# HOW TO TEACH CHILDREN TO READ WORDS 

by Patrick Groff, PhD<br>Professor of Education Emeritus<br>San Diego State University

Copyright © 2015 by The National Right to Read Foundation
Permission is granted for reproduction and use for noncommercial educational purposes.

To the Teacher:
Dr. Groff prepared this document in 1995, and it was discovered in a folder at The National Right to Read Foundation after his passing in the spring of 2014. It seems proper and right to publish this instruction booklet now, not only to honor Dr. Groff, but to perpetuate the legacy he left to children today. The principles embodied in this teaching tool are truly timeless. Opening the door for all students to become proficient readers was his lifelong mission. We are grateful to Dr. Groff's son Christopher, who gave permission for this to be published.

It is our hope that many will find this a helpful tool to open the door to the wonder of words, and the joy of reading.

Robert W. Sweet, Jr.
President
The National Right to Read Foundation
http://www.nrrf.org

## Preface

This book is written for the use of anyone who wants to help someone else learn to read. If you can read, and wish to teach another person the basic skills of reading, this book is for you.

The book often talks directly to tutors of children or pupils. The content of the book is equally useful, however, for instructors of any illiterate, semi-illiterate, or functionally illiterate person, regardless of his or her age. The book has widespread application because the task of learning to read is the same for illiterate people of all ages.

Why is it important to be able to read words well? The experimental research on reading development (see the "References and Suggested Readings" at the end of the book) reveals one thing, clearly and consistently. The ability to recognize words relates more closely to reading comprehension than does any other factor associated with literacy. Being able to read word automatically (quickly, accurately, and confidently) therefore is the most important requirement for being able to understand what is read.

It often is asked, "Can't a reader just skip written words he or she can't recognize, or simply guess them? Isn't it all right to substitute words for ones that can't be read?

The answer to both these questions is NO. Mature, skillful readers generally do not read in this fashion. Instead, they usually pay close attention to all the words in sentences they read. Anytime it is important that you understand precisely what an author intended to say, you must read all the words he or she wrote. This is not only true for technical, vocational, or scientific written material. Literature, such as poetry, also must be read just as carefully.

Students enter our schools expecting to become good readers by the time they graduate. Unfortunately, many of them leave school, often as dropouts with very poor reading ability. The functional illiterates cost the nation billions of dollars in lost production and poor job performance, welfare payments, consequences of criminal activities, lost tax revenues, and remedial education. Failure to learn to read well can literally destroy the future of a student caught in its web. Inability to read words well (automatically) is the basic problem.

It thus is wise for parents or any other tutors of children to first test their ability to read grade-level material toward the end of the first grade. Sometime in the second half of the first grade, determine if our student omits, substitutes, mispronounces, or inserts words when reading aloud. If he or she does, this student needs help in word recognition.

How to Teach Children to Read Words shows you now to provide that needed assistance. It takes you slowly, and surely, through the various stages of word recognition instruction that research has found should be conducted.

Good luck and Happy teaching!

## Introductory Note from Professor Groff

The book illustrates, with many examples, how to begin word reading instruction, the way to test whether learners have mastered the Stages of this teaching, and the many ways to motivate or stimulate people to want to learn to read words. You won't have to reason out the words that are needed in this teaching. The book provides lists of words for that purpose.

By putting this book into practice with those who require its teaching, you will give a vital and urgent service. You will help to ameliorate the crisis in literacy development that now envelops the nation.

## Table of Contents

## Introduction

## Teach Yourself Phonics Information

20 Tips for Teaching Phonics Information.

## The 7 Stages of Phonics Teaching

The First Stage of Phonics Teaching
Step 1. Teach special terminology involved: word, letter, sentence
Step 2. Distinguish each letter of the alphabet
Step 3. Learn letter names
Step 4. Use letter cards to spelling some single syllable words as student watches
The Second Stage of Phonics Teaching
Step 1. Minimal pair drills: 6 categories of consonants
Step 2. Say speech sounds of familiar 2 and 3 letter words
Step 3. Tell what word you hear from sounds
Step 4. Have student tell rhymes
Step 5. Detect serial order of speech sound as they occur in words
Step 6. Phoneme deletion
The Third Stage of Phonics Teaching
Step 1. Letter cards to identify letters in predictable-spelled 3-letter words
Step 2. Letter cards to spell 3 -speech sound words spelled with three letters
Step 3. Consonant substitution to word, i.e., rat > bat.
Step 4. Substitution for middle letter, i.e., rat $>$ rut.
Step 5. Single syllable words beginning letter (consonant) clusters.
The Fourth Stage of Phonics Teaching
Step 1. Consonant digraphs (ch, sh) and ending digraphs, ll, ng, ck, ss, ff.
Step 2. VCE: hat $>$ hate, pet $>$ Pete, bit $>$ bite, hop $>$ hope, cut $>$ cute.
Step 3. Single-syllable words with vowel digraphs: ea, oa, ai, ee, oo.
The Fifth Stage of Phonics Teaching
Step 1. Review ea, oa, ai, see: first letter long sound
Step 2. Four new vowel sounds
Step 3. Digraph ou as in loud
Step 4. Digraph oi as in oil (Groff listed 4, $5 \& 6$ together)
Step 5. Digraph /oo/ as in boot
Step 6. Digraph /oo/ as in book.
Step 7. The digraphs ou, ow, oi, and oo not given "long" vowel sounds. Just have them spell them.
The Sixth Stage of Phonics Teaching - Unusual spellings
Step 1. care, hair, there, bear, their as /ě/ - Vowel-r words
Step 2. deer, hear as /i// (Groff lists Steps 2, 3, 4, and 5 together in his "Contents.")
Step 3. arm, part as /ŏ/
Step 4. born, more as / $\overline{0} /$
Step 5. her, burn, bird, worm as /ûr/
Step 7. Have students spell the vowel-r words.

The Seventh Stage of Phonics Teaching
Step 1. Vowel letters \& Consonants Letters
Step 2. Single syllable words ending in vowels
Step 3. Sound of words ending in single vowel letters: long vowels, i.e., be, me, go,
Step 4. Sounds of words ending in two vowel letters, sea, die, toe, too
Step 5. w \& y as vowel letters: play, blew, blue, my, buy. "The vowel letters are a, e, i, o, y and sometimes w and y."

Teaching Some Unpredictably Spelled Words.
cold, find all, salt, fence, have, of, was, what, said, some, been. Approximate pronunciation.
Applying Phonics to Multisyllabic Words. (Note: Groff did not include these steps until later)
Step 1. cow, boy: cowboy
Step 2: Compound Word List
Step 3. -ing, un-, -er, -ly, -ies, -dges, -est, -er, -y
Step 4. Inflected words: -ing,-ies, -es, -est- -er
Step 5. Mark off number of syllable in words by putting a line under each vowel letter
Step 6: Underline Syllables in words.
Step 7: -y at end of words
Finale to Your Phonics Teaching
Teach prefixes and suffixes.
Word to Use in Your Phonics Teaching

1. Words with Short Vowel Sounds.
2. Word with Long Vowel Sounds (Marker e).
3. Words with Long Vowel Sounds (Digraphs)
4. Words with the /ou/ sound.
5. Words with the /oi/ sound.
6. Words with the /oo/ sound.
7. Words with the /oo/ sound.
8. Words with the Vowel Sound and /r/ Sound.
A. Words with /ěr/.
B. Words with /ŏr/.
C. Words with /irr/.
D. Words with /ûr/.
E. Words with /ōr/.
9. Word that End in Vowel Sounds.

How to Print Letters

A Chart of Consonant Speech Sounds

A Chart of Vowel Speech Sound

References and Suggested Readings

## How to Teach Children to Read Words

## Introduction

Children who experience difficulties in learning to read almost always have trouble in recognizing written words. These children's liability to read usually stems from the inadequate instruction in word recognition that the have been given.

Word recognition ability relates more closely to reading comprehension than does any other factor. So, when children cannot recognize individual words quickly and accurately, they fail to understand what they try to read.

The best reviews of the research on reading to date, the Handbook on Reading Research (Longman, 1984), Learning to Read: The Great Debate (McGraw-Hill, 1987), and Learning to Read (MIT Press, 1990) all agree: The best way to improve children's word reading skills is to teach them information about phonics. Phonics information is that which tells us about the ways the letters in our alphabet represent speech sound in oral language.

## Teach Yourself Phonics Information

As noted, phonics is the name given to the information on how letters are used in writing to represent the speech sounds of our language. For example, dog has 3 letters, d-o-g. When said aloud, dog also has three speech sounds, $/ \mathrm{d} /-/ \mathrm{o} /-/ \mathrm{g} /$. (Notice that speech sounds are shown between slanted lines: /d/. Letters are shown in italics: 3.) When a speech sound is spelled regularly with only one letter or (letters) this is called a predictable spelling. Therefore dog is a predictably-spelled word.

Some of the rules for letters and speech sound are not as useful as the ones for dog, however. For example, the /d/speech sound is spelled $\underline{d}$ in written words $98 \%$ of the time. On the other hand, the $\bar{i} /$ speech sound (as in hit) is spelled 22 different ways. The research indicates, however, that if phonics rules are applied when the student spells words, he or she can spell correctly, or with only one mistake, $85 \%$ of words.

Part of the reason for the unpredictable spelling of some words is the unfortunate fact that we have only 26 letters in our alphabet to spell the over 40 different speech sound of our oral language. To be found at the end of this book are charts of speech sounds for English, along with an indication of the ways they usually are spelled. Make yourself familiar with these charts. Your success in teaching phonics will depend on the efforts you make in this regard.

Another good source for learning about the speech sounds in English is the pronunciation key in your home dictionary. Here you will find the different written symbols your dictionary uses for the various speech sounds. A word spelled with these symbols is called a "phonetic spelling." For example, jockey is spelled jŏkē, and sewage is spelled sooorj.

In both the charts at the end of this book, and in your dictionary's pronunciation key, you will discover that the 26 letters of our alphabet can be changed or augmented in certain ways, so that each of the various speech sounds are recorded with a distinctive written symbol. Notice that single letters ( d in dog) are used, as well as double letters (ch in chin), and diacritically marked letters (ō as in ōver).

