

FrameWork 12/21

Connie Wilson on Ian Carr-Harris

How do you make a word *sound*?

The International Phonetic Alphabet (IPA) (image 1) should not be confused with the NATO Phonetic Alphabet (image 2).

THE INTERNATIONAL PHONETIC ALPHABET (revised to 2020)

CONSONANTS (PULMONIC)

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| | Bilabial | Labiodental | Dental | Alveolar | Postalveolar | Retroflex | Palatal | Velar | Uvular | Pharyngeal | Glottal |
|---------------------|----------|-------------|--------|----------|--------------|-----------|---------|-------|--------|------------|---------|
| Plosive | p b | | | t d | | ʈ ɖ | c ɟ | k ɡ | q ɢ | | ʔ |
| Nasal | m | ɱ | | n | | ɳ | ɲ | ŋ | ɴ | | |
| Trill | ʙ | | | ʀ | | | | | ʀ | | |
| Tap or Flap | | ⱱ | | ɾ | | ɽ | | | | | |
| Fricative | ɸ β | f v | θ ð | s z | ʃ ʒ | ʂ ʐ | ç ʝ | x ɣ | χ ʁ | ħ ʕ | h ɦ |
| Lateral fricative | | | | ɬ ɮ | | | | | | | |
| Approximant | | ʋ | | ɹ | | ɻ | j | ɰ | | | |
| Lateral approximant | | | | l | | ɭ | ʎ | ʟ | | | |

Symbols to the right in a cell are voiced, to the left are voiceless. Shaded areas denote articulations judged impossible.

CONSONANTS (NON-PULMONIC)

| Clicks | Voiced implosives | Ejectives |
|------------------|-------------------|-----------------------|
| ◌ Bilabial | ɓ Bilabial | ʼ Examples: |
| Dental | ɗ Dental/alveolar | ɸ Bilabial |
| ! (Post)alveolar | ɟ Palatal | ɬ Dental/alveolar |
| ≠ Palatoalveolar | ɠ Velar | k' Velar |
| Alveolar lateral | ɣ Uvular | s' Alveolar fricative |

OTHER SYMBOLS

| | |
|-------------------------------------|---------------------------------------------------------------------------------------------------------|
| ɱ Voiceless labial-velar fricative | ɕ ʑ Alveolo-palatal fricatives |
| ʋ Voiced labial-velar approximant | ɺ Voiced alveolar lateral flap |
| ɰ Voiced labial-palatal approximant | ɥ Simultaneous ʃ and x |
| ħ Voiceless epiglottal fricative | |
| ʕ Voiced epiglottal fricative | Affricates and double articulations can be represented by two symbols joined by a tie bar if necessary. |
| ʔ Epiglottal plosive | |

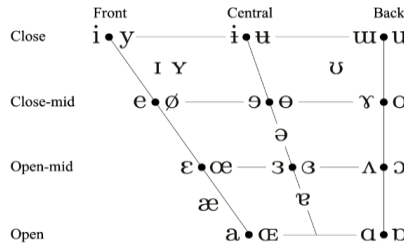
DIACRITICS

| | | | | | |
|-------------------|----------|--------------------------------|------------------------------------------|-----------------------|----------|
| ◌ Voiceless | ◌̥ n̥ d̥ | ◌̬ Breathily voiced | ◌̬ b̬ a̬ | ◌̪ Dental | ◌̪ t̪ d̪ |
| ◌ Voiced | ◌̬ s̬ t̬ | ◌̥ Creaky voiced | ◌̥ b̥ ḁ | ◌̩ Apical | ◌̩ t̩ d̩ |
| ◌ Aspirated | ◌ʰ tʰ dʰ | ◌̟ Linguolabial | ◌̟ t̟ d̟ | ◌̵ Laminar | ◌̵ t̵ d̵ |
| ◌ More rounded | ◌̙ ɔ̙ | ◌̞ Labialized | ◌̞ t̞ʷ d̞ʷ | ◌̃ Nasalized | ◌̃ ẽ |
| ◌ Less rounded | ◌̙ ɔ̙ | ◌̟ Palatalized | ◌̟ t̟ʲ d̟ʲ | ◌̚ Nasal release | ◌̚ d̚ |
| ◌ Advanced | ◌̟ u̟ | ◌̞ Velarized | ◌̞ t̞ˠ d̞ˠ | ◌̜ Lateral release | ◌̜ d̜ |
| ◌ Retracted | ◌̠ e̠ | ◌̞ Pharyngealized | ◌̞ t̞ˤ d̞ˤ | ◌̚ No audible release | ◌̚ d̚ |
| ◌ Centralized | ◌̞ e̞ | ◌̞ Velarized or pharyngealized | ◌̞ ɫ | | |
| ◌ Mid-centralized | ◌̞ e̞ | ◌̞ Raised | ◌̞ e̞ (ɹ̞ = voiced alveolar fricative) | | |
| ◌ Syllabic | ◌̚ n̚ | ◌̞ Lowered | ◌̞ e̞ (β̞ = voiced bilabial approximant) | | |
| ◌ Non-syllabic | ◌̚ e̚ | ◌̞ Advanced Tongue Root | ◌̞ e̞ | | |
| ◌ Rhoticity | ◌̠ ɻ̠ ʀ̠ | ◌̞ Retracted Tongue Root | ◌̞ e̞ | | |

