

To develop as independent spellers, students need to learn how the orthographic (spelling) system works so that they can readily spell words they have never seen before.

The orthographic system is regular and predictable. It codes information about words, particularly:

- sound
- functions, e.g. plural, tense, affixes
- meaning
- history.

The development of spelling knowledge parallels the nature of the spelling system itself, and begins with the simplest alphabetic level. Over several years, the knowledge expands to include the function and meaning levels. Therefore, students need to learn about the abstract and progressive nature of the orthographic system in a systematic and staged way.

Spelling knowledge relates to word knowledge in reading. In both word recognition and spelling, students use the same orthographic information to make meaning. However, they use it differently, e.g. encoding and decoding.

Students will need to be explicitly taught four kinds of knowledge in order to become independent spellers. These levels of orthographic understandings are outlined below.

1. **Phonological knowledge** includes:
 - letter names and the sounds that they represent
 - the sounds of English
 - the way that different sounds may be represented
 - how to segment the sounds in words into chunks of sound.
2. **Word function knowledge:** students understand that affixes can be added to the endings of words to show how they can function as nouns, verbs, plurals and adjectives.
3. **Meaning knowledge:** the study of units of meaning within words, and the corresponding understanding that words that share meaning are often spelt the same, in spite of a change in sound, e.g. please, pleasant, pleasure.
4. **Word history knowledge:** the study of word origins and the history of their meaning.

The Scope and sequence provides a list of key orthographic patterns to be explicitly taught. The patterns are colour-coded to link to the four knowledges. This scope and sequence is organised to show expectations at the end of each year-level juncture. It presents knowledge of the spelling system and active spelling strategies, and includes a glossary to explain terms used in this document.

Teaching the orthographic system must be sequential and explicit, focusing on the developmental aspect of word study. In any classroom, it is unlikely that all students will be at the same point in their development.

Consequently, before planning any learning activities, teachers need to determine what students know and what they need to learn.

This can be managed by considering the way that students spell words. Their misspellings provide a direct window into how they think the system works. By interpreting what students do when they spell, teachers can target a student's "zone of proximal development" (Vygotsky, 1962).

Please refer to the CD-ROM, *Spelling: Improving learning outcomes*, for examples of diagnostic tools that teachers can use to determine individual instructional levels. This CD-ROM was provided to all Queensland schools in 2000.

This Scope and sequence provides teachers with curriculum content — the “**what**” of teaching spelling. Students also need to know the “**how**” and “**when**” to use this knowledge. They must develop strategies for:

- self-monitoring
- learning
- recalling spelling in their written work.

Phonological knowledge	
Word function knowledge	
Meaning knowledge	
Word history knowledge	

Note for Year 1 teachers

For children to successfully learn the content and strategies described for the end of Year 1, they need the following prerequisites:

- oral vocabulary basis
- phonological awareness
- alphabet knowledge
- letter–sound knowledge
- concept of a word.

Children at this early stage of literacy development should only be taught to spell words that they immediately identify as reading sight words.

