

Don Potter's Alphabet
Writing and Identification
Fluency Materials

*The Precursor to
Accurate and Fluent
Reading and Spelling*

Teaching “Total Recall of the Alphabet”

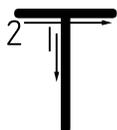
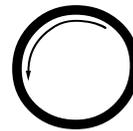
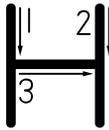
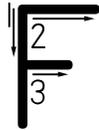
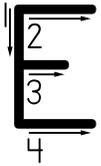
Prepared by Donald L. Potter
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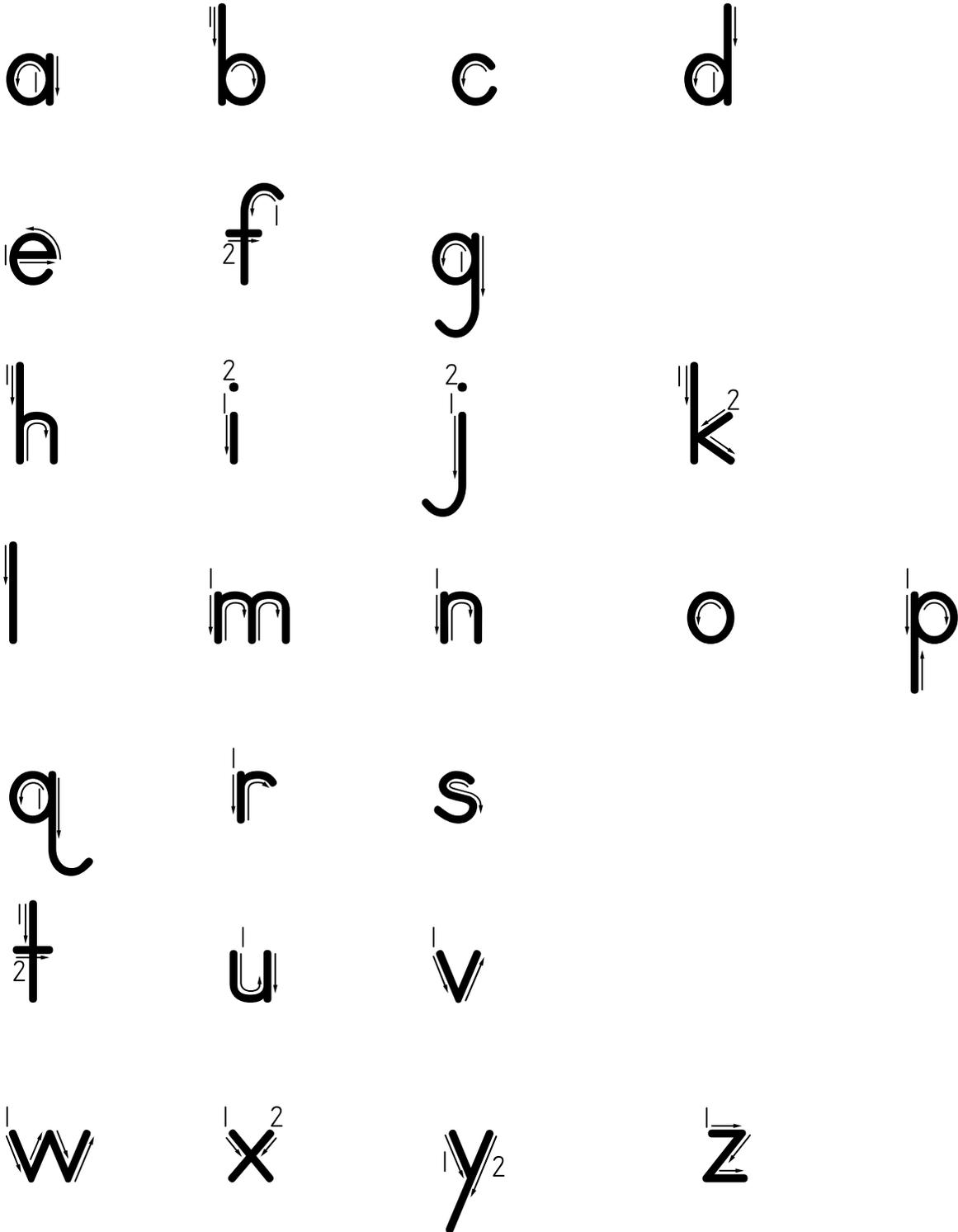
ZANER-BLOSER STROKES

MANUSCRIPT UPPERCASE



ZANER-BLOSER STROKES

MANUSCRIPT LOWERCASE



TAP THE ALPHABET
MANUSCRIPT LOWERCASE

a b c d

e f g

h i j k

l m n o p

q r s

t u v

w x y z

TAP THE ALPHABET
MANUSCRIPT UPPERCASE

A B C D

E F G

H I J K

L M N O P

Q R S

T U V

W X Y Z

TAP THE ALPHABET
MANUSCRIPT UPPER AND LOWERCASE

Aa Bb Cc Dd

Ee Ff Gg

Hh Ii Jj Kk

Ll Mm Nn Oo Pp

Qq Rr Ss

Tt Uu Vv

Ww Xx Yy Zz

TAP THE ALPHABET
CURSIVE LOWERCASE

a *b* *c* *d*

e *f* *g*

h *i* *j* *k*

l *m* *n* *o* *p*

q *r* *s*

t *u* *v*

w *x* *y* *z*

TAP THE ALPHABET
CURSIVE UPPERCASE

A

B

C

D

E

F

G

H

I

J

K

L

M

N

O

P

Q

R

S

T

U

V

W

X

Y

Z

TAP THE ALPHABET
MANUSCRIPT LOWERCASE

a b c d
e f g
h i j k
l m n o p
q r s
t u v
w x y z

TAP THE ALPHABET
MANUSCRIPT UPPERCASE

A

B

C

D

E

F

G

H

I

J

K

L

M

N

O

P

Q

R

S

T

U

V

W

X

Y

Z

TAP THE ALPHABET
MANUSCRIPT UPPERCASE

Aa Bb Cc Dd

Ee Ff Gg

Hh Ih Jj Kk

Ll Mm Nn Oo Pp

Qq Rr Ss

Tt Uu Vv

Ww Xx Yy Zz

Alphabet Tapping Exercise

a b c d

e f g

h i j k

l m n o p

q r s

t u v

w x y z

Instructions

1. Have the students use their index finger to physically tap each letter in in ABC order while saying the names of the letters. They can use the alphabet song to help them, but make sure they are tapping the correct letter that goes with the name.
2. Once they can tap each letter in sync with the alphabet song, have them tap the letters from left to right starting with different rows.
3. Next, have them name the letters tapping from top to bottom, bottom to top, and right to left.
4. Finally, have them identify the letters by randomly pointing at the letters.

Note: The **purpose** of this exercise is to make sure that students are **completely focused** on learning each letter and not mindlessly singing the alphabet song. Mere mastery of the song is not a sure sign of mastery of the alphabet, nor is it much of an aid in learning since it can be memorized long before the student can identify any of the letters. This is an amazingly powerful method for forming a strong association (bond, connection) between the letterform and the letter name. You can also practice the letters and test the students with flashcards.

Don Potter's Alphabet Flashcards for *Developing Instant Recall of the Alphabet*

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These Flashcards are designed to help teachers and parents teach the youth of today the high-level reading skills of an effective phonics-first method.

A student that learns to read from the “sounds to symbols” using phonics-first, with no admixture of sight-words memorization or whole word guessing, develops high level, dyslexia-free reading abilities.

Visit www.blendphonics.org and www.donptter.net for phonics programs to use with these flashcards.

The **first step in reading** is to know the alphabet well.

These flashcards are presented to you free from Donald L. Potter's website. They may be reproduced and used freely for non-commercial educational purposes. (Revised 9/2/08, 11/12/10, 8/12/11)

A B C D

E F G

H I J K

L M N O P

Q R S

T U V

W X Y Z

a b c d

e f g

h i j k

l m n o p

q r s

t u v

w x y z

A a A a

Card 1: ā

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B b B b

Card 2: bē

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C c C c

Card 3: cē

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D d D d

Card 4: dē

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E e E e

Card 5: ē

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F f F f

Card 6: ěf

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G g G g

Card 7: ġē (Note the single-dot ġ represents the /j/ sound)

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H h H h

Card 8: aych

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I i l i

Card 9: ĩ

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J j q j

Card 10: jā

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K k K k

Card 11: *kā*

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L l L l

Card 12: *ēl*

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Mm Mm

Card 13: ěm

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Nn Nn

Card 14: ěn

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O o O o

Card 15: *ō*

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P p P p

Card 16: *pē*

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Q q Q q

Card 17: *cū*

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R r R r

Card 18: *ār*

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S s S s

Card 19: šs

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T t T t

Card 20: tē

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U u U u

Card 21: ū = /yoō/

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V v V v

Card 22: vē

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W w W w

Card 23: *double-ü*

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X x X x

Card 24: *ěks*

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Y y Y y

Card 25: wī

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Z z Z z

Card 26: zē

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Alphabet Letter Recognition Test

Name: _____ Date: _____ Age _____ Grade _____

School _____ Uppercase LPM _____ Lowercase LPM _____

Underline unknown letter. If they say another letter, write it over the printed letter.
LPM = 1560/seconds.

Upper Case Manuscript

I E A Z W S O K G C X

T P L H D U Q M Y V R

N J F B

Lower Case Manuscript

u q m y v r n j f b x

t p i d l e a z w s o

k g c h

Alphabet Letter Recognition Test

Name: _____ Date: _____ Age _____ Grade _____

School _____ Uppercase LPM _____ Lowercase LPM _____

Underline unknown letters.

Upper Case Cursive

U Z M Y V R J

F B X I P L H

D L E A Z W S

O K G C N

Lower Case Cursive

i e a z w s

o k g c x t

p l h d u q

m y v r n j

f b

INSTRUCTIONS FOR GIVING THE ALPHABET FLUENCY TEST

There are two parts to the Alphabet Fluency Test:

1. **Alphabet Recognition Fluency.** Ask the student to say the names of the letters as quickly as he or she can. To find the speed in letters per minute, (LPM) divide 1560 by the number of second it took them to identify the letters. (The factor 1560 comes from multiplying 26 by 60.).
2. **Alphabet Writing Fluency.** Ask the student to write the alphabet from *a* to *z* as fast as they can. The timing is the same as for the Alphabet Recognition Fluency. Notice pencil grip, letter formation, legibility, reversals, stress, seating posture, tendency to correct letters, etc.

Kindergarten students should be able to write the alphabet from *a* to *z* at 40 letters per minute from memory by the end of the year. Each grade level thereafter should increase about 10 letters per minute by the end of the next year.

Alphabet fluency is a good predictor of later reading success. My experience giving this simple assessment has changed my ideas of the importance of having “total recall of the alphabet.” Many older students with reading difficulties will score low on both parts of the assessment. This is a clear indication that they did not receive adequate instruction in alphabet fluency and need remedial work in letter writing and identification.

A foggy (blurred) knowledge of the alphabet leads to a foggy (insecure, inaccurate) recognition of words in their serial spelling aspects and difficulties in recall.

Most reading problems could be prevented by teaching student to write and spell in fluent, legible handwriting all the words in a comprehensive developmental phonics program like Hazel Loring’s *Reading Made Easy with Blend Phonics for First Grade*.

