Using Scientific Word Inquiry to Hook Kids on Words
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CKO Lexercise.com
The Language & Learning Clinic, PLLC
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Schedule
3:30 pm – 4:30 pm Word Inquiry - Methods & Tools
4:30 pm – 5:00 pm Word Inquiry Practice
5:00 pm -- 5:30 pm Discussion & Questions
What is the best way to teach “language arts”?

- discourse
- syntax
- semantics
- morphology
- orthography
- phonology
“bottom-up” skills are essential….

- discourse
- syntax
- semantics
- morphology
- orthography
- phonology
discourse (e.g., literature) versus
- syntax
- semantics
- morphology
- orthography
- phonology

Scientific WORD Inquiry?

scientific?
The Scientific Method
- Ask a Question
- Do Background Research
- Construct a Hypothesis
- Test Your Hypothesis
- Analyze Data; Draw a Conclusion
- Communicate Your Results

CREDITS
The Structured Word Inquiry Method & Tools

Melvyn Ramsden (RealSpelling)
Pete Bowers (WordWorks Kingston)
Gina Cook (LEX)
Neil Ramsden

See Appendix

Gina Cooke, *Making Sense of Spelling*
TED-ED Talk
Our alphabet does represent some aspects of pronunciation, but it cannot represent speech \textit{per se}. (That's why we need the \textit{International Phonetic Alphabet}.)

- \textbf{morphological elements} may have varying pronunciations (e.g., tapped, tabbed, ridded);

- \textbf{graphemes} represent phonemes;

- \textbf{etymological markers} signal connections to meaning (e.g., \textless know\textgreater relates to \textless knowledge\textgreater);

- \textbf{structural connectors} (e.g., \textit{2\textsuperscript{nd}} \textless o\textgreater in \textless oceanography\textgreater)
orthographic conventions (e.g., the <e> in <lapse> signals that this is not the plural word, <laps>);

lexical markers distinguish lexical function words (e.g., the <e> in <one> to distinguish it from <on>)

The triangle model of reading
Kirby, Bowers & Deacon (2009)

Morphology
is a primary organizing concept for spelling.

Graphemes are contained within and do not cross morpheme boundaries. -- Real Spelling
Identifying and constructing the word’s **base** is the first step in mature spelling…

…but, of course, it must begin with accurate reading & spelling of base words and forms.

**foundational skills**  
(phonological – orthographic)

**Phono**
1. Divide the word into **syllables**.
2. Divide each syllable into **phonemes**.
3. Decide which **grapheme** represents each phoneme.

**Ortho**
Mature structural analysis

1. Identify any prefix or prefixes
2. Identify any suffix or suffixes
3. Identify the base
4. Divide the word into syllables
5. Divide each syllable into phonemes
6. Decide which grapheme represents each phoneme. (See: English phoneme-grapheme pairs)

As an example, let’s use structural analysis with the word:

orthography

Step 1. Identify any prefix or prefixes

or- can be used as a suffix but not as a prefix
Orthography

Step 2. Identify any suffix or suffixes

-y

YES! <-y> is a suffix
It forms nouns, especially with combining forms from Greek, Latin or French origin indicating state, condition, or quality.

Step 3. Identify the base.

<orthography> has two bases (Greek combining forms):
- orth(o) + graph

Origin of <ortho> or (before a vowel, < orth- >)

Online Etymology Dictionary:
a comb. element in forming scientific and technical words, from Gk. ortho-, stem of orthos "straight, true, correct, regular." from PIE *eredh- "high" (cf. Skt. urdhvah "high, lofty, steep," L. arduus "high, steep," O.Ir. ard "high").

Online Etymology Dictionary
Origin of <graph>

World English Dictionary:
— *n* combining form
1. an instrument that writes or records: *telegraph*
2. a writing, record, or drawing: *autograph*; *lithograph*
   [via Latin from Greek -graphos, from graphein to write]

Origin of orthography

Dictionary.com:
1425–75; late Middle English ortografye < Latin orthographia correct writing, orthogonal projection < Greek orthographia. See ortho-, -graphy

Online Etymology Dictionary:
"correct or proper spelling," c.1450, from M.Fr. orthographie (O.Fr. ortografie, 13c.), from L. orthographia, from Gk. orthos "correct" (see ortho-) + root of graphein "to write."

Divide the word in to syllables

<orthography>

orth o graph y
Divide each syllable into phonemes

,/ɔrˈθ/ /ɒ/ /ɡrəf/ /ɪ/

NOTE!

Orthographic phonology ....

....requires a different perspective than the one you take when you transcribe speech.

For example:

Is the highlighted unit in the first syllable one or two "speech sounds?"

