SPELLING

By Lee Kindler
& Jan Hagston

approach

a

strategic

SPELLING

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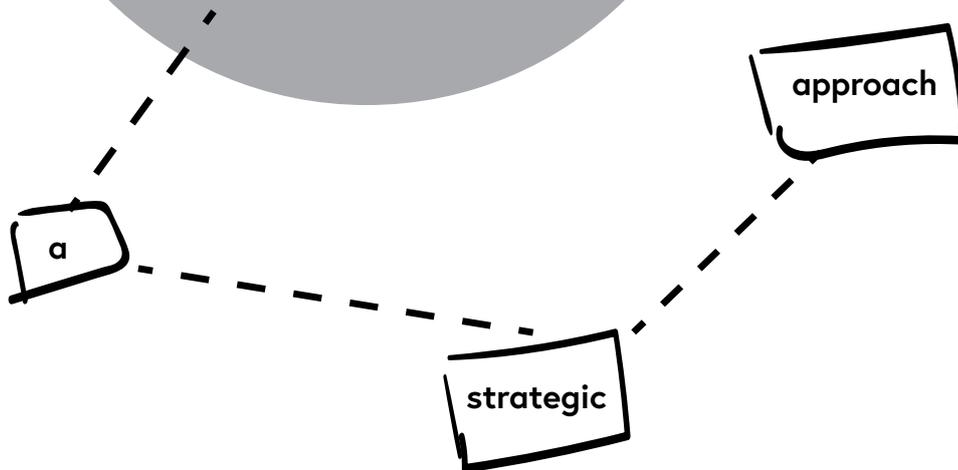
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Spelling - a strategic approach

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We are happy to answer any questions about the activities in this resource and welcome any feeback. Please contact:

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INTRODUCTION

Why teach spelling?

Like it or not, we are judged on our spelling and being able to spell words correctly is an essential part of communicating effectively. Studies show that spelling mistakes can result in negative perceptions about a person's conscientiousness, intelligence and trustworthiness (Vignovic, & Thompson, 2010). This can limit opportunities in work and other areas of life.

Adults[1] and young people who are poor spellers often lack confidence with their writing. They see their poor spelling as evidence of deficient writing skills and lack of general English proficiency (Grief, Meyer & Burgess, 2007). This, in turn, can impact on self-esteem. Having the skills to spell words correctly can allow people to focus on developing the content of their writing rather than concentrating time and energy on thinking about spelling each word.

Spelling knowledge has been found to be connected to other areas of literacy. It can help students understand how words work at the levels of sound, structure and meaning (McQuirter Scott, 2010) which can enhance vocabulary and develop reading comprehension.

It is difficult for many people to develop spelling skills through exposure to print alone. Research has shown that explicit teaching of spelling can significantly improve students' spelling performance (Graham & Santangelo, 2014).

A common misconception is that English spelling is random and can't be taught in a systematic way. This has led to a focus on memorisation as the primary spelling strategy (Adoniou, 2014). While there are some irregular words, in general, English spelling follows patterns of sound and meaning. A great deal of research in the last few years has looked at identifying teaching strategies which can help students develop a systematic approach to spelling by acquiring different kinds of knowledge about the sound and meaning of words (Daffern, 2017; Herrington & Macken-Horarik, 2015).

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1   We include older adolescents in our definition of adult learners

Some theory around spelling: a snapshot

HOW DO PEOPLE LEARN TO SPELL?

Beyond stage theory

A great deal of spelling theory has focussed on identifying stages of development that children go through in learning to spell (e.g. Frith, 1980 & 1985, Bear and Templeton 1998, Gentry 1981, Henderson & Templeton, 1986). Stage theorists argue