Knowledge and understanding of the spelling system

By the end of Year 1 Explicit teaching focus	By the end of Year 3 Explicit teaching focus	By the end of Year 5 Explicit teaching focus	By the end of Year 7 Explicit teaching focus	By the end of Year 9 Explicit teaching focus
<p>Beginning consonants in single syllable words</p> <p>Short-vowel in onset and rime patterns in single syllable words</p> <ul style="list-style-type: none"> at, an, ad, ap, ag op, ot, og et, eg, en ug, ut, un ip, ig, ill <p>Digraphs and blends</p> <ul style="list-style-type: none"> sh, ch, th, wh st, sp, sk, and sm sc, sn and sw pl, bl, gl, cl, fl cr, fr, gr, pr, tr, dr k, wh, qu, tw <p>Short vowels in single-syllable cvc words</p> <ul style="list-style-type: none"> short a (sad, ham) short o short i short u short e (bed, yes) <p>Short vowels and initial digraphs (that, ship, when)</p> <p>Short vowels and initial blends (glad, drip, crab)</p> <p>Short vowels and final digraphs (cash, rich, much)</p> <p>Short vowels before ng, nt, nd, nk and mp (rang, went, end, thank, jump)</p>	<p>Nasal continuants in more complex words</p> <p>Common long-vowel patterns in single syllable words</p> <ul style="list-style-type: none"> long a (space, rain, tray) long e (seem, clean) long o (drove, road) long u (cube, food, fruit) <p>Short /e/ sound spelled ea (dead, head, bread, ready)</p> <p>Short vowel sound in -ve pattern (give, live, have, love)</p> <p>Less common long-vowel patterns</p> <ul style="list-style-type: none"> short i and long i (write, might, why) long i (wild, find, child) long o (told, both, roll, ghost) <p>r-influenced vowel patterns in single-syllable words</p> <ul style="list-style-type: none"> ar, are, air er, ear, eer ir, ire, ier or, ore, oar ur, ure, ure <p>w-influenced vowel patterns</p> <ul style="list-style-type: none"> wa (watch, wash), war (warm war), wor (word, work worm) <p>Hard and soft c and g patterns (city/cake; grass/giant)</p> <p>Vowel digraphs</p> <ul style="list-style-type: none"> long oo (moon) short oo (book) <p>Diphthongs in single-syllable common words</p> <ul style="list-style-type: none"> oi/oy (boil, toy, enjoy) ou, ow (cloud, brown) <p>Silent beginning consonant</p> <ul style="list-style-type: none"> kn, wr (knife, wrong) <p>Triple r-blends</p> <ul style="list-style-type: none"> scr, str, spr <p>Consonant digraphs in more complex words</p> <ul style="list-style-type: none"> thr, shr, squ (throat, shrink, square) 	<p>Complex vowel clusters in multisyllable words</p> <p>Silent beginning consonant patterns in more complex words (knead, knoll, wreath, gnaw)</p> <p>Hard and soft c and g patterns in more complex words (circumference/ crystal; giraffe/gallery)</p> <p>dge and ge word patterns</p> <ul style="list-style-type: none"> short-vowel pattern (edge) long-vowel pattern (stage) <p>Diphthongs in more complex words</p> <ul style="list-style-type: none"> oi/oy; ou/ow (voice/employ; mountain/chowder) <p>Open and closed syllables</p> <ul style="list-style-type: none"> vccv double (supper, dinner) vcv open (super, diner) vccv different (window, sister) vcv closed (river, cover) <p>Vowel patterns in accented syllables</p> <ul style="list-style-type: none"> long a patterns (rainbow, crayon, basement) long i patterns (frighten, ninety, higher) long o patterns (toaster, lonely, owner) long u patterns (cougar, noodle, useful) long e patterns (season, freedom, people) <p>Vowel patterns in unaccented syllables</p> <ul style="list-style-type: none"> unaccented final syllable (-le spelled le/el/il/al) unaccented final syllable er spelled er/ar/or unaccented final syllable chur spelled ture, sure (picture, measure) 	<p>Complex vowel patterns in multisyllable words</p> <p>Ambiguous vowels</p> <ul style="list-style-type: none"> au, aw, al (saucer, awkward, although) <p>Complex consonant patterns in multisyllable words (crouches/haunches/stretches/scratches/switches)</p> <p>Open and closed syllables in more complex words</p> <ul style="list-style-type: none"> vccv double (fossil, groggy) vcv open (human, silent) <p>Vowel patterns in accented and unaccented syllables in more complex words</p> <ul style="list-style-type: none"> dge and ge patterns in more complex words (badger/village) <p>Diphthongs in two-syllable words</p> <ul style="list-style-type: none"> (fountain/council/mouthful; coward/prowler/brownie) <p>Adding -ion to base word, "e" drop and spelling change (congratulate/congratulation; translate/translation)</p> <p>Adding -ion to base word; predictable changes in consonants (explode/explosion; decide/decision)</p> <p>Affixes</p> <ul style="list-style-type: none"> base word plus prefix (non-, fore-, pre-, post-) base word plus suffixes (-er, -est, -ier, -iest) <p>Advanced homophones</p> <ul style="list-style-type: none"> (holy/wholly, incite/insight; patience/patients) <p>Introduce concept of alternation</p> <p>Consonant alternation</p> <ul style="list-style-type: none"> silent to sounded (sign/signal; muscle/muscular) <p>Vowel alternation</p> <ul style="list-style-type: none"> adding -ity: vowel alternation, schwa to short (general/general; normal/normality) long a to short a (cave/cavity; nature/natural) long i to short i (crime/criminal; divide/division) long e to short e (please/pleasant/pleasure) long u to short u (reduce/reduction) 	<p>Complex vowel patterns in multisyllable words</p> <p>Complex consonant patterns in multisyllable words</p> <p>Adding -able to base word</p> <ul style="list-style-type: none"> "e" drop (consumable, excusable, reusable) keep "e" (noticeable, manageable, knowledgeable) <p>Suffixes</p> <ul style="list-style-type: none"> -ness, -ful, -less and combination of suffixes (looseness/rigorousness, disgraceful, thoughtless/flawless, tactlessness, flawlessness) <p>Vowel alternation</p> <ul style="list-style-type: none"> schwa to short (moral/morality; neutral/neutrality) <p>Vowel alternation</p> <ul style="list-style-type: none"> accented to unaccented (comedy/comedian; emphasis/emphatic) <p>Greek and Latin elements</p> <ul style="list-style-type: none"> Latin word roots : man-, -scrib, -script, -cred-, fac- (manuscript, circumscribe, incredible, factory) -bene-, mal- (benevolent, malfunction) fract-, -flect, -flex, -ject, mis-, -mit prefixes: ante-, post- (antebellum, post-mortem)