,/ɔrˈθ/ /ɒ/ /ɡrəf/ /ɪ/

In orthographic phonological analysis some units (e.g., vowel glides and r-controlled vowels) are identified as single phonological units (i.e., as single phonemes).
Step 6. Decide which grapheme represents each phoneme. (…with reference to the morphological bases!)

<table>
<thead>
<tr>
<th>/ɔ/</th>
<th>/ə/</th>
<th>/gəf/</th>
<th>/v/</th>
</tr>
</thead>
<tbody>
<tr>
<td>th</td>
<td>o</td>
<td>g</td>
<td>ph</td>
</tr>
</tbody>
</table>

Note that r-controlled vowels are considered to be one phoneme.

connecting vowel

Note this phoneme-grapheme pair.

Exercise

orthography

<table>
<thead>
<tr>
<th>prefix(es)</th>
<th>base(s)</th>
<th>suffix(es)</th>
</tr>
</thead>
<tbody>
<tr>
<td>orth(o)graph</td>
<td>y</td>
<td></td>
</tr>
</tbody>
</table>

Word matrix method following *Real Spelling*

Exercise

orthography

World English Dictionary:
1. a writing system
2. spelling
   • spelling considered to be correct;
   • the principles underlying spelling
3. the study of spelling
4. orthographic projection
The relationship between **phonemes and graphemes** in English is governed by reliable **morpho-phonetic** patterns.

Check out the three free *Lexercise Live Broadcast* Recordings about word structure & morphology (see Appendix)

**Lexercise**

English spelling (orthography) is not strictly phonetic; it is **morphological & phonological**.

*(NOTE the difference between phonetics and phonology.)*

**Lexercise**

A few points:

- Phonemes (isolated speech sounds) are illusive and abstract.
- Linguistic building blocks are referred to as "elements".
- Terminology matters! Use precise and accurate terms.
- The classification system for **phonological orthography** is slightly different from the one used in **phonetics.**
And I’m supposed to teach this...

...to kids with processing problems!!!???
Ask kids to suggest words for inquiry

Dictionary.com

scud
resplendent
slipstream
heinous
sepulchral
higgledy-piggledy
canker

Word Inquiry Matrix

prefix(es) base(s) suffix(es)
Exercise

The Mini Matrix Maker

Build a matrix from a word sum.

en + joy + able
over + joy + ous + ly

http://www.neilramsden.co.uk/spelling/matrix/

Exercise

Mini Matrix Maker

http://www.neilramsden.co.uk/spelling/matrix/

curious

cur(e) + i ous
What happened to the `<u>`?

When `<-ity>` is added to `<-ous>` the `<u>` is elided, resulting in a “unitary” suffix:

- *ous+ity* → *osity*
- *cur+e + i + ous+ ity* → *curiosity*
- *lumin + ous+ ity* → *luminosity*
- *monstr+ ous+ ity* → *monstrosity*
Pair-Share

The Scientific Method
- Ask a Question
- Do Background Research
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<table>
<thead>
<tr>
<th>Exercise</th>
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<tr>
<td><strong>Pachycephalosaurus</strong></td>
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<td><strong>Nodosaurus</strong></td>
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<tr>
<td><strong>Parasaurolophus</strong></td>
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<tr>
<td><strong>Para+saur+o+lophus</strong></td>
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<tr>
<td><strong>Empyreal</strong></td>
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<tr>
<td><strong>Ephemeral</strong></td>
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</table>
em-py-re-al - pertaining to the highest heaven, formed of pure fire

em + pyre + al

e-phe-mer-al – lasting about a day

ep(i) + hemer(a) + al

“Why some kids can’t spell and why spelling tests won’t help”

Adoniou, M. (2013). The Conversation

◆ Find meaning
◆ More than sounds
◆ How words make their meaning
◆ Where words come from
◆ Teaching not testing

The Structured Word Inquiry Method

“English spelling is a highly ordered system for representing meaning that can be investigated and understood through scientific inquiry.”

--WordWorksKingston

Real Spelling

Real Spellers

Linguistic Educator Exchange
Questions & Discussion

Sandie@lexercise.com

Appendix

References


Gina Cooke’s Lexercise Live Broadcast #24-

Pete Bower’s Lexercise Live Broadcast #33-

Appendix

School & Class Blogs

- Mrs. McGrath’s 3rd Grade Class (blog): http://mcgrath.ism-online.org/
  Llana McGrath- 3rd grade- Manila International School
  Sarah Pickles- 4th grade- Lincoln Community School-Ghana
- Grade 5-Mr. Allen (blog): http://blogs.zis.ch/dallen/category/languagespellingword-study/
  Dan Allen- 5th grade- Zurich International School
- Word Nerds (blog): http://wordsexvinesa.wordpress.com/
  Ann Whiting- 7th grade- Kuala Lumpur International School
- Literacybytes (blog): http://literacybytes.com/
  Jen Munnerlyn- American Community School of Abu Dhabi