Your first responsibility as a teacher of phonics information thus is to become familiar with the ways that letters represent speech sounds. To this effect, say the word to yourself, e.g., young. Ask yourself: "How many speech sounds does young have" ( $3-/ \mathrm{y} /$, $/ \mathrm{u} /$, and $/ \mathrm{ng} /$ ). "What are the letters that represent these 3 speech sounds?" ( y represents $/ \mathrm{y} /$, ou represents $/ \breve{\mathrm{u}}$ /, and $\underline{\mathrm{ng}}$ represents $/ \mathrm{ng} /$. )

Use your dictionary to test your ability to name the number of speech sounds in spoken words, and to write the letters that represent each of them. Try writing word "phonetically." For example, young is yŭng. Refer to your dictionary to see how well you do in this regard.

## Teaching Children Phonics Information

You can teach your student a great deal about phonics, and thereby help improve his or her reading ability. Many parents and teachers have learned enough phonics to successfully pass on this knowledge to their children or pupils.

For you to be productive in this teaching requires two things. One, you must acquire some basic understanding of what phonics information is all about. Two, as a teacher of phonics you must give this instruction in a systematic and direct fashion. The discussion to follow is a detailed description of the second requirement for effective phonics teaching.

Phonics training is essential because it helps get learners past the "guessing at individual words" stage of their reading development. Beginning readers often guess at words, using sentence context for help. For example, immature reads might substitute horse for pony in His excited pony began to buck. However, once learners can recognize words automatically (accurately and quickly) they seldom use sentence context for this purpose.

## 20 Tips for Teaching Phonics Information

1. Don't set a strict timetable for how much your student should learn in each lesson you teach. Be patient. Switch back to earlier Levels or Steps if your student experiences unusual difficulty in learning.
2. Be positive in your teaching. Reward your student with many smiles and compliments. Some parents like to give material rewards to their children for learning or making a good effort, such as pennies, M\&M chocolates, or tokens that can be accumulated by the student for a larger gift. Use TV viewing as a reward.
3. Keep a diary or graph of how much your student has learned. Show this record to your student. It will stimulate effort on his or her part.
4. Provide many examples of the item of phonics information that you are trying to teach. A list of predictably-spelled words useful for this purpose are found in the back of this book.
5. Remember that the application of phonics rules will result only in the approximate pronunciation of words. The student can then infer the correct sound.
6. Do not teach the rules of syllabification found in your home dictionary. This has not been found to be helpful to your children learning phonics information. See "Applying Phonics to Multisyllabic Words" (pp. 15).
7. Set a regular time each day for your phonics lesson. Limit your lesson time to about 20-30 minutes. To be effective, your instruction must be regular and intensive, not hit-and-miss.
$\underline{8}$. Be constantly aware that vowel-letter and vowel-speech sound combinations are almost always difficult to learn than consonant combinations. Spend more time with the vowel combinations.
$\underline{9}$. In each of your lessons concentrate on a single bit of phonics information or a single phonics rule.
8. Start each lesson with an example your young student already can do. This sets a positive anticipation for success at the beginning of each lesson.
9. Have your student repeat almost everything you do or say in a lesson. Say continuously to your student: "What did I say? What did I do?"
10. Give directions in our lessons in uncomplicated, short sentences. It is vital that your instruction be clear and easy to follow. Have your student repeat these directions before he or she attempts to follow them.
11. Remove distracting influences from your lessons. Conduct your lesson in a room away from other family members or pupils. Make it rule that your lesson will not be interrupted at any time.
12. Repeatedly ask your young student for other examples of words you have taught him or her to decode. This helps you discover if your student truly understand the concept involved.
13. Use "pseudo-words" to test your student's learning. For example, if your student is taught to decode bet, then see if he or she can read aloud, beb, bef, bem, bep, etc. This kind of testing eliminates any chance for your student to guess at the pronunciation of words.
14. After a phonics rule has been taught, encourage your student to see how fast he or she can read other words that involve the rule. A common challenge from you should be: "Show me how fast you can read these words." Speed of decoding is a fundamental goal of phonics instruction.
15. In general, don't have your student try to simply memorize phonics rules and repeat them back to you. It's better for your student to show if he or she knows a phonics generalization by successfully applying the rule to decode a new word or a "pseudo-word."
16. At the end of each lesson take a minute or two to have your student tell you what he or she thinks was learned in that session.
17. An effective way to reinforce children's knowledge of phonics information is to have them immediately spell the words they have learned to read. For example, as soon as your student has learned to recognize sat have him or her write the word. If mistakes in the student's spelling of a word are detected, go back to the steps in phonics teaching that are relevant and reteach these steps. It is clear that your student's ability to spell words is a revealing test of how well he or she has learned to read them. You can be confident that if a student can spell a word he or she can read it.
18. Finally, not all children learn in exactly the same way or with the same speed. It is necessary for all children learning too read to understand how spoken language is represented in writing or print. However, for a certain student a Step in the phonics instruction outlined in the book may be less difficult than a previous one. The sequence or hierarchy of learning activities presented in the book's phonics program appear to work best with children in general. For your student, nonetheless, it may not be the perfect arrangement. Therefore, do not be afraid to rearrange somewhat the order of Steps in the Level of Phonics Teaching.

If your student experiences unusual difficulty in learning phonics information do not assume, however, that he or she is not "auditory minded," and therefore has some natural handicap in learning phonics. Almost always, such children are merely the victims of phonics teaching that is not arranged in the proper order, that rushes a student to a new phonics concept before he or she fully understands more basic ones, that does not make sure that children learning phonics pay close attention to what is being taught, or that uses unfamiliar terminology.

This last point deserves some additional comment. Often children who have difficulty learning phonics information are confused by the words their tutors or teachers use. Therefore, when you first use a key word in your phonics teaching, e.g., word, sentence, sound, same, different, letter, rhymes, stands for, without, added to, long and short vowel sound, first, second, third, and so forth, first make sure the student knows it.

In short, assume that at student having trouble learning phonics does not understand your teaching. Change your instruction to make it understandable to this student.

Be clear about the differences between teaching and testing. In teaching a phonics rule you should give several examples of pertinent words to which it applies, and demonstrate how the rule works. In testing you merely ask your student if he or she knows something. An example of testing would be to say, "Tell me another word that begins with the same sound as boy." Teaching this concept requires you to display a series of such words, read them aloud for your student, and have your student repeat what you demonstrated.

## The 7 Stages of Phonics Instruction

## The First Stage of Phonics Instruction.

Once you are confident you can identify the different speech sounds in spoken words, you are ready to begin to teach phonics information to your student. In preparing children for this instruction you should do the following -- but first read the " 20 Tips for Teaching Phonics."

Step 1: Make sure your student understands the special terminology that is involved in learning phonics: word, letter, and sentences. To promote this understanding, first print some familiar singlesyllable words on cards, one word on a card. Examples of these word, and instructions for printing letters on cards are given at the end of this book. Some parents buy an inexpensive printing set stamp out these letters on cards. Again, be sure you use one-syllable words for this purpose, e.g.:


Now, ask your student: "Count the number of cards I showed you." (4)
Tell your student that there is one word on each card. Then ask: "How many words are in this sentence? (4)

After this say to your student some short sentences (4 or 5 familiar words). Ask, for each sentence you say," How many words are in this sentence?

After you are satisfied that your student is familiar with the terms, word and sentence, invite him or her to tell you a word and sentence. The best test of a student's understanding of something you teach him or her is to ask the student to produce this piece of information.

Step 2: Make certain your student can distinguish each of the letters in the alphabet. Begin by displaying lower-cases letters printed on cards, one letter per card, e.g., $\underline{\mathrm{t}}$ s. Ask your student, "Is this letter $t$ the same as or different from this letter $\underline{s}$ ?" Continue this questioning with all the letters of the alphabet.

Be sure, before you begin Step 2, that your student understands the terms, same and different. Say, "Are a cat and dog the same or different? Are a bike and a bicycle the same or different?" And so on.

It is important at this stage of your phonics teaching that your student makes distinctions among lowercase letters than whether he or she can give the names of the letters. Do not use capital letters in this teaching until later.

Step 3: Learning the names of the letters by your student should be easy once he or she can accurately tell which letter, in a group of letter cards you place down is the same as or different from a letter card you hold up. Teach letter names by showing a letter card. Say: "Do you have an $\underline{r}$ (for example) among your letter cards? Show it." When your student holds up an $\underline{r}$ card, have him or her say its name.

Step 4. Use letter cards to spell some single syllable words as your student watches, e.g., dog. Say to your student, "I am making a word out of these letters. How many letters did I use? (3) This is dog? I will make another word with my letters. You make the same word with your letters.

The Second Stage of Phonics Instruction
After you are convinced that your student can identify the letters of the alphabet, it is time to introduce him or her to the speech sounds of our spoken language. The work that you previously have done with the charts of speech sounds at the end of this book, or with the pronunciation guide in your dictionary, will prepare you for this stage of teaching phonics to your student. Proceed in teaching him or her about the speech sounds in this manner.

Steps 1: Say to your student: "I am going to make a sound a cat makes. (Meow)." "Is this the sound a cat makes? (wolf) Who makes this sound?" (dog) "Is meow the same as or different from wolf?" "Now I am going to make two other sounds. Tell me if they are the same or different." "/t/ -- /s/.

Remember that your student has had experience following questions about same and different when you taught him or her to identify letters. About one-half of the time you say pairs of speech sounds to your children that are the same, e.g., $/ \mathrm{t} /--/ \mathrm{t} /$. The other half of the time say pairs of speech sounds that are different from one another, e.g., /t/ - /t/.

To do a good job in teaching Step 1, you need to know that speech sounds fall into 6 categories. (see the chart at the end of this book):

Category $1: / \mathrm{p} /$, /t/, /ch/, /k/, /b/, /d/, /j/, and /g/

Category 2: /f/, /th/, /s/, /sh/, /h/, /v/, /z/, and/sh/

Category 3: /m/, /n/, and /ng/
Category 4: /l/ and /r/
Category 5: /w/ and /y/
Category 6: the vowel speech sound
Speech sounds are written between slanted lines, e.g., /t/.
Note Carefully: When saying speech sounds in isolation, it is more difficult to give the correct pronunciation of the sounds in Category 1 than in the other categories. Therefore, teach children to recognize the speech sounds in Categories 2-6 before those in Category 1.