Remember to teach the student that **we spell with the letter names**, and **we read with the letter sounds**. This distinction should always be kept in mind. The letter names should be taught before and separate from the letter sounds. The letter sounds (phonemes) and associations (spellings) are best taught with the *Phonovisual Charts*. www.phonovisual.com.

By Donald L. Potter - 3/22/12, Odessa, TX. www.donpotter.net

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These materials will enable students to develop fluency with the alphabet very quickly. There is convincing evidence that alphabet identification and writing fluency is a very excellent predictor of early student reading and spelling ability.

The use of these materials is very simple, especially when used in conjunction with my edition of Hazel Loring's highly effective 1980 *Reading Made Easy for First Grade with Blend Phonics*.

Clarence Barnhart, the dictionary expert and co-author of the Leonard Bloomfield *Let's Read* reading system wrote, "Under no circumstance should you start to teach your child to read until he has the necessary muscular skills to see the small distinctions between letters of the alphabet. You can tell he has the necessary muscular coordination when you notice that he can button his clothes or see and pick up a pin on the floor." (3)

June Brown in her excellent 1981 *Guide to let's read*, says, "Every child I worked with learned to read providing he or she could see a pin on the floor and pick it up, could button clothes, and *had total recall of the alphabet*. No one can read an alphabet language without total recall of the alphabet. 'Total recall' means that the student can recite the letters in alphabetical order, can identify them when they are presented in random order, and can print any word when it is pronounced and spelled. These three goals must be met with absolute perfection before the student can become a good reader. Unfortunately, many schools do not insist on total recall. They teach children to recite the letters in alphabetical order, and sometimes they teach them to identify the letters in random order. However, very few schools teach children to print any word when it is pronounced and spelled. The foundation of reading success is total recall of the alphabet." (7)

Concerning dyslexia, June Brown had some interesting comments, "Let's get the facts straight! There is no such thing as dyslexia among children who know the alphabet. Any child who can learn the alphabet is not dyslexic. Therefore, if your child knows the alphabet, can see normally, can button clothes, your child can and will learn to read. "Dyslexia" is a very confusing term. Many educators no longer use it because no one is quite sure what it means. Generally, it means that a child can only read with great difficulty, but sometimes it means a child cannot read at all. I have seen many children labeled dyslexia. But every one of them who knew the alphabet learned to read." (12)

Bob Rose, in his important book, *Forget the Bell Curve*, maintains that there is strong evidence that kindergarten students who are taught to write the letters of the alphabet from memory at a rate of 40 letter per minute will have no problem learning to read. (See the excerpt of Chapter 12 at the end of this document.). Note: Mr. Rose has used the words in Hazel Loring's 1980 *Reading Made Easy with Blend Phonics for First Grade* to teach reading using his methodology

My recommendation for developing fluency is simply have the student write the alphabet from *a* to *z* everyday until they reach the desired fluency as measured by letters for minute. My preference for timing the students is simply to time how long it takes them to write the alphabet from *a* to *z* and divide 1560 by the results in seconds (LPM = 1560/Seconds). The Flashcards are excellent for developing fast letter identification responses and for practice in alphabetization.

Learning Letter Names

Students should learn the names of the letters of the alphabet as they learn to write the alphabet. The names of most of the letters have elements (hints) of the sound represented by the letter, which are of great assistance to children beginning their first steps in reading. The underlined letters contain at least one of the sounds of the letter in the name: a b c d e f g h i j k l m n o p q r s t u v w x y z.

The following have the sound value at the **beginning** of the letter name:

a /ā/, b /b/, c /s/, d /d/, e /ē/, g /j/, i /ī/, j /j/, k /k/, o /ō/, p /p/, t /t/, v /v/, z /z/.

The following letters have the sound value at the **end** of the name.

f /f/, l /l/, m /m/, n /n/, r /r/, s /s/, x /x/, y /ī/

This leaves only h, q, w, and y to be learned by associations other than the letter name.

Noah Webster's spelling for the names for the letters are very helpful, yet little known today:

a (ā), b (bē), c (cē), d (dē), e (ē), f (ěf), g (gē), h (aytch), i (ī), j (jā), k (kā), l (ěl), m (ěm), n (ěn), o (ō), p (pē), q (cū), r (ar), s (ěs), t (tē), u (ū), v (vē), w (double ū), x (ěks), y (wī), z (zē).

You can download *Reading Made Easy with Blend Phonics* free from www.blendphonics.org or my website, www.donpotter.net. It is also available as an inexpensive paperback from Amazon.

The best method for teaching the sound-to-letter correspondences is the Phonovisual Method, consisting of two scientifically organized and easy-to-teach wall charts: Consonants and Vowels. www.phonovisual.com.

<http://www.cde.state.co.us/coloradoliteracy/theimportanceofteachingletternames>

I would like to recommend my own *Shortcut to Cursive* (2014). I created it for the student at the Odessa Christian School in Odessa, TX. It has proven very effective with a wide range of tutoring students from kindergarten up. The evidence of its effectiveness was proven beyond doubt when three of my students at the Odessa Christian School won first for their grade level in an International Handwriting Competition with *Cursive Is Cool*, and I was awarded Outstanding Teacher of the Year. This year (2015-2016) five of my student won prizes for their cursive! I also had five more students win prizes in the 2016-2017 contest.

<http://donpotter.net/pdf/shortcut-to-cursive.pdf>

I have also published *Shortcut to Manuscript* on my website for those who prefer to start with manuscript.

<http://www.donpotter.net/pdf/shortcut-to-manuscript.pdf>

This document last revised 2/1/2022 by Donald L. Potter.

Pangrams

<http://www.rinkworks.com/words/pangrams.shtml>

A *pangram* is a sentence that contains all letters of the alphabet. Less frequently, such sentences are called *holalphabetic* sentences. Interesting pangrams are generally short ones; constructing a sentence that includes the fewest repeat letters possible is a challenging task. However, pangrams that are slightly longer yet enlightening, humorous, or eccentric are noteworthy in their own right.

By far the most well-known pangram is, "The quick brown fox jumps over a lazy dog." Frequently this is the sentence used to test out new typewriters, presumably *because* it includes every letter of the alphabet. Curiously, this sentence is often misquoted by changing "jumps" to "jumped." The past tense version, lacking an "s," is not a pangram. Often, too, it is misquoted as "the lazy dog" rather than "a lazy dog." This error is not as grievous; the sentence remains a pangram, just a slightly longer one.

A number of pangrams are given below, listed from longest to shortest.

1. Forsaking monastic tradition, twelve jovial friars gave up their vocation for a questionable existence on the flying trapeze. (106 letters)
2. No kidding -- Lorenzo called off his trip to visit Mexico City just because they told him the conquistadores were extinct. (99 letters)
3. Jelly-like above the high wire, six quaking pachyderms kept the climax of the extravaganza in a dazzling state of flux. (96 letters)
4. Ebenezer unexpectedly bagged two tranquil aardvarks with his jiffy vacuum cleaner. (71 letters)
5. Six javelins thrown by the quick savages whizzed forty paces beyond the mark. (64 letters)
6. The explorer was frozen in his big kayak just after making queer discoveries. (64 letters)
7. The July sun caused a fragment of black pine wax to ooze on the velvet quilt. (61 letters)
8. The public was amazed to view the quickness and dexterity of the juggler. (60 letters)
9. While Suez sailors wax parquet decks, Afghan Jews vomit jauntily abaft. (59 letters)
10. We quickly seized the black axle and just saved it from going past him. (57 letters)
11. Six big juicy steaks sizzled in a pan as five workmen left the quarry. (56 letters)
12. While making deep excavations we found some quaint bronze jewelry. (56 letters)
13. Jaded zombies acted quaintly but kept driving their oxen forward. (55 letters)
14. A mad boxer shot a quick, gloved jab to the jaw of his dizzy opponent. (54 letters)
15. The job requires extra pluck and zeal from every young wage earner. (54 letters)
16. A quart jar of oil mixed with zinc oxide makes a very bright paint. (53 letters)
17. Whenever the black fox jumped the squirrel gazed suspiciously. (53 letters)
18. We promptly judged antique ivory buckles for the next prize. (50 letters)
19. How razorback-jumping frogs can level six piqued gymnasts! (49 letters)
20. Crazy Fredericka bought many very exquisite opal jewels. (48 letters)
21. Sixty zippers were quickly picked from the woven jute bag. (48 letters)
22. Amazingly few discotheques provide jukeboxes. (40 letters)
23. Heavy boxes perform quick waltzes and jigs. (36 letters)
24. Jinxed wizards pluck ivy from the big quilt. (36 letters)
25. The quick brown fox jumps over a lazy dog. (33 letters)
26. Pack my box with five dozen liquor jugs. (32 letters)
27. Jackdaws love my big sphinx of quartz. (31 letters)
28. The five boxing wizards jump quickly. (31 letters)
29. How quickly daft jumping zebras vex. (30 letters)
30. Quick zephyrs blow, vexing daft Jim. (29 letters)
31. Sphinx of black quartz, judge my vow. (29 letters)
32. Waltz, nymph, for quick jigs vex Bud. (28 letters)
33. Blowzy night-frumps vex'd Jack Q. (26 letters)

To figure letters per minute, multiply the numbers of words by 60 and divide that number by the number of seconds it took the child to write the sentence. **Example:** I just wrote, "The quick brown fox jumps over the lazy dog" in 21 seconds. $33 \times 60 = 1,980$. $1,980 \div 21 = 94.28$ letters per minute.

**INFORMATION ON FLUENCY
FROM
THE MORNINGSID MODEL OF GENERATIVE INSTRUCTION**

Mr. Bob Rose brought the Morningside Model of Instruction to my attention in his thought-provoking book, *FORGET THE BELL CURVE*. In June 2011, I got a copy of Ken Johnson and Elizabeth M. Street's book, *THE MORNINGSID MODEL OF GENERATIVE INSTRUCTION: WHAT IT MEANS TO LEAVE NO CHILD BEHIND*, CAMBRIDGE CENTER FOR BEHAVIORAL STUDIES, 2004.

I simply want to show insights that I gained from the book that relate to the nature of fluency as it relates to the development of alphabet letter writing and identification fluency. I have two main point: 1) to show that insufficient fluency does not support student advancement in the same way that higher levels of fluency do, and 2) to encourage teachers to help students achieve the necessary levels of fluency through well designed daily practice exercises.

In the following paragraphs I will present information from that book as a series of quotations with comments. My comments are in [brackets].

The elegance of an instructional program depends on the programmer's ability to detect and teach some minimal response or generative set which can combine and recombine into the universal set of all possible relationships. One is looking, very simply, for the exponential value of key instructional events, in which behaviors that emerge are in a power relationship to the elements which are taught (28f). [Generative is also called "contingency adduction," in which the contingency "draws out" the additional (novel) behavior. Learning the alphabet to fluency is a "key instructional event" which has a "power relationship" (possessing exponential value) with learning to read and spell. The paragraph goes on to illustrate by comparing sight-word and phonics instruction. Sight-word instruction possesses no power-relationship (exponential value) to reading because it does not generalize to other words, phonics, on the other hand, "will reliably produce recombinative reading behavior, guaranteeing successful reading of thousands of words beyond those taught in the original instruction."]

