

What is letter-sound knowledge and why is it important?

Phonics instruction is an essential component of a comprehensive literacy program because it is a high-yield strategy to draw upon when attempting to name words that are not immediately known. All students need to be taught how to develop increasingly sophisticated and independent decoding skills. The English orthography is based on an alphabetic system of 26 letters and approximately 44 sounds/ (phonemes) and because the language is opaque “there are not enough letters of the alphabet to represent all the sounds of our speech” (Garcia & Cain, 2013, p. 49). However, while learning letter-sound correspondence using a synthetic phonics approach (introduction to single letter sounds and moving onto blending the letter sounds) can present challenges, there is a high level of predictability for how to pronounce sounds in words. Johnston, McGeown, & Watson (2012, p. 1382) also make the point that “boys do very much better with this method (synthetic phonics) than the analytic phonics approach [identifying words that share the same letter-sound correspondence]. It is suggested that boys may be slower to develop the integration between visual and phonological information that underpins word reading due to sex differences in brain activation when carrying out reading tasks.” Mesmer & Griffith (2006, p. 367) describe three layers in the English language. There is “a straight sound layer (e.g., *bit, got*); a pattern layer that varies in complexity (e.g. *chick, lake, straight*); and a meaning layer, which maintains unusual and irregular sound-symbol spellings due to morphemes (e.g., *hymn, hymnal*.” Logically then, instruction in phonics can support students to crack the code of the alphabetic system (Beck 2006; Caldwell & Leslie, 2013; Duff, Mengoni, Bailey, & Snowling, 2014; Fox, 2012; Rasinski & Padak, 2013). Savage (2011, p. 7) stresses that “phonics is a body of information” all students are entitled to learn. However, letter-sound knowledge alone will not guarantee that students are independent and successful readers because it is possible to decode words yet not know their meaning or comprehend an author’s message. Words that students spell (encode) they can also read, but just because they can read words (decode) does not guarantee that they can spell them. It is practical and

efficient then that students be taught how to spell the words they are learning to decode.

There is an additional challenge faced by teachers of students who are learning English, and in English, as there may be differences in letter-sound correspondence between English and their first language. With this being the case phonics instruction is especially important as it “unlocks a large proportion of the system of English orthography” (Mesmer & Griffith, 2006, p. 367). Teachers would understandably make wide use of visuals and other multisensory approaches while also encouraging students to talk about, and question, similarities and differences.

There is strong research support for the efficacy of explicitly teaching alphabet letters because it is deemed to be one of the best predictors of later reading achievement (Diamond & Baroody, 2013; Evans, Bell, Shaw, Moretti, & Page, 2006; Hogan, Catts, & Little, 2005; Pullen & Justice, 2003; Strickland, 2011). Letter names should be learned early, preferably before students’ first year at school (see for example, Roe & Smith, 2012; Savage, 2011) with the reason being that letter names are constant so they provide a common reference point for discussion and instruction, for example, a teacher explaining that when reading the word ‘fly’, the letter ‘y’ (why) makes the ‘i’ (igh) sound. Being able to sing the ‘Alphabet Song’ does not guarantee letter knowledge (some students have been known to believe that *elemenohpee* was a word) and neither does having an alphabet chart on a classroom wall or just practising letter identification with flashcards. Students need to be assuredly fluent at locating randomly selected letters “in a variety of print displays” (Reutzel & Cooter, 2012, p. 113) so that they recognise letters by their form rather than deduce them from context. In addition, it has also been shown that students who have longer names, and can write them (even if they are only partially correct), are advantaged (Diamond & Baroody, 2013; Puranik, Schreiber, Estabrook, & O’Donnell, 2013)! Students should be able to automatically, fluently, and accurately provide the name and (predominant) sound for capital and lowercase letters that are randomly nominated (Reutzel & Cooter, 2012) and know the consonants and vowels. When students have learned the sounds for a few consonant and vowels they can quickly be

taught how to blend these sounds together to make words. It is not recommended that blending instruction be held off until after all alphabet letters are known because students need to get reading as soon as possible. Also, by learning how to blend sounds students can soon move toward making approximate pronunciations of words that are already part of their spoken language.