Some diacritics may be placed above a symbol with a descender, e.g. ɪ̞̥

Typefaces: Doulos SIL (metatext); unilipa (symbols)

VOWELS



Where symbols appear in pairs, the one to the right represents a rounded vowel.

SUPRASEGMENTALS

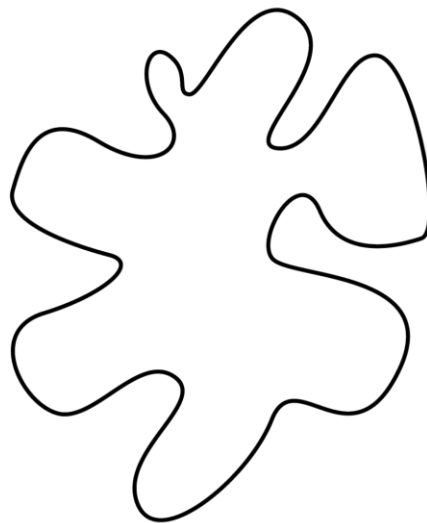
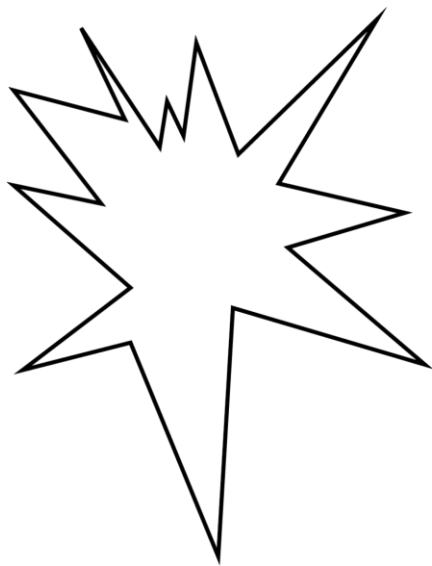
| | |
|--------------------------------|--------------|
| ˈ Primary stress | ˈfounəˈtɪʃən |
| ˌ Secondary stress | ˌ |
| ː Long | eː |
| ˑ Half-long | eˑ |
| ◌̥ Extra-short | e̥ |
| Minor (foot) group | |
| Major (intonation) group | |
| · Syllable break | ri.ækt |
| ◌ Linking (absence of a break) | |

TONES AND WORD ACCENTS

| LEVEL | CONTOUR |
|-------------------|------------------|
| é or ˥ Extra high | é or ˥ Rising |
| é High | é Falling |
| ē Mid | ē High rising |
| è Low | è Low rising |
| è Extra low | è Rising-falling |
| ˩ Downstep | ˩ Global rise |
| ˨ Upstep | ˨ Global fall |