The goal of fluency building is to build hardy academic behaviors – behaviors that weather periods of no practice, occur with short latencies, are impervious to distraction, and are easily accessible in new situations (30). [Each of these goals is important. Alphabet fluency makes the letters of the alphabet available for learning to read and spell. For maximum effectiveness this fluency needs to be developed even before reading instruction begins. "Easily accessible in new situations" means that once the alphabet is learned to fluency the students can use it for the practical purposes of learning. Students whose alphabet fluency is low will have to look repeatedly at a word on the board, overhead, or paper in order to copy the complete word. They will not be able to store the spelling of the entire word in their memory. They are also easily distracted.]

Precision Teaching was conceived by Dr. Ogden Lindsey at the University of Kansas in his quest for a mechanism that brought continuous measurement and rate data into educational practice. Lindsey was heavily influenced by Skinner's allegiance to rate as the primary datum for studying behavioral change, and he recognized that traditional educational measurement systems that depend on percent correct and letter grades placed artificial ceilings on performance and lead students and teachers to a false security about the strength of their performance. Both Skinner and Lindsey believed that high-rate behavior not only looked different than low-rate behavior, it also had fundamentally different features (66). [Note that high-rate behavior is fundamentally different. There is a quantum of difference.]

In Precision Teaching parlance, once a performance demonstrates retention, endurance, and application, it is *fluent*. As a metaphor, performance fluency is flowing, flexible, effortless, errorless, automatic, confident, second-nature and masterful. When performance is fluent, it becomes a highly probably activity. Fluent performance is fun, energetic, naturally reinforced behavior. Dr. Carl Binder (1993,1996) coined the term *fluency building* to refer to practice activities that are designed to achieve these goals. [My Alphabet Fluency Exercises are designed with this purpose in mind.] Currently at Morningside, we use five characteristics of performance to set fluency performance frequencies, changing the acronym to RESSA: Retention, Endurance, Stability, Application, and Adduction (67).

References on Fluency

1. Carl Binder's brief explanation of Precision Teaching: "Behavioral Fluency: A New Paradigm."

http://binder-riha.com/behav_fluency_new_paradigm.pdf

2. Carl Binder & C. L. Watkins (1990) Precision Teaching and Direct Instruction: Measurably superior instructional technology in school.

http://www.binder-riha.com/PT_DI.pdf

3. Fluency: Achieving True Masterly in the Learning Process (2002) by Carl Binder, Elizabeth Houghton & Barbara Bateman. (Note: Bateman wrote the special education edition of *Open Court* many years ago, before it was purchased by SRA/McGraw-Hill.). This is a very clear and helpful article.

http://special.edschool.virginia.edu/papers/Binder-et-al_Fluency.pdf

Excerpt from *Forget the Bell Curve*

Chapter Twelve – How Children Learn to Read

By Dr. Bob Rose

Speech exists in both oral and written forms. The conceptual aspects of each are parallel to one another in many ways. The learning of the language of music and of learning to play a musical instrument are also parallel to it, as is the learning of almost any complex system of study. A discussion of these latter subjects is beyond the scope of this present book.

I have mentioned the schema theory held important and dear to writers Marilyn Adams and E.D. Hirsch, Jr. Hirsch's *Cultural Literacy* is available as an inexpensive paperback. It is indispensable to anyone interested in improving education. The second chapter is devoted to an explanation of what "schema theory" means and how it relates to learning and to education. This chapter alone is worth the price of the book.

By means of one brief example, if one tries to learn the appearance of a painting of a rural scene containing a cottage, a meadow, some cattle, a small stream and footbridge and some birds flying overhead, the task will be much simpler for an individual who already has prior knowledge of the appearance of cottages, meadows, cattle, streams, footbridges and flying birds. It is the essence of common sense. Hirsch shows knowledge is like "mental Velcro." Once a mind contains sufficient basic knowledge, new knowledge tends to adhere in memory to related knowledge already there. Adams extends the idea to learning to read.

Adams points out knowledge of letters leads to the ability to perceive and recognize sequences of letters. This leads to easier familiarity with the written syllables. She postulates there are about 5,000 different written syllables in English, about the same number of abstract geometric characters Chinese children learn to recognize and identify before they become highly literate in their language.

I like to put it as follows: *It is not possible to mentally envision, remember and recognize the written word "at" unless one is first quite familiar with the appearances of the letters "a" and "t". One cannot conceive of the written word "cat" without first being capable of envisioning "at, and "cat" precedes "catch", which in turn must precede "catching."*

Some months ago, I fell into conversation with a severely dyslexic seventeen-year-old boy. He told me he was dyslexic because his birth mother had ingested cocaine during her pregnancy with him. He believed the ensuing brain damage had made it impossible for him to learn to read normally.

I asked him to spell "candy" and he did so immediately. He explained that was possible because he had memorized the verbal sequence of alphabet letter names in the world, "C-A-N-D-Y spells candy."

I asked him if he could close his eyes and picture what a capital "H" looks like. He said he could; it was easy. I then asked him if he could mentally picture the word "IT", written with capital letters. He said he could not, adding the mental imagery of words is much more difficult than the imagination of single letters.

Then I pointed out "H" is formed by adding a short horizontal line to two straight vertical lines. "IT" is likewise formed by exactly the same combination. Only the relative position of the horizontal bar shifts somewhat in the conversion of "H" to "IT." One is no more difficult than the other. The boy stared at me long and hard, not knowing what to say.

Some years ago, I had considerable email and surface mail contact with some psychologists who are practitioners of a subdivision of Behavior Analysis known as Precision Teaching (PT). PT folks measure the rate at which students can perform the skills they are trying to acquire. It was PT researchers who had done the study in Seattle showing children who can deliver simple addition facts at something faster than a basal rate of fluency never have subsequent problems in math if this skill is acquired by sufficient practice before the end of second grade.

PT people use their own special graphs to chart student progress and they believe the rate of change in rate (called "acceleration" as opposed to "deceleration") of behavior is an important constant in studying the success of students in virtually any learning domain. I was particularly impressed by the PT definition of "fluency." Their definition involves a series of positive statements about it. According to them you are fluent at a given activity if:

1. You can perform it at a high rate of speed.
2. You can perform it accurately with a minimum of mistakes.
3. You can continue your performance for relatively long periods of time without undue stress and fatigue.
4. You can persist in your performance even in the presence of external distractions which would interrupt the performance of a less fluent student.
5. You can perform the activity well even after long periods without regular practice.

The PT enthusiasts, many of whom specialize in the education of autistic or retarded children, have found when learning a complex activity, learning tends to proceed through a predictable sequence of steps or stages. They have also found the almost invariable cause of a learning arrest at one of these learning stages is lack of adequate fluency at the performance of the activity of the preceding learning step. And they found if adequate fluency is attained at each step, progression to the next one is relatively easy. Students often seem to make the advancement almost spontaneously and without specific instruction from the teacher.

I was very happy to have these shared insights. The concept of practicing to the point of fluency and of schema theory seemed to dovetail nicely. If children learn to envision individual letters quickly, easily and automatically (or “fluently”) then the ability to envision combinations of letters in sequence is not difficult either.

Aristotle wrote that one learns to play the harp by playing the harp. It is apparently not true that one can strengthen a generic ability to remember things in general. Learning Latin certainly must offer many advantages to the learner. However, it will not increase one’s ability to remember telephone numbers or items on a grocery list.

It is certainly true that success breeds success. Success at learning Latin may well give students a sense of pride, self-confidence and determination, which is helpful in many different ways.

Pioneer psychologist, William James, once undertook to memorize poetry to see if it would make him faster at memorizing it. He timed himself to see how long it took him to memorize a certain number of lines or verses.

The exercise no doubt benefited James, but he never found his speed at memorizing poetry increased. But when it comes to learning specific things, repetition is certainly the key to learning. As the saying goes, perfect practice makes perfect. And we get good at remembering a specific thing by remembering it over and over. We get good at remembering by remembering. Think of a person practicing the delivery of a memorized speech. The night before he stands in his living room reciting the speech over and over. The presence of a prompter with a written version of the speech is an obvious facilitator of memory and learning.

It occurred to me if little children are to be able to automatically recognize written syllables, and then use schema theory to learn to recognize “written entities” such as words and common phrases (“in the park”, “after the party”), the first thing to do would be to have the children practice remembering what individual alphabet letters look like.

In theory it should suffice to tell our five-year-olds, “Please spend five minutes each day remembering what each of the capital and small letters in the alphabet look like.” Yes, this would be fine in theory. But how many five-year-olds would actually do it?

Suddenly I realized if a child writes an alphabet letter with a pencil, the child must imagine, or remember what the letter will look like before the pencil tip can begin to move. And applying the principle of synesthesia, we can quickly understand if a child has learned the trajectory the pencil makes in writing a letter, the physical form and visual appearance of the letter are learned simultaneously and automatically.

This is not to say it’s wise or beneficial to emphasize speed in printing in itself to young students. As a matter of fact, it isn’t a good idea at all. If one attempts to do something fast, one does it as quickly as one can. In other words, one rushes. We can never do anything well if we rush or do it as fast as we possibly can. The idea of fluency is not to be fast. It is easy, relaxed and automatic we are striving for. That is how pianists practice a new piece. They always play slowly. As a piece is played more fluently, what seems slow to the artist is actually faster and faster to his audience. It’s the same with teaching kindergarten students to write the alphabet fluently. Just a few minutes a day for a few months will suffice. But the children must never rush. They hold their pencils as lightly as possible. They concentrate only on ease and legibility. Speed then takes care of itself.

Writing with a pencil is a marvelous exercise for young children. Pencils as we know them were invented in the first half of the nineteenth century. Before that there was a lead “plummet” used to write instead.

There is a right way and a wrong way to hold a pencil. It is described and illustrated in Romalda Spalding’s book, the *Writing Road to Reading*. Both my mother and my mother in law were born shortly after 1910. Both remember filling entire pages with the letter “a” in the early grades and they do not remember any children failing to learn to read.

The pencil should be held in a relaxed hand and with a natural position to the hand. As Spalding pointed out, the most common reason children have trouble learning to write is holding the pencil too tightly or pressing too hard on the paper.

This is not taught in most classrooms. Most children (and even adults) hold a pen or pencil with an awful “monkey fist.” I saw a young woman actually holding her pen the right way the other day. When I commented she said when she learned to write, the teacher taught the children how to manipulate chopsticks at the same time they were learning to hold a pencil. Maybe she has something there.

With the Suzuki method, young children about to begin violin lessons are given an exercise that teaches them the lightest and most effective way to hold a bow. The lesson is the same with holding and using a writing instrument. To do so effectively requires only the minimal amount of muscular work to perform easily and effortlessly.

A common and effective teaching practice is to have little children learn to “air write” the letters with a finger or hand. Maria Montessori wrote almost 100 years ago that she easily taught the three- and four-year-old children of poor working families in Rome to write even before they had learned to hold a pencil. She taught them to make the trajectories of the letters with a finger. Afterwards the children only had to hold pencil to paper and move the hand in the same way in order to write the letters on paper.

Many teachers worry that a significant number of children don’t have the “fine motor control” necessary to become skillful at printing alphabet letters at the age of five or six. But I have corresponded with a physician who is a published expert on “the clumsy child syndrome”. This entity only appeared in the medical literature in the past twenty years. Its name was changed to the lexically inappropriate term “dyspraxia”, and later to its present official designation as CDD, or “coordination deficit disorder”. But according to my source, “clumsiness” in the absence of demonstrable neurological abnormalities (which is essential to the diagnosis...if a neurological abnormality exists, its diagnosis supersedes the default diagnosis of “clumsiness”), this condition, while globally incurable, does not preclude the acquisition of specific skilled motor skills with adequate coaching and practice. So for the purposes of schooling children in the classroom, this condition may be ignored.

