery of the two new joining moves.

oo, oa, od, oe, ou, oi, oh, ol, on, om, oc, or

Count and Write (o)

on, of, or, old, out, off, open, moon, mop, hop
odd, one, none, moan, donor, close noon

1. Loop Top
2. Sharp Trace

Introduce "b" using the regular procedure. Work for mastery with joined pairs and sets. Emphasize the end point and the need to start the following letter in a new place. Practice joining "o" with various other letters to assure understanding and initial mastery of the two new joining moves.

bb, be, bi, bl, bo, ba, bu

Count and Write (b)
bind, bend, blend, blue, band, bond, able, about

1. Sharp Top
2. Sharp Top
3. Sharp Trace

Introduce "w" using the regular procedure. Work for mastery with joined pairs and sets. Emphasize the end point and the need to start the following letter in a new place. Practice joining "w" with various other letters to assure understanding and initial mastery of the two new joining moves.

ww, we, wi, wh, wo, wa, wu

Count and Write (w)
wind, when, with, white, wand, won, wish, went
wash, awe, owl, wow, wall, warm, own, want, now

1. Round Top
2. Sharp Trace

Introduce "v" using the regular procedure. Work for mastery with joined pairs and sets. Emphasize the end point and the need to start the following letter in a new place. Practice joining "v" with various other letters to assure understanding and initial mastery of the two new joining moves.

vv, ve, vi, va, vo, u

Count and Write (v)
view, over, vend, van, vex, weave, even, live
vat, vase, vain, vane, vise, vest, vine, vowel

Choose words from the letter lists to use for a muscle memory spelling test. Be sure to include some of the words practiced for each of the Tarzan letters.

This spelling test will be fun because we are testing the muscle memory. We do that by writing the words with eyes closed as they are dictated. The product revealed on the paper will be a good indicator of the accuracy of dynamic information stored.

Have the students look to touch the pen or pencil, then close the eyes to write the word called. Check the iteration to make sure the muscle memory has written all of the letters.

Use the "Letter Tops" evaluation to check legibility. Look at form, slant size and spacing.

Lessons - Group Six - Below-Line Joiners

The below-line joining letters are not used as frequently as the other letters. The tails demand two new joining movements. The joining stroke begins below the line as the rainbow tail rolls up to cross the baseline before moving on to form the top of the next letter.

jygz

The movements must travel a long distance to achieve good size, slant and spacing. Mastery for writing words fluently will require extra practice and the rhythm concept for the patterns should be explained carefully.

A tail letter which ends a word needs a rolling finish stroke to finish the form and space the word in a sentence.

lay

However, when the letter begins a word, or is needed inside a series of letters, the rhythmic end point for letter is at the bottom of the tail.

glaze

Students who have learned these letters by practicing individual copies with a finish stroke on each, may find the concept confusing. Action Words coupled with Count and Write practice will help to improve control patterns. Always ask students to write joined pairs or sets and emphasize the difference between joining and finishing a word or set.

1. Sharp Tail
2. Dot

Introduce "j" using the regular procedure. Work for mastery with joined pairs and sets. Emphasize the end point and the need to start the following letter in a new place. Practice joining "j" with various other letters to assure understanding and initial mastery of the two new joining moves.
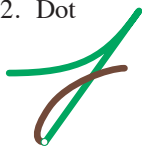
jj, je, ji, jo, ja, ju, jl

Count and Write (j)
jeep, job, jar, join, jet, jam, just, justice

1. Round Top
2. Sharp Tail

Introduce "y" using the regular procedure. Work for mastery with joined pairs and sets. Emphasize the end point and the need to start the following letter in a new place. Practice joining "y" with various other letters to assure understanding and initial mastery of the two new joining moves.

yy, ye, yi, yo, ya, yu, yl

Count and Write (y)
jury, yard, you, yet, jelly, yes, yield, yawn, yellow

1. Roll Top
2. Sharp Tail

Introduce "g" using the regular procedure. Work for mastery with joined pairs and sets. Emphasize the end point and the need to start the following letter in a new place. Practice joining "g" with various other letters to assure understanding and initial mastery of the two new joining moves.

gg, ge, gi, go, ga, gu, gl

Count and Write (g)
get, age, got, gold, agree, glow, glad, juggle
jungle, judge, greed, green, glue, gopher
grown, grade, great, gobble, guest, gutter

1. Round Top
2. Bounce Tail

Introduce "z" using the regular procedure. The z has a double downstroke that could be compared to a "slinky" toy going down a stairway. The round top slants to the baseline and rolls down into the space below the baseline to form the lower loop.

Work for mastery with joined pairs and sets. Emphasize the end point and the need to start the following letter in a new place. Practice joining "z" with various other letters to assure understanding and initial mastery of the two joining moves.

zz, ze, za, zo,

Count and Write (z)
zoo, zebra, zoom, zinc, zero, buzz, puzzle
zap, zone, buzzer, buzzard, blizzard

Evaluation And Review

This is a good time to do some assessment. Collect another fluency score and conduct some self-evaluation training.

If you have not already begun, you should definitely have your students write in cursive for spelling and vocabulary work and tests.

Measure the time it takes to complete the test, or any other applied writing task and you can use the formula below to establish an LPM score based upon the task rather than doing the time-limited test.

Number of Letters X 60 ÷ Total # of Seconds = LPM

Example:
Student writes for 3 minutes and 12 seconds.
Letter count equals 104.

104 letters x 60 = 6240
3 minutes = 180 seconds + 12 = 192 seconds
6240 ÷ 192 = 32.5 LPM

The Letter Tops Evaluation process is a relatively quick an easy way to look at control and legibility with your student. It will help them develop some critical thinking skills. Be prepared for a difference of opinion, particularly when you are evaluating fresh samples. The student knows what he or she wrote, so it is legible to them even if it might not be easy for you to read. They may not be able to read it so easily after a day or two has passed.

When legibility of a form is questionable, it would be a good idea to revisit the training lesson for a review and extra practice.

Review Can Be Fun

Independent practice of words will seldom be helpful for fluency and isn't much fun either. But, directed, count and write practice can be a lot of fun when the writing must be done with eyes closed. It is a good test of the dynamic information stored in muscle memory. Combine the activity with a "letter tops" evaluation of the eyes-closed word and look at the legibility sub-skills for each.

Form
Are the letter tops the right shape?

Slant
Are the tops leaning forward consistently?

Size/Proportion
Are tall tops a consistent size?
Are small tops a consistent size and in good proportion?

Spacing
Is the space between letters nicely consistent.
Judge space between tops at the level of the vowels.