At the beginning, 2 speech sounds to your children each from a different category. Then, day 2 speech sounds each from the same category. Each time your student tells you whether a pair of speech sounds is the same or different. Make him or her say these 2 sounds each time he or she hears them.

Step 2: Now, select some familiar words that have 2 or 3 speech sounds (e.g., up, lap, it, dog). Say to your student the speech sounds of these words in isolation, e.g., say $/ \breve{u} /--/ \mathrm{p} /$; $/ 1 /--/ \mathrm{a} /--/ \mathrm{p} /$; etc. Ask your student: "How many sounds do you hear?" (2-up, 3-lap)

It helps to here to use a set of differently colored blocks or pieces of paper. Say to your student: "Listen to this word $/ a ̆ n /--/ a /-/ n /$. Say these two sounds. This green block in for $/ a ̆ /$. This white block is for $/ \mathrm{n} /$. Let's put the green block and the white block together to make /ăn/. Show me the bocks we use for /ă/. For /n/. Make /ăn/ with these two blocks. How many sounds are there in /ăn/? How many blocks do we need to make /ăn/?"

Step 3: Repeat Step 3 just above. However, now ask your student to tell you what word he or she hears. Say to your student: "Listen to these sounds. (/ă/-/t/). What word do they make?" (ăt).

Step 4: Repeat the above step. Now say to your student: "Listen to this word, /ăt/. Tell me another word that begins like /ăt/. That rhymes with /ăt/." Be sure your student knows what "rhymes" means.

Step 5: Say the speech sounds of monosyllabic words to your student, e.g., $\overline{1} /--/ n /$ (There are examples in the charts at the end of the book.) Now say, "I said /// first. Second, I said /n/. Listen to these two sounds, /ǒ/--/n/. What sound did I say first? Second? Repeat with single syllable words three and four letters.

Display four colored blocks (or cards), red, green, white, and blue. Tell our student "These blocks stand for the sounds in /sănd/. How many sounds are there in /sand/? (4) The red block is $/ \mathrm{s} /$, the green block is $/ \breve{a} /$, the white block is $/ \mathrm{n} /$, and the blue block is $/ \mathrm{d} /$. Show me the $/ \mathrm{s} /$ block, the /ă/ block, etc." Continue this step until your student can quickly and accurately detect the serial order of speech sounds as they appear in spoken words.

Step 6: Your student's perception of speech sounds can also be tested by having him or her say words from which speech sounds have been omitted. Say to your student: "Listen to this word /măn/. Say /măn/ without the /n/. Now say /brāk/ without the /r/." Continue with /desk/ without the /s/, /skin/ without the /s/ or $/ \mathrm{k} /$, and with other appropriate words.

Note carefully: This will be the most difficult task you have asked your student to perform so far. If your student experiences difficulty here, even with words like /măn/, go on to the next stage. Be sure to come back to Step 6, however it is critical that your student accomplishes it.

## The Third Stage of Phonics Teaching

At this Stage of your phonics instruction your student already should be aware of several important kinds of information. He or she should know by this time:
*what written words look like
*what written sentences look like
*the names of the letters
Your student should also be able to:
*repeat speech sounds he or she hears
*tell if speech sounds are alike or different
*tell how many speech sounds there are in a short spoken word
*Listen to a series of speech sounds and infer the word they represent
*tell were in a spoken word a speech sounds occurs
It is vitally important that your student makes satisfactory progress in learning the information that you have taught at Stages 1 and 2 before you begin Stage 3? Often in school reading programs pupils are taken too quickly through this information, before some have truly mastered it. Your student may be one of the pupils who was advanced into other phonics teaching before he or she had completely acquired the above listed skills. Therefore, regardless of the age of your student, make sure that he or she has control of these skills before moving him or her into the Third Stage of Phonics Teaching.

If you are convinced that your student has progressed satisfactorily so far, he or she is now ready to learn how letters are used to represent speech sounds in writing. To teach your student this information effectively you should:

Step 1: Go back to your letter cards, $\underline{a}, \underline{b}$, etc. Use these cards to spell a familiar, predictably-spelled, 3letter word. Again, ask your student: "How many letters are in this word?" (e.g., dog). "What are the names of these letters?" "Which letters are first, second, third?"

Step 2: Now use your letter cards to spell a 3 -speech sound word that is spelled with 3 letters, e.g., sat. Ask your student:
"What are the names of these letters? $\underline{s}-\underline{a}-\underline{t}$ " Then say: "The sound for $\underline{s}$ is $/ \mathrm{s} /$. Say this sound." "The sound for $\underline{a}$ is $/ \bar{a} /$. Sa this sound." "The sound for $\underline{t}$ is $/ t /$. Say this sound." "Say the word that /s/-/ă/-/t/ makes."
Continue this kind of practice until you have introduced your student to all the consonant sounds, and letters commonly used to spell them. Do the same for the vowel sounds, and the letters usually used to spell them. Restrict yourself in this Step to teaching only the 5 vowel sounds: /ă/, /厄̌/, /̌i/, //o/, / $/ \mathbf{u} /$, and the letters ordinarily used to spell them.

Step 4: Carry on the same procedure as described in Step 3. However, now substitute letter cards in the middles and ends of words. For example, go from letter cards, $\underline{r}, \underline{a}, \underline{t}$, to letter cards, $\underline{r}, \underline{\mathbf{u}}, \underline{t}$, to $\underline{r}, \underline{a}, \underline{g}$. Continue to use only familiar, single-syllable words, and only words with the vowel sounds, /ă/, /ě/, ז̄̄/, /ō/, /ŭ/.

Step 5: Continue the activities of Steps 1 through 4, only now use single-syllable words that contain these consonant clusters: $\underline{s t}, \mathrm{gr}, \underline{\mathrm{cl}}, \underline{\mathrm{sp}}, \mathrm{pl}, \underline{\mathrm{tr}}, \underline{\mathrm{br}}, \underline{\mathrm{dr}}, \underline{\mathrm{l}}, \underline{\mathrm{fr}}, \underline{\mathrm{fl}}, \mathrm{pr}, \underline{\mathrm{cr}}, \underline{\mathrm{sl}}, \underline{\mathrm{sw}}, \underline{\mathrm{sl}}$, and $\underline{\mathrm{sk}}$.

## The Fourth Stage of Phonics Teaching

Up to this time in your systematic program to teach phonics to your student, you have asked him or here to apply phonics information to decode only one-syllable words in which each speech sound is represented by only one letter. At this point your student should be ready to learn that in some written words more than one letter is used to represent a single speech sound, i.e., shut, chin, hush. To bring your student to this new level of phonics knowledge carry on in this fashion, but first, remember: when children apply phonics rules this will result in the approximate sounds of words. Children must then infer the correct pronunciation of these words.

Step 1: Repeat the steps in the Third Stage of Phonics Teaching but now use the consonant digraphs sh and $\underline{\mathrm{ch}}$, and at the ends of words the digraphs $\underline{\mathrm{ll}}, \underline{\mathrm{ng}}$, $\underline{\mathrm{ck}}$, $\underline{\mathrm{ss}}$, and $\underline{\mathrm{ff} \text {. (A digraph is a pair of adjourning }}$ letters that represent a single speech sound). Be sure to continue to use only one-syllable, familiar words


Step 2: Teach your student that the addition of the letter $\underline{e}$ at the end of single-syllable words can signal that the word with the final e has a different sound than does the word spelled without the final e. For example, notice how this occurs in hat and hate. Present your student a list of words that he or she has some previous experience decoding, for example:

```
hat
pet
bit
hop
cut
```

From what you have taught him or her so far, our student now should be able to decode these words by applying the phonics knowledge he or she has acquired. Now alongside the above familiar words present ones to with a final e has been added.

```
hat - hate
pet - Pete
bit - bite
hop - hope
cut - cute
```

Tell your student when an $\underline{e}$ is added to hat the a in this word now "says its name." At this point you can see the necessity of previously teaching your student the name of the letters. Display the word hat and say to your student: "Listen to /hăt/. What is the second sound in /hăt/?" Display hate. Say: "Listen to /hāt/. What is the second sound in /hāt/?"

Continue with other examples of single-syllable words whose vowel sound changes when a final e is added to the word, e.g., pin-pine, at-ate.

There is a good way to test whether your student has grasped this shift in sound that is signaled by the addition of final e to single-syllable words. Pick some monosyllabic words to which the letter e cannot be added, e.g., big. Create a "pseudo-word" by adding e to big (bige). If your student can decode bige as $/ \mathrm{b} \overline{\mathrm{g}} /$, he or she shows that the "marker e" principle phonics has been understood, and can be applied to word recognition.

Step 3: Repeat the activities given in previous steps of his stage of phonics teaching. Begin now to use single-syllable words spelled with the vowel digraphs, ea, oa, ai, ee, oo, as in seat, coat, fail, and seen. Teach your student at this step that he or she usually cannot give the $/ \check{\mathrm{a}} /$, /ě/, $/ \overline{\mathrm{I}} /$, /ŏ/, / $\check{\mathrm{u}} /$ vowel sounds to 2 vowel letters that appear alongside one another in a word. Teach your student to give these digraphs the $/ \overline{\mathrm{a}} /$, / $\overline{\mathrm{e}} /, / \overline{\mathrm{I}} /$, / $\overline{\mathrm{o}} /$, / $\overline{\mathrm{u}} /$ vowel sounds.

Teachers have made up a little rhyme that student can memorize to help them remember that the vowel digraphs ea, oa, ai, and ee should be given the vowel sounds $/ \overline{\mathrm{e}} /$ / / $\overline{\mathrm{o}} /$, / $\overline{\mathrm{a}} /$, / $\overline{\mathrm{e}} /$. The rhyme is:
"When two vowels go walking
The first one does the talking." (says its name)
If your student keeps this rhyme in mind, and remembers to give the / $/ \overline{\mathrm{e}} /, / \overline{\mathrm{o}} /$, $/ \overline{\mathrm{a}} /$, and /ē/ vowel sounds when reading the above digraphs, he or she should be able to decode the words in which they appear.