One day during a recess on the roof of Montessori’s preschool a boy who had only been taught the letters, but knew nothing about reading announced he could write words. When the doubting Montessori challenged him, he took a lump of coal and wrote “mano” (hand) on the rooftop.

Suzuki teaches young violin students to hold the bow the easiest and most natural way. When Montessori’s book was published in English, the Harvard professor supplying the preface wrote, “That couldn’t possibly work with English-speaking children.”

But it will work! The only reasonable definition of “dyslexic” is a dyslexic child is one who has not learned to read well by the time his grade peers have. Once a reading problem has been defined and established with psychologist, parents, teacher and child it is devilishly difficult to remediate. The trick is to prevent it before the end of first-grade. The best technical definition of dyslexic is “a child who appears unable to remember what written words look like.”

In order to remember what a word looks like it is necessary for a child to remember what its component written syllables look like. Notice for yourself when you envision the appearance of a one-syllable word, you see the whole word written in your mind’s eye. But with longer words we can only envision one written syllable at a time. In imagination the other syllables are indicated only by their veiled positions. We don’t actually see how they are spelled unless we turn our mental attention from one to the other. When we write or type, we proceed to do so automatically without even thinking about it.

It is widely believed that in the earliest stages of the acquisition of literacy young children go through a phase of reading “logographically.” This refers to the remembering of the geometric forms of written words without any mental reference to the correspondence of letters (graphemes) and letter-sounds (phonemes). Children often can recognize some words and product logos (like the one on bottles of *Coca Cola*) before they can really read at all.

But research has shown this to essentially be a myth. The British reading researcher, Morag Stuart, has demonstrated the number of written words five-year-old children can learn to reliably recognize without confusion with other similarly written words is approximately zero unless they understand the alphabetic principle of representing sounds with letters. But once they understand the alphabetic principle and learn to recognize known words as familiar, they expand their sight vocabularies with a “sponge like” facility.

One can’t associate a word with a graphic symbol without knowing both first. That’s why the Chinese began writing words phonetically under the written characters in beginners’ books years ago.

Once a child knows letters well enough to be able to mentally envision three of them in a row, the child will ask how a few simple spoken words are written. A teacher or parent should start with some of the twenty-five two-letter words in common English (it, at, as, if, on, etcetera). After they are secure one proceeds to three-letter words (cat, hat, cut, hut). **Teaching the first thousand words by grouping them into such gradually more complex word families after children learn to envision letters fluently is a faultless method of ensuring fluent literacy by the end of first grade if it is done systematically.**

If a child can read aloud and accurately a text composed only of the thousand most common words in children’s vocabularies fluently by the end of first-grade, the child will be a good reader and a good student for life. Fluency in this case may be defined as a minimum of 120 correct words per minute read aloud. With this degree of fluency children are able to pay attention to the “inner voice” and reading comprehension also takes care of itself.

The NICHD has proved this by studies and has prescribed specific reading rate fluency goals for the end of each of the specific early school grades. According to their studies lack of reading fluency is the principal cause of low scores on reading comprehension tests in American elementary schools. E.D. Hirsch, Jr. has an opposing and erroneous opinion. All of his writings indicate he believes the sole cause of poor reading comprehension is lack of the knowledge necessary to understand the meaning of the written sentences.

The best way to teach children how words are phonetically encoded (and all written English words are, no matter how idiosyncratic and arbitrary the choices of our spellings are) is to teach children to write them “iteratively.” That means as a beginning student writes a word, he or she should silently say the sound that letter happens to represent in the very same word. Learning rules of “phonics” is not necessary at first. The child simply learns the “e” in “the” is pronounced short before words starting with consonants (the man, the store), and long when before an initial vowel (the apple, the orange). This reverses the order in which children learn to go from “sounds to letters”, proving the order makes no difference.

Iterative writing is an absolutely essential habit for young students to develop. By means of this technique they learn to associate the geometrical trajectories of written words with the corresponding spoken words.

Our spoken language depends on acoustical representations of geometric symbols transmitted through the air in sound waves. The same thing is true with writing. We know a pencil or hand trajectory for each word we can write. If we are fluent at touch-typing, we also know the thousands of finger dances necessary to express ourselves on a keyboard.

The essence of mentation is twofold. First, we must be able to make mental representations of reality. Second, we must be able to associate memories with one another. We are all familiar with Freud’s free association test. And as Mark Twain observed, a cat will only sit on a hot stove once.

This “iterative writing” which involves the stretching out of a spoken word and emphasizing its component sequence of phonemes as a child writes is a time honored and extremely effective way for children to learn penmanship, letter-sound correspondences, the alphabet principle, phonemic awareness and spelling all simultaneously and spontaneously. This put the lie to the prevalent idea among phonics fanatics who insist the association must be learned “from sound to letter and not from letter to sound.”

It doesn’t matter which way they learn, as long as they learn. As Samuel Johnson once quipped there is little profit in pondering too long about which leg will go into the trousers first.

Marilyn Adams wrote the most important habit for beginning readers to acquire is the habit of glancing back at a new word immediately after it has been “sounded out.” In this way, the letter-sound correspondences are verified, and the image of the word can be mnemonically stored in memory.

That is also a most important principle. However, no one has ever checked this out to see whether it would work or not. In the article by Professor Groff referenced in the article I submitted to the *Harvard Education Review*, appended after the end of this book, he wrote no one can truly tell if it would work unless someone checks it out first. In his concluding line, Groff writes, “Until that time we will continue to be guided by personal intuition and by armchair philosophy.”

You can read Mr. Rose’s book at:

http://donpotter.net/PDF/Forget_the_Bell_Curve.pdf

Quotes Regarding Alphabet Fluency from Marilyn Jager Adams' 1990 *Beginning to Read: Thinking and Learning about Print*

The following quote is taken from Chapter 13 of Adam's well-respected and much quoted book. I am afraid that Chapter 13 on "Print Preliminaries" has been largely overlooked and unfortunately underestimated in the designing of reading curriculum.

Both theory and data suggest that instruction on neither the sounds of letters nor the recognition of whole words should be earnestly undertaken until the child has become confident and quick at recognizing individual letters (363). [This is the reason behind the creation of these Alphabet Fluency materials. This may be the most frequently violated principle of reading acquisition.]

In Chapter 6 of *Beginning to Read*, Dr. Adams gives a **summary** and the **instructional implications** of the Orthographic Processing Module of the reading process according to the Parallel Distributed Processing (Connectionist) Model of Reading. It merits careful consideration.

When the skilled reader fixates on a word, each letter activates its own recognition unit in the reader's memory. These directly activated units, in turn, send activation to each other, with the result that the associations between them are strengthened as the automatic consequence of having looked at the word. Over time, as the reader encounters more and more words, the associations between the letter units will ultimately come to reflect the more general orthographic structure of the printed language.

Strong associations develop between the units representing sequences and patterns of letters that have been seen frequently. As a result, any word composed of these sequences and patterns is perceived more or less holistically: Because of the learned associative linkages, every one of its component letters effectively primes and reinforces the perception of every other. In contrast, weak or inhibitory associations develop between letters that have rarely occurred together. As a result, long words are automatically broken into syllables: Because the letter sequences within syllables are quite predictable, the perception of the syllable as a whole coheres; because the sequences of letters that occur between syllables are unpredictable, the perception of the word becomes somewhat disassociated at the syllable boundary.

In short, then, although the skilled reader's Orthographic processor requires sequences of individual letters as input, it effectively perceives whole words and syllables. In reverse, however, the ability to perceive words and syllables as wholes evolves only through complete repeated attention to sequences of individual letters. With concern toward how to develop word recognition skills, the theory thus carries several implications.

First, it is extremely important that young readers be able to recognize individual letters accurately before word recognition instruction begins. Individual letters are input to the network. If a child cannot recognize a letter, it will not activate the appropriate unit within the network. Unless it activates its appropriate unit with the network, it cannot share the excitation with the other letters of the word under study. Unless the letters share excitation with the other letters of the word under study, the associations between them cannot be strengthened. Only through strengthening of these associations can word study enhance word recognition capacity.

Second, for the development of word recognition proficiency to proceed at its optimal rate, young readers must be able to recognize individual letters relatively quickly. The associations between one letter and another are strengthened or created only when both recognition units are active at the same time. If the child spends any measurable amount of time recognizing the second letter in a word, then, by the time it is resolved, the activation of the first will have uselessly swindled away. Difficulties in individual letter recognition thus subtract directly from any potential profit to be gained from studying whole words.

Third, for immature readers – readers who have not yet acquired a set of associations to match the print before them, it is important not just that they look at the word before them but that they attend carefully to its completed ordered sequence of letters.

Toward hastening the development and refinement of the letter recognition network, students should be engaged in activities that encourage attention to the ordered, letter-by-letter structure of the syllables and words they are to read. (Remember that the order of letters in a sequence is poorly perceived until the sequence becomes familiar.) Many of the most common practices of reading programs – including synthetic phonics, writing exercise with frequent blends and digraphs, and practice with word families – seem ideally suited to this end.

In this context, the allure of phonics, or the exercise of discovering words by sounding out its spelling, is that it inherently forces the child to attend to each and every letter of the word, in left-to-right order. The motivation for its recommendation has little to do with the value or importance of actually sounding out words. It is, from this perspective, merely a gimmick to focus the child's attention on its spelling. Note too that phonics activities that direct the child's attention to individual letters rather than sequences of letters do not seem useful to this end.

The value of having children write and spell is also strongly reinforced. **It has been shown that the act of writing newly learned words results in a significant strengthening of their perceptual integrity in recognition.**

By writing and spelling, I mean writing and spelling of **whole words**, as when a child composes her or his own story, writes to dictation, or even copies words over. (See Endnote) Workbook exercises that have children fill in the appropriate letter in a blank do not serve the same purpose because they do not force the child's attention to the spelling patterns of the words as wholes.

Exercise on frequent blends and digraphs such as *bl*, *st*, *pr*, *th*, *sh* and *ch* also seem worthwhile. As attention to such letter groups serves to strengthen the associations among their letters in memory, it should hasten the children's ability to perceive such strings quickly and holistically. In the same spirit, instruction on frequent prefixes and suffixes may similarly be helpful for the reader who is sufficiently advanced to be working on polysyllable words.

The theory suggests further that children be discouraged from skipping or glossing over words that are difficult for them. When they encounter a word that is hard to read, they should take the time to study it. They should look carefully at its spelling and sound out its pronunciation; then they should repeat this process until they can read off the word with something close to normal ease and speed. Happily, for children who are normal readers, this level is reached with only a couple encounters of the word, even if the encounters are separated by several days.

Importantly such focused word study during corrected reading should be relatively infrequent in practice. Intuitions and research concur that students' reading abilities are best advanced by giving them texts in which the vast majority of words are manageable. When students are stumbling on too many words, the best solution is no longer to ask them to reread; it is to give them an easier text. Note further that the objective here is not to force children to study and reread difficult words while you are watching; it is to help them develop the inclination to study and reread words they are reading by themselves.