Check Understanding
Can the student write all eighteen members of the baseline joining family?

Can the student explain why finish strokes on words are valuable?

Can the student explain why letters joined in words end before a finish stroke is added?

Can the student write the four members of the above-line and below-line families?

Using a word you have written fluently, can the student mark the end-point of each letter?

Introducing Capital Letters

The capital letters are related by movement and will be introduced in groups to take advantage of the relationships. Unlike the lowercase forms, capitals begin in different places. The movements needed generally relate to circular moves that would produce ovals by moving clockwise or counter-clockwise.
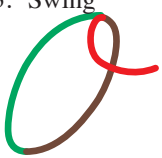
Left-Curve Group

1. Curve Down
2. Sharp Top

Introduce "A" using the regular procedure. Work for mastery with pairs and sets. Emphasize the joining concept by writing the letter both ways.
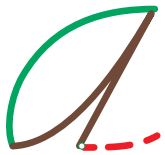
Count and Write (A)

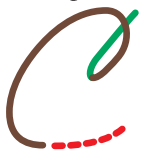Ann, Andy, Allie, Amos, Amy, Avis, Abe, Allen

1. Curve Down
2. Rock
3. Swing

Introduce "O" using the regular procedure. Work for mastery with pairs and sets. Explain that the O is a "Never Join" capital.

Count and Write (O)

Orin, Ollie, Olive, Olaf, Omar, Otto, Oprah

1. Down
2. Loop Around

Introduce "C" using the regular procedure. Work for mastery with pairs and sets. Emphasize the joining concept by writing the letter both ways.

Count and Write (C)

Carol, Caleb, Cathy, Craig, Carl, Carrie, Candy

1. Down
2. Loop Around
3. Loop Around

Introduce "E" using the regular procedure. Work for mastery with pairs and sets. Emphasize the joining concept by writing the letter both ways.

Count and Write (E)

Erin, Eric, Emily, Ed, Emma, Edna, Eve, Ernie

Twist-Down Group

1. Twist Down
2. Loop Twist
3. Rock Swing

Introduce "D" using the regular procedure. Work for mastery with pairs and sets. Explain that the D is a "Never Join" capital.
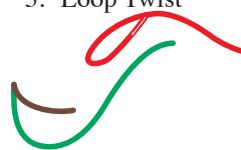
Count and Write (D)

Dana, Dan, Dove, Don, Darcy, David

1. Twist Down
2. Rock
3. Loop Twist

Introduce "T" using the regular procedure. Work for mastery with pairs and sets. Explain that the T is a "Never Join" capital.

Count and Write (T)

Tom, Toni, Tallie, Tina, Tracy, Travis, Theda

1. Twist Down
2. Rock Hook
3. Loop Twist

Introduce "F" using the regular procedure. Work for mastery with pairs and sets. Explain that the F is a "Never Join" capital.

Count and Write (F)

Fran, Faye, Fawn, Frank, Fred

Review, practice eyes-closed and Try size reduction with lined paper. The capitals are rarely used compared to lowercase forms. It is a good idea to review frequently due to the relative lack of opportunity for application.
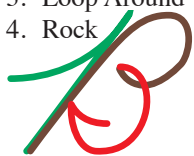
SHARP-STEM GROUP

1. Sharp Top
2. Trace Around

Introduce "P" using the regular procedure. Work for mastery with pairs and sets. Explain that the P is a "Never Join" capital.

Count and Write (P)

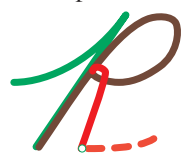Pamela, Paul, Peter, Patrick, Patricia

1. Sharp Top
2. Trace Around
3. Loop Around
4. Rock

Introduce "B" using the regular procedure. Work for mastery with pairs and sets. Most teach the letter without mention of joining. If you are working with an older student who uses the letter in his or her name, you could introduce the idea of joining the B in a signature. But, explain that the B is difficult to join and joining isn't necessary. It will require extra practice to join with good control and spacing.

Count and Write (D)

Bea, Ben, Beth, Bert, Bess, Brooke

1. Sharp Top
2. Trace Around
3. Loop Slant

Introduce "R" using the regular procedure. Work for mastery with pairs and sets. Explain that the R is a baseline joining letter. Emphasize the joining concept by writing the letter both ways.
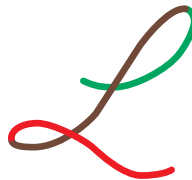
Count and Write (R)

Ray, Randy, Rita, Reed, Ralph, Rachel

ROCK-LOOP GROUP

1. Rock
2. Loop Twist
3. Loop Twist

Introduce "L" using the regular procedure. Work for mastery with pairs and sets. Emphasize that the final "twist stroke" drops below the baseline so the L is a "Never Join" capital.

Count and Write (L)

Leah, Leon, Lester, Libby, Lynn, Liz, Lacey

1. Rock Up
2. Loop Twist
3. Rock

Introduce "S" using the regular procedure. Work for mastery with pairs and sets. Most teach the letter without mention of joining. If you are working with an older student who uses the letter in his or her name, you could introduce the idea of joining in a signature. But, explain that the S is difficult to join and joining isn't necessary. It will require extra practice to join with good control and spacing.
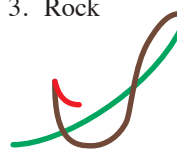
Count and Write (S)

Susan, Sidney, Sally, Samuel, Salvatore

1. Rock, Loop Rock
2. Slant Curve
3. Rock

Introduce "G" using the regular procedure. Work for mastery with pairs and sets. Most teach the letter without mention of joining.
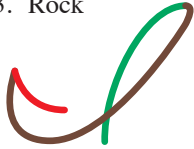
Count and Write (D)

Gina, Ginger, Gabe, Glen, Gwen, Gretchen

Review all forms, Practice G and S in sets to emphasize the difference in form. Test Muscle memory with eyes-closed trials. Experiment with size reduction and ruled paper.

Roll Up Group

1. Roll Up
2. Curve Down
3. Rock

Introduce "I" using the regular procedure. Emphasize the start point on the baseline. Work for mastery with pairs and sets. Most teach the letter without mention of joining.