## The Fifth Stage of Phonics Teaching

Through the last four Stages of teaching your student to decode written words, you have presented him or her with learning tasks of steadily-increasing difficulty. To avoid frustration or overwhelming-difficult phonics exercises, each step in this instructional program presents somewhat more difficult, but not overly-demanding tasks.

At the Fifth Stage of this teaching you will have to present some decoding activities to your student that may appear to him or her as unusually taxing. This is because the words your student learns to decode at the Fifth Stage of your teaching have different vowel sounds than he or she has previously learned about.

In the First through Fourth Stages of teaching you have presented words with two kinds of vowels. The first group of these is commonly called "short" vowels (although this is a misnomer). These are the 5
 sounds (again, a misnomer). These are the vowel sounds $/ \overline{\mathrm{a}} /$, $/ \overline{\mathrm{e}} /$, $\overline{\mathrm{I}} /$, $/ \overline{\mathrm{o}} /$, / $/ \mathrm{u} /$.

There are 4 additional vowel sounds that your student should become aware of. See the charts of speech sounds at a the end of this chapter.) They may be harder for the student to perceive, and to apply, than were the first 10 speech sounds you have taught him or her.

The new vowel sounds are heard in these example words:

1. $/ \mathrm{ou} /$ as heard as heard in loud and howl.
2. /oi/ as heard in spoil and toys.
3. $/ \overline{\mathrm{oo}} /$ as heard in smooth an truth.
4. /oo/ as heard in put and book.

As you examine this list of 4 new vowel sounds you will discover that your student will have to learn that certain vowel digraphs are not given the so-called "long" vowel sounds. Your student must learn, then, that words like loud, spoil, smooth, and book are given different vowel sounds.

It must be emphasized at this point: Unless your student can readily decode single-syllable words that contain the vowel digraphs ea, oe and ai, and ee he or she will not be sufficiently ready to undertake the learning of the 4 new sounds introduced in this Fifth Stage of your teaching: /ou/, /oi/, $/ \overline{\mathrm{oo}} /, / \overline{\mathrm{oo}} /$.

The crux of the learning problem for your student presented in the Fifth Stage of your phonics teaching is whether your student can remember that:

1. the digraphs ea, oa, ai, and ee are given the "long" vowel sound, but that
2. the digraphs ou, ow, oi, oy, and oo are not given the "long" vowel sounds.

There are no especially different way to effectively teach your student to decode words like howl, toys, boot, and book. Therefore, instruction to your student should parallel the teaching that you have given in previous stages:

Step 1: Have your student recall that with words like seat, coat, fail, and seen, were 2 vowel letters appear alongside each other, these digraphs are given the "long" vowel speech sound of the first letter in the digraphs. That is: "When two vowels go walking. The first one does the talking."

If there is any hesitancy on your student's part in making this recall go back to Step 3 of the Fourth Stage of your phonics teaching.

Step 2: Introduce the 4 new vowel sounds, one at a time. As you did when you presented the first 10 vowel sounds, say to your student
"Listen to this sound: /ou/. It is one we haven't worked with before. Say the /ou/ sound for me. Listen to the /ou/sound in loud and howl. Say these words. (Use words given at the end of this book.) Is the /ou/sound in these words the first, second, or third sounds? ( $\left.2^{\text {nd }}\right)$

Step 3: Say to your student: "Look at this word." Spell $1 \underline{0}$ u d with your letter cards. What letter does it begin with? (1) Say the name and sound of this letter. (1//1/)." Do the same for the final letter. Then say: "Now look at the two letters between $\underline{1}$ and $\underline{d}$. What are these letters? These letters are given the sound of /ou/. Can you say the 3 sounds of /loud/? When you see these letters (point to ou) what should you give? Let's see if you can read these words that have the ou in them? out round south pouch

Steps 4, 5, and 6: Continue the kind of teaching you did in Step 2 for $/ \mathrm{ou} /$ and $/ \mathrm{oi} /$, $/ \mathrm{oo} /$, and $/ \mathrm{oo} /$. Be sure to use only familiar, single-syllable words spelled with these three digraphs for your student to decode. (Use the chart of words in the book.)

Step 7: The digraphs ow, ow, oi, and oo are not given the "long" vowel sounds. It is likely that your student is simply going to have to memorize this fact. One of the ways to help him or her recall which vowel digraphs are given the "long" vowel sounds, and which are not, is to teach him to spell these words. In this regard, dictate one-syllable words to your student that have vowel digraphs that are not given the "long" vowel sound. For example, after your student has learned to read count, couch, found, shout, and down, fowl, gown, howl dictate these words to him or her. Say to your student: "Listen to this word, /kount/. Spell the second sound of/kount/."

The Sixth Stage of Phonics Teaching

In this Stage of your phonics teaching you will introduce your student to some unusual spelling of vowels that has intrigued language experts for years. This unpredictable spelling of vowel sounds in words immediately precede the $/ \mathrm{r} / \mathrm{speech}$ sound. For example, the spoken word /dirr/ is spelled dear. The spoken word /běr/ is spelled bare or bear. Most vowel sounds in spoken word that immediately precede the $/ \mathrm{r} /$ sound are spelled unpredictably. That is we would predict /dĭr/ would be spelled dir, and /bĕr/ as ber.

This unpredictable nature of such spellings will likely constitute a special learning problem for your student. You must become especially acknowledgeable about these distinctive spellings. To familiarize yourself with them say these words aloud. (Consult again the pronunciation charts at the end of the book.):

* care, hair, there, bear, there /ĕ/
* dear, hear /ĩ/
* arm, park /ŏ/
* born, more / $\overline{\mathbf{o}} /$
* her, burn, bird, work /ûr/

Notice that the vowel sounds of these 5 groups of words are indicated in column 2. Observe that in each of these words the $\underline{r}$ immediately follows the word's vowel letters. The vowel sound in her, burn, bird, and worm is a speech sound you have not previously taught your student. The vowel sound in care, hair, there, bear, and there is one you have taught, / $\overline{\mathrm{e}} /$. You can see, however, that the vowel sounds in these latter 5 words are not spelled with an $\underline{e}$ as would be predicted.

Also take note that the vowel sound in deer and here is $/ \overline{\mathbf{1}} /$. These words are not spelled with $\underline{i}$, so they, too, spelled unpredictably. As for arm and park, we would predict their sound, $/ \bar{o} /$, that they would be spelled with o. Such is not the case, clearly enough. Then, the vowel sound in more, / $\overline{\mathbf{o}} /$ is spelled predictably, but the same vowel in born is not.

Complicating this matter is the fact that in different parts of the country the vowels that precede $\underline{r}$ are not pronounced the same. Parents and teachers in Boston, for example, will pronounce the vowels differently than how I, a native Californian, do. It is mandatory that parents or teachers using this book adapt anything it says to the regional dialect they speak.

Teaching the vowel-r sounds and letters that represent them may pose the most rigorous and potentially troublesome challenge you have faced so far in teaching phonics to your student. Your student's success in this Stage of your teaching will depend entirely on how well he or she has mastered the previous phonics teaching you have given. I your student appears uncommonly confused or perturbed by your phonics instruction in this Stage, quickly switch back to some easier phonics activities. Return to the Sixth Stage later on.

If you decide your student is ready to learn how to decode the vowel-r words of this Stage, proceed with this instruction thusly:

Step 1: Present your student the vowel-r words using the approach you yourself utilized to become consciously aware of the speech sounds of these words. To this effect, say to your student: "Listen to these words. (pronounce care, hair, there, and bear. What is the second sound in each of these words? (/e/). Now, look at these word card (care, hair, there, bear) as I say them. Notice that these words are not spelled the way they should be. How should they be spelled? (each as er)

Steps 2, 3, 4, and 5: Continue the activity of Step 1 with the 4 other groups of vowel-r words.

Step 6: It may help your student to remember that the vowel-r words are not spelled predictably (and thus are not pronounced according to the phonics rules that you have previously taught him or her if he or she learns to spell these words. In dictating these words for your student to spell remember that it is the spelling of the vowel sounds that you want to stress. With hair, for example, your student (if he or she has responded satisfactorily to your phonics teaching) will likely be able to spell the consonants of this word, the $\underline{h}$ and the $\underline{r}$. So, as you dictate vowel-r words for your student to spell, ask him or her to spell only the vowel sound of the word. Remember, use only one-syllable words for this purpose. Say to your student: "Listen carefully to this word. (hair). How many sounds do it have? (3) What are the sounds? (/h/-/e//-/r/) Spell the second sound in the word. (ai)

Keep in mind when pupils or children apply phonics rules to predictably spelled words the best results they can obtain are approximate pronunciations of these words. With unpredictably spelled words the result of the application of phonics rules will result in pronunciations that bear less resemblance to the accurate pronunciations of these words. Therefore, the student will be more hard-pressed here after decoding words to infer what their true soundings are.

## The Seventh Stage of Phonics Teaching

In this Stage of your phonics teaching you will introduce a different relationship of vowel speech sounds, and the letters that represent them, from what you have taught your student so far. Up to this time you have used single-syllable words of two kinds: (1) those that start and end with consonant letters. Vowel letters in these words are found between consonant letters, for example, top, stop, doll, and bear, and (2) those that start with vowel letters and end with consonant letters, e.g., up.

Single-syllable words whose vowel sounds followed by consonant sounds are called closed syllables, e.g., rate and rat. The often are called phonograms by teachers.

This Seventh Stage of your teaching will acquaint your student with open syllable words. These are one-syllable words that end in a vowel sound - not a consonant sound, e.g., saw, play, be, blew, go, my, ha, sea, die, toe, and too.

Your task as a teacher of phonics at the Seventh Stage of your teaching of phonics will be to acquaint your student with the fact that some words do not end in consonant letters. Your student has had experience in decoding words like late. Here the final e is not pronounced. In the group of words he or she will learn to decode at this Seventh Stage of your teaching the final vowel letters in words, e.g., saw, be, go, will be sounded out.

