



Information on Structured Word Inquiry (SWI)

About six years ago we started learning about Structured Word Inquiry (SWI) and feel we found an approach for addressing spelling issues that also helps students with decoding. SWI is based on linguistics, the scientific approach to understanding language. Through SWI we have learned that English is really a morphophonemic language (words are spelled based on meaning) and is stress-timed, not a syllable-timed language. Although we can break many of our words into syllables, as you may have seen through teaching or other examples, not all words work that way. And, phonology (how we sound out words) can shift within a word family when we add different prefixes and suffixes. Using the SWI approach we first look at the morphology (meaning of the morphemes) of the word, then the etymology (history of the spelling of the word), and then phonology (graphemes used to represent the phonemes you hear, but not all graphemes in a word have phonological representation because they are lexical markers/etymological markers/zero allophones). So, the final spelling and pronunciation of a word is determined by morphology, etymology and phonology, in that order.

There are four questions that we use to investigate words:

1. What does the word mean?
2. How is it built? (word parts - prefixes, base(s), suffixes)
3. What are its relatives? (words that share meaning)
4. What aspects of its pronunciation are relative to its spelling?

Here is an example that is used widely because it demonstrates this so well:

Why is there a <g> in <sign>? (If you know Orton-Gillingham we would teach this as a Sight Word.)

1 – What does the word mean?

First, we would ask the student if they know what it means and if can they use it in a sentence?

We would look it up in a dictionary (preferably one with etymological information with each word entry) and/or look it up on www.etymonline.com.

Here is the exact page for <sign>: http://etymonline.com/index.php?allowed_in_frame=0&search=sign

After discussing the dictionary definition and the entry in www.etymonline.com, the student (with guidance as needed) can determine a definition.

What does it mean? a marker or indicate something

2 - How is it built? (word parts - prefixes, base(s), suffixes)

We consider the word's morphology. Does it have any prefixes or suffixes? Does it have a free base or bound base? A free base can stand alone as a word. A bound base must have at least one additional morpheme to be a complete word.

We learned from the entry in www.etymonline.com that it comes from Latin <signum> for the noun and <signare> for the verb. We have done a lot of study in this area, so I can tell you that when we see a Latin base with a <-um> or <-are> suffix, we remove those suffixes for the English base.



When we analyze the word and use the evidence we have gathered from various sources, including the etymology of the word, we can hypothesize that this word is comprised of one morpheme, the free base <sign>.

3 - What are its relatives? (words that share meaning)

Encourage the student to come up with words that may be related in meaning. They may come up with words that use the base <sign>, such as stop sign or signal. Or, they may come up with words that do not share the same base, such as mark or clue. All words they come up with are good words to discuss.

Next, we will focus on morphological relatives. Morphological relatives are words that share the same base and are related in meaning. Are there words they came up with that share the same base, <sign>, and have a shared meaning? List them together. Then, if you know more, you can facilitate discussion about words you know by asking questions.

Here are some thoughts for you:

What if we add on the suffix <-al>, what do you get?

The word sum: sign + al --> *signal*

What if we add the suffixes <-ate> and <-ure>?

The initial portion of the word sum: sign + ate + ure

(We would drop the <e> on the <-ate> suffix because the <-ure> begins with a vowel.)

You get the word sum: sign + ate/ + ure --> *signature*

Are all of these words (*sign*, *signal*, *signature*) related in meaning? Yes!

One thing that we discover is that the <g> in *sign* has to be there because it is a base of a word family and we can't have words like *sign*, *signal*, *signature* without the <g>.

What other words may share this same base? We can see a possible list of words that share the same base by looking up the letter string <sign> on the Word Searcher. Here is a link to the Word Searcher: <http://www.neilramsdn.co.uk/spelling/searcher/index.html> Just type in sign in the search box. You will see lots of words appear in the box on the right. It is important to note that not all words that show up in the box on the right will necessarily share the same base, but they all will have the letter string you look up. You will have to do some investigation to determine if a given word on in the list shares the same base. I will say for this particular search it looks like most, if not all, of the words happen to share the same base. You will see words such as: *assign*, *assignment*, *design*, *designate*, *designation*, *resign*, *resignation* and many more. Students get to discover how all these words are related. This could aid in building vocabulary as well!

We can build a matrix with the words we discover that share this same base (but they must also share meaning). I have attached a sample matrix with the <sign> base. It has a few word sums listed, but many more word sums could be written from this matrix and more prefixes, suffixes and bases could be added to this matrix. A matrix is a living document that a student can revisit to add new morphemes for building word sums.



4 - What aspects of its pronunciation are relative to its spelling?