Count and Write (I)

I, Ida, Izzi, Ian, Iowa, Ivan

1. Roll Up
2. Slant Tail

Introduce "J" using the regular procedure. Work for mastery with pairs and sets. Emphasize the baseline start point and the joining control point. It is very common for children to misinterpret th movement sequence and try to write the letter by starting at the top and producing a large shape like a lowercase "g." Review of the lowercase "j" may help the student realize he or she already knows how to join the letter.
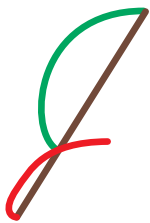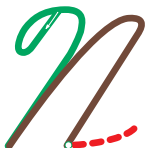
Count and Write (J)

Julie, June, James, Jack, John, Jim, Jane, Juan

Loop-Slant Group

The N, M, H, K, and X all begin with the same loop-slant beginning stem. It makes sense to practice all of them together as they are introduced.
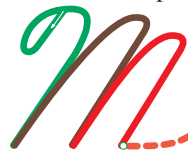
1. Loop Slant
2. Round Top

Introduce "N". Work for mastery with pairs and sets. Explain that the N is a baseline joining letter. Emphasize the joining concept by writing the letter both ways in pairs or sets of three.

Count and Write (N)

Ned, Nate, Nina, Nancy, Natalie

1. Loop Slant
2. Round Top
3. Round Top

Introduce "M" . Work for mastery with pairs and sets. Emphasize the joining Concept. Write the letter both ways in pairs. Practice sets of N and M to emphasize the difference between the two forms.

Count and Write (M)

Matt, Mike, May, Mabel, Marcia, Maddie

1. Loop Slant
2. Curve Down
3. Trace Swing

Introduce "H". Work for mastery with pairs and sets. Most introduce the letter without mention of joining. Work for consistency by writing pairs or sets of three. Practice sets of H, N and M to provide extra practice.

Count and Write (H)

Halie, Hank, Helen, Hal, Hattie, Henry

1. Loop Slant
2. Twist Down
3. Loop Slant

Introduce "K". Work for mastery with pairs and sets. Emphasize the brown "twist" stroke. It will require extra practice. Emphasize the joining concept. Write the letter both ways in pairs. Practice sets of K, H, N and M to provide extra practice of all forms.

Count and Write (K)

Kate, Kathi, Kay, Karl, Kennedy, Kelly

1. Loop Slant
2. Rock/Cross

Introduce "X" using the regular procedure. Work for mastery with pairs. Explain that the X is a baseline joining letter, so the crossing stroke is added after the word is finished. Provide extra practice by writing joined in pairs with vowels.

Xe, Xa, Xi, Xu, Xo

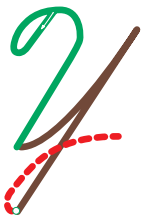Count and Write (X)

Xavier, Xerox, Xenia

LOOP-SLANT GROUP

1. Loop Slant
2. Sharp Top

Introduce "U". Work for mastery with pairs and sets. Explain that the U is a baseline joining letter. Emphasize the joining concept by writing the letter both ways in pairs.

Count and Write (U)

Uri, Udo, Udaya, Udeit, Udoka, Udval

1. Loop Slant
2. Sharp Tail

Introduce "Y" using the regular procedure. Work for mastery with pairs and sets. Point out the similarity of the "U." Explain the joining control point. Review the lowercase form to build confidence in joining the capital form.

Count and Write (Y)

Yadu, Yale, Yvet, Yves, Yalin, Yago, Yolana

1. Loop Slant
2. Up Twist

Introduce "V" using the regular procedure. Work for mastery with pairs and sets. Emphasize the "twist" up-stroke and that the V is a "never join" letter.

Count and Wrtie (V)

Vera, Vance, Vonn, Valynn, Valerie, Varden

LOOP-CURVE GROUP

1. Loop Curve
2. Sharp Top
3. Roll

Introduce "W" using the regular procedure. Work for mastery with pairs and sets. The W is a "never join" capital. Emphasize the curve of the loop stem. If it does not curve back to the left far enough the brown sharp top will become wide and vertical. Emphasize the progressive reduction in the height of the tops. The letter will look better when the red upstroke does not rise to the height of the brown sharp top.

Write and Count (W)

Will, Wesley, Wanda, Wade, Wagner, Wake

1. Loop Curve
2. Loop Twist

Introduce "Q" using the regular procedure. Work for mastery with pairs and sets. The Q is a "never join" capital. Emphasize the final "twist" stroke. It should twist down below the baseline. Here again, the curve of the green starting stem needs to curve back to the left to achieve a consistent slant with the other letters.

Write and Count (Q)

Quinn, Quaide, Quincy, Quinton, Quinlea

1. Loop Curve
2. Loop Tail

Introduce "Z" using the regular procedure. Work for mastery with pairs and sets. Review the lowercase form for similarity in joining concept.

Count and Write (Z)

Zoey, Za, Zack, Zacho, Zadia, Zazu, Zeus

THE COLOR/RHYTHM ALPHABET

In 1972 Peterson Handwriting introduced a new way to present letters. It is called a color/rhythm alphabet. The color separations make it easier for a child to learn how to move fluently. The fluent kind of movement we want to enable is goal oriented. To move with smooth rhythm the student must learn to look ahead of the pen or pencil to goals for the strokes. The color separations make those goals easy to see. The colors also make an alternative grammar of action that can be used nicely during letter-patterning work. This tool also makes it easy to correlate the movement-based strategy into phonics, spelling and language programs.
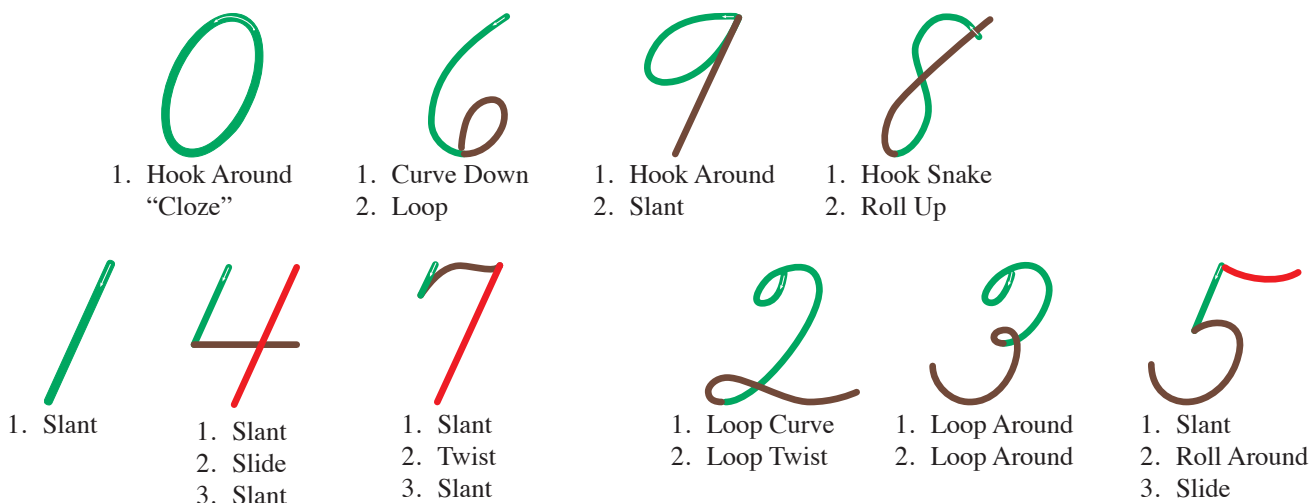
Our student books, wall cards, position guides and desk strips all provide models in color rhythm. Use the color rhythm charts (see pages 16 and 17) to figure out the counting sequence for each target word. One-color letters need one count, two-color letters need two counts and three-color letters need three counts. We want to establish a rhythmic pattern for each target word. Best practice is to establish a "progressive count" through the entire word and add a count for the spacing stroke. We count only for the strokes that travel up to the right. The slant-back strokes fall between the beats.