So far, you have not taught your student the terms, vowel letters and consonant letters. This is the appropriate time to do so. Proceed with the Seventh Stage in this fashion:

Step 1: Say to your student: "Look at these two rows of letters:

1. aeiou
2. bcdfghjk mnpqrstvwxyz

We call the first row of letters vowel letters. Say the vowel letters. We call the second row consonant letters. Say the consonant letters. Is this a vowel letter or a consonant letter? (Hold up some vowel and consonant letters cards)

Step 2: Say to your student: "The next kind of words we will work with all end in vowel letters. What are the names of those letters." Show me those letters. Does this word end in a vowel letter?" (Display some single-syllable words that end in vowel letters and ones that do not.)

Step 3: Say to your student: "You will have to remember which sounds to give the words that end in vowel letters. Look at this word (be). It ends with the /e/ sound. Say this word. Look at this word (go). It ends with the $/ \overline{0} /$ sound. Say this word."

Step 4: Continue the activity you conducted in Step 3 with these words: see, sea, die, toe, and too. Day to your student: "You will have to remember that some words end in 2 vowel letters. Look at this word (see). What are the vowel letters it ends with? This word ends with the $/ \overline{\mathrm{e}} /$ sound. Say this word."

Step 5: In this step you will teach your student that in rare instances the letters $\underline{w}$ and $y$ become vowel letters. Say to your student: "You will remember when a word ends in $\underline{w}$ or y that $\underline{\underline{w}}$ and y become vowel letters. Look at this word (saw). What 2 letters does it end with? The second sound you give thee letters is /ŏ/. Say this word."

Continue this same exercise for play, blew, blue, my, and buy. Then say to your student: "I want you to remember this sentence: "The vowels letters are $\underline{a}, \underline{e}, \underline{i}, \underline{o}, \underline{u}$ and sometimes $\underline{w}$ and $\underline{y}$. Say this sentence."

## Teaching Some Remaining Unpredictably Spelled Word

We have come to the end of what you should try to teach your student about using phonics information to decode one-syllable words. Your student doubtless will come across some unpredictably spelled words that you have not taught him or her to decode, however. There are words like: cold, find, all, salt, fence, have, of, was, what, said, some, and been.

If the phonics rules you have taught your student are applied to these words, the words would not be given their correct pronunciations. From the basis of a study I did with beginning readers, however, I predict this: If your student can reach an approximate pronunciation of a word, through the application of phonics information, then he or she will be able to infer and reproduce the correct pronunciation of the word. For example, when the beginning readers I studied heard have pronounced /hāv/ in a sentence, $98 \%$ of these young children could infer and reproduce the correct pronunciation of have.

To test out my findings with our student, have him or her read cold, for example, in a simple sentence: Jim had cold hands. According to the phonics rules your student has learned, cold should be decoded as /kŏld/. If your student gives this pronunciation to cold in the above sentences, tell him or her to try another sound for the $\underline{o}$ in cold. Very often if your student simply makes a change from the "short" vowel sound to the "long" vowel sound, or vice versa, he or she can gain the needed approximate pronunciation of the unpredictably spelled words, notice how this happens in these words:
cold find fence student roll

## Applying Phonics to Multisyllabic Words

So far in our phonics teaching you have used only single-syllable words in your instruction. It is wise to begin phonics teaching with one-syllable words because words with more than one syllable are harder to learn to recognize.

The phonics information that you have taught your student about decoding multisyllabic words also can be successfully applied to a decoding of words that have more than one syllable. To teach your student how to apply his or her phonics knowledge to the decoding of multisyllabic words you will need, however, to demonstrate how multisyllabic words can be broken up into single syllables. This process is called syllabication.

Each syllable in a multisyllabic word is made up of a single vowel speech sound. Almost always, a syllable also has a consonant sound or sounds. This is the information you need to teach your student. Proceed in this way:

Step 1. Make sure your student can count the number of syllables in spoken words. This usually is an easy task for children. In learning to speak, your student has developed an implicit understanding of the syllabic nature of words. Say to your student: "Listen to this word (cow). Say it. Now, listen to this word (boy). Say it. Here is another word (cowboy). Say it. How many parts are there in cowboy? (2)

Step 2: Present your student with other compound written words, like offside. Have your student named the 2 words he or she finds in each compound word. Some good compound words for this exercise are: offside, baseball, bedroom, armchair, boxcar, grandstand, pigpen, campfire, tiptoe, eardrum, steamboat, shoelace, fireplace, bedtime, cartwheel, pancake, sandbox, sidewalk, locksmith, sawdust, hairpin, doormat, popcorn, starfish, postcard, horseback, sunburn, mudslide, horsehair, airport, catfish, wishbone, sunshine, cowhide, dishpan, pigtail, bluebird.

Step 3: Continue with the exercise you used in Step 2. This time use words like: running, unlike, farmer, deeply, ladies, judges, greatest, higher, and happy. Say to your student. "How many parts does cowboy have? Now say the second part."

Step 4. Continue with the same activities of Step 3. Present your student with a list of inflected words, such as: walking, running, ladies, judges, greatest, and bigger. Have your student now tell you the base word for each inflected word. Say to your student: "Look at this word (pigpen). Can you find a little word in this longer word? What is the little word in bigger.

Step 5: Teach your student to mark off the number of syllables in a word. Begin with the list of compound words given above. Say to your student: "Put a line under each vowel letter in pigpen?

Step 6: Now have your student to mark off the number of syllables in words. Say to your student: "Watch how I underline the 2 parts of pigpen. I find the first vowel letter, $\underline{i}$, and put a line under the first part, pigpen. Now I find the second vowel letter, e, and put a line under the second part, pigpen. Now I want you to do this with some other words.

By this time your student can recognize in and ish in the words pin and fish. He or she can now apply this knowledge to read finish:

| Known: | fun her | rock pet | gun her | hand |
| :--- | :---: | :---: | :---: | :---: |
| Unknown: | un der | rock et | un der | stand |

The same sort of analysis is called for with words in which the final $y$ is changed to $i$ before a suffix is added:

Known: penn $y$ less
Unknown: penn i less
Here, of course the student has learned the recognition of $y$ as an open syllable. Other words involve somewhat more complicated analysis:

| Known: tack lid bend | rat if lick a tion | tub bill pant |
| :--- | :---: | :---: |
| Unknown: $\quad$ ac cid ent | frat if ic a tion | jub il ant |

Step 7: Give your student practice in seeing how the $y$ at the end of certain multisyllabic words is changed to $i$ before these words are given a plural inflection, a past-tense inflection, or other changes. Your student must be taught to recognize that the $y$ is changed to $i$, for example when the following are added. es-abilities, ance-compliance, ous-injurious, ed-buried, ment-merriment, ness-readiness, eremptier, ful-pitiful, less-penniless, est-hungriest.

## Finale to Your Phonics Teaching

At this point you approach the end of what a parent, tutor, or teacher can do to help a student recognize single-syllable and multisyllabic words. Some phonics experts believe that children should be taught to recognize as such, the common prefixes in word: com-, re-, ad-, un-, in-(unto), in-(not), dis-, ex-, de-, en-, pro-, pre-, sub-, be-, ab-.

And to recognize the common suffixes in words: -able, -age-, -al, -an/-ian, -ant, -ate, -ance/-ence, -ent, -er, -ful, -ic, -ical, -ition/-sion, -ish, -ive, -less, -ment, -ness, -or-, -ous.

Note that the great majority of these prefixes (e.g., un) and the suffixes (e.g., ant) can be successfully decoded by our student using the instructions you have taught for syllabication of word. If you do teach some common prefixes separately, teach only the ones that cannot be syllabicated in the manner you have taught your student to use for this purpose. These prefixes are: re, de, pro, pre, and be.

## Words to Use in Your Phonics Teaching

The following list of frequently-used, single-syllable words are the ones you should use when teaching phonics rules. These words exemplify the various kinds of phonics generalizations you will want your student to learn.

These lists have been arranged into the order of phonics information that you will teach. That is, the first list is made up of one-syllable words that have the "short" vowels sounds: /ă/, /ě/, , $\overline{1} /$ /, $/ \overline{\mathrm{o}} /$, $/ \breve{\mathrm{u}} /$. The different lists of words to follow are thus presented in the following categories:

1. words with the "short" vowel sounds: e.g., cup.
2. words with the long vowel sounds: $/ \overline{\mathrm{a}} /, / \overline{\mathrm{e}} /, \overline{\overline{1}} /$, $/ \overline{\mathrm{o}} /$, $/ \overline{\mathrm{u}} /$, spelled with the "marker e," e.g., late.
3. words spelled with vowel digraphs in which the first letter of the digraph is given the "long" vowel sound and the second letter is ignored, e.g., seat
4. words with the /ou/sound, e.g., loud
5. words with the /oi/ sound, e.g., boil
6. words with the /oo/ sound, e.g., smooth
7. words with the /oo/ sound, e.g., book
8. words in which the vowel sound is followed by the $/ \mathrm{r} /$ sound e.g., hair
9. words that end in the vowel sounds (open syllables), e.g., see

## 1. Words with Short Vowel Sounds

-ab: blab, cab, crab, dab, drab, gab, jab, nab, slab, tab.
-ack: back, back, clack, crack, hack, jack, lack, pack, quack, rack, sack, shack, slack, smack, snack, stack, tack, track.
-act: fact, tact
-ad: add, bad, clad, dad, fad, glad, had, lad, mad, pad, dad.
-aff: chaff, gaff, quaff, staff.
-aft: craft, daft, draft, graft, raft, shaft.
-ag: brag, crag, drag, gag, hag, ag, nag, rag, sag, snag, stag, tag, wag.
-am: clam, cram, dam, ham, jam, ram, slam, swam, yam.
-amp: camp, champ, clamp, cramp, damp, lamp, ramp, stamp, tamp, tamp,
-an: ban, bran, can, can, fan, man, pan, plan, ran, scan, span, tan, van.
-and: band, bland, brand, gland, hand, land, sand, stand, strand.
-ang: bang, clang, fang, gang, hang, pang, rang, sang, sang, sprang.
-ank: bank, bank, clank, crank, dank, drank, flank, frank, hank, lank, plank, prank, rank, sank, shank, shrank, spank, tank, thank, yank.
-ant: chant, grant, pant, plant, rant, slant.
-ap: cap, chap, clap, flap, gap, lap, map, nap, rap, dap, slap, snap, strap, tap, trap, wrap.
-ash: brash, cash, clash, crash, dash, flash, gash, hash, lash, mash, rash, sash, slash, smash, thrash, trash.
-ast: blast, cast, fast, last, mast, past, vast.
-at: bat, brat cat, chat, fat, flat, hat, mat, pat, rat, sat, slat, that, vat.
-atch: batch, catch, hatch, latch, match, patch, scratch, snatch, thatch,
-ax: flax, lax, tax, wax.
-eck: check, deck, fleck, neck, peck, speck, trek, wreck.
-ed: bed, bred, fed, fled, bed, red, shed, shred.
-ell: bell, cell, dwell, fell, quell, sell, shell, smell, spell, swell, tell, well, yell.
-em: gem, hem, stem, them.
-en: den, glen, hen, men, pen, ten, then, when, wren, yen.
-ench: bench, clench, drench, French, quench, trench, wrench.
-end: bend, blend, lend, mend, rend, send, spend, tend, trend, vend, wend.

