## Teach sight words faster Best practices from brain research, science

We will look at what recent brain research has found about reading, and how to apply that to learning to read. Then, there is a 52 week plan to learn over 200 sight words based on best practices from scientific research.

Recent brain research has found that the adult brain of good readers does not process words as wholes, but instead, as Stanislas Dehaene explains in his article, The Massive Impact of Literacy on the Brain, by analyzing the individual letters and letter teams at the same time in a "massively parallel architecture." ${ }^{1}$ The speed of this parallel processing led early researchers to believe that the brain was processing the words as a whole, but recent brain research using more powerful technology has found the opposite.

You can find many of Stanislas Dehaene's articles online ${ }^{2}$, and his videos and other videos about reading and the brain can be found on one of 40L's YouTube playlists. ${ }^{3}$

Recent advances in brain scans have enabled scientists to see what is happening as the human brain reads, capturing what is going on in the brain millisecond by millisecond. The ability of the brain to translate letters into meaningful words is amazing, and harder than it seems.

First, the brain has to recognize letters. While this seems simple to an adult, it is actually a complex task that is hard for computers to replicate. The human brain can quickly and effortlessly translate hundreds of different fonts and thousands of different handwritten letters, some of them messier than others [messy writing], into the letters of the alphabet. It is hard to train computers to recognize so many fonts and even harder for a computer to recognize messy writing.

Then, the letters are translated into sounds so fast that the adult mind thinks that it is recognizing them as wholes, when in fact, each letter and letter team is being processed in parallel. ${ }^{4}$ As this happens, the sounds of the word almost instantaneously light up the

[^0]meaning areas of the brain. For a more technical explanation of this amazing process, read Dehaene's "Reading in the Brain."

In Language at the Speed of Sight, cognitive neuroscientist Mark Seidenberg states,

> There is a profound disconnection between the science of reading and educational practice. Very little of what we've learned about reading as scientists has had any impact on what happens in the schools because the cultures of science and education are so different.
> The gulf between science and education has been harmful. A look at the science reveals that the methods commonly used to teach children are inconsistent with basic facts about human cognition and development and so make learning to read more difficult than it should be. They inadvertently place many children at risk for reading failure. They discriminate against poorer children. ${ }^{5}$

You can find more information on Mark Seidenberg's website ${ }^{6}$ and in his book.
For more about how and why this disconnect between science and education harms poor and minority students, watch 40L's YouTube video "Closing the Reading Gap." ${ }^{7}$ My 23 years as a volunteer literacy tutor have taught me just how important a good phonics base is for everyone, but especially for my disadvantaged students.

The generally recommended number of sight words that teachers suggest a young student can learn by sight is 2 words per week. With phonics, you first need to spend a few weeks learning the letter sounds and then a few more weeks learning to blend these sounds together to make words. We'll compare how much you can learn at the rate of a few sounds or word per week, comparing teaching the most commonly taught sight words as wholes by sight verses teaching them with phonics.

[^1]As you can see on this first graph, initially the sight word method looks faster.


But, once you get past the basics of learning the letter sounds how to blend them together, phonics is faster and more efficient. The new reader will initially sound out words slowly and haltingly, but with practice, this process gets faster and faster until eventually they will be able to sound them out so fast that they too will think they are reading them as wholes, but science proves the opposite, that they are being decoded as sounds lightning fast in parallel. It can take a few years of practice to achieve this speed.


By the end of 52 weeks, phonics nets you twice as many words learned vs. learning them as wholes by sight.


Moreover, the benefits of phonics are magnified, phonics is even more powerful. At the end of 16 weeks, you have the ability to sound out 10,000 additional words. At the end of week 20 , you add an additional 5,000 words.


By the end of 52 weeks, with phonics, you have the ability to sound out thousands and thousands of additional words. So, your progress is magnified and multiplied.