These qualifications notwithstanding, repeated readings of difficult words and passages result in marked improvements in children's speed, accuracy, and expression during oral reading and, most important, in their comprehension. In view of this, we should choose texts that are worth rereading and, whenever it seems worthwhile, we should have children reread them.

In view of the importance of syllabification skills, one might infer that they ought to be taught. Is this inference supportable? Opponents of syllabification training have argued that it is circularly unproductive. In order to break a word down into syllables, they argue, the readers must first sound the word out. Being able to sound the word out was the goal of breaking it into

syllables in the first place. Consistent with this argument, various efforts to teach children to divide words into syllables have generally produced very little improvement either in children's ability to divide new, untrained words into syllables or in their overall vocabulary and reading comprehension scores.

As exceptions, several recent studies have obtained improvement in children's ability to pronounce two-syllable words by training them to compare the syllable to known one-syllable words (e.g., *problem-rob, them*) ...

Overall, the best instructional strategy for orthographic development is to induce children to focus on likely sequences that comprise syllables, words, and frequent blends and digraphs. As the children become familiar with these spelling patterns their ability to syllabify will naturally emerge along with the automaticity with which they will recognize the ordered spellings of single syllables. Beyond that, the strongest implication of the theory toward developing solid word recognition skills is that children should read lots and often.

Endnote

It is worth taking time to watch individual students copying words. Some persist in looking at the word to be copied, writing down one single letter and then looking back for the next letter. With respect to orthographic learning, however, the benefits of copying are expected to come from looking at the text to be copied, remembering the whole word or syllable, and writing that down before looking back to check one's spelling or to get the next word or syllable to be copied. Sometimes letter-by-letter copying seems to be nothing more than a habit, as though it simply has not occurred to the child to go for whole words or syllables. In these cases, the problem may be fully remedied by providing a little guidance on the method and increase efficiency of treating the to-be-copied materials in a word-by-word or syllable-by-syllable manner.

Quotes Regarding Alphabet Fluency from Marilyn Jager Adams' 2013 *ABC Foundations for Young Children: A Classroom Curriculum*

I was overjoyed recently to learn that Dr. Adams has published a new book: *ABC Foundations for Young Children: A Classroom Curriculum*, published by Paula H. Brookes Publ. Co, Baltimore, Maryland, 2013. In this book, Dr. Adams has translated the most current research into classroom practice. It is basically the outworking of the principles laid down in chapter 13 of her 1990 *Beginning to Read*. I am surprised that it took 23 long years for someone to finally write the book we have need all along. I had surmised from reading the book that there was one very creative and practical mind behind it. Dr. Adams recently emailed me that my suspicion was correct, and that she had written it herself from start to finish. Let's proceed to my quotes. I will not be including the references. I trust that everyone who reads these quotes will have their appetite whet sufficiently to purchase the book and read it all for themselves.

Children need to know the alphabet. To use phonemic awareness for reading, children need to know which letter represents which phoneme. In turn, learning letter-sound correspondences requires that children not only be able to discern each letter but also to identify each letter by shape, confidently and securely. To use their phonemic awareness to write, children must also be able to form the letters with legible accuracy and reasonable ease. For much of their classroom instruction on reading and spelling, they must be able not only to recognize each letter, but also to seek, recall, or even image the letter given only its name or sound. (2).

Even so, the issue is deeper than that, for children's letter knowledge is a good predictor of their responsiveness to phonemic training. ... It may well be, as several have argued, that gaining phonemics awareness *depends* on prior letter knowledge. (2)

In all, children's knowledge of letter names and sounds at school entry is the single best predictor of their reading and spelling growth, not just at the outset but throughout the elementary school years. Moreover, this is so even when other weighty predictors such as phonological awareness, language development, and intelligence measures are factored out of the equation. Children who enter school with poor knowledge of letters names and sounds face a far higher risk of reading delay and disability. (2)

Studies commonly show that only a minority of children are able to name or write all letters of the alphabet by the end of first grade and that the number who know the letter sounds is still smaller. (2) [Three years ago, I developed a simple alphabet knowledge and fluency assessment, in response to reading Bob Rose's *Forget the Bell Curve*. Bob maintained that children who know the alphabet to fluency will generally learn to read with little or no problem. I have a very busy tutoring practice for children, teens, and adults with reading problems, getting students from a wide range of local public and private public schools. My assessment revealed that NONE of the student coming to me for tutoring had alphabet fluency. That came to me as a shock, but confirms Dr. Adams' research observation.]

How can this be? Alphabetic knowledge is so fundamental and so pervasively important to literacy development. Without a comfortable familiarity with the alphabet, the student is effectively locked out of virtually everything that formal education has to offer. Our schools *must* do far better in helping children learn their ABC's. What could be the problem? [Adams then explains that most reading programs allocate too little attention and time to developing alphabet fluency, being only a small or incidental portion of a larger literacy program. (3, 4)

Of all the challenges that the child will ultimately confront, learning the letters of the alphabet is the *only* one that depends exactly and only on sheer rote memorization, and it must be over-memorization, at that. (4)

If the support they need is offered neither at home nor at school, then how will they learn? And without solid alphabetic knowledge, how much else will remain unlearnable? (4) [These are soul-searching questions. As the situation stands all across America, most first-graders do not know the alphabet at the end of first-grade. Here Adams was contrasting children coming to school from families that teach the alphabet and families that don't.]

Alphabetic knowledge refers to the children's familiarity with the names, forms, and sounds of the letters of the alphabet as measured by recognition, production, and writing tasks. The **goal** of this book is to provide teachers with lesson plans, materials, and assessments that will help them give their students the instruction, practice, and support needed to master each of these dimensions of alphabetic knowledge. (5) [Emphasis by DLP. Here Adams is summing up the rationale and purpose for the book.]

There are two underlying motivations for this design. The first, of course, is to help the children learn to print each letter efficiently and legibly. The second is that learning to write the letters significantly hastens children's ability to recognize them as, deep in the brain, the motor habits involved in writing each letter become tightly tied to the letter's visual representation. (6) ["Design" here refers to her explicit letter writing instructions. This is why Dr. Rose and I insist on having children *write* the letters of the alphabet in ABC order on a daily basis until they attain true fluency (automaticity).]

In the introduction to “Writing Uppercase Letters,” Dr. Adams has some very important information that should be carefully considered.

There are several strong reasons for anchoring letter writing as soon as possible. The most obvious, of course, is to engage children in writing as soon as possible – yet students will not be able to write much as long as the letters are insecure or onerous for them. A second reason is that spelling activities, both structured and independent are shown to be a superlative means of advancing children’s phonemic awareness, their grasp of the alphabetic principle, and their internalization of spelling patterns and conventions. However, spelling activities are thwarted to the extent that children are struggling with letters. (59)

Even so, learning to form letters so that they *look* right is only part of the challenge. Mature readers and writers do not “draw” letters in the way they draw faces, bunnies, or trees. Instead, each letter is tied to a highly overlearned series of movements that are executed almost automatically as people write. Thus, most people can write more legibly with their eyes closed than they can with their nondominant hand. A more important consequence is that as letter formation becomes automatic, people can devote their attention to their message, choice of wording, and spelling as they write. (59)

Leading children to practice a consistent set of strokes for each letter serves to accelerate the development of letter-writing automaticity. Furthermore, as the hand movements involved in writing each letter becomes bound to the visual representation, they serve to hasten and secure the child’s ability to recognize the letters. (59) [The term “bound” here refers to the connections model of learning that is the psychological theory behind Dr. Adams’ work – and mine. This would apply to any letterform, cursive, manuscript, or italic. I prefer cursive.]

In the introduction to “Writing Lowercase Letters,” Dr. Adams has some very important information that should be carefully considered.

The lowercase letters are far more difficult to learn than uppercase letters. [I do not think most parents and teachers are aware that lowercase letters are “far more difficult to learn than uppercase letters.” It is my personal preference to teach uppercase manuscript first and then go to lowercase cursive; but it takes a good knowledge of cursive instruction to do that. I come from the last generation in America to have learned cursive-first in first grade, before lowercase manuscript for math and drafting. I do not force my personal preference on other, although it is my consistent practice with my tutoring students; and I can vouch for its effectiveness.]

As mentioned in the introduction to Unit II, visual representation of the letters is integrally bound to the movements that the hands make when writing them. But there is more. Although learning to recognize uppercase letters is *hastened* by learning to write them, research indicates that learning to recognize lowercase letters *depends* on learning to write them. This is the reason that, for survival purposes, the visual system itself is preprogrammed to ignore differences in orientation of objects; yet, orientation is integral to letter identity and, indeed, makes all the difference between *b*, *p*, *q* and between *n* and *u*. (121)

What matters is not just *writing* the letters, but linking the appearance to a common habitual stroke sequence for its writing. Thus, letter-writing lessons are designed to help the children write letters such that each is represented by a consistent set of strokes, produced in a consistent order. You will be able to tell whether children are using the proper stroke sequence by examining their written work. The tendency to write letters backwards is a strong indication that children are not adhering to recommended starting spots or stroke sequences, as is inconsistency

in rendering of a letterform one occasion to the next. (121) [I consider these words of wisdom that are worthy of serious consideration. Dr. Adams' advice applies to any form of writing. Most children coming to me have either received no handwriting instruction or were not paying attention when proper handwriting strokes were taught. While she does not mention it, proper posture and grip are also vital. To get to the heart of why handwriting instruction has been neglected for decades in American schools just read Gail Harold-Taylor's 1989 *Administrator's Guide to Whole Language*, where the author clearly says that formal handwriting instruction is not necessary in the primary grades. My own school district has gone without any formal handwriting program for over 25 years. Just ask any first-grade teacher. Yes, it is hard to believe, but true!]

Quotes from Unit 4: "Introducing Letters and Sounds." Here Dr. Adams recommends teaching long-vowel sounds **before** short-vowel sounds, in accordance with only a handful of phonics programs such as the Priscilla McQueen's method which was based on the Association Method of Mildred McGinnis, the Weiss Method, Stevenson, Open Court before SRA/McGraw-Hill tragically switched from long to short vowels first, and a few others.

The vowels, by contrast, are exercised by having children listen for such sounds as /ē/ when it occurs in the medial (*meet* versus *moat*) or final (*see* versus *sow*) position in words. This is a relatively difficult challenge. However, it is also an important one. Children must learn to hear vowels in the middle and end of word as they develop phonemic awareness and learn phonics and spelling. To make this challenge easier, only the *long*, sounds of the vowels are introduced in Chapter 12. One advantage of the long vowels is that they require tensing of the mouth that must be held long enough to make a relatively clean and distinct sound. A second is that the long sounds of the vowels are the same as their names. As such, each long vowel sound is already familiar to the children, allowing them to concentrate their attention on finding the sound within the words. (185)

Awareness of vowel phonemes is notoriously difficult for young children. How many times to young spellers have to be reminded that every syllable must have a vowel? One reason is that consonants are intentional, ballistic movements. They are articulated, whereas the vowels are shapes of the mouth. Awareness of short vowels is particularly difficult. Because they are short in duration and lax in pronunciation, the short vowels are hard to detect, and their sounds may vary far more as a function of the phonemes that surround them than do those of the long vowels. (185)

Understanding how the brain controls drawing and handwriting

By Pam Versfeld, Physiotherapist

Experienced hand writers can write a sentence without needing visual guidance. This is because fluent and efficient handwriting is produced with minimal need for visual feedback.

