

The Peterson Method
A Research-based Strategy
For
Teaching And Learning
Motor Skills
For
Written Language

by

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Welcome to physical language instruction with *We Write To Read*. This program is designed to affect your students' ability to use symbolic language in all forms - and fluency is a consistent goal. The developmentally sequenced teaching and learning activities provided in this program are based upon a specific strategy and the research which demonstrates powerful potential for motor learning when this strategy is employed. The strategy includes fluent movement as an objective from the beginning.

We welcome the opportunity to work directly with you. If you do not understand how to include movement as an objective, a few minutes on the telephone will solve the problem. It is quite easy to demonstrate on the telephone because we can illustrate movement. Think about that statement for a moment. Are you wondering how we can illustrate movement on the telephone? The answer to this question is the secret to the strategy and the powerful advantages it can offer your students.

Our toll free number can put you in touch with a teaching specialist as questions arise. Please do not hesitate to contact us at: 1-800-541-6328.

Teaching Strategies

Think back to your days as a student in the elementary classroom. Can you remember the most frequent activity your teacher employed for handwriting skill development? What was your goal during those handwriting lessons? What did you do during the activity? Can you describe the strategy behind the activity?

There are three strategies out there. One can be named *invention*, the second is called *trace & copy*. Unfortunately, invention may well be the most widely used while *trace & copy* is the most widely promoted. The third strategy is called *directed instruction*. A discussion of the alternatives should help you to identify the strategy behind your grade school handwriting lesson experience. This program is based upon the third strategy - a *directed lesson*.

Invention

For decades, college methods courses have virtually ignored mention of handwriting and any possible connection with language arts. Developmental objectives, motor learning considerations, methods for teaching and specific techniques are rarely part of our training. We walk into the classroom ill prepared to deal with the needs of children who are increasingly expected to use written language - even in some preschools. The *invention* strategy is the result of this almost total lack of awareness.

You must make a decision each day. The child needs to write. Will you teach a process for writing or expect the child to invent a way to get the symbols onto the page?

Trace & Copy

The *trace & copy strategy* is actively promoted by a majority of educational publishers. Workbooks for handwriting practice are designed for *trace and copy* activities - and to sell workbooks. The learning activity consists of tracing a model, generally presented with numbers and arrows to illustrate the movement sequence, followed by the production of multiple copies of the target form. In most classrooms the production of these copies is an independent activity. "How-to-move" is not an objective. Therefore, *fluency* is at best an implied goal.

When someone notices that too many pupils are unable to write legibly and composition is labored to the point of disability, the school begins a search for a "new" handwriting program. Great effort is often expended to rewrite a curriculum. A call goes out for samples from various publishers. Much discussion about the model alphabet begins.

“The M shown here is not the same as the one shown in our language book!”
“Simplified capital letters would be easier for the pupils to learn.”
“This continuous stroke program says that cursive will just happen.”
“My intermediate students all print anyway, we should try this italic program.”

There is little discussion of the strategy for instruction and learning, or the specific production process demanded by the models shown. The old program; workbooks, wall cards and charts are eventually replaced at considerable expense. And in most cases, students continue with the *trace & copy* strategy in new workbooks. The change initially stimulates some improvement due to a renewed focus. But they will be shopping again soon.

The DIRECTED Strategy

A huge advantage is offered by this strategy. Because movement is included as an objective, the brain is presented with a *challenge* that stimulates change in the way it processes the information. This change has been recorded by science with digitizers^{1,2} and PET Scan technology.³ The directed lesson strategy addresses more than the need to produce a legible replica of a model letter.

To meet the challenge of movement a student learns to focus, sit properly and to hold the tools so that movement can progress. The child learns sequencing skills. The brain begins to process written language differently. The changes result in improvement in all learning activities. *We Write To Read* will make it easy for you to address three phases of learning - *Develop, Practice* and *Apply*.

To create the challenge you will “direct” lesson activities using several easy techniques for guiding student movement during frequent short training sessions. *DEVELOP* lessons will allow students to internalize the movement sequence and rhythm. *PRACTICE* lessons will allow students opportunity to improve control of rhythmic movement. *APPLY* lessons will provide students with opportunity to use rhythmic movement as a tool. You use a simple *vocabulary* to show the children how to move. Chanting words in unison creates a rhythm. The challenge to move with the rhythm makes lessons fun, time efficient and far more effective than drawing 20 copies of an image.