Learning sight words as wholes can also lead to confusion. When you are learning by shape, words that look alike are easily confused. For instance, look at the following words, a small subset of the easily confused sight words:

## be-by-buy-big <br> come-came-can <br> they-then-them

They are easily confused if you are not looking at every letter and sounding them out. Almost all of my remedial students have lingering confusion problems with some sight words, but especially between "they," "then," "than," and "them."

For more about this, see Raymond E. Laurita's article, Basic Sight Vocabulary - A Help or A Hindrance?

The problems from guessing often do not show up until a few years later when more complex text is used, another reason sight words are still taught besides the disconnect between education schools and research. All my remedial students have had some degree of guessing problems and difficulty sounding out complex multi-syllable words.

You can easily avoid these guessing problems and confusion by teaching the sight words with phonics. About $70 \%$ of them are completely regular and need no rules or explanation to teach. All but 5 of the most commonly taught 220 Dolch sight words and 100 Fry Instant words can be easily taught with phonics by teaching a few simple rules and patterns. See the documents and videos linked in footnotes 9 - 14 of this document to learn how.

A good phonics program like Phonics Pathways or the free to print Blend Phonics or Word Mastery will also teach most of these sight words with phonics. To make sure you're getting a good sound phonics program without a lot of sight words taught as wholes, use one recommended by 40L, by Don Potter, or by the National Right to Read Foundation. ${ }^{8}$

The fastest, most efficient way to learn the sight words is with phonics. Learning them with phonics will also prevent later confusion and guessing problems. Plus, your brain will thank you.

[^2]
## 52 Week Sight Word Teaching Plan

Week 1-4. Teach letter sounds. An easy way to learn the basic letter sounds is to play Leapfrogs DVD "Talking letter factory" daily for a few weeks. You can also use 40L's free to print vowel and consonant charts and cards. ${ }^{9}$ Don Potter has a good video showing how to learn the sounds using a Phonovisual chart, a chart similar to 40L's free to print chart. ${ }^{10}$

Week 4-8. Work on oral blending, when it is mastered, start on a white board or use 40L's cards or magnetic letters to sound out simple 2 letter words listed for week 9 . Watch the videos on 40L's YouTube Pre-Reading Skills Playlist for oral blending ideas and fun ways to teach blending. ${ }^{11}$ 40L's Blending Page has more blending ideas. ${ }^{12}$

Week 9. Learn to blend and read the following 2 letter words. They are all short because they end in a consonant. You can watch 40L's video "Know Sight Words \#1 - Short Vowels" to help teach these sounds. ${ }^{13}$

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an, am, at
in, it, if
on
up, us
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Week 10. Teach these 3 letter short vowel words, 19 additional words. They are all short because they end in a consonant.
had, can, ran
yes, get, let, red, ten
big, did, him, sit, six
got, hot, not
run, cut, but

[^3]Week 11. Double consonant ff has the same sound as a single f. Review all short vowel words.

## off

Week 12-13. Consonants will blend together, see 40L's blending page (link in footnote 12) for explanations of how sounds combine when they blend.
and, ask, fast
went, best
its
stop, long
jump, just, must
Week 14. This week you will teach sh and ending ck as k. See 40L's Sight word page, 40L's "Sight Words by Sound" document and 40L’s Know Sight words YouTube series for help teaching these sounds. ${ }^{14}$ (These links also cover how to teach the remaining sounds for weeks 15 -52.) You can also use any good beginning phonics program such as Don Potter's free to print Blend Phonics or the inexpensive "Phonics Pathways" by Delores Hiskes to learn how to teach using phonics and incorporate additional words in your lessons.

## black, pick <br> wish

Week 15. Teach the sounds of $\mathbf{t h}$ and $\mathbf{w h}$.

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that, than
then, them
this
when
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Week 16. Teach ch and ending th.