Active spelling strategies

Knowledge of active spelling strategies	By the end of Year 1 Students interact with texts to:	By the end of Year 3 Students interact with texts to:	By the end of Year 5 Students interact with texts to:	By the end of Year 7 Students interact with texts to:	By the end of Year 9 Students interact with texts to:
Self-monitor own writing	<ul style="list-style-type: none"> • Proofread and correct errors in written work • Reread work to identify and circle possible misspellings • Use a variety of authoritative sources to find and copy unknown words (word walls, word family charts, personal dictionaries, picture dictionaries) • Use <i>Have-a-go</i> book 	<ul style="list-style-type: none"> • Proofread and correct errors in written work • Identify and circle possible misspellings • Use a variety of sources to find and copy unknown words (word walls, word family charts, dictionaries, spellchecker) • Use <i>Have-a-go</i> book • Check with reliable sources – wall charts containing word lists, word families 	<ul style="list-style-type: none"> • Proofread and correct errors in written work • Recognise the contexts in which conventional spelling, punctuation and legible script are valued • Identify misspelt words in own written text and attempt to correct • Use a variety of authoritative sources to spell words (dictionaries, wall charts, spellchecker) 	<ul style="list-style-type: none"> • Proofread and edit written work • Recognise the contexts in which conventional spelling, punctuation and legible script are valued • Apply classroom established processes for proofreading and editing to produce written texts that are error-free • Use a variety of authoritative sources to spell words (dictionaries, wall charts, spellchecker) 	<ul style="list-style-type: none"> • Proofread and edit written work • Recognise the contexts in which conventional spelling, punctuation and legible script are valued • Apply classroom established processes for proofreading and editing to produce written texts that are error-free • Use a variety of authoritative sources to spell words (dictionaries, wall charts, spellchecker)
Learn to spell and to recall words	<ul style="list-style-type: none"> • Use <i>Look-Say-Cover-Write-Check</i> strategy • Say words and listen to sounds in words • Use familiar sound and visual patterns 	<ul style="list-style-type: none"> • Say words and listen to sounds in words • Apply learned spelling generalisations • Use knowledge of sound and visual patterns to spell unfamiliar words • Experiment with tense and plural endings • Use accessible references to locate and copy words • Use mnemonics for spelling irregular words • Use visualisation strategies 	<ul style="list-style-type: none"> • Use effective <i>Look-Say-Cover-Write-Check</i> process • Break words into syllables • Use knowledge of sound, visual and meaning patterns to spell unfamiliar words • Use knowledge of affixes to spell words • Use analogy to spell unknown words • Visualisation activities (see CD-ROM) • Use <i>Have-a-go</i> book • Use extended knowledge of generalisations to spell new words 	<ul style="list-style-type: none"> • Use effective <i>Look-Say-Cover-Write-Check</i> process • Break words into syllables • Use knowledge of sound, visual and meaning patterns to spell unfamiliar words • Use a range of prefixes and suffixes to spell words correctly 	<ul style="list-style-type: none"> • Use <i>Look-Say-Cover-Write-Check</i> strategy • Break words into syllables • Use knowledge of sound, visual and meaning patterns to spell unfamiliar words • Use a range of prefixes and suffixes to spell words correctly • Use a range of Latin and Greek elements to spell multisyllabic words

Metacognitive knowledge

Metacognitive knowledge	By the end of Year 1 Students interact with texts to:	By the end of Year 3 Students interact with texts to:	By the end of Year 5 Students interact with texts to:	By the end of Year 7 Students interact with texts to:	By the end of Year 9 Students interact with texts to:
Knowledge of the spelling system	<ul style="list-style-type: none"> • Discriminate and categorise by sound, sequence and/or pattern during word sorts and word hunts • Know when to apply knowledge of letter/sound patterns when spelling 	<ul style="list-style-type: none"> • Discuss, sort and analyse features to categorise spelling probabilities according to sound, letter sequence and position • Apply knowledge and monitor performance to recognise successful spelling 	<ul style="list-style-type: none"> • Analyse and categorise spelling “knowledges” to begin to synthesise their understanding of the spelling system • In monitoring spelling, know when to switch between automaticity and an analytic approach to spelling 	<ul style="list-style-type: none"> • Extend and confirm their understanding of spelling as a multilayered system • Identify and discuss aspects of the spelling system as the basis for learning, use and monitoring, e.g. use of “-able” and “-ible” pattern 	<ul style="list-style-type: none"> • Generalise their understanding of spelling as a system to be able to identify and articulate the layers of spelling knowledge and to know which layer takes precedence. • Identify those aspects of the spelling system that they can apply to produce the most efficient learning, use and monitoring of spelling
Knowledge of self, as speller	<ul style="list-style-type: none"> • Describe and discuss their knowledge of spelling • Demonstrate an awareness of the need for correct spelling 	<ul style="list-style-type: none"> • Describe and articulate their strategies for learning correct spelling of new words • Describe and articulate their strategies for achieving correct spelling in own writing • Demonstrate an awareness of the value of correct spelling 	<ul style="list-style-type: none"> • Determine problem-solving strategies that match aspects of the spelling system • Begin to develop a conscious knowledge of the difference between automaticity and an analytic approach to correct spelling • Demonstrate an awareness that spelling expertise is valued in our community 	<ul style="list-style-type: none"> • Evaluate their problem-solving strategies to achieve successful spelling • Demonstrate a knowledge of contexts when correct spelling is mandatory 	<ul style="list-style-type: none"> • Demonstrate the development of a spelling conscience