There are three alternatives for directing movement practice - *Action Words, Color Rhythm and Count*. Each has its place in a developmental sequence designed to automate the handwriting process and improve fluency as language skills grow to allow it. The focus is on process, but product must also be an objective. The goal is fluent **legibility**.

Your leadership is the key to success for your pupils. The ease and time efficiency this strategy affords will surprise you. While we have seen the results on thousands of student samples for decades, scientific research has only recently demonstrated some specific reasons for the success of the directed lesson.

We now know...

The **challenge** to move fluently engages the *Internal Model* in the brain to participate when it otherwise might not be involved due to early tendencies that rely primarily upon the visual feedback process. Many people never learn how to use the system simply because they were never given opportunity to try. The IM carries primary responsibility for guiding automatic movements using the visual system as an adjunct - like a copilot on an airplane.² We need to automate the *handwriting process* to the best possible degree in order to free the brain for *word processing* tasks.⁴ It makes sense that activity aimed specifically at the IM system offers the best chance at improving fluency.

We Write To Read provides you with a thorough and complete plan of action designed to maximize each student’s ability to use the automatic movement guidance system as a tool for learning and expression.

The Movement Objective Is Key

We know that the task of putting thoughts on paper is the most demanding function of symbolic language. This is true because of the cognitive processing demanded. Choosing words to express an idea (the process of *text generation*⁴), along with the demand for fine control of the movements needed to create the symbols (the process of *transcription*⁴) is a tricky juggling act.

Minimal experience in a classroom reveals that a child who must think about letter production is distracted from the concept, the words that would describe it, spelling, sentence structure and punctuation. This distraction makes it more difficult for children to learn all of the language skills you work so hard to teach.⁴ The child who cannot write a word or sentence without looking at a wall alphabet or model of words on a chalkboard, needs to learn how to move.

Thanks to motor control research by Dr. Hans-Leo Teulings in particular, and many other scientists around the world, we now know much more about the motor control system and how the brain uses it. Our goal is to develop skills that will allow *transcription* to be automatic. Thanks to the science, you can easily identify fluent movement² with confidence. The student who can easily put thoughts on paper has mastered the use of two systems in a cooperative effort to accomplish the task.

System A - The Visual Feedback System

The brain relies on this system when precise movement guidance is needed² - like touching a line with a pencil. Fluency of movement with this guidance system is limited because of the time it takes to process visual information and update the muscles.² The basic movement guidance process is constant. Muscles have to move and receive continual guidance from the eyes as the brain processes position and sends adjustments. The science is complex but you don't need to understand it to use the knowledge.

Classroom translation - The child who watches the pencil as it moves cannot move with rhythm. You have probably seen this in action. The child begins a stroke - and stops to erase when dissatisfied with the image before the letter is complete. It means that the child has not internalized the pattern of movement. It is much easier to solve the problem when you know what is happening. The challenge to move with rhythm enhances the internalization process. When the child can execute the movements with rhythm the pattern has been internalized. The child can produce the symbol without looking at the wall alphabet because the movements come from inside the brain.

System B - The Internal Model - A Motor Pattern

This system works differently. The IM sends a batch of movements to the muscles including an end point. Then the muscles move toward that goal.² The movement can be rhythmic and fluent but may not be very precise until practice improves control. Movement practice will improve rhythm and control - often very quickly. Again, you need not understand the science to take advantage of the knowledge.

Classroom translation - When the child executes the movements with rhythm, he or she is using the motor pattern to guide the pencil.² The first hurdle we encounter when teaching, is the early result. It may not be very accurate. Therefore, the child tends to give up on fluent movement and use the more accurate visual pencil driver. It is easy for you to see this happen during a directed lesson. Motivation and regular practice will help the student gain confidence. We provide short daily lessons and begin with simple basic strokes - clear goals that can be achieved by the majority of your pupils. The lessons provided in the teacher handbook are easy to conduct and provide a sequential learning experience. You and your students will see the progress when you save papers and compare one day to the next.