## much, which, with

[^4]Weeks 17 - 18. Words and syllables ending in a vowel are long and the vowel will say its name. Also teach sh, th, and ending $\mathbf{y}$ as $\mathbf{I}$ in short words. (When y is a vowel, it usually acts as an I except when it is in an unaccented syllable at the end of a word. Rules for when the word "the" schwas should be taught later and are explained in the Sight Words by Sound document.)
a
be, he, me, she, we, the
I
go, so, no
my, try, why, by, fly
Weeks 19 - 21. Silent e words. You may have to compare and contrast and underline the e and the vowel, for example, mat vs. mate, cap vs. cape, pet vs. Pete, hop vs. hope, etc. At the beginning of work on silent e words, there can be a confusion between these and the short vowel words, you will need to review short vowel words and compare and contrast the two. I would personally also teach long o , e, and $u$ silent e words, adding a few such as hope, note, Pete, cute, and cube. (See sight words by sound document for how to teach long $\mathbf{u}$, it can either be yoo or oo.)
ate, came, made, make, take, gave
five, like, ride, time, white
Week 22. The letter team ee is highly regular and is usually very easy to teach.

## see, green, keep, sleep three

Week 23. The letter team ea as its primary sound of long e.
eat, clean, each, read* (read can also be short e depending on context)
Week 24. The letter teams ay and ey as long a. Personally, I would also teach ai and ei as in mail and vein and add a few extra words.

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say, may, day, way, play
they
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Week 25. The letter team igh. This is not a silent gh but a letter team working together to keep the I long.

## light, right

Week 26. The letter team ow as long $\mathbf{o}$.
grow, show, own, yellow

Week 27. The letter teams ue and ew as long u. I would personally add in a few words such as few, new, and glue. You can also teach ui as long $\mathbf{u}$ as in fruit.
blue, new
Week 28. These are l controlled vowels.
all, call, fall, small
tell, well, help
Week 29. More l controlled vowels.
will
full, pull
Week 30. The sound of n in $\mathbf{n g}$ and $\mathbf{n k}$. (Different from the normal sound of n .)
sing, bring, going
drink, think
thank

Week 31. The letter teams ou and ow as "ou."
out, found, round
how, now, down, brown
Week 32. The letter team aw. You could also teach "au" as in autumn and faun.
saw, draw
Week 33. Long and short oo.
good, look
too, soon
Week 34. These are r controlled vowels.
far, start, part
or, for

Week 35. More r controlled vowels (Divide between two consonants, syllables ending in a consonant are short. If these two syllable words are too difficult, add dashes as in af-ter and bet-ter or save until the student is older.)

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first
her
hurt
after, better, under
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Week 36. More r controlled vowels
our
here

Week 37. These have w control.

## want, wash, walk

Week 38. More w control. I would personally add a few more of each type such as warp and world.

## warm <br> work

Week 39. Schwa, unaccented syllables often schwa, especially beginning unaccented a.
again, about, around, away.
Week 40. Schwa, see 40L's Sight Words by Sound document for explanation.
come, some, done, from
Week 41. Schwa.
what
other

Week 42. These have s as z , "does" also has a schwa. This is because s and z are consonant pairs.
as, has
is, his
does

Week 43. More s as z, was and of schwa and have their consonant pair substation (The letters $f$ and $v$ are also consonant pairs, this is why "of" is pronounced " $u v$ " and why leaf changes to leaves.)

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hers
was
of
Week 44. More s as z in ending -se.
please, these
those
use
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Week 45. A bit tricky, already learned patterns.
always
goes
Week 46. Ending v. (Live can be either short or long depending on context.)
have
give, live*
Week 47. Vowel changes, o as oo. (Into divides between two consonants.)
to, do
into
Week 48. Vowel changes.
because
been

Week 49. Vowel changes.
could
pretty
Week 50. Vowel changes.

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put
said
shall
you
```

Week 51. Vowel changes.