Visual monitoring of handwriting is important for positioning of handwriting on the page and keeping the writing in a straight line.

Letters are formed by a series of small movements called strokes.

The pattern of strokes needed to form a letter are store in the brain as a motor plan.

The motor plans (also referred to as representations) for letters contain information about the relative length, direction and sequence of the strokes needed to form each letter.

Well-learned motor plans control the direction and sequence of strokes without the need for feedback for completing the movements with reasonable accuracy.

Handwriting movements occur so fast to rely on feedback for controlling each letter.

The movements (strokes) used to form letters are pre-planned and very rapid. In fact, the speed of fluent handwriting is so fast that they are completed before any information from the muscles or from the vision reaches the brain.

In fluent handwriting each letter is pre-planned and the movement is carried out without the need for visual monitoring or feedback from the muscles. In fact, research has shown that after the first few months of handwriting young children not only re-plan letters, but have started to pre-plan whole syllables.

The equivalence factor: writing big or small uses the same motor plan

Learning to print letters is all about learning the motor plan for the letter.

Learning to write a letter is a process of learning the relative length, direction and sequence of the strokes that form the letter and storing this information in the brain as a motor plan for the letter.

When a letter is well learned seeing an example of the letter (grapheme) or hearing the letter (phoneme) will call up the motor plan for writing the letter.

With repeated practice the link between seeing, hearing or thinking about a letter becomes more direct, efficient and faster and requires no attention.

When learners have acquired the motor plan for a letter, they are able to write the letters without hesitation.

Learners who have not developed a direct link between the letter and the motor plan will hesitate before writing a letter.

Tracing letters inhibits learning the motor plan

Tracing letters or writing a letter guided by an outline of the letter can only be done with any degree of accuracy by using visual monitoring of the movement of the pencil tip. To do this the child uses a series of short strokes to make sure that the line they are drawing stays on the line (or between the lines) on the page.

This has two consequences: children get into the habit using vision to monitor their actions and they do not learn the motor plan for the letter. Tracing is a bad idea - and should be banned from handwriting programs.

Last edited on 9/6/2017.

<https://skillsforaction.com/handwriting/brain-controls-handwriting-movements>

Words of Wisdom from Romalda Spalding

Romalda Spalding was correct when she wrote, “I have gone into great detail in what to say to children who are learning to write because it is necessary to be specific if handwriting is to become a correct and facile tool for learning. (Cursive or connected writing is easily learned from *correct* manuscript writing). If letters are made incorrectly, they are mentally pictured incorrectly also. This is a serious cause of failure in both reading and written spelling. It develops dyslexia or perceptual handicap.”

Spalding continues, “Have the letters written across the page to teach the spacing of both kinds of letters (Letters starting at 2 and with a line). Letters that begin with 2 on the clock start *just far enough* from the preceding letter to form the clock. Letters that begin with a line sit *very close* to the preceding letter.” I have the child say the letter name when practicing writing the alphabet for fluency.

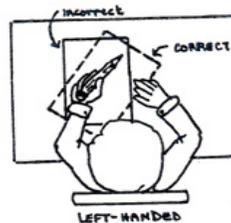
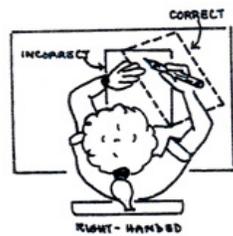
Spalding concludes, “The beginner at any age in school (and at home) needs to be taught all these writing techniques which helps any child acquire the correct motor patterns. The first-grade and second-grade teachers cannot afford to skip any of them. Handwriting with the sounds of the phonograms is a basic means of preventing or overcoming confusion and reversals in spelling and reading from which so many children needlessly suffer. (WRTR p. 78)

Notice carefully that we do **not** use trace and copy to teach letter formation. All letters are taught **by direct instruction**. Students must be taught every detail of letter formation, including grip, posture, and strokes. This will require intense teacher observation until the correct habits are well established.

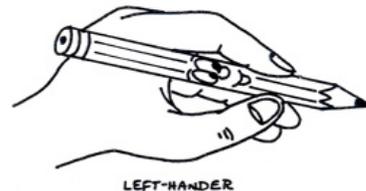
Letter writing fluency in letters per minute (LPM) can be calculated by timing the students writing the entire alphabet in seconds and dividing that number by 1560 (26 x 60). $1560/\text{seconds} = \text{LPM}$

Handwriting Manuscript

How to position Writing Exercise Book



How to hold a pen with the Tripod Grip



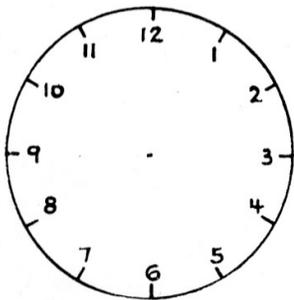
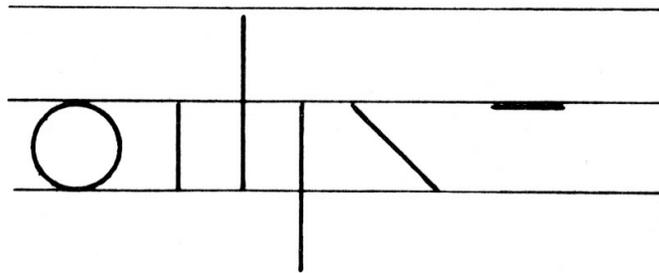
Detailed Instruction for Teaching the Lowercase Manuscript Letters

General Rules:

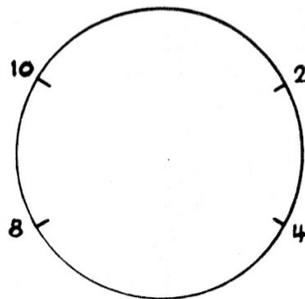
All letters set on the base line.

Letters or parts of letters are of two sizes. They are either *tall* or *short*. Tall letters or tall parts reach to the second line above but do not touch it. Short letters or short parts are half as high as tall letters, reaching to the first line above.

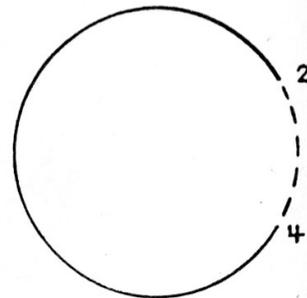
Manuscript letters are made from the clock face or parts of it, and straight lines.



The Clock Face



These are the four points we use most often

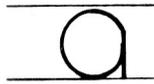


This shows how we use the clock to write c (from 2 to 4)

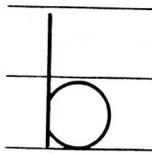
Formation of the Lowercase Letters

Presented in Alphabetical Order

For Fluency Development



Teacher says, “The letter *a* is a *short* letter. Short letters fill the space from the baseline to the first line above. Start far enough in from the edge of the paper to make a clock face. Start at 2, *go up* around the clock to 2 and, without lifting the pencil, pull a line straight down to the baseline.”

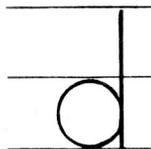


“The letter *b* is a *tall* letter with a *short* part. It starts with a line just below the second line above. Pull the pencil down to the baseline and, without lifting the pencil, go back up almost to the first line above and, going in the direction in which we write, make the round short part starting from 10 and rounding to 8 on the clock.” Note that the lips make a line when saying the /b/ sound.

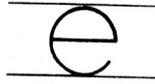
Special note regarding all letters starting with a line: Letters that start with a line *sit close* to the preceding letter. No part of a letter should ever be put before this beginning line. All beginning vertical or slanted letters start *at the top*. **These are two important rules.** Do not take the pencil off the page to complete any of the lowercase letters except in making the second part of *k*, to put the crosses on *f*, *t*, and *x* and to put the dots on *i* and *j*. Horizontal lines are always drawn in the direction of writing. Do not use the words left or right. Instead establish very firmly from the start the *direction in which we write* (and read). Many remedial children, both left- and right-handed, learned to make this line correctly, but before lifting the pencil they retrace it backwards. Make certain that *no* child does this, for it causes him or her to see the letters backwards, reversing the habit will help the student learn to write and read correctly.



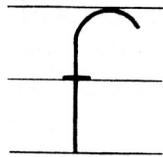
“The Letter *c* is a *short* letter. It starts just far enough from the edge of the paper to make a clock face. Began at 2, *go up* and around the clock and stop at 4.” It has two sounds /k/ and /s/.”



“The letter *d* is a *short* letter with a *tall* part. Start at 2 to make the short round part, *go up* and around the clock to 2, go straight up to the second line above, and pull a line straight down to the baseline. This is all done without lifting the pencil.” Note that the lips form a circle when you make the /d/ sound.

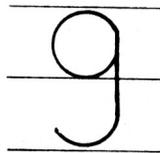


“The letter *e* is a *short* letter. It starts with a straight line drawn from 9 to 3 through the clock. (Put 9 and 3 on the clock face to show this). Without lifting the pencil, continue *up* around the clock from 3 and stop at 4.” Note that *e* is the *only* letter for which a line is made in reference to the clock face. It sits close to the preceding letter because it starts with a line.

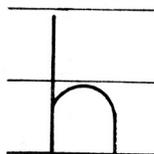


“The letter *f* is a *tall* letter. It starts below the second line above, at 2. Go *up* around the top to 10, pull straight down to the baseline. Lift the pencil to put on a *tiny* cross in *the direction in which we write*.”

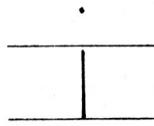
The left-handed child’s normal direction in using his or her hand is away from the body (to the left). Explain this to the child. Then teach the child from the start that writing English requires that he or she makes all horizontal lines go *in the direction in which we write*. This training can save the student from developing dyslexic tendencies.



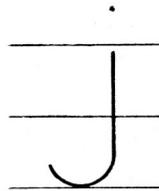
“The letter *g* is a *short* letter. It starts at 2. Go *up* and around the clock to 2 and make a line down almost to the line below the baseline so this part is the same size as the part above the baseline. Round it from 4 to 8.” A short letter should be able to set beneath it without touching it.



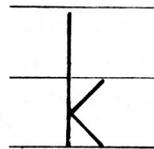
“The letter *h* is a *tall* letter with a *short* part. It starts *at the top* with a line. Start just below the second line above and pull a line down to the baseline and without lifting the pencil, go back up to the first line above, and going *in the direction we write*, make the short round part, start from 10 to 2 and finish with a line down to the baseline.”



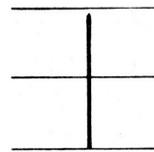
“The letter *i* is a *short* letter which starts at the *top*. The dot is made last by setting the pencil above the letter and taking it off.”



“The letter *j* is a *short* letter. It goes below the baseline. Since it begins with a line, it starts *at the top*. It goes down almost to the line below, before rounding on the clock from 4 to 8. The dot is put on last.”



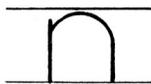
“The letter *k* is a *tall* letter and starts *at the top*. The second part is separate. It is a short part that starts *at the top*, going in and out the same distance.”



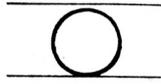
“The letter *l* is a *tall* letter. It starts at the *top* and sits on the baseline.”