1,2   3,4   5,6   7,8   9
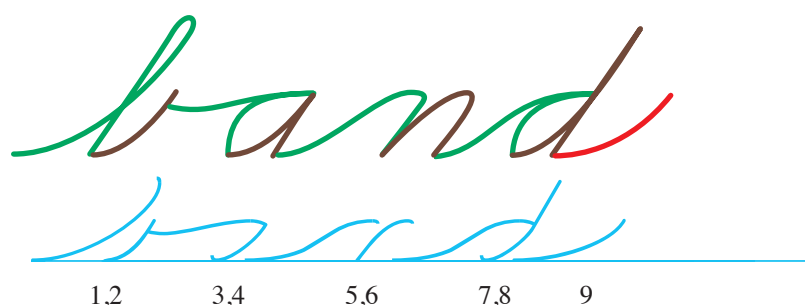
The second illustration showing only the forward up-strokes, was created using one of the variations of our font family called, Rock And Roll. This font version makes it easy to create "reading puzzles" with spelling and vocabulary words. You could use these reading puzzles to measure the impact on reading fluency offered by word patterns.

Create two lists with the words that will be patterned during the week. The lists will contain the same words, but they will be presented in a different sequence on the second list. Prior to the count & write exercises, conduct a timed "decoding" exercise to measure how long it takes for the student to solve the puzzles. Then direct the practice of the words and the internalization it drives. A second timed decoding should show a considerable drop in the amount of time needed to solve the puzzles.

NUMERALS

1. Hook Around "Cloze"

1. Curve Down
2. Loop

1. Hook Around
2. Slant

1. Hook Snake
2. Roll Up

1. Slant

1. Slant
2. Slide
3. Slant

1. Slant
2. Twist
3. Slant

1. Loop Curve
2. Loop Twist

1. Loop Around
2. Loop Around

1. Slant
2. Roll Around
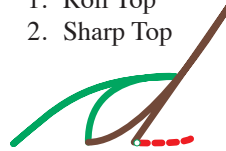3. Slide

1. Roll Top
2. Sharp Top

1. Loop Top
2. Sharp Trace
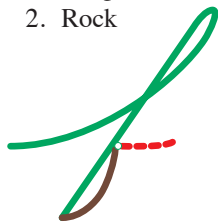
1. Rock, Hook,
   Slant

1. Roll Top
2. Sharp Top

1. Loop Top

1. Loop Tail
2. Rock

1. Roll Top
2. Sharp Tail

1. Loop Top
2. Round Top
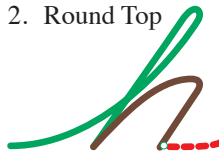
1. Sharp Top
2. Dot
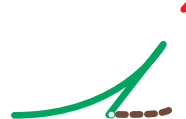
1. Sharp Tail
2. Dot
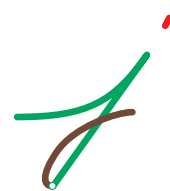
1. Loop Top
2. Round, Hook
   Slant

1. Loop Top
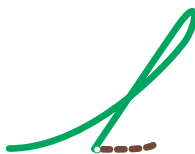
1. Round Top
2. Round Top
3. Round Top

1. Round Top
2. Round Top

1. Roll Top
2. Rock

1. Sharp Tail
2. Round Top
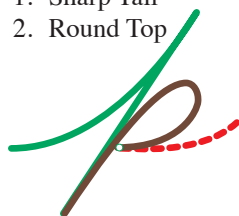
1. Roll Top
2. Sharp Tail
3. Rock

1. Rock, Roof,
   Slant
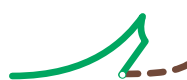
1. Rock
   Slant, Curve

1. Sharp Top
2. Cross
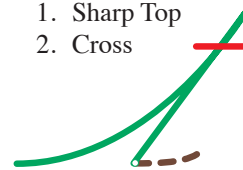
1. Sharp Top
2. Sharp Top

1. Round Top
2. Sharp Trace

1. Sharp Top
2. Sharp Top
3. Sharp Trace

1. Round Top
2. Cross

1. Round Top
2. Sharp Tail

1. Round Top
2. Bounce Tail

1. Curve Down
2. Sharp Top
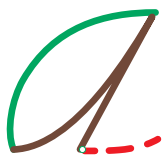
1. Sharp Top
2. Trace Around
3. Loop Around
4. Rock

1. Down
2. Loop Around
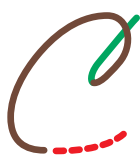
1. Twist Down
2. Loop Twist
3. Rock Swing

1. Down
2. Loop Around
3. Loop Around

1. Twist Down
2. Rock Hook
3. Loop Twist
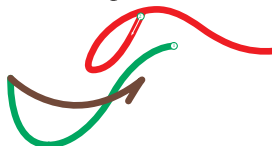
1. Rock, Loop Rock
2. Slant Curve
3. Rock

1. Loop Slant
2. Curve Down
3. Trace Swing

1. Roll Up
2. Curve Down
3. Rock

1. Roll Up
2. Slant Tail
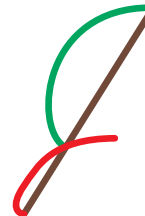
1. Loop Slant
2. Twist Down
3. Loop Slant
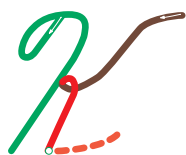
1. Rock
2. Loop Twist
3. Loop Twist
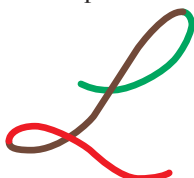
1. Loop Slant
2. Round Top
3. Round Top