```
both
any, many
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Week 52. Long vowel in words with I or 0 followed by 2 consonants.

kind, find<br>old, cold, hold

To teach the remaining 220 Dolch and 100 Fry sight words not yet taught ( 35 words), see 40L's Sight Words by Sound document (footnote 14) for a detailed explanation on how to teach them, including syllable division rules. You can also see how to teach them all in 40L's "Know Sight Words: Summary" YouTube video. ${ }^{15}$


[^5]
[^0]:    ${ }^{1}$ Dehaene, Stanislas, "The Massive Impact of Literacy on the Brain and its Consequences for Education," Human Neuroplasticity and Education, 2011, p. 23 [Note: Stanislas Dehaene's 2009 book "Reading in the Brain" has a more detailed explanations and compares many different studies.]
    ${ }^{2}$ Selected publications of Stanislas Dehaene:
    http://www.unicog.org/biblio/Author/DEHAENE-S.html

    3 40L’s YouTube Playlist, "Your Brain on Reading:"
    https://www.youtube.com/playlist?list=PLJLxBWdK_5l1u9v4FTXD3CXgCBIGeSZpM

[^1]:    ${ }^{4}$ From Stanislas Dehaene’s book "Reading in the Brain," page 107: "The conversion of a letter into a sound starts only 225 milliseconds after the letter first appears on the retina, and its compatibility with a spoken sound is recognized after about 400 milliseconds."
    ${ }^{5}$ Seidenberg, Mark. Language at the Speed of Sight, Basic Books, 2017, page 9.
    ${ }^{6}$ Mark Seidenberg's website about his book, "Language at the Speed of Sight:" https://seidenbergreading.net/contact/

    7 40L’s YouTube video "Closing the Gap in Reading:" https://www.youtube.com/watch?v=zORKu1F5wx0

[^2]:    8 40L's list of good phonics programs:
    http://www.thephonicspage.org/On\%20Reading/phonicsandspelli.html

    Don Potter's list of good phonics programs and other phonics information:
    http://www.donpotter.net/education_pages/reading-instruction.html
    The National Right to Read foundation's list of recommended phonics programs:
    http://www.nrrf.org/resources/\#featured-products

[^3]:    ${ }^{9}$ 40L's vowel and consonant charts are free to print:
    http://www.thephonicspage.org/On\%20Reading/Resources/40LChartsCombined.pdf
    ${ }^{10}$ Don Potter's Phonovisual Chart for Kids YouTube video:
    https://www.youtube.com/watch?v=0BdyTR-dqxw\&feature=youtu.be

    11 40L's Pre-Reading Skills YouTube playlist:
    https://www.youtube.com/playlist?list=PLJLxBWdK_5l3aBN-qowg2u8BdGYM64pTi
    12 40L's Blending Page:
    http://www.thephonicspage.org/On\%20Reading/blendingwords.html

    13 40L's YouTube video Know Sight Words \#1 - Short Vowels: https://www.youtube.com/watch?v=Eed_elWl6k\&t=6s\&index=5\&list=PLJLxBWdK_5l2AdSYtPS1d426P8rIv66eT

[^4]:    1440L's Sight Word page:
    http://www.thephonicspage.org/On\%20Reading/sightwords.html
    40L's "Sight Words by Sound," free to print:
    http://www.thephonicspage.org/On\%20Reading/Resources/Sight\%20Words\%20by\%20Sound1.pdf
    40L's sight word YouTube videos, including the "Know Sight Words" series:
    https://www.youtube.com/playlist?list=PLJLxBWdK_5l2AdSYtPS1d426P8rIv66eT
    Don Potter's free to print Blend Phonics:
    http://www.donpotter.net/education_pages/blend_phonics.html

[^5]:    15 40L's Know Sight Words Summary movie available at:
    https://www.youtube.com/watch?v=8V1d_VmbFik\&index=3\&t=7s\&list=PLJLxBWdK_512AdSYtPS1d426P8rIv66eT