| CHARACTER | MORSE CODE | TELEPHONY | PHONIC (PRONUNCIATION) |
|-----------|------------|-----------|---------------------------------|
| A | • — | Alfa | (AL-FAH) |
| B | — ••• | Bravo | (BRAH-VOH) |
| C | — • — • | Charlie | (CHAR-LEE) or (SHAR-LEE) |
| D | — •• | Delta | (DELL-TAH) |
| E | • | Echo | (ECK-OH) |
| F | •• — • | Foxtrot | (FOKS-TROT) |
| G | — — • | Golf | (GOLF) |
| H | •••• | Hotel | (HOH-TEL) |
| I | •• | India | (IN-DEE-AH) |
| J | • — — — | Juliett | (JEW-LEE-ETT) |
| K | — • — | Kilo | (KEY-LOH) |
| L | • — •• | Lima | (LEE-MAH) |
| M | — — | Mike | (MIKE) |
| N | — • | November | (NO-VEM-BER) |
| O | — — — | Oscar | (OSS-CAH) |
| P | • — — • | Papa | (PAH-PAH) |
| Q | — — • — | Quebec | (KEH-BECK) |
| R | • — • | Romeo | (ROW-ME-OH) |
| S | ••• | Sierra | (SEE-AIR-RAH) |
| T | — | Tango | (TANG-GO) |
| U | •• — | Uniform | (YOU-NEE-FORM) or (OO-NEE-FORM) |
| V | ••• — | Victor | (VIK-TAH) |
| W | • — — | Whiskey | (WISS-KEY) |
| X | — •• — | Xray | (ECKS-RAY) |
| Y | — • — — | Yankee | (YANG-KEY) |
| Z | — — •• | Zulu | (ZOO-LOO) |
| 1 | • — — — — | One | (WUN) |
| 2 | •• — — — | Two | (TOO) |
| 3 | ••• — — | Three | (TREE) |
| 4 | •••• — | Four | (FOW-ER) |
| 5 | ••••• | Five | (FIFE) |
| 6 | — ••••• | Six | (SIX) |
| 7 | — — ••• | Seven | (SEV-EN) |
| 8 | — — — •• | Eight | (AIT) |
| 9 | — — — — • | Nine | (NIN-ER) |
| 0 | — — — — — | Zero | (ZEE-RO) |

A sound made-word is onomatopoeia, a word approximating the sound it represents. What is the autological (a word that defines itself) opposite? Phonosemantics, or sound symbolism, deals with the resemblance of a sound to its meaning. The bouba/kiki effect is a popular example of the non-arbitrary mapping we do between shapes and speech sounds (image 3). Bouba, mapped by most as a round, undulated shape, much in the way we round our mouths to express IPA Number 308, also known as the close back rounded vowel, also known as u. Kiki, often mapped as a spiked and sharply angled shape, much in the way we sharply obstruct our breath in the expression of IPA Number 109 variety k^h, also known as the aspirated k.



But does this tendency belie objectivity? In phonics, the relationships between sounds (phonemes), and letters and letter groupings (graphemes), are objective, if convoluted and difficult to learn.

Monster Test YOU CAN ANALYZE DEVELOPMENTAL SPELLING . . . And Here's How To Do It! Early Years K-8 by Dr. J. Richard Gentry, from 1985 is a spelling test used to analyze children's progress in literacy (images 4 and 5). The results of the test track a child in developmental positions numbered 1 through 5, from nearly no phonic comprehension and incorrect spelling to complete phonic comprehension and correct spelling. The ten word spelling test is named for the first word in the Spelling Word List ("1. monster"). Each word in the list is accompanied by a descriptive sentence using the listed word: ("The boy was eaten by a MONSTER.").

Follow these directions: Call out each word in the spelling list, give the sentence provided, and call out the word again. What you want your students to do is invent the spelling or use their best guess at what the spelling might be. Explain that the activity will not be graded as right or wrong, but that it will be used to see how the student thinks certain difficult words should be spelled. Be encouraging and make the activity challenging and fun.

SPELLING WORD LIST

- | | |
|------------|---------------------------------|
| 1. monster | The boy was eaten by a MONSTER. |
| 2. united | You live in the UNITED States. |
| 3. dress | The girl wore a new DRESS. |

- | | |
|-----------|---------------------------------------------|
| 4. bottom | A big fish lives at the BOTTOM of the lake. |
| 5. hiked | We HIKED to the top of the mountain. |
| 6. human | Miss Piggy is not a HUMAN. |
| 7. eagle | An EAGLE is a powerful bird. |
| 8. closed | The little girl CLOSED the door. |
| 9. bumped | The car BUMPED into the bus. |
| 10. type | TYPE the letter on the typewriter. |

The Monster Test Spelling Word List reads like poetry, which is not relevant in any way to the test's ability to determine developmental spelling, but it is interesting. Often that latter quality belies any objectivity.