Part of phonics instruction would understandably see teachers giving students many opportunities to apply what they have learned by reading decodable texts. These texts do not purport to be literature, and neither would they be the only texts that students read, but to strengthen phonic understandings they are an efficient way of practising the decoding of words (Joliffe & Waugh, 2012; McQuiston, O'Shea, & McCollin, 2008; Roe & Smith, 2012). It has also been observed that "judicious reading of decodable texts may also provide successful reading experiences needed to motivate struggling readers" (Jenkins, Badasy, Peyton, & Sanders, 2003 cited in Roe & Smith, 2012, p. 194). A further justification for use of decodable texts is that "although predictable texts offer context clues, the ease of reading through context may detract from careful processing of print (Roe & Smith, p. 193). Glazzard & Stokoe (2013, p. 54) state that while decodable texts generally have simple narratives "you can aid their understanding of the texts they read by talking to them about the story, its events and characters and you can ask them simple questions about the text."

Students need to be given many opportunities to decode single words as well as words embedded in sentences, paragraphs, and longer connected text (Joliffe & Waugh, 2012). Once the foundation skills have been developed teachers can move on to expanding students' structural analysis skills by focusing on how to decode multi-syllable words, words with affixes (prefixes and suffixes), words that have Greek and Latin roots, and compound words (Cunningham, 2013). Interestingly, recent research has suggested that ubiquitous texting may well support students' development of decoding because when using abbreviations they need to phonetically segment the sounds in words that they plan to write (Carter, 2014).

In its position statement about the place of phonics, the International Reading Association (1997, unpaginated) reiterated that "rather than engage in debates about whether phonics should or should not be taught, effective teachers of reading and writing ask when, how, how much, and under what circumstances phonics should be taught."

Links with reading

Student's listening, speaking, and vocabulary abilities influence development of phonic skills because as Roe & Smith (2012, p. 187) state "use of phonics techniques to decode words is not helpful if the words are not in the students' listening vocabularies." Students need a reference point to decide whether the word they are naming is a real word and, when reading connected text, if it fits the context of what is being read. These foundational skills are crucial for all students but are especially critical when teaching students who do not have English as their first language as they "need help in developing extensive vocabularies of English words to allow them to make effective use of phonic generalizations" (Roe & Smith, 2012, p. 187).

Pullen & Justice (2003, p. 89) remind teachers that development of literacy-based understandings begin in the preschool years and that it is when children "move from understanding that print is like pictures and that written words comprise letters that map to speech sounds, will they be able to begin visual word recognition (Snow et al., 1998)." Further, when students have secure phonemic awareness they understand that words are composed of separate sounds (Caldwell & Leslie, 2013; Roe & Smith, 2012; Schuele & Boudreau, 2008) as they have developed the capacity to aurally segment and blend sounds in words (Rightmyer, McIntyre, & Petrosko, 2006).

With the ultimate aim being that students read for meaning, Garcia & Cain (2013, p. 1) remind teachers that "reading comprehension and its development are highly dependent on a reader's ability to read written words accurately and fluently."

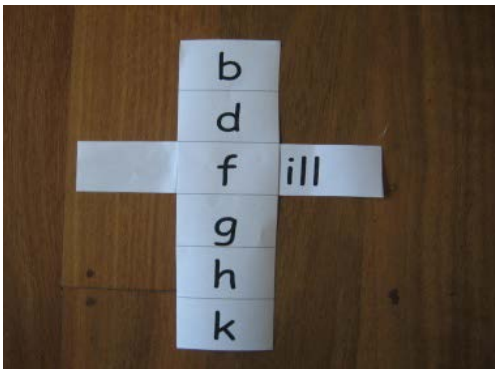
Factors that influence development of letter-sound knowledge