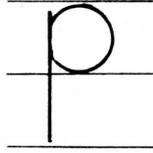
“The letter *m* is a *short* letter. It begins with a line. It starts at the *top* and is drawn straight down to the baseline. Retrace from the top and round it on the clock from 10 to 2, continue by making a straight line to the baseline, retrace to the top of the line, round again from 10 to 2 on the clock and finish with a straight line which ends at the baseline.”



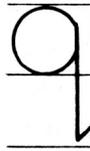
“The letter *n* is a *short* letter.” Repeat the directions for making the first part of the *m*.



“The letter *o* is a *short* letter. It starts at 2 on the clock, and goes *up* and around and closes at the 2. Make it sit on the baseline.”



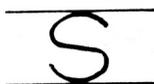
“The letter *p* is a *short* letter. It starts with a line and therefore *sits close* to the letter in front of it. The line starts at the *top* and goes to the line below the baseline. Retrace from this line to the top and round the second part from 10 to 8 on the clock.”



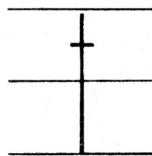
“The letter *q* is a *short* letter. It starts at 2 and goes *up* and around to 2. Without lifting the pencil make a straight down to the line below. Make a tiny flag *in the direction we write*.



“The letter *r* is a *short* letter. It starts at the top. Make the short line go to the baseline, retrace to the top and round it from 10 to 2 on the clock.”



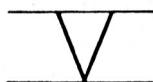
“The letter *s* is a *short* letter. It starts at 2 on the clock, goes *up* around to 10, slides across to 4 (which is below 2) and back around to 8 (which is below 10).”



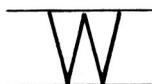
“The letter *t* is a *tall* letter. It begin at the *top* just below the second line above. The cross is small and drawn just above the center, *in the direction we write*.” Make sure they do not retrace backwards!



“The letter *u* is a *short* letter. It starts with a line, and therefore it is started at the *top* and sits close to the letter in front. Bring the line to the baseline and round it from 8 to 4, continue up with a straight line, and retrace with a line to the baseline.”



“The letter *v* is a *short* letter. It starts with a line, and therefore it is started at the *top* and sits close to the letter in front. The first line slants *in the direction in which we write*. Finish without lifting the pencil.”

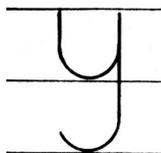


“The letter *w* is a *short* letter. The instructions are the same as for *v*, except repeated for the second half of the letter.”

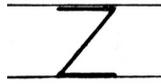


“The letter *x* is a *short* letter. It starts with a line, which starts *at the top*, therefore it sits close to the letter in front and slants *in the direction in which we write*. Its cross starts *at the top* and goes through the middle of the letter.”

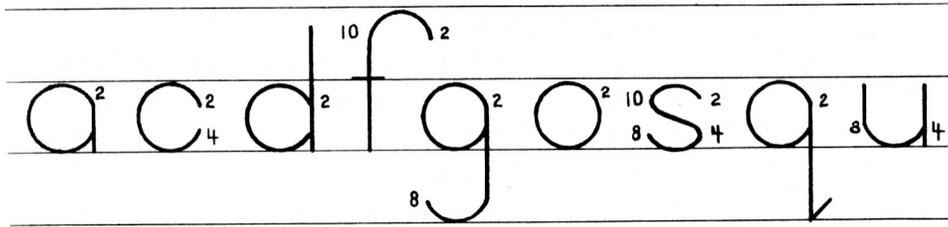
Note: Make sure all the children write each of the letters *f*, *t* and *x* *before* putting on their crosses.



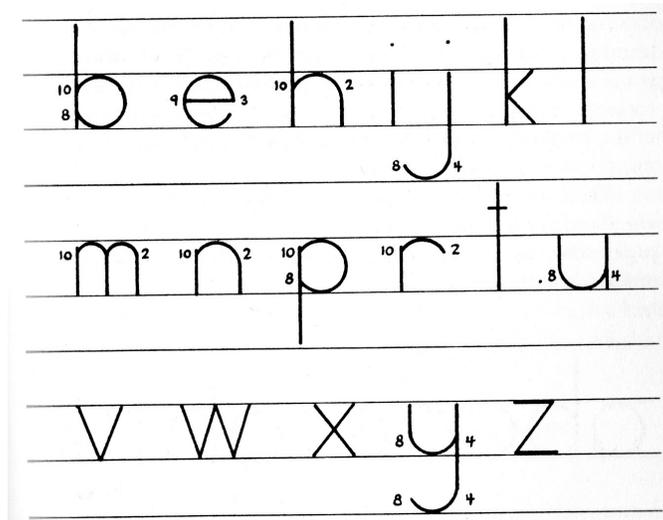
The letter *y* is a *short* letter. Start it at the *top* with a straight line, then round the bottom from 8 to 4, go up with a straight line and straight down to the line below the baseline. It sits close to the letter in front. The bottom part is rounded from 4 to 8 on the clock.” This form for the lowercase *y* is taught in anticipation for teaching cursive, instead of the two-line form.



“The letter *z* is a *short* letter. It starts with a line. Therefore, it sits close to the letter in front and the top line is made in the *direction in which we write*. Without taking the pencil off the paper make a slant to the baseline at the point under the beginning of the top line, and finish with a line drawn *in the directing in which we write*.” The top and bottom lines should be parallel.



These are the letters that begin with a circle starting at 2 in the clock. The teacher’s explanation of how to use the numbers on the clock is indicated above. These letters start at 2 on the clock and *go up*. They start *just far enough out* to make the circle.



These are the letters that begin with a line at the *top*. They sit close to the letter in front. The teacher is to explain how the clock is used for the round parts. They all set close to the preceding letter.

abcdefghijklmnopqrstuvwxyz

abcdefghijklmnopqrstuvwxyz

abcdefghijklmnopqrstuvwxyz

This is how the alphabet should look when the students write all the letters from *a* to *z* in lowercase letters. Students should practice writing the alphabet from *a* to *z* daily to develop fluency. They should say the letter names as they write the letters to develop a strong association between the letter name and the motor movement. This is important for oral spelling.

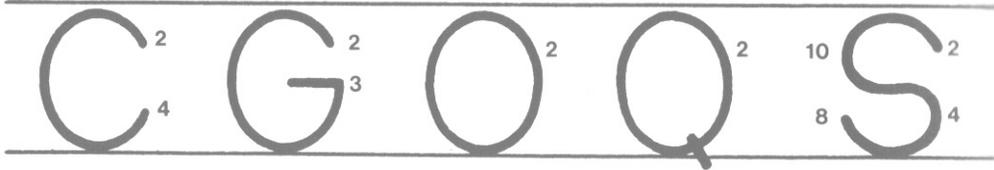
After children can easily form the letters correctly, they should learn to reduce the size of their writing to one third the size of the above lowercase letters, as shown below.

abcdefghijklmnopqrstuvwxyz

Techniques for Teaching the Manuscript Uppercase Letters

All capital letters are *tall*. They almost fill the space between the baseline and the line above.

The rules for *round* lowercase letters also apply to the uppercase letters: C, G, O, Q, and S. Each starts at 2 on the clock and *goes up*. Since these are tall letters the round parts are somewhat elongated vertically. Have the students say the letter names as they write the letters to establish a strong associative link between letter shape, motor movement, and letter name. The cross on the Q starts at the top and slants in the direction we write.



In writing uppercase (capital) letters beginning with lines make the vertical line first, starting at the *top*. The horizontal lines of A, E, F, H, I, T are made *in the direction in which we write*. Where there is more than one horizontal line, make the top one first (E, F, I). The pencil is lifted before making the second line of A, B, D, E, F, H, I, K, M, N, P, R, T, and they also begin the *top*.



The uppercase letters V, W, and X are made just like the lowercase letters. First make the line which slants in the direction in which we write, starting at the *top*. V and W are made without lifting the pencil. The second line of X starts at the *top*. Y is the only uppercase letter that is finished below the baseline. Z is formed the same as its lowercase letter. The top line is drawn in the direction in which we write and it is finished without taking the pencil off the paper.



Teaching the Alphabet

By Samuel L. Blumenfeld

Few moments in childrearing are more enjoyable than those spent teaching a child the alphabet. I've seen the joyful look that lights up a child's face as she repeats the alphabet letters, coached by a parent or tutor. The child realizes that she is beginning to learn to make sense of printed matter.

The first step in this process is learning the letter names. Some pedagogues believe that teaching the letter sounds should precede teaching the letter names. They contend that teaching the letter names first may confuse the child when learning the letter sounds.

I disagree. The child should be taught the letter names because all objects have names, and we identify them by their names. The child has seen letters all over the place in this literate world. She has seen them in the storybooks her parents read to her. The child hasn't a clue what the letters mean until she is taught their sounds. That's when you explain what the letters mean. Learning the letter names is just the beginning of the long process of understanding.

There are many ways to teach the alphabet. The easiest way is to use the "Alphabet Song." Arrange the alphabet in the form of a rhyming poem to be recited as in the box at right. Note that *w* is on a line by itself, because it has three syllables: "dou-ble-you."

Children learn to sing the Alphabet Song correctly before they can identify the letters at random. Thus, after the child knows the alphabet song, get a set of alphabet flash cards or make a set of your own. Teach both lower-case and upper-case letters. Show the child the letters at random and see if she can name them. Don't worry if she has problems remembering the letters. She will learn them much better when you start teaching the letter sounds during which she will be learning to read words and simple sentences.

If you want to be creative and make your own flash cards, print out letters from your computer, or cut out letters from newspaper headlines and magazine ads.

You can ask your child to look at a magazine ad and have her cut out the letter *c* or *m* or any other letter. Your child may even help you make a set of flash cards.

Sometimes, just knowing the letter names helps a child learn to read on his or her own. There are indeed precocious children who actually teach themselves to read. Of course, there is no law that says you can't teach the letter sounds anytime you want. A good phonics program would be useful to have on hand in case your child wants to move ahead speedily. I recommend a program without pictures, so that the child understands that letters stand for sounds and will concentrate on what the letters say rather than what a picture says. Pictures delay learning and encourage guessing.

If a child has learned to read with lots of pictures, he or she will be discouraged when faced with a page of nothing but print. A fluent phonetic reader who has learned to read without pictures will not be fazed by a full page of print.

As you teach the alphabet your child may want to draw the letters. Get a large drawing pad and markers and let your child copy the letters as they appear in books or magazines. In other words, don't use ball-and-stick manuscript.

Once you begin teaching the letter sounds, then start teaching your child to write in cursive. The reason for this is simple: if a child learns cursive, first he or she will always be able to learn to print very nicely later on. But if you teach manuscript - or print script - first, your child may never develop a good cursive handwriting. When children spend a year or two writing in manuscript, they develop writing habits that create obstacles to the development of a good cursive script - or, as it was once called, penmanship.

In sum, teaching your child the alphabet should be the most pleasant task you can perform. It is a milestone in your child's growth, and a wonderful time to remember. You may even want to tape your child reciting the alphabet as he or she is learning it so that the both of you can listen to it twenty years hence, and laugh - or cry.