MONSTER TEST

How to Analyze the Spellings

An overview of the developmental levels of spelling:

A scoring chart is provided on page 5 to help you analyze the spellings. Before going further, think about the features that you will look for at each developmental level. For example:

1. **PRECOMMUNICATIVE SPELLING** is the “babbling” stage of spelling. Children use letters for writing words but the letters are strung together randomly. The letters in precommunicative spelling do not correspond to sounds. Examples: OPSPS = eagle; RTAT = eighty.
2. **SEMIPHONETIC SPELLERS** know that letters represent sounds. They perceive and represent reliable sounds with letters in a type of telegraphic writing. Spellings are often abbreviated representing initial and / or final sound. Examples: E = eagle; a = eighty.
3. **PHONETIC SPELLERS** spell words like they sound. The speller perceives and represents all of the phonemes in a word, though spellings may be unconventional. Examples: EGL = eagle; ATE = eighty.
4. **TRANSITIONAL SPELLERS** think about how words appear visually; a visual memory of spelling patterns is apparent. Spellings exhibit conventions of English orthography like vowels in every syllable, e-marker and vowel digraph patterns, correctly spelled inflectional endings, and frequent English letter sequences. Examples: EGIL = eagle; EIGHTEE = eighty.
5. **CONVENTIONAL SPELLERS** develop over years of word study and writing. Correct spelling can be categorized by instruction levels. For example, correct spelling for a corpus. . . words that can be spelled by the average fourth grader would be fourth grade level correct spelling. Place the word in this category if it is listed correctly.

Analyzing the words:

1. Look at the student’s spelling for each word. Find the error type in the chart provided on page 5 that best matches the student’s spelling of the word.
2. Write the appropriate developmental label next to the word on the student’s spelling list. You will determine if the student’s spelling most closely matches the word listed on the chart below that is representative of the Precommunicative spelling stage, the Semiphonetic spelling stage, the Phonetic spelling stage, the Transitional spelling stage, or the Conventional spelling stage. Once you have decided which word on the chart on page 5 is the best match to the way that the student spelled the word, write the matching developmental spelling stage beside each of the ten spelling words.

MONSTER TEST

3. Next look at the spelling stages next to each word to determine if most of the student's spellings were at the Precommunicative stage, the Semiphonetic stage, the Phonetic stage, the Transitional stage, or the Conventional stage. This is the student's probable developmental level. Even though ten words is a small sample, this test will reveal the types of developmental errors that a student is likely to make in free writing.

4. Observe other invented spellings in the student's written language sample to verify the student's level of development. Remember that many of the student's spellings in free writing may be conventional. Students who are at lower developmental levels may have memorized spellings for words such as C - A - T, cat. It is their misspellings, however, that provide "windows into their minds" to reveal their developmental level of spelling.

MONSTER TEST

DEVELOPMENTAL SPELLING TEST SCORING CHART

Dr. J. Richard Gentry
Professor of Elementary Education and Reading

| WORDS | | Precommunicative Stage | Semiphonetic Stage | Phonetic Stage | Transitional Stage | Conventional Stage |
|-------|---------|------------------------|--------------------|----------------|--------------------|--------------------|
| 1. | monster | Random letters | mtr | mostr | monstur | monster |
| 2. | united | Random letters | u | unitd | younighted | united |
| 3. | dress | Random letters | jrs | jas | dres | dress |
| 4. | bottom | Random letters | bt | bodm | bottum | bottom |
| 5. | hiked | Random letters | h | hikt | hicked | hiked |
| 6. | human | Random letters | um | humm | humum | human |
| 7. | eagle | Random letters | el | egl | egul | eagle |
| 8. | closed | Random letters | kd | klosd | closed | closed |
| 9. | bumped | Random letters | b | bopt | bumped | bumped |
| 10. | type | Random letters | tp | tip | tipe | type |

FrameWork 12/21

Image 1.) The chart of the International Phonetic Alphabet (IPA) as of 2020, with the phonetic symbols rendered in the TeX TIPA Roman font, as selected by the Alphabet, Charts and Fonts committee of the International Phonetic Association., 2020

Image 2.) 1/The FAA Phonetic and Morse Code Chart. Made in INKSCAPE by Jaime AA. Sanchez. Edited to correct the letter H by Richard G. Clegg., 2006

Image 3.) A version of the bouba/kiki effect image I made in Adobe Illustrator, 2021

Images 4-6.) Pages 3-5 of the *Monster Test YOU CAN ANALYZE DEVELOPMENTAL SPELLING . . . And Here's How To Do It! Early Years K-8* by Dr. J. Richard Gentry., 1985