Glossary

Accented syllables: those syllables in words with two or more syllables that are emphasised more than others.

Affix: a suffix or prefix attached to a base word, stem or root.

Alphabet knowledge: the first layer or word-study instruction focusing on letters and letter–sound correspondences.

Blend: a spelling unit composed of two or three consonants that retain their identity when pronounced, e.g. split.

Consonant alternation pattern: the process where the pronunciation of consonants changes in the base or root of derivationally related words, while the spelling does not change, e.g. the silent-to-sounded pattern in the words *sign* and *signal*, as well as the /k/ to /sh/ pattern in words *music* to *musician*.

Closed syllable: ends with or is "closed" by a consonant sound. In multisyllable words, a closed syllable contains a short vowel sound that is closed by two consonants (sna-zzy, ra-cket).

Digraph: a single sound represented by two letters, e.g. ea in sea and sh in shop.

Diphthong: a speech sound beginning with one vowel sound and moving to another within the same syllable, e.g. oi as in poison, ou as in sound.

Homophones: words that sound the same but are spelled differently, e.g. bear/bare, pane/pain.

Homographs: words with same spelling but different meanings, e.g. read (present tense)/ read (past tense); lead/lead; tear/tear.

Inflectional endings: suffixes added to the stem of a word, e.g. plurals and past tense endings.

Morpheme: the smallest unit of meaning.

Nasal continuant: a consonant sound, such as /m/ or /n/, that can be prolonged as long as the breath lasts without distorting the sound quality.

Onset: the initial consonant or consonant blend in a single syllable word, e.g. fl in flock. (See also rime.)

Open syllable: ends with a long vowel sound (la-zy, rea-son).

Orthography: the system of English spelling, specifically, the correct sequence of letters, characters or symbols.

Phoneme: the smallest unit of sound.

Phonological awareness: the ability to pay attention to, identify and manipulate various sound segments of speech.

Rime: the vowel plus consonant or consonant blend at end of a single syllable word, e.g. op in drop, ank in sank.

Schwa: a vowel sound in English that often occurs in an unstressed syllable, such as the /uh/ sound in the first syllable of the word alone.

Vowel alternation: the process in which the pronunciation of vowels changes in the base or root of derivationally related words, while the spelling does not change, e.g. the long to short vowel change in related words *crime* and *criminal*; the long to schwa vowel change in the related words *compose* and *composition*.

References and bibliography

Adams, MJ 1990, *Beginning to read: Thinking and learning about print*, MIT Press, Cambridge, MA.

Bear, DR, Invernizzi, M, Templeton, S, & Johnston, F 2000, *Words their way: Word study for phonics, vocabulary and spelling instruction*, Merrill/Prentice-Hall, Upper Saddle River, NJ.

Cunningham, P 1995, *Phonics they use*, 2nd ed, HarperCollins, New York.

Gentry, JR & Gillet, JW 1993, *Teaching Kids to Spell*, Portsmouth, Heinemann.

Henderson, EH 1990, *Teaching spelling*, 2nd ed, Houghton Mifflin, Boston.

Moats, LC 1995, *Spelling: Development, disabilities, and instruction*, York Baltimore, MD.

Moustafa, M 1997, *Beyond Traditional Phonics: Research Discoveries and Reading Instruction*, Heinemann, Portsmouth.

Spelling: Improving Student Outcomes, 2000, The State of Queensland (Department of Education), Queensland Catholic Education Commission and the Association of Independent Schools of Queensland, Brisbane (CD-ROM).

Templeton, S 1992, "Theory, nature, and pedagogy of higher-order orthographic development in older children", in S Templeton & D Bear, eds, *Development of orthographic knowledge and the foundations of literacy: A memorial Festschrift for Edmund H. Henderson* (pp 253-78), Lawrence Erlbaum, Hillsdale, NJ.