- ent: bent, cent, dent, lent, rent, spent, tent, vent, went.
-ept: crept, kept, slept, swept, wept.
- esh: flesh, fresh, mesh, thresh.
-ess: bless, chess, dress, guess, less, mess, press, stress, tress, yes.
-et: bet, fret, get, jet, let, met, net, pet, set, wet, yet.
-ib: bib, crib, fib, glib, rib.
-ick: brick, chick, click, crick, flick, kick, lick, nick, quick, rick, sick, stick, thick, tick, wick.
-id: bid, did, grid, hid, kid, lid, mid, rid, skid, slid, squid.
-iff: cliff, skiff, sniff, stiff, tiff, whiff.
-ift: drift, gift, lift, rift, swift, shift, shift, thrift.
-ig: big, brig, dig, fig, jig, rig, sprig, swig, twig, wig.
-ill: bill, chill, dill, drill, fill, frill, hill, kill, mill, pill, quill, shrill, sill, skill, spill, still, swill, thrill, till, will.
-ilt: gilt, hilt, jilt, lilt, quilt, silt, spilt, tilt, wilt.
-im: brim, dim, grim, prim, rim, skim, slim, swim, trim, vim, whim.
-imp: blimp, crimp, limp, primp, shrimp, skimp.
-in: bin, chin, din, fin, grin, inn, kin, pin, shin, skin, spin, thin, tin, twin, win.
-inch: cinch, clinch, finch, flinch, pinch, winch.
-ing: bing, cling, ding, fling, king, ping, ring, sing, sling, spring, sting, string, thing, swing, wing, wring.
-ink: brink, blink, clink, drink, kink, link, pink, shrink, slink, think, wink.
-int: flint, glint, hint, lint, print, splint, print, squint, tint.
-ip: chip, clip, dip, drip, flip, grip, hip, lip, quip, rip, ship, sip, skip, slip, snip, strip, tip, trip, whip.
-isk: brisk, disk, frisk, risk, whisk.
-iss: bliss, hiss, kiss, this.
-ist: fist, list mist, twist.
-it: bit, fit, flit, grit, hit, kit, lit, pit, quit, sit, slit, spit, wit.
-itch: ditch, hitch, pitch, rich, stitch, switch, twitch, which, witch.
-ix: fix, mix, six.
-ob: blob, bob, cob, fob, hob, job, lob, mob, rob, sob, throb.
-ock: block, clock, crock, dock, flock, frock, lock, mock, rock, shock, smock, sock, stock.
-od: clod, cod, God, hod, nod, odd, plod, pod, prod, rod, shod, sod, trod.
-og: bog, clog, cog, dog, fog, frog, frog, jog, log, slog.
-ond: blond, bond, fond, pond.
-ong: gong, long, prong, song, strong, throng, thong, wrong.
-op: chop, cop, crop, drop, flop, hop, lop, mop, prop, shop, slop, sop, stop, top.
-oss: boss, cross floss, gloss, moss, toss.
-ost: cost, frost, lost.
-ot: blot, clot, cot, dot, got, hot, jot, lot, plot, pot, rot, shot, slot, spot, trot.
-ox: box, fox, sox.
-ub: club, cub, drub, grub, hub, shrub, snub, tub, tub.
-uck: buck, chuck, cluck, duck, luck, pluck, puck, shuck, struck, stuck, suck, truck, tuck.
-ud: bud, cud, mud, spud, thud.
-udge: budge, drudge, fudge, grudge, nudge, sludge, smudge, trudge.
-uff: bluff, cuff, fluff, gruff, huff, puff, snuff, stuff.
-ug: bug, drug, dug, hug, jug, lug, mug, plug, pug, rug, shrug, slug, snug, tug.
-um: chum, drum, glum, gum, hum, plum, slum, some, strum, sum, swim.
-ump: bump, chump, clump, dump, hump, jump, lump, slump, stump, thump.
-un: bun, dun, fun, gun, nun, pun, run, shun, spun, stun, sun.
-unch: bunch, crunch, hunch, lunch, munch, punch.
-ung: clung, flung, lung, rung, slung, sprung, strung, stung, sung, swung.
-unk: bunk, chuck, drunk, hunk, junk, shrunk, skunk, slunk, spunk, sunk, trunk.
-unt: blunt, bunt, grunt, hunt, punt, runt, stunt.
-us: bus, fuss, muss, plus.
-ush: blush, brush, crush, flush, gush, hush, mush, plush, rush, slush, thrush.
-ut: cut, glut, hut, jut, nut, putt, rut, shut, strut, tut.
-utch; clutch, crutch, Dutch, hutch.


## 2. Words with Long Vowel Sounds with the Marker e

-ace: brace, face, grace, lace, pace, place, race, space, trace.
-ase: case, chase, vase.
-ade: blad, fade, glade, grade, jade, shade, spade, trade, wade.
-age: cage, page, rage, sage, stage, wage.
-ake: bake, brake, cake, drake, fake, flake, lake, make, quake, rake, sake, shake, stake, take.
-ale: bale, gale, pale, sale, stale, tale.
-ame: blame, came, fame, flame, game, lame, name, same, shame, tame.
-ane: cane, crane, lane, mane, pane, vane.
-ape: cape, drape, gape, nape, shape, tape.
-aste: baste, haste, paste, taste, waste.
-ate: crate, date, fate, gate, grate, hate, late, mate, plate, rate, skate, slate, state.
-ave: brave, crave, gave, grave, pave, rave, save, shave, slave, wave.
-aze: braze, craze, daze, faze, gaze, glaze, haze, maze, phrase.
-ibe: bribe, tribe.
-ice: dice, mice, nice, price, rice, slice, spice, twice.
-ide: bride, glide, hide, pride, side, slide, stride, tide, wide.
-ife: life, strife, wife.
-like: dike, hike, lke, pike, spike, strike.
-ile: file, mile, pile, rile, smile, stile, tile, vile, while.
-ime: chime, crime, grime, lime, prime, slime.
-ine: brine, dine, fine, line, mine, nine, pine, shine, shrine, sign, spine, swine, twine, vine, whine. -ipe: gripe, pipe, ripe, stripe, swipe, wipe.
-ire: fire, hire, sire, mire, spire, tire, wire.
-ite: bite, kite, quite, smite, spite, white, write.
-ive: dive, drive, five, hive, life, strive, thrive.
-obe: globe, lobe, probe, robe.
-oke: broke, choke, cloak, folk, joke, poke, smoke, soak, spoke, stoke, woke.
-ole: hole, mole, pole, role, sole, stole, whole.
-ome: chrome, dome, home.
-one: bone, cone, drone, lone, stone, throne, tome, zone.
-ope: grope, hope, mope, pope, slope.
-ose: chose, close, doze, froze, nose, pose, rose, those.
-ote: note, quote, tote, vote, wrote.
-ove: clove, cove, drove, grove, hove, rove, stove, strove, wove.
-ute: butte, cute, mute.

## 3. Words with Long Vowel Sounds Spelled with Digraphs

-aid: aid, braid, laid, maid, paid, raid.
-ail: bail, fail, flail, frail, hail, jail, mail, nail, pail, quail, rail, sail, snail, tail, trail.
-aim: aim, claim (waist)
-ain: brain, chain, drain, gain, grain, lain, main, pain, plain, rain, slain, Spain, sprain, stain, strain, train, vain.
-eak: beak, beak, creak, freak, leak, peak, sneak, speak, squeak, streak, tweak, weak.
-eam: beam, cream, dream, gleam, scream, seam, stream, team.
-ean: bean, clean, dean, lean, mean, wean.
-ease: cease, crease, grease, lease, peace, please, tease.
-eese: breeze, cheese, freeze, sneeze, squeeze, wheeze.
-eat: beat, bleat, cheat, feat, heat, meat, neat, pleat, seat, treat, wheat.
-eave: heave, leave, peeve, sleeve, weave.
-eed: bleed, breed, deed, feed, freed, greed, heed, need, reed, seed, speed, steed, tweed, weed. -eek: cheek, creek, Greek, meek, seek, sleek.
-eel: feel, heel, keel, peel, reel, wheel.
-een: green, keen, queen, seen, sheen.
-eet: feet, fleet, greet, meet, sheet, sleet, street, sweet.
-oa: coal, cloak, foal, foam, load, moan, road, soak, toad.
-oast: boast, coast, roast, toast.
-oat: bloat, boat, coat, float, gloat, goat, moat, oat, throat.