1. Loop Slant
2. Round Top

1. Curve Down
2. Rock
3. Swing
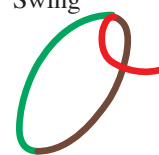
1. Sharp Top
2. Trace Around

1. Loop Curve
2. Loop Twist

1. Sharp Top
2. Trace Around
3. Loop Slant
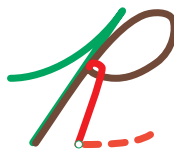
1. Rock Up
2. Loop Twist
3. Rock
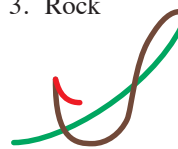
1. Twist Down
2. Rock
3. Loop Twist
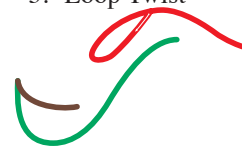
1. Loop Slant
2. Sharp Top
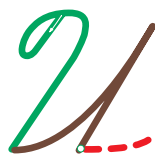
1. Loop Slant
2. Up Twist

1. Loop Curve
2. Sharp Top
3. Roll

1. Loop Slant
2. Rock/Cross

1. Loop Slant
2. Sharp Tail
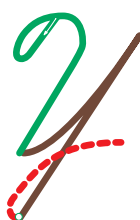
1. Loop Curve
2. Loop Tail
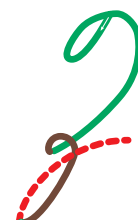
OBJECTIVES FOR POSITION SKILLS

When you begin to include rhythmic movement as a goal, you will quickly discover that position skills are very important. Poor position habits will make it much more difficult for the child to learn how to execute and control fluent movement. It is not easy to change poor habits that will be presented by many children. Regular movement-based exercise is one key to success. The challenge to move presents the child with a reason for change. It is important to reinforce good position goals in every writing activity. Otherwise, class work will likely become practice of undesirable habits that retard fluency.

BODY POSITION AT THE DESK

Check eye distance.
(11-14 inches)
When the head is down, it usually indicates that fingers are too close to the point of the pencil.

Lean forward so the arms support the upper body.

Forearms on desk

Chair back, front legs just under desk.

Check desk height.
The top of the desk should not be higher than the lower rib. When the desk is high it forces arms away from the body toward the sides of the paper. See paper position/arm entry.

Space between stomach and desk.
When the child sits too close to the desk, arms are forced away from the body toward the sides of the paper. See paper position/arm entry.

Feet back or flat.

BODY POSITION AT THE CHALKBOARD

Large muscle involvement is particularly necessary as a first step in learning handwriting skills. The convenience of the chalkboard is unmatched for this purpose. Practice sessions provide excellent feedback for teachers because of the opportunity to: (1) observe pupils' "body language," (2) identify process areas that need to be improved, and (3) provide instant help for needs that are identified.

1. Right-handed pupils stand erect with the body and feet facing to the right. Spread the feet apart. Always start writing near eye level.

2. Left-handed pupils stand erect with the body and feet facing to the left. Spread the feet apart. Begin left-to-right movement with the left arm extended and begin writing at shoulder level so that a downstroke is made with a pushing movement. As writing moves toward the body, move the feet so the arm never hooks.

3. Hold chalk between the index finger, middle finger, and thumb with the back of the chalk pointing toward the heel of the hand (do not hold chalk like a pencil).

4. Be sure the hand and fingers are suspended away from the board. Only the point of the chalk touches the surface.

5. Keep the non-writing hand on your hip, or place the arm behind your back. Lines on the board should be 4-5 inches apart. Space lines so that writing requires arm movement.

push   *pull*
pull   *push*
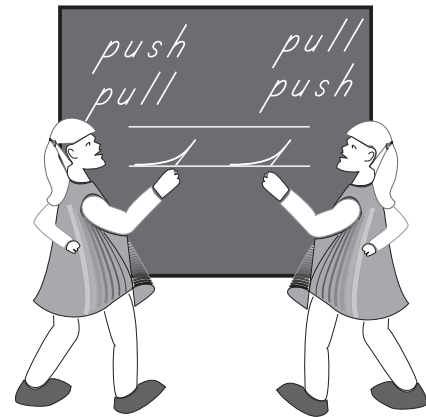
Avoid squeaks! Do not hold chalk like a pencil!

Teaching Cursive

Paper Position Is A Critical Objective

Because we will include instruction aimed at developing the use of the fluent type of movement, pupils need to learn position skills that will allow them to move fluently. Our analysis of the ergonomics and subsequent recommendations are based upon thousands of digital handwriting samples collected in hundreds of classrooms, work places and faculty rooms.

When the writing page is held in "reading position" fluent lateral movement is blocked!
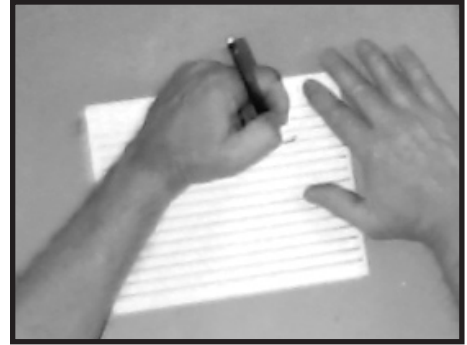
The movement issues are created by the writing hand and arm being positioned beside the image area. The body, along with the height of desk surface and chair, control the position of the writing arm. The student must learn to rotate the paper beneath the writing arm to achieve a position that will allow efficient lateral movement. One of the three positions pictured below should be learned by all students.

Right-handed.
Hand and arm under the baseline.
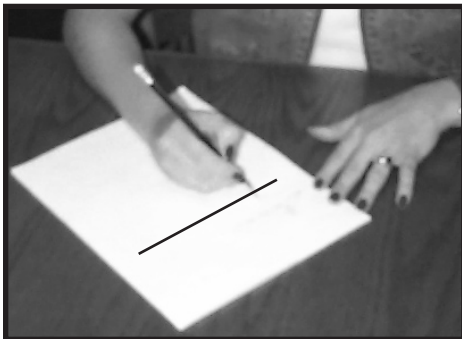
Left-handed, Sidestroke.
Hand and arm under the baseline
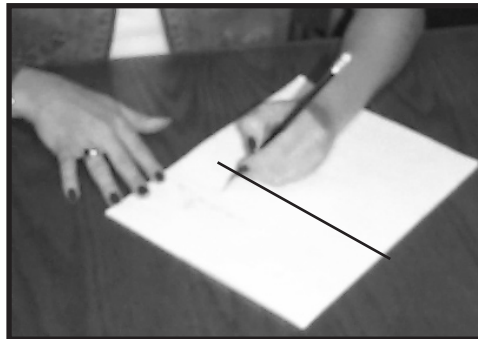
Left-handed, Overhand
Hand and arm above the top line.
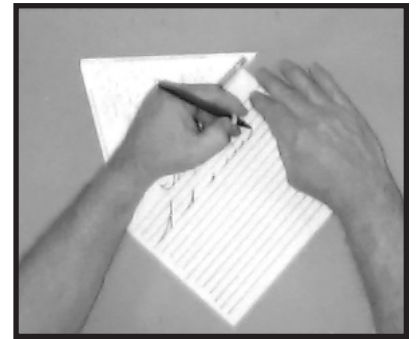
Note wrist is rolled outward.