The Process for Pattern Development and Improvement

It is easy to employ the directed strategy with these four steps.

Step One - Illustrate & Describe (Introducing the Movements)

Display a very large model in position for direct viewing for all students. Emphasize the start point of the first movement and its end point. Teach the action words that go with this movement. Continue to demonstrate each successive stroke in the target sequence. Refer the student to each of the key points on the color rhythm model in their text, and the action words presented next to the form. Then write in the air as you say the action words for the strokes.

Objective: Each student will be able to indicate start and end points for each stroke and recite the action words that will guide the progress of each movement.

Step Two - Airwriting with Action Words (Gross Motor Patterning with Rhythm)

All students point to the start point on your display. You direct by saying, "Ready, say it." Students chant the words aloud as they execute the movements in the air with the writing arm. The Animated Letter Cards CD offers a great way to conduct this airwriting step. A minute of Airwriting will probably allow enough repetitions of the pattern to get everyone moving and chanting in unison.

Objective: Establish a rhythm for the chant and the movements. This process will stimulate internalization because of the rhythm challenge. However, the pattern internalized may not be very accurate. We are all aware of the problems with transfer from chalkboard to desk. That is the reason for step three and the student text.

Step Three - Fingertrace with Action Words (Fine Motor Patterning with Rhythm)

With the text in writing position, students touch the pointer finger to the start point on the color rhythm model in the text. Explain that the goal is to move the arm and to follow the image as closely as possible with the finger. To get them started, use a command sequence like, "On your mark, get set, say it." Once again a minute of repetition should allow sufficient experience to get more accurate trajectory information into the motor pattern.

Objective: Establish the movement pattern and rhythm connection with the muscle group that will actually execute the movements with a pen or pencil. Gross patterns share information with various muscle groups readily. But, *airwriting* trajectories are not very accurate. The Fingertrace step enhances perception and allows the IM to integrate more accurate trajectory information.

Step Four - Write & Say (Execution with Rhythm)

Students move to practice paper in good writing position. Relate the start point to the paper. Use the command sequence (On your mark, Get set, Say it) to initiate action so that students can chant in unison as the pencils move.

Develop Objective - make sure the student is able to maintain the vocal as the pencil moves to write several copies in a row. The voice is your evidence that the motor pattern is playing its role. No erasing or patching. Write four, pick the best and try again.

Practice Objectives - We want to develop some critical thinking and select goals for improving control of the rhythmic movement. Six subskills offer specific understandable goals. They are: Form, Downstrokes/Slant, Size, Spacing, Smoothness (rhythm) and Control. All six are related by movement. Focusing on one specific goal makes it easy for the pupil to handle and success will usually have a positive effect on all subskills in the product. The subskills also make it easy to correlate handwriting goals into application activities.

The Directed Strategy in Application

Using the directed strategy as a tool for word integration is the most natural means to correlate language objectives and handwriting skills. It is quite easy to do once you learn how to use count as a grammar of action. That will take a bit of practice on your part. The challenge to move to the count will result in enhanced internalization of the words you want students to learn.

We also have a technique that allows application of the rhythm and control skills to undirected applied work at cursive levels. We will examine the word integration strategy first.

The goal is simple. Practice new words with rhythmic movement to include fluency as a goal. The objective can be stated as follows. *The student will be able to write a legible copy of the target word while counting aloud.*

The Count Process for Print Levels

Write a large model of the target word on the chalkboard. Wall cards, student texts, and position guides all provide color rhythm alphabets. We will use one count for each color in the letter. Have students help to figure out the count for each letter. Because we want to internalize the word as a unit, write the counts in a progressive manner for the word as illustrated below.

handle
1,2 3,4 5,6 7,8 9 10,11

The language goal is to have the child internalize the word and its spelling.

Step One - prepare the model and count on the chalkboard.

Step Two - spell the word aloud in unison. (Students say the letter when you point at the image.)

Step Three - Airwriting and count.

You name the letter as you point at the image - students write the letter in the air as they count aloud. Repeat at least twice to establish a rate for the chant and movement.

Step Four - Write and count on practice paper.

Use the command sequence (On your mark, Get set). In this case you will *say it* (the name of the letter). Direct the writing of the word at least three times. Students count aloud as they write the strokes.