1. Use of one phonic program/developmental hierarchy across year levels in a school (Reutzel & Cooter, 2012). As Glazzard & Stokoe (2013, p. 51) say "picking and mixing from different schemes is not advisable, because each scheme will have its own planned progression."
2. Teachers' clear articulation of letter names and sounds (Glazzard & Stokoe, 2013).
3. Students' correct articulation of letter names and sounds (Copeland & Calhoon, 2007).
4. Auditory memory. Students need to be able to name sounds and sequentially retain them so that words can be named (Copeland & Calhoon, 2007).
5. A different letter/phoneme introduced every day in the students' first term at school (Joliffe & Waugh, 2012; Reutzel & Cooter, 2012). Students who securely learn the content can be taken further in their skill development while other students receive additional instruction until their understanding is accurate and fluent. The necessity to move briskly is because "a prolonged pace of teaching means that children begin to use other strategies such as whole-word recognition to read, rather than apply their phonic skills to decode" (Joliffe & Waugh, 2012, p. 109) and use of a whole-word approach puts too much load on their memory.
6. Daily and brief (10-15 minute) sessions that are active and interactive (Glazzard & Stokoe, 2013).
7. Systematic and explicit instruction (Beck, 2006; Reutzel & Cooter, 2012; Rose, 2006). Further, the National Reading Panel (2000, p. 132) stated "specific systematic phonics programs are all more effective than non-phonics programs and they do not appear to differ significantly from each other in their effectiveness."
8. Use of multi-sensory instructional approaches: visual, auditory, kinaesthetic (Joliffe & Waugh, 2012).
9. Teacher-led group and individual decoding activities, with personal accountability, and limited use of worksheets (Mesmer & Griffith, 2006).
10. A range of opportunities for students to apply their decoding skills in meaningful ways (Fox, 2012).
11. Simultaneously teaching students how to name, sound and, as soon as possible, blend letters and write them in words (Fox, 2012).
12. Understanding that students with disabilities have the potential to develop phonic skills and that this may occur at a later age (Copeland & Calhoon, 2007).
13. Recognising that students in the primary and secondary years may not have secure decoding skills and that these must be taught.
14. Teaching phonics as part of a comprehensive literacy program (Glazzard & Stokoe, 2013).

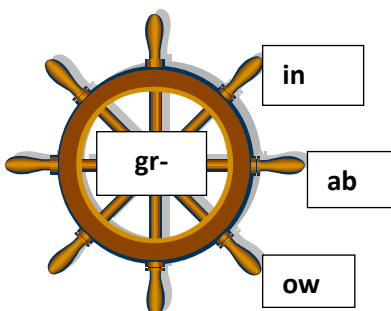
Instructional approaches

1. Use students' names for letter identification and blending practice. Compare pronunciation of names that share the same letters.
2. Match and sort letters using visuals and print including experience with naming and sounding letters written in a variety of fonts.
3. Use magnetic letters/letter tiles for students to match letters and build words.
4. Give students paintbrushes and tubs of water to practise correct letter formation.
5. Teach students physical actions to remember letters.
6. Sort letters. *What is the odd one out and why?*

7. Have students make their own alphabet and blend books that include names of family, pets, hobbies, interests, and media and sport celebrities.
8. Letter-sound-picture bingo games.
9. Play snap and memory games.
10. Phonic sliders.



11. A "...trail of objects [starting or] ending with the same sound can be laid out for the learners to follow and discover the links" (Morgan & Moni, 2005, p. 42).
12. Put a range of items into a bag and have a student draw out an item, name it, and blend the sounds in the word.
13. Phonic wheels.

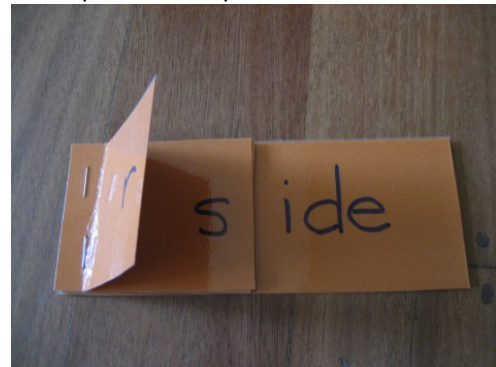


14. Racetrack game. Throw a die and, after landing on a space, name a designated number of words that start with that letter/blend.

15. Point to a letter and ask students to nominate a word that starts with it.

s	p	t
i	s	m
n	e	a
o	b	g

16. Put up a finger for each sound you hear in the word. Now write the letters for each finger/sound.
17. Sand timer. Nominate a letter/blend and ask students to name as many words they can think of that start with that it.
18. Use flip books for practice.