## 4. Words with the /ou/ Sound

-ouch: couch, crouch, grouch, ouch, pouch, slouch, vouch.
-oud: cloud, (crowd), loud, shroud.
-ounce: bounce, flounce, pounce, trounce.
-ound: bound, found, ground, hound, mound, pound, round, sound, wound.
-out: count, mount.
-our: flour, hour, scour, sour, (flower).
-ouse: blouse, douse, grouse, house, mouse.
-out: bout, clout, doubt, drought, flout, lout, pout, rout, scout, shout, snout, spout, sprout, stout, trout.
-owl: (foul), fowl, growl, howl, prowl, scowl, howl.
-own: brown, clown, crown, down, drown, frown, gown, town.
-oil: boil, broil, coil, foil, soil, spoil, toil.
-oin: coin, join.
-oy: boy, coy, joy, toy.

## 6. Words with the $/ \overline{\mathrm{oo}} /$ Sound

-ool: cool, drool, fool, pool, school, spool, stool.
-ood: brood, food, mood.
-oom: bloom, boom, broom, doom, gloom, loom, room.
-oon: boon, coon, croon, loon, moon, noon, soon, spoon, swoon.
-oop: coop, hoop, loop, poop, stoop, swoop, troop, whoop.
-oot: boot, coot, hoot, loot, root, shoot, toot.
-ooth: booth, tooth.
7. Words with the $/ \mathrm{oo} /$ Sound
-ood: good, hood, stood, wood, (could, would, should)
-oof: goof, hoof, proof, roof, woof.
-ook: book, brook, cook, crook, hook, look, nook, shook, took.

## 8. Words with Vowel Sounds Followed by /r/ Sound

A. Words with the /err/:

* bear, pear, swear, tear, wear.
* bare, blare, care, dare, flare, glare, hare, mare, pare, rare, scare, share, snare, spare, square, stare.
* chair, fair, hair, lair, air, stair.
* there, where.
B. Words with /ŏr/:
* bar, car, char, far, jar, mar, par, scar, spar, star, tar.
* card, guard, hard, lard, yard.
* bark, dark, hard, lark, mark, park, shark, spark, stark.
* charm, farm, harm.
* cart, chart, dart, heart, mart, part, smart, tart.
C. Words with /irr/:
* cheer, clear, dear, deer, ear, fear, gear, hear, here, jeer, mere, near, peer, pier, queer, rear, shear, sheer, smear, sneer, spear, steer, tear, tier, veer, year.
D. Words with /ûr/:
* blur, cur, fir, fur, purr, sir slur, spur, stir, were, whir.
* curb, herb, verb.
* curve, nerve, serve, swerve,
* birch, church, lurch, perch, search.
* cure, lure, pure.
* curl, earl, furl, girl, hurl, pearl, swirl, twirl, whirl.
* burn, churn, earn, fern, learn, spurn, tern, turn, yearn.
* firm, germ, squirm, worm.
* blurt, curt, dirt, flirt, hurt, pert, shirt, spurt, squirt.
E. Words with /ōr/:
* cord, lord.
* boar, bore, core, door, floor, fore, four, gore, lore, more, oar, ore, pore, roar, score, shore, snore, soar, sore, store, swore, tore, wore, yore.


## 9. Words that End in Vowel Sounds (Open Syllables)

$/ \overline{\mathrm{a}} /-$ bay, bray, clay, day, flay, gay, gray, hay, jay, lay, may, nay, pay, play, pray, prey, ray, say, slay, spray, stay, stray, sway, tray, way, stray.
/ē/ - bee, fee, flee, free, glee, ke, pea, plea, sea, spree, tea, tee, three, tree.
/̄̄/ - blow, bow, crow, doe, dough, flow, foe, fro, glow, go, ,grow, hoe, know, low, mow, owe, sew, show, slow, snow, sow, stow, throw, toe, tow, woe.
/ŏ/ - awe, caw, claw, draw, flaw, jaw, law, paw, raw, saw, squaw, straw, thaw.
/ou/ - bow, brow, cow, how, now, plow, prow, scow, vow.
/oo/ - blew, blue chew, clue, coo, crew, dew, drew, due, few, flew, glue, grew, hew, hue, mew, new, pew, shoe, stew, strew, sue, threw, too, true, two, view, woo, you.

## Final Notes

1. It is best to teach the following kinds of words late in the word recognition program:
-- "silent k" words, such as knife.
-- "silent b" words, such as comb and bomb.
-- the beginning consonant cluster, sc, as in scrap.
2. There are many words like wise and June when decoded (pronounced) according to the phonics rules (e.g., $/ \mathrm{wi} z /$ and $/ \mathrm{jyoon} /$ are sounded out close enough to their true pronunciations that children or pupils can read them.

## How to Print Letters

Lower-case letters are easy to print. Just remember that they have only a few basic strokes or features:

$$
\square>\mid
$$

Notice in writing the letter models to follow that you always begin by printing the left part of the letter first. All lower-case letters are full or one-half size. Follow the arrows and you soon will be printing legible letters for your child to read. Here is the lower-case alphabet:




A Chart of Consonant Speech Sounds

| Phonetic Spelling | Typical Spelling | Percentage of Occurrence in Words | Number of Spellings |
| :---: | :---: | :---: | :---: |
| 1. /p/ | $p$ at | 96 | 2 |
| 2. $\mathrm{t} / \mathrm{/}$ | tap | 97 | 9 |
| 3. $/ \mathrm{ch} /$ | chap culture | $\begin{aligned} & 55 \\ & 31 \end{aligned}$ | 5 |
| 4. /k/ | cat keep | 71 | 13 |
| 5. /b/ | $b$ at | 91 | 3 |
| 6. /d/ | dot | 98 | 3 |
| 7. /j/ | jet gem | $\begin{aligned} & 22 \\ & 66 \\ & \hline \end{aligned}$ | 7 |
| 8. /g/ | got | 88 | 7 |
| 9. /f/ | fat | 78 | 6 |
| 10./th/ | thin | 100 | 1 |
| 11./s/ | sat cent | $\begin{aligned} & 73 \\ & 17 \end{aligned}$ | 10 |
| 12./sh/ | shut action | $\begin{aligned} & 26 \\ & 53 \end{aligned}$ | 15 |
| 13./h/ | hit | 98 | 2 |
| 14./v/ | vat | 99.5 | 3 |
| 15./th/ | the | 100 | 1 |
| 16. /z/ | $\begin{aligned} & z \text { ap } \\ & \text { as } \\ & \hline \end{aligned}$ | $\begin{aligned} & 23 \\ & 64 \\ & \hline \end{aligned}$ | 8 |
| 17./zh/ | usual fusion | $\begin{aligned} & 33 \\ & 49 \end{aligned}$ | 5 |
| 18./m/ | man | 94 | 6 |
| 19./n/ | not | 97 | 6 |
| 20. $\mathrm{ng} /$ | sing bank | $\begin{aligned} & 59 \\ & 41 \end{aligned}$ | 3 |
| 21. /1/ | $\begin{array}{\|l\|} \hline \begin{array}{l} \text { lap } \\ \text { able } \end{array} \\ \hline \end{array}$ | $\begin{aligned} & \hline 91 \\ & 95 \\ & \hline \end{aligned}$ | $\begin{aligned} & \hline 4 \\ & 5 \\ & \hline \end{aligned}$ |
| 22. $/ \mathrm{r} /$ | $r$ un | 97 | 4 |
| 23./w/ | wet | 92 | 3 |
| 24. /y/ | yet senior | $\begin{aligned} & 44 \\ & 55 \end{aligned}$ | 3 |

## A Chart of the Vowel Speech Sounds

| Phonetic Spelling | Typical Spelling | Percentage of Occurrence in Words | Number of Spellings |
| :---: | :---: | :---: | :---: |
| 1./1/ | it myth | $\begin{aligned} & 66 \\ & 23 \end{aligned}$ | 22 |
| 2. /ă/ | at | 96 | 3 |
| 3. $/ \mathrm{oo} /$ | foot <br> put | $\begin{aligned} & 31 \\ & 54 \end{aligned}$ | 6 |
| 4. $/$ ŭ/ | up | 86 | 6 |
| 5. /e// | bed vary care hair there | $\begin{aligned} & 91 \\ & 29 \\ & 23 \\ & 21 \\ & 15 \\ & \hline \end{aligned}$ | $\begin{gathered} 13 \\ 9 \end{gathered}$ |
| 6. /e/ | be <br> eat <br> feel | $\begin{aligned} & 70 \\ & 10 \\ & 10 \\ & \hline \end{aligned}$ | 16 |
| 7.//a/ | $\begin{aligned} & \text { angel } \\ & \text { ate } \end{aligned}$ | $\begin{aligned} & 45 \\ & 35 \end{aligned}$ | 16 |
| 8. /i// | find ice by | $\begin{aligned} & 37 \\ & 37 \\ & 14 \end{aligned}$ | 14 |
| 9. /oo/ | boot <br> truth <br> who <br> rude | $\begin{gathered} 38 \\ 21 \\ 8 \\ 8 \end{gathered}$ | 16 |
| 10. / $\overline{\mathrm{o}} /$ | both code cord | 73 14 unavailable | $16$ <br> unavailable |
| 11. /ŏ/ | $\begin{array}{\|l\|} \hline \begin{array}{l} \text { ddd } \\ a \mathrm{rm} \end{array} \\ \hline \end{array}$ | $\begin{array}{r} \hline 79 \\ 89 \\ \hline \end{array}$ | $\begin{gathered} \hline 13 \\ 6 \\ \hline \end{gathered}$ |
| 12. /ou/ | out how | $\begin{aligned} & 56 \\ & 29 \end{aligned}$ | 5 |
| 13./oi/ | $\begin{aligned} & \hline \text { boil } \\ & \text { boy } \end{aligned}$ | $\begin{aligned} & 62 \\ & 32 \end{aligned}$ | 4 |
| 14. /yoo/ | union cute | $\begin{aligned} & 69 \\ & 22 \end{aligned}$ | 11 |
| 15. /ûr/ | $\begin{array}{\|l} \hline \text { her } \\ \text { burn } \\ \text { fur } \end{array}$ | $\begin{aligned} & 40 \\ & 26 \\ & 13 \end{aligned}$ | 14 |

## References and Suggested Reading

Auckerman, R. C. (1984). Approaches to Beginning Reading, New York, NY: John Wiley
Adams, M. J. (1990) Beginning Reading. Cambridge, MA: MIT
Anderson, R. C., et al. (1985). Becoming a Nation of Readers. Washington DC: U.S, Department of Education.