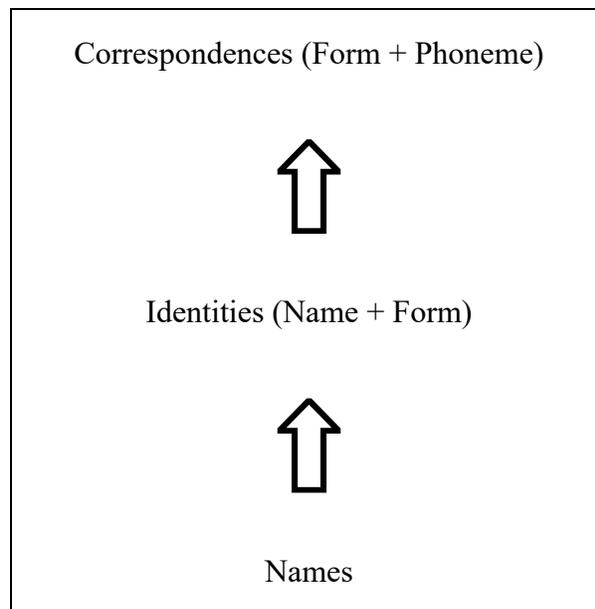
First published in *Practical Homeschooling* in 2001.

Accessed by Donald Potter on June 4, 2021.

Teaching Letter Recognition

by Bruce A. Murry

Why is it often hard for children to remember the names of letters? Unlike Chinese characters, letters are simple, spare forms with little detail. This simplicity contributes to the ease of forming letters, but it can make them easy to confuse, particularly the lowercase letters *b*, *d*, *p*, and *q* which are all the same shape and differ only in orientation. Some teachers have added to the confusion by describing them as made of balls and sticks. Generally, children are taught the capital letters (where *B*, *D*, *P*, and *Q* are not similar shapes) well before the lowercase letters. Acquiring letter names is useful in learning to read. The names are concepts about print, vital vocabulary for understanding reading instruction. In addition, most letter names provide reasonably good hints for phoneme awareness (e.g., *eff* is not a bad approximation of the phoneme /f/). Children's first experience with the alphabet may be to learn to sing the alphabet song, which introduces letter names with a tune originally introduced by Mozart. Figure 2 shows the developmental sequence for learning letters.



Developmental sequence for learning letters.

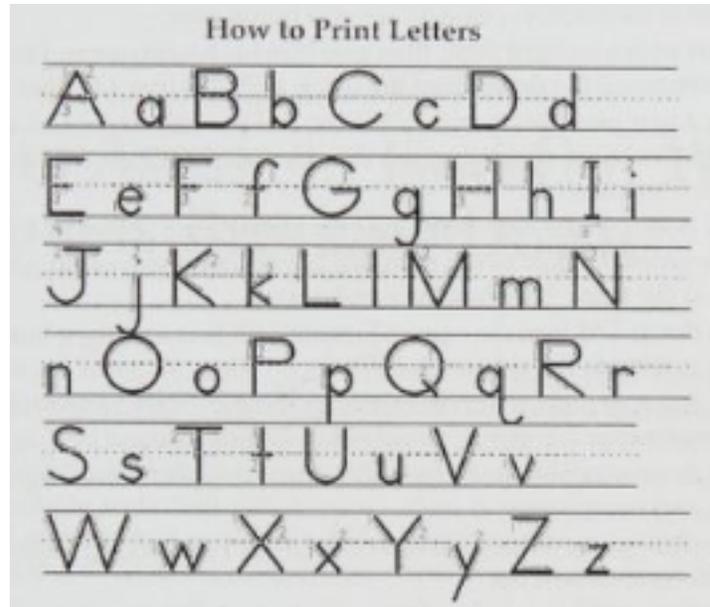
Letter names, essentially nonsense words when first learned in the alphabet song, are linked with letters in learning letter identities. The critical achievement for learning to read is to learn the correspondence between each letter form and its phoneme. Consonants are learned this way in phoneme awareness instruction. At this point, the letter name is replaced by the phoneme so that the letter form signals the phoneme, rather than the letter name. Because the letter name drops out in using correspondences for decoding, teachers should move away from asking, e.g., “What does h-o-g say?” In this case, the letter names give misleading signals for the phonemes. It is better to use covers to reveal the letter forms one by one, to scaffold decoding.

Letter recognition was once thought to be the best predictor of children's success in learning to read (Bond Dykstra, 1967). Though it has been edged out by phoneme awareness, the combination of letter recognition and PA explains most of the variation in success in learning to read words (Share, Jorm, Maclean, Matthews, 1984). Letter names are useful for several reasons. **First**, letter names are concepts about print. Children need the vocabulary of letter names (e.g., *double-u*, *ex*, *wye*, and *zee*) to understand the teacher's talk about phoneme awareness and phonics. **Second**, letter recognition helps phoneme awareness. Having a constant visual symbol for a phoneme makes the phoneme easier to learn. **Third**, letter names help children learn letter identities by giving the abstract form a name. With a reliable link to the letter identity, correspondences are easier to learn.

The common-sense view that we learn letters by memorizing their shapes is wrong. The problem is evident with the letters *b*, *d*, *p*, and *g*, which are all the same shape. Recognizing letters is a matter of learning the placement, direction, size, and sequence of letter features (Adams, 1990). It is a mistake to try to teach children letters as holistic shapes, or as assemblages of balls and sticks. Letters are not recognized by shapes, but by their **features**. For example, the letter *m* is composed of a line segment, a hump, and a second hump, executed from left to right. Learning this sequence is best taught with guided printing practice on lined primary paper, emphasizing the optimal downward and left-to-right sequence of strokes that puts the hand into the right position for the next letter. Sue Dickson, creator of the *Sing Spell, Read, and Write* phonics program, devised child-friendly ways to help children learn the placement, direction, size, and sequence of letter features. A summary of her ideas is in the Appendix of this chapter, including a diagram with directional arrows to show the sequence for printing the features and verbal instructions for walking children through forming each letter. A vital material for helping children learn the placement, direction, size, and sequence of letter features is primary paper, the kind with a dotted line between two solid lines and a generous amount of space for forming the letters. So that children can understand the use of these lines, it helps to give them concrete names, such as the fence (the intermediate dotted line) [midline], the rooftop (the line above the fence) [headline], and the sidewalk (the line below the fence) [baseline]. The area below the sidewalk, also important in letter formation, might be called the ditch [guideline below]. Figure 3 illustrates these lines with images that will be helpful to prealphabetic readers who can't read the printed labels. The lines act as landmarks to show students the placement, direction, size, and sequence of features in forming the letters. Using plain paper is not more creative: It withholds a crucial scaffold for learning the optimal sequence for forming each letter, the sequence that will make it easiest for the hand and end in the position to form the next letter in spelling words. In general, the easiest sequence is to form letters from top to bottom and from left to right. Left and right are crucial concepts about print for instruction in forming letters. The directional arrows on the diagram in the appendix show these sequences.

The best way to learn letter features is by guided printing practice. Guided printing practice shows the sequence of strokes while explaining and modeling letter formation with simple language. For example, "Letter *c* begins just below the fence [midline], curves up to touch the fence [midline], continues around to the sidewalk [baseline], and ends just above the sidewalk [baseline]. In other words, go up and touch the fence [midline], then around to the sidewalk [baseline] and up. *F* or letter *a*, make a letter *c*, but keep going back to the place you began and then go straight down to the sidewalk [baseline]. Go up and touch the fence [midline], then around and touch the sidewalk [baseline], around and straight down. "Simple directions, coupled with modeling will help children form the letters in the right sequence and learn the features of letters for automatic recognition. In explaining and modeling letter formation, children need vivid, concrete language, e.g., "To make lowercase *b*, start at the rooftop [headline] and drop straight down to the sidewalk [baseline]. Then b-b-bounce back up to the fence [midline] and around. "As children form the letters during their early practice, they should recite a brief version of these instructions as they form the letter, e.g., "Drop down, bounce up, and around. **Should beginners trace dotted letters? The answer is no, because tracing will not guide them through the optimal sequence for forming the letters.** If I wanted to show you the way to an unfamiliar place, I could have you follow my car, or I could name the roads, identify landmarks along the way, and give directions about which way to turn at each landmark. Having you follow my car would be analogous to tracing dots; you would get there, but you probably wouldn't be able to find your way next time. Noting the key roads, landmarks, and directions would help you learn the route. Similarly, **students need printed guidelines and a standard sequence to learn where to begin a letter, which direction to go, and how large to make each part.** The idea of drawing the letters is based on the mistaken idea that letters are learned as holistic shapes rather than as sequences of features. Chinese children have much more complicated characters to learn, using guidelines shaped like windows. We can benefit from their insights in using primary paper to help children learn to form letters.

Highlight and underlines are by Don Potter to indicate important information. Information in brackets [] is from the Zaner-Bloser manuscript strokes. Sue Dickinson's strokes may be more child friend, but Zaner-Bloser is standard and understandable to small children.



Placement, direction, size, and sequence for forming letters, from Zaner-Bloser.

This information was taken from Dr. Bruce Murray's *Making Sight Words: Teaching Word Recognition from Phoneme Awareness to Fluency – How to help children read words effortlessly without memorization* (2012). This is the first edition. There is a 2020 edition available. I highly recommend Dr. Murry's book as an interesting, up-to-date, and practical reference book for improving reading instruction.

<https://archive.org/details/makingsightwords0000murr/page/290/mode/2up?view=theater>

<https://amzn.to/3Uq60mc>

It come as no surprise to me that none of the kids coming to me for tutoring appear to have received any formal handwriting instruction since handwriting books were removed from the classrooms in about 1995 due to the Whole Language Tsunami. Recent efforts by local teachers have been rebuffed by those in charge of curriculum. I suppose there will be no improvement until those enamored with Whole Language eventually retire and are replaced with teacher schooled in the Science of Reading.

Internet Resources

“The ABCs of Alphabet Instruction” by Deborah K. Reed, Ph.D. Director, Iowa Reading Research Center.

<https://iowareadingresearch.org/blog/alphabet-instruction>

Why handwriting is important for reading.

<https://appytherapy.com/2017/03/08/handwriting-literacy-handwriting-influences-reading/>

Hand-writing letters shown to be the best technique for learning to read. This is a report of a study by Brenda Rapp and Robert Wiley.

<https://hub.jhu.edu/2021/07/07/handwriting-more-effectively-teaches-reading-skills-brenda-rapp/>

Dr. J. Richard Gentry’s 2016 *Psychology Today* article, “5 Brain Based Reasons for Teaching Handwriting.”

<https://www.psychologytoday.com/us/blog/raising-readers-writers-and-spellers/201609/5-brain-based-reasons-teach-handwriting-in-school>

On the next three pages, is the Zaner-Bloser Detailed Stroke Description. This is very valuable information because it will enable any parent or teacher to communicate the strokes to their students clearly in a manner that will make it relatively easy for the students to develop very good manuscript handwriting in a very short time.

On November 9, 2022, I saw a Twitter feed from a lady who was using a method very similar to my Alphabet Tapping Exercises. She said she got it from “Roadsters.” They put *wx* and *yz* on separate lines, which would work as well as my method, but takes another line of text. I developed my method on my own from a hint I read that kid should tap the alphabet. I didn’t know exactly what that meant, but it gave me a lead for developing a method of teaching the alphabet the Alphabet Song and tapping.

<http://www.readsters.com/wp-content/uploads/2017/07/ABCSongChart.pdf>

Be sure and watch Amy Siracusano’s excellent webinar: “The Simple View of Writing; Transcription and Composition.” (Feb. 24, 2021)

<https://www.zaner-bloser.com/webinars/handwriting-webinars.php>