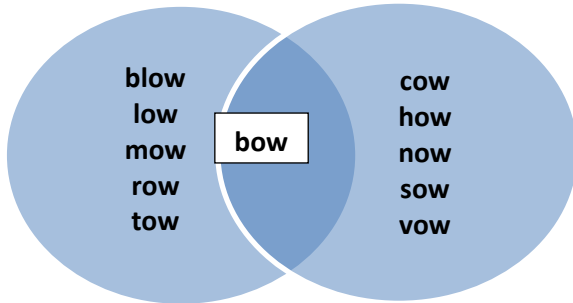


19. Put a piece of transparent plastic over a printed page and have students use a water-based pen to circle a nominated letter/blend. This task can be made more challenging by setting a time limit.
20. Nominate a coordinate e.g., A2. Before the sand timer runs out, write (and for early learners, draw) as many words as you can that start with that letter. "I'll give you a word to get started."

	1	2	3
A	s	p	i
B	n	a	m
C	e	t	b

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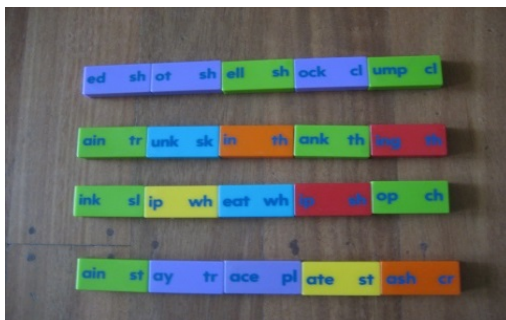
21. Construct Venn diagrams to show connections between words.



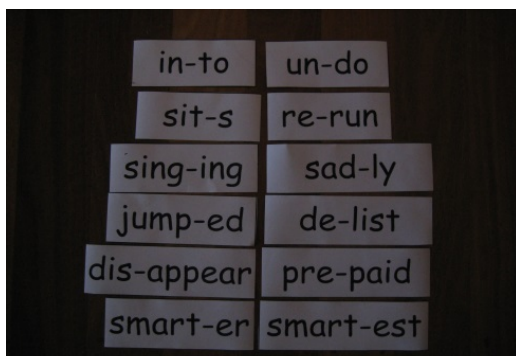
22. Spin the spinner to find out how many words need to be named.



23. Practice blending by playing word dominoes.



24. Teach how to read words that have affixes.



25. There are over 120 free downloadable phonic books, following the Jolly Phonics© sequence, available from the Speld(SA) website. These can be read on tablet devices or printed. Most of these books also have pages of suggestions and activities that can be used to consolidate students' decoding practice.
<http://www.speld-sa.org.au/>



Another free source of online decodable texts is from Starfall.

<http://www.starfall.com/n/level-a/learn-to-read/load.htm?f>

26. Teachers of struggling older students (particularly boys), may find *Project X Code*© to be a motivating instructional approach.
http://www.oup.com.au/primary/literacy/project_x_code