Trial One: you name the letters and the children write each as they count aloud. Observe the students. If a student stops to look at the model, a letter has not been internalized and therefore stops the movement process. The motor pattern locks up just like a computer. The child who cannot write and count needs specific help on the trouble letter. He or she will not be able to use this letter fluently in any word. Finally, we spell aloud touching each letter with the pencil as it is named.

Trial Two: repeat the steps in trial one. You will likely notice that the children increase the rate of production and count a bit faster.

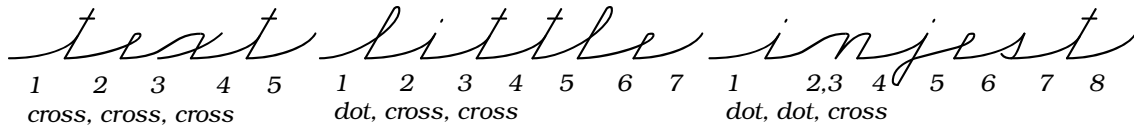
Trial Three: Modify your direction in this manner. Say the word then command, On your Mark, Get Set, Count. You will not name the letters this time. Students will count aloud and write the word. Then spell the word aloud as students touch each letter - to make sure all letters were included. You did not spell the word. The student did not spell the word. So, if all letters were written, what spelled the word? Answer: the muscle memory! Test the muscle memory again by writing to the count with eyes closed. The students will love to practice new words this way.

The Count Process for Cursive Levels

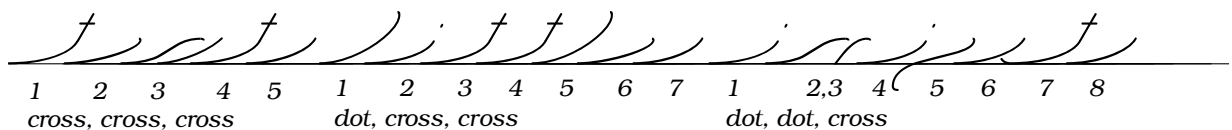
The steps and procedure with cursive are the same as described for print. It is a bit more challenging to create the count for words in cursive. Color rhythm can be used here also, but with a few changes.

We don't cross the 't' and 'x' or dot the 'i' or 'j' until after the word is finished. These letters show two colors - one for the body of the letter and the second for the cross or dot. We will not count in the sequence for crossing strokes and dots. Instead we will say them after the word is written.

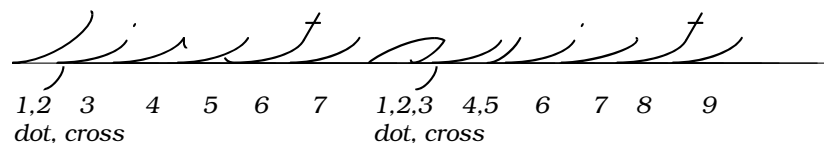
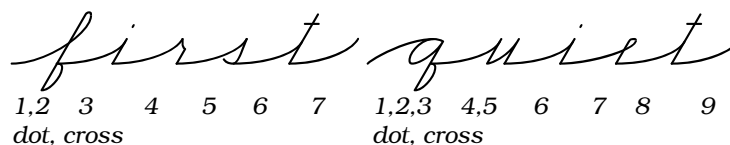
Examples:



In reality, we are counting for the *rock* and *roll* strokes that move upward and to the right.



The Cursive rhythm leader chart in your manual is a handy reference for planning spelling and vocabulary practice. There are a couple of tricky letters - 'f' and 'q' have rock strokes that return to the baseline from the bottom of the tail. These strokes need a count.



Don't try to count for capital letters. Say the name of the capital as it is written and count for the lowercase. You will find students really like this type of word practice. The challenge is engaging.

You will quickly spot those students who have erroneous letter patterns. To execute cursive while counting aloud, the student must know where each letter ends. Many will initially be confused because they practiced individual letters - each with a finish stroke. Until you explain that the beginning stroke of the next letter replaces an ending stroke, they will be confused by the concept they first learned. It will take some practice to get past those old habits that want to insert extra movements into the word.

This cursive concept does not work. This one does!

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