Our self-adhesive position guides are extremely effective. You can instantly spot pupils who need a reminder during any writing activity.

Forward slant shows good lateral movement...

Pencil Position - Avoid Writer's Cramp
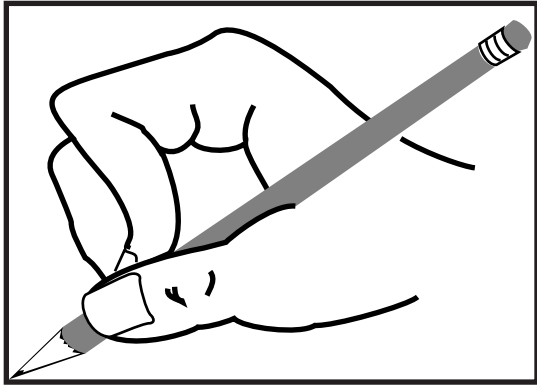
Thumb dominance is responsible for the most common form of writers cramp although you will probably notice the more bizarre, claw type grips first. If the grip posture causes the writing hand to cover the writing space, fluent movement will be more difficult to learn.

To execute movements fluently, the child must learn to look ahead of the pencil to goals for movements.

Youngsters start poor habits early. Pupils who use a grip causing them to "plant" the hand, often do not know how to move the arm. Our recommendations for large-size writing are aimed at creating a demand for arm movement. When the child learns to make the moves with the arm the fingers can relax.

Thumb Back
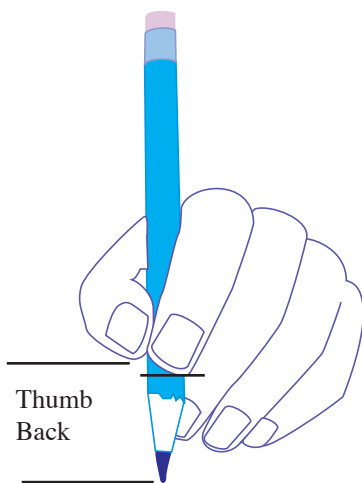
The thumb should touch the side of the pencil at a point that is farther away from the point than the tip of the pointer finger. The thick, triangular pencils we offer are very helpful for developing a more relaxed grip.

Habits are hard to break but our experience and research shows that a poor grip is associated with patterns for early drawing movement. A better grip can and will be associated with the patterns learned during "write & say" practice of fluent movement.

Thumb Back
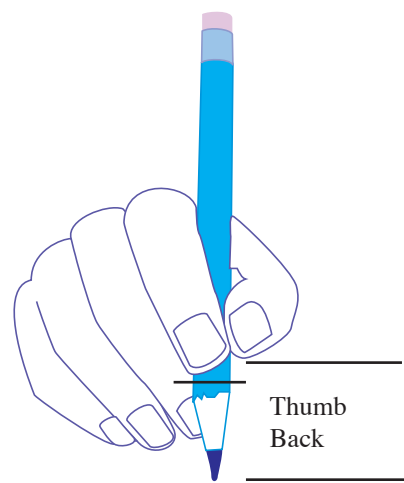
The challenge to move the pencil with smooth, rhythmic movement creates a need to adjust tight, cramped grips, particularly when the exercises demand long, lateral arm movements. A new grip will feel strange and uncontrollable until the brain can establish connections with muscles that could not participate due to the old tight grip.

You will find lesson plans for exercises designed specifically for providing experience with a new grip. Simple movements across the page don't present a difficult control challenge. It means the pupil will be more willing and able to participate using the new posture. During the exercises, the brain will have an opportunity to establish connections which will allow the new grip to feel much better. Many successful teachers use the exercises as a warm-up routine prior to each lesson until they see evidence of successful change.

The grip illustrated above is not the only successful posture, but it is the one most often recommended by a majority of skilled penmen over many decades.

Free video presentations are available on our web site. They thoroughly explain
and illustrate position skills for right and left-handed pupils
www.peterson-handwriting.com

POSITION PROBLEMS TO AVOID
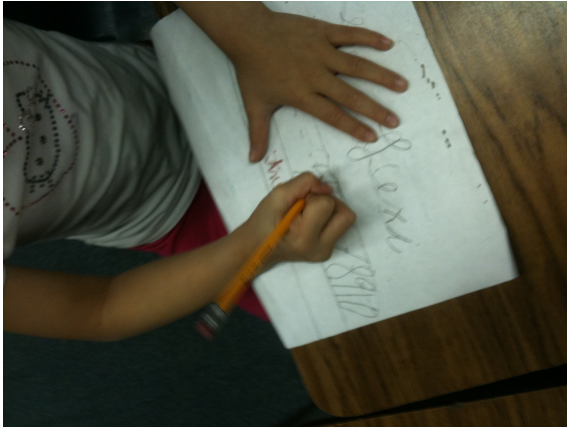
Thumb-wrap grip
Paper at bottom of desk
Body leaning back
Writing arm dangling off desk