References

- Beck, I.L. (2006). *Making sense of phonics. The hows and whys*. Camberwell, Vic: ACER Press.
- Caldwell, J.S., & Leslie, L. (2013). *Intervention strategies to follow informal reading inventory assessment. So what do I do now?* (3rd ed.). Upper Saddle River, NJ: Pearson.
- Carter, C. (June 13, 2014). Texting improves children's spelling and grammar. *The Telegraph*.
<http://www.telegraph.co.uk/education/10895575/Texting-improves-childrens-spelling-and-grammar.html>
- Copeland, S.R., & Calhoun, J.A. (2007). *Effective literacy instruction for students with moderate or severe disabilities*. Baltimore, MA: Paul H. Brookes.
- Cunningham, P.M. (2013). *Phonics they use. Words for reading and writing* (6th ed.). Boston, MA: Pearson Education.
- Diamond, K.E., & Baroody, A.E. (2013). Associations among name writing and alphabetic skills in prekindergarten and children at risk of school failure. *Journal of Early Intervention*, 1-20. DOI: 10.1177/1053815113499611
- Duff, F.J., Mengoni, S.E., Bailey, A.M., & Snowling, M.J. (2014). Validity and sensitivity of the phonics screening check: implications for practice. *Journal of Research in Reading*, 1-15. DOI: 10.1111/1467-9817.12029
- Fox, B.J. (2012). *Word identification strategies. Building phonics into a classroom reading program*. Boston, MA: Pearson Education.
- Garcia, J.R., & Cain, K. (2013). Decoding and reading comprehension: A meta-analysis to identify which reader and assessment characteristics influence the strength of the relationship in English. *Review of Educational Research*, 1-38. DOI: 10.3102/0034654313499616
- Glazzard, J., & Stokoe, J. (2013). *Teaching systematic and synthetic phonics and early English*. UK: Critical Publishing.
- Hogan, T.P., Catts, H.W., & Little, T.D. (2005). The relationship between phonological awareness and reading: Implications for the assessment of phonological awareness. *Language, Speech, and Hearing Services in Schools*, 36(4), 285-293.
- International Reading Association (IRA). (1997). *The role of phonics in reading instruction*.
http://www.reading.org/Libraries/position-statements-and-resolutions/ps1018_phonics.pdf
- Johnston, R.S., McGeown, S., & Watson, J.E. (2012). Long-term effects of synthetic versus analytic phonics teaching on the reading and spelling ability of 10 year old boys and girls. *Reading and Writing*, 25, 1365-1384. DOI: 10.1007/s11145-011-9323-x
- Joliffe, W., & Waugh, D. (2012). *Teaching systematic phonics in primary schools*. London: Sage Publications.
- McQuiston, K., O'Shea, D., & McCollin, M. (2008). Improving phonological awareness and decoding skills of high school students from diverse backgrounds. *Preventing School Failure*, 52(2), 67-70.
- Mesmer, H.A.E., & Griffith, P.L. (2006). Everybody's selling it-But just what is explicit, systematic phonics instruction? *The Reading Teacher*, 59(4), 366-376.
- Morgan, M., & Moni, K.B. (2005). Use phonics activities to motivate learners with difficulties. *Intervention in School and Clinic*, 41(1), 42-45.
- National Reading Panel (2000). *Teaching children to read: An evidence-based assessment of the scientific research literature on reading and its implications for reading instruction*.
<http://www.nichd.nih.gov/publications/pubs/nrp/pages/smallbook.aspx>
- Pullen, P.C., & Justice, L.M. (2003). Enhancing phonological awareness, print awareness, and oral language skills in preschool children. *Intervention in School and Clinic*, 39(2), 87-98.
- Puranik, C.S., Schreiber, S., Estabrook, E., & O'Donnell, E. (2013). Comparison of name-writing rubrics: Is there a gold standard? *Assessment for Effective Intervention*, 1-8. DOI: 10.1177/1534508413502390
- Rasinski, T., & Padak, N.D. (2013). *From phonics to fluency. Effective teaching of decoding and reading fluency in the elementary school* (3rd ed.). USA: Pearson Education.
- Reutzel, D.R., & Cooter, R.B. (2012). *Teaching children to read. The teacher makes the difference* (6th ed.). Boston, MA: Pearson.
- Rightmyer, E.C., McIntyre, E., & Petrosko, J.M. (2006). Instruction, development, and achievement of struggling primary grade readers. *Reading Research and Instruction*, 45(3), 209-241.
- Roe, B.D., & Smith, S.H. (2012). *Teaching reading in today's elementary schools* (11th ed.). Belmont, CA: Wadsworth, Cengage Learning.
- Rose, J. (2006). *Independent review of the teaching of early reading*. UK: Department for Education and Skills (DfES).
<http://webarchive.nationalarchives.gov.uk/20130401151715/http://www.education.gov.uk/publications/eOrderingDownload/0201-2006pdf-EN-01.pdf>
- Savage, J.F. (2011). *Sound it out! Phonics in a comprehensive reading program* (4th ed.). NY: McGraw-Hill.
- Strickland, D.S. (2011). *Teaching phonics today. Word study strategies through the grades* (2nd ed.). Newark, DE: International Reading Association.