Last, but not least as it is equally important to all the other questions, we look at phonology - With our words: *sign, signal, signature* - you can hear the phonology shifts from the <g> in *sign* not having a phonological representation when the word is being pronounced, but adding a phoneme for <g> in *signal* and *signature* when we pronounce them. How do we know how to pronounce the words? Because we speak English! We know that we don't say the word *sign* with a phonological representation of the <g>. Just as we know we do pronounce the <g> in *signal* and *signature*. Now, think about the phonological shift in the phoneme for <i> from *sign* to *signal*, and the phonological shift of the <s> from *sign* to *designate*, and the phonological shift in the <t> from *designate* to *designation* to *signature*. We have lots of phonological shifts in these words, but the spelling of the base and affixes (prefixes and suffixes) stays the same. So, the pronunciation, which is equally important in the spelling of the word, needs to come last and not first. We cannot rely on "sounding out" these words. We must have an understanding of the meanings of these words and these word's structures to be able to understand their spellings.

Discoveries from studying the word *sign* from the attached matrix :

Base: <sign>

Related Words: several are listed on the attached matrix, several more could be derived from the matrix

Prefixes: re-, as-, de-, un-, con-, en-, in-, co-,

Suffixes: -s, -ing, -ed, -er, -al, -ate, -ure, -ment

Graphemes-to-Phonemes

<s> - /s/, /z/

<i> - short /i/, long /i/

<n> - /n/

<g> - /g/, zero allophone

<d> - /d/

<e> - long /e/, short /e/

<r> - /r/

<a> - long /a/, schwa

<m> - /m/

<t> - /t/, /sh/, /ch/

<u> - long /u/

<l> - /l/

Some additional discoveries if as many as 96 related words are discovered

Prefixes: con-, en-, in-, co-

Suffixes: -ify, -ia, -ly, -ee, -ize, -ory, -ion, counter-

Bases compounded with <sign>: <post>, <man>, <men>, <board>, <under>



Here are some additional resources on SWI:

Each year we host our Annual Virtual Dyslexia Conference, which always includes several workshops that are related to SWI. We have offered to view one of the workshops from our 2018 conference for free on the Virtual Conference page of our website. The workshop is *Structured Word Inquiry: What it is, what it isn't...and where it fits in the research*, presented by Peter Bowers, Ph.D.:

<https://www.dyslexiatraininginstitute.org/annual-virtual-conference.html>

Here are some short videos by Gina Cooke, a linguist providing training and free blogs and videos about SWI, that will explain some more words by looking at their morphology, etymology and phonology:

Making sense of spelling : <https://www.youtube.com/watch?v=0mbuwZK0lr8>

The true story of 'true' : <https://www.youtube.com/watch?v=VYFE3tYUdJU>

Why is there a 'b' in doubt? <https://www.youtube.com/watch?v=YvABHCJm3aA>

And, here are some websites with some more information and resources about SWI, the structure of the English language and more:

www.wordworkskingston.com

www.linguisteducatorexchange.com

www.realspelling.fr

Here are some free webinars that either Kelli & I or people we respect (know their stuff!) have conducted that you may find interesting:

Go to this webpage: <http://webinar.dyslexia-ca.org> and scroll to find

Spelling Mistakes to Inform Instruction by Kelli Sandman-Hurley & Tracy Block-Zaretsky (Sept 2017)

There Is No Such Thing as a Sight Word by Kelli Sandman-Hurley & Tracy Block-Zaretsky (July 2016)

Go to this webpage: <https://umw.dyslexiaida.org/webinars/> and locate these webinars (this list starts with the earliest presented to the most recent)

Discovering the Sense in English Spelling: The Foundation of Literacy for Every Student by Timothy Houge, Ph.D. and Sue Hegland (Dec 2017)

Developing Literacy in the Content Areas Through Structured Word Study by Sue Hegland (March 2017)

Four Steps to Better Spelling Instruction by Bill Keeney (Dec 2016)

Recognizing Dyslexia in the Classroom by Kelli Sandman-Hurley & Tracy Block-Zaretsky (Oct 2016 – GoToWebinars Top100)

Making Sense of "Irregular" Words by Sue Hegland (May 2016)

Insights into "Sight Words" by Gina Cooke (Feb 2016)

We do offer an 8-week introductory course on SWI if you are interested. Here is a link for more information on our course: http://dyslexiatraininginstitute.org/class_structured-word.html

Kelli has also written a few blog posts that are about word structures. Check our blog:

<http://www.dyslexiatraininginstitute.org/blog/>



You can also get training from:

Gina Cooke (www.linguisteducatorexchange.com) – online courses and on-site workshops

Real Spelling (www.realspelling.fr) – online or on-site in France

Peter Bowers (www.wordworkskingston.com) – online courses and on-site workshops

Rebecca Loveless (<http://rebeccaloveless.com/classes/>) online

MaryBeth Steven (<http://mbsteven.edublogs.org/swi-class/>) – online (for teachers in the classroom)

Let us know if you have questions. You can email us at dyslexiaspec@gmail.com

Tracy