Fingers too close to point causing...
Tight pinching,
Head down, poor posture,
Highly probable eye strain due to head position.
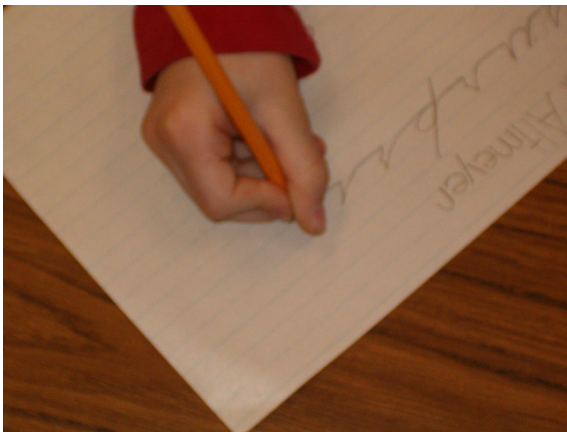
Wrist position causes palm edge to be anchored on the page.
The thumb is extended forward to push the pencil sideways.
Thumb and pointer too close to the point.
Not visible is the sideways tilt of the spine and head in an effort to see the hidden pencil point.
Thumb forward causes distention of pointer distal joint.
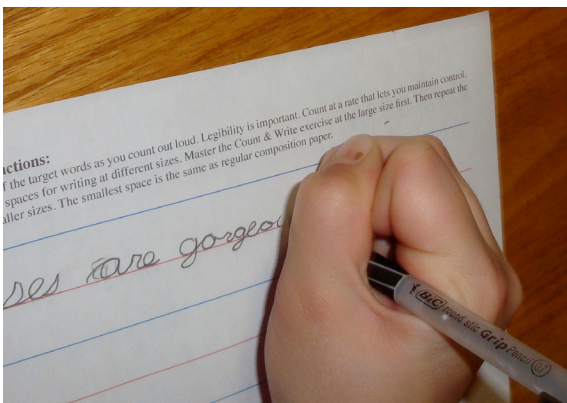
Grip posture totally blocks view of image area. The tight, cramped grip will quickly cause fatigue in any sustained writing activity. This student has legibility problems with print writing due to the lack of visibility and avoids the use of cursive due to the grip which plants the hand preventing arm movement.

THE FLUENCY OBJECTIVE

Putting thoughts on paper requires a movement process no matter what tool is used, pencil or keyboard. But, there are other tasks involved as well. The word "composition" is not specific enough to reveal our general objectives. More specific terms will help to show the goals clearly.

When putting words on paper, the brain must handle two processes at the same time. One process is called **Text Generation**. The other is called **Transcription**. Your efforts with handwriting instruction will affect both of these processes. The distinction afforded by these names is very helpful as we consider objectives.

Text Generation is the process of choosing words to express an idea or thought. It is a translation problem that demands much cognitive processing. It involves skills that would likely be "associated" with a language program; spelling, vocabulary, sentence structure, punctuation, etc. Efforts to improve the effectiveness and efficiency of *text generation* can be directly affected by the *transcription* process.

Transcription is also a translation task. Here the brain must translate sounds into movement sequences. At first this task also demands a lot of cognitive processing power. When your pupil must think about how to build a letter, he or she is not able to "think in words." This conflict was noted decades ago.

> Early, George & Heath, Earl J., 1970: Overburdened Cognitive Process, pp. 53-56, Building Handwriting Skills In Dyslexic Children, Academic Therapy Publications, 1970.

> Caramazza, A., Miceli, G., & Villa, G., 1986: The role of the output phonological buffer in reading, writing, and repetition. Cognitive Neuropsychology, 3, 37-76.

Luckily, transcription can be automated. Given the right opportunity, the motor system can record and store the movements required. Once *fluency* is established the "muscle memory" can guide the movements with minimal need for cognition. The general objectives are now quite clear. We will work to internalize and automate patterns that can control the transcription process for each letter and an ever growing number of words. This program will *Develop* the patterns, lead *Practice* to improve movement control and guide *Application* of skills. The learning experiences will positively affect development of text generation skills, particularly when the strategy is correlated into language lessons for spelling and vocabulary.

The patterns you establish as instruction progresses will contain dynamic information as important for reading as they are for writing. You can teach a proven, efficient process or the child must invent one. This simple fact brings us to an important concept regarding the ***strategy*** for instruction and the learning activities.

The Peterson Strategy

In 1908 P. O. Peterson recognized the link between rhythm and fluency. He changed the way cursive forms were introduced to achieve a simple goal. These changes allowed a young child to produce each letter completely as a rhythmic unit. Because he recognized the difference between drawing and fluent writing movement, he designed lessons that included rhythmic movement as a student goal.

Handwriting lessons using the Peterson Strategy are based upon "Directed Exercise" aimed at internalization of movement control information. Our lesson sequence will guide you through a developmental sequence of instruction. You will use a grammar of action to DIRECT the learning. Thanks to current motor science we now know much more about this learning process.

The grammar of action is chanted aloud to create a beat. This presents a challenge to move with rhythm through each sequence. It is the challenge to move with rhythm that directly involves the motor system to enhance internalization*. Please remember that independent trace and copy practice does not include a movement challenge. Because of innate tendencies, independent copy activities will usually result in drawing.

   * Reza Shadmir and Henry Holcomb: Neural Correlates of Motor Memory Consolidation. Science, Vol. 277, 8 August 1997.

We now know that drawing movement is guided in a much different way than the fluent movement we want to teach. Because of the way the visual feedback system communicates with muscles, independent work will result in poor movement dynamics. Incidentally, tracing models with a pencil demands use of the visual system in order to make the lines match. Most children will quickly learn rhythmic movements by finger-tracing.

   Teulings, H.L., Van Gemmert, A.W.A. (Eds.). Proceedings of the 11th Conference of the International Graphonomics Society (IGS2003), 2-5 November 2003, Scottsdale, Arizona, USA. Submovement Analysis in Learning Cursive Handwriting or Block Print. H.L. Tuelings and D. Romero, Neuroscript, Tempe AZ.

The Forgotten Value Of Cursive Instruction

Children respond to, actually are drawn to challenges. They seem hungry for them. A child who has begun to crawl well is automatically drawn to climb the steps. The brain reacts to motor-learning challenges by creating new pathways and connections to handle the challenge. As the pathways and connections are consolidated movements are automated. One need only watch the crawler learn to stand and walk to see the processing changes first hand.

Handwriting movements are learned and consolidated in much the same way over time. But there is a difference. Handwriting is physical language. Like learning to balance and stand, organization of the structures for movement takes some time and multiple experiences. Handwriting movement must be guided visually at the outset until the motor system can consolidate the pathways that automate and enable fluency. One problem is created by instructional techniques that do not include fluent movement as a goal.

The student who is not challenged to move fluently will become dependent on that visual-feedback guidance system. When independent practice allows visual drawing, the most important opportunity to stimulate valuable processing pathways is essentially put aside.

The discontinuous movement process used for print writing offers a challenge early on, but only for a limited time. The cursive movement challenge remains for as long as the student has opportunity to practice fluent movement with an ever-growing list of new words. If education is aimed at changing the brain, cursive handwriting should be an important component of the curriculum.

High Frequency Words And Counts

The word counts shown are "pure" letter counts. You must add one count for the spacing/finish stroke and also "say" dots and crosses where necessary. Peterson offers reproducible pages with cursive models for high frequency words. Ask for WORD MASTERS.

Baseline Joins Only

Word	Count	Word	Count	Word	Count	Word	Count
is	2	up	4	free	5	their	6
it	2	me	4	here	5	there	6
its	3	Mr.	4	kill	5	these	6
let	3	still	5	nice	5	three	6
see	3	elect	5	next	5	enter	6
set	3	seen	5	ask	5	raise	6
sir	3	sick	5	did	5	ship	6
sit	3	trip	5	due	5	then	6
six	3	city	5	put	5	they	6
ice	3	seen	5	hat	5	easy	6
if	3	clue	5	has	5	turn	6
in	3	life	5	far	5	such	6
so	3	lift	5	am	5	shed	6
to	3	like	5	Mrs.	5	into	6
as	3	line	5	my	5	each	6
at	3	ride	5	cities	6	card	6
he	3	true	5	itself	6	said	6
us	3	sent	5	letter	6	rain	6
else	4	side	5	little	6	talk	6
less	4	cent	5	retire	6	shut	6
list	4	real	5	sister	6	thus	6
rest	4	rule	5	street	6	that	6
tell	4	suit	5	select	6	lake	6
tire	4	sure	5	clerk	6	take	6
red	4	this	5	extra	6	law	6
sea	4	last	5	issue	6	saw	6
ten	4	late	5	clear	6	dress	6
try	4	call	5	slide	6		
cut	4	cast	5	scene	6		
she	4	east	5	seem	6		
tax	4	race	5	term	6		
the	4	care	5	refer	6		
eat	4	case	5	trust	6		
car	4	rate	5	start	6		
air	4	sail	5	state	6		
all	4	end	5	class	6		
are	4	lay	5	least	6		
her	4	ran	5	since	6		
his	4	run	5	read	6		
use	4	feel	5	ring	6		
fix	4	feet	5	send	6		
act	4	fell	5	stay	6		
an	4	felt	5	lead	6		
do	4	file	5	time	6		
no	4	fill	5	spell	6		

Above-Line Joins

Word	Count	Word	Count	Word	Count
we	4	form	8	only	7
of	4	blue	6	warm	9
be	3	post	6	walk	8
or	3	five	6	soap	7
on	4	bill	5	road	7
by	4	most	7	once	6
now	7	more	7	done	7
bed	5	when	8	body	8
top	5	wind	8	omit	7
not	5	lost	5	none	7
old	5	hope	7	don't	7
but	5	with	7	wait	7
out	5	week	7	navy	8
big	5	even	6	town	8
hot	5	hour	7	down	9
lot	4	wife	7	whom	10
low	6	open	7	love	6
how	7	cost	5	look	7
for	5	burn	7	book	8
why	7	bear	6	over	6
out	5	able	6	door	7
buy	6	stop	6	foot	7
off	6	news	7	move	8
who	7	four	7	poor	7
nor	5	wish	7	wore	7
bed	5	ever	5	born	7
bad	6	know	9	took	7
bay	6	hold	7	both	7
box	5	wire	6	work	8
way	7	copy	7	word	8
one	5	been	6	vote	6
was	6	lose	5	throw	9
son	5	view	7	bring	8
two	6	does	6	house	8
was	6	lose	5	other	7
God	7	wear	7	north	8
too	5	busy	7	white	8
own	7	come	7	river	6
will	6	long	7	seven	7
have	7	ball	6	south	8
live	5	home	8	never	7
cold	6	some	7	found	10
soft	6	baby	8	every	7
five	6	sons	6	could	8
well	6	back	7	where	8
blow	8	away	9	story	7
went	7	soon	7	short	7
show	8	noon	8	round	9
what	8	band	8	horse	7
very	6	boat	7	pound	10
west	6	want	8	black	8
sold	6	from	8	table	7
told	6	room	8	power	9
best	5	upon	8		

TRACKING FLUENCY

BELOW-LINE JOINS

Word	Count	Word	Count
go	4	mayor	10
age	5	organ	9
yes	4	charge	9
get	4	change	10
yet	4	figure	9
eye	4	August	10
you	6	flight	9
got	5	degree	8
just	5	engine	9
year	6	length	9
page	7	injure	8
girl	5	system	9
glad	7	height	9
July	6	allege	8
high	7	forget	9
June	6	ground	11
says	6	bought	11
size	4	anyway	13
give	6	bridge	9
good	8	always	11
your	7	enough	11
yard	7	though	11
gave	7	oblige	9
game	8	region	9
gold	7	object	8
gone	7	regard	9
goes	6	engage	10
jail	5	getting	10
grand	2	justice	8
large	7	arrange	11
glass	7	general	10
light	7	citizen	8
night	8	tonight	11
fight	8	subject	9
grant	8	thought	12
right	7	through	12
sight	7	neighbor	13
might	9	January	12
great	7	against	11
eight	7	foreign	11
judge	8	suggest	10
guest	7	anything	14
ledge	7	daughter	13
guess	7	marriage	13
maybe	10	argument	14
begun	9	progress	11
dozen	8	although	14
weigh	9	majority	13
ought	9	judgment	14
began	9	organize	12
again	9	yesterday	13
young	10	gentlemen	14
royal	8	agreement	14
enjoy	8	emergency	14

The main reason to track fluency is to identify those students who have not internalized the movement patterns or those who are still using poor position habits. If these students move on without successful learning of skills for fluent handwriting, they will likely fall behind in all language skill development. Collecting fluency data does not demand much class time or recording time if you create a simple chart as pictured below.

Please collect and record fluency data (letters-per--minute score) at least once each month. More frequent timed writing exercises are highly recommended. A minimum goal for fluency would be 40 LPM.

Consider using this LPM score as a measure of internalization success as letters are taught. Have students write joined pairs or triplets for one minute and count the number of legible letters written. It makes sense to evaluate legibility as part of the exercise. "The Letter Tops Evaluation" is easy to teach and enhances pupil critical thinking skills. More detailed guides to Tracking Fluency and Letter Tops Evaluation can be downloaded from our web site.

FLUENCY SCORE RECORD

Student Name	Date	LPM Score

LOOKING FOR A THESIS PROJECT?

Correlate handwriting fluency data with your reading skill assessment to look at possible connections between handwriting fluency and reading skill development. You may be very surprised by your result. There is already a little research indicating that the elusive connection between reading and handwriting is movement fluency.

This form of action research could be an important stimulus to funding more science and discovery that is badly needed. Combine your data with that of other teachers and the value increases greatly. Use the internet to broaden the number of classrooms and something important just might emerge. Is there a connection between handwriting fluency and language skill development? Our experience in thousands of schools leads us to believe strongly that skills for fluent handwriting are one key step to moving less functional students toward written language proficiency.

WWW.PETERSON-HANDWRITING.COM

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