Balmuth, M. (1982). The Roots of Phonics. New York, NY: McGraw-Hill.
Chall, J. S. (1967, 1983). Learning to Read: The Great Debate. New York, NY: McGraw-Hill.
Chall, J. S. (1989) "Learning to Read: The Great Debate Twenty Years Later," Phi Delta Kappa, 71, 52-385.

Feitelslon, D. (1988). Facts and Fads in Beginning Reading. Norwood, NJ: Ablex.
Groff, P. (1977). Phonics: Why and How. Morristown, NJ: General Learning.
Groff, P (1983). "A Test of the Utility of Phonics Rules," Reading Psychology, 4, 217-225.
Groff, P (1987). Preventing Reading Failure. Portland, OR: National Books.
Groff, P. and Seymour, D. Z. (1987) Word Recognition. Springfield, IL: C. C. Thomas.
Henderson. L. (1982). Orthography and Word Recognition in Reading. New York, NY: Academic.
Pearson, P. D. (Ed.) (1984). Handbook of Reading Research. New York, NY: Longman.
Perfetti. C. (1985). Reading Ability. New York, N: Oxford.
Spalding, R. B. \& Spalding. W. T. (1986). The Writing Road to Reading. New York, NY: William Morrow.

Suggested 2015 Resource Update by Don Potter and Bob Sweet
Dehaene, Stanislas, (2009) Reading in the Brain: The Science and Evolution of a Human Invention, New York, NY: Viking.

Mr. Donald L. Potter, a long time educator in Odessa, Texas, retyped and reformatted Dr. Groff's manuscript for publication by the National Right to Read Foundation. Other essays and papers by Dr. Groff are available from the NRRF website, www.nrrf.org and the "Reading Instruction and Research Page" of Mr. Potter's website, www.donpotter.net.

# Are There Limitations on Phonics Rules? 

Spelling Progress Bulletin, Summer 1983, pp10, 11

by Patrick Groff, Ed.D.

One of the key questions posed by the International Reading Association Special Interest Group on Reading: Orthography and Word Perception is. "What are the limitations of phonic generalizations?" I have recently completed some research, which offers some new insight into this query.

## Phonics Rules Have Limitations.

In 1963 Clymer reported on his study of how frequently the application of phonics rules would result in the true pronunciation of words. As a result of his study, Clymer advised teachers that the application of phonics rules must not be considered useful unless it results in the accurate pronunciation of written words $75 \%$ of the time.

Since 1963 there has been general acceptance among professionals of the design of Clymer's research and the legitimacy of his $75 \%$ exclusion rule. An inspection of the texts on the methods of reading instruction published since the appearance of Clymer's findings indicates that the great majority of their authors has accepted the proposition that unless the application of a phonic rule results in the accurate pronunciation of a written word $75 \%$ of the time, this application is not a useful practice. Teachers are advised not to teach children phonics rules that do not meet the $75 \%$ test of utility.

Reading experts who oppose the teaching of phonics are quick to use Clymer's data as support for their contention that English spelling is so irregular or unpredictable that the application of phonics rules is not a useful practice. The advocates of the so-called "psycholinguistic" approach to reading instruction particularly are heartened by the Clymer proposition since they are convinced it is misleading to try to teach the student in terms of phoneme-grapheme correspondences. Part of their objection to phonics teaching rests on their belief that only a few of the frequently taught phonics rules are consistent enough to relate to enough words to make them worthwhile teaching. Even the new A Dictionary of Reading and Related terms (Harris and Hodges, 1981), which was designed to bring clarity to the meaning of reading terms and to serve as a reference when questions arise about the reading process, agrees. This dictionary states that "a word may be taught as a sight word if it is not phonetically regular" (p. 295). A sight word, this lexicon says, is a word that pupils are expected to, learn to recognize, automatically as a whole unit. The examples given are: and, have, and of.

## The Challenge to Clymer.

Only a conspicuously few reading experts appear to challenge the notion that if the application of a phonics rule results in the accurate pronunciation of written words less than $75 \%$ of the time, it is not a useful practice. Some reading experts do argue, however, that approximate pronunciations of written words that are derived from the application of phonics rules do have utility in decoding words. They contend that phonic analysis is a tool to use in making an intelligent guess as to the oral equivalent of a printed word. They believe that even if the application of a phonic rule does not lead to precise pronunciation, it may still effectively lead a student to word recognition. Among the reading experts who make such statements are Jonathan Baron, Joseph Bukovec, Robert Glushko, Philip Gough, Arthur Heilman, Frank May, Richard Venezky, and Richard Wallach. None of these reading authorities cite any empirical evidence in their defense of the value of gaining approximate pronunciations of words through phonics analysis, however. Apparently there has been no empirical test of Clymer's assumptions about this matter.

## A Study of Clymer's Assumptions.

It is obvious that the reading experts who over the years have demanded a $75 \%$ utility for phonics generalizations if they are to be thought of as useful have never paused to reflect: "If a student can gain an approximate pronunciation of a written word through the application of phonics rules, can he or she then infer and produce the true pronunciation of this word?" It is as apparent that none of the reading experts who accept this $75 \%$ maxim have never tested its assumptions.

I designed a study to investigate whether pupils who hear mispronounced words in a story-like context, words mispronounced so as to reflect the application of phonics rules, can infer and produce the true pronunciation of these words. It was the major assumption of my study that as pupils decode head, for example, using phonics rules for this word, they will pronounce the word as /hēd/. It was further hypothesized that after this point pupils can infer and correct their mispronunciation of head through the use of context and semantic cues available in connected discourse. I deduced that the manner in which pupils make such corrections in words read aloud to them would be comparable to the inferences they make when they decode irregularly spelled written words.

I read aloud to 49 second-grade pupils, one at a time, a story-like context in which they heard 14 key words mispronounced so as to conform to certain well-known phonics rules. For example, these pupils heard: "Did you bump your /hēd/?" The phonics rule here is that in head, the digraph, ea, signals that the first letter in the digraph will be given its 'long" vowel sound and that the second letter of the digraph, $a$, will not be sounded. Each of the key words in this study was read aloud in a short sentence (as above). The individual student being tested was then asked to infer and produce the correct pronunciation of this word.

Of the 49 pupils in this study, 23 inferred and produced the correct pronunciations of all the 14 mispronounced words read aloud to them. Of the total responses by the pupils in this study, 686 (49 pupils x 14 key words), only 51 were incorrect. That is, only $7.4 \%$ of the responses by the pupils were in error. Never did less than $80 \%$ of the pupils fail to correctly infer and produce a given pronunciation.

These data suggest that by the end of the second grade pupils can readily infer and produce the correct pronunciations of irregularly spelled words that have been mispronounced so as to conform to specified phonics rules. The findings of this study thus do not support the conclusions given by Clymer, and later by other reading experts that the application of a phonics rule must result in the true pronunciation of a written word if this rule is to be deemed a useful one. This study suggests that the only kind of phonics rule that would be classified as not useful for word recognition would be one whose application results in a mispronounced word - whose correct pronunciation pupils cannot infer from this approximate pronunciation and from the context of the sentence involved. In my study, the only phonics rules that might be considered for this category would be those that pertain to the vowel letter-speech sound correspondences in ball, find, paper and her. I found that 18, 22, 29, and $16 \%$ of the pupils in my study respectively, failed to infer and produce the correct pronunciations of these words.

## Discussion.

If one accepts Clymer's criterion that phonics rules only have utility if their application results in the true pronunciations of the written words then doubtless one would be in favor of reforming the alphabet so as to make that there are no irregularly spelled words. In this case, all phonics rules would become useful because they then would conform to Clymer's criterion.

But what if, as the data from my study suggests, phonics rules have utility with irregularly spelled words because they allow pupils to arrive at the approximate pronunciation of these words, pronunciations from which pupils can infer correct pronunciations? It would appear superfluous in this event to argue for a reformation in spelling.

The findings of my study suggest that the answer to the so-called spelling problems for readers supposedly created by irregularly spelled words is not likely to be the reformation of our current spelling. Instead, the solution to this issue would be to teach children in an intensive manner so that they would be assured of the ability to apply phonics in an easy and accurate manner.

This shift away from the attempt to reform spelling to making sure that all children are exceedingly skilled in the ability to apply phonics has one other advantage in its favor. It is more likely that society will accept intensive phonics teaching as a general practice than it will agree to a reformation of the spelling. My findings thus appear to have practical consequences. They provide a solution to a problem (spelling reform) that so far has resisted all attempts at its remediation.

I do concede that I only indirectly tested children's abilities to apply phonics rules plus context and to utilize the information that results from this application to the recognition of words. I am convinced, nonetheless, that until some more clever researcher than I can conceive of a way to determine children's abilities to utilize approximate pronunciations of words (that their attempts to decode words provides them) to infer the correct pronunciation of words, that my findings provide the most basic answer at present to this problem. I hope, of course, that my research will lead to more sophisticated investigations so that we will have more direct answers to the issue I have raised in this discussion.

It is true that the findings of my study only apply to reading. There appears at present ample evidence that learning to read and learning to spell are mutually exclusive activities in certain respects. The findings of my study thus should not be construed to offer evidence as to how to best teach children to spell correctly.

## References.

Clymer, Theodore. "The Utility of Phonic Generalizations in the Primary Grades." Reading Teacher, 17 (1963), 252-258.

Harris, Theodore L. and Hodges, Richard E. (editors), A Dictionary of Reading and Related Terms. Newark, Delaware: International Reading Association, 1981.

Mr. Potter added Dr. Groff's 1983 article countering Theodore Clymer's widely accepted claims that phonics rules are too limited to be of much use in helping readers identify words. This is a summary of Dr. Groff's article mentioned in the "References and Suggested Readings," "A Test of the Utility of Phonics Rules."

Accessed 1/2/2014 at http://www.englishspellingsociety.org/bulletins/b83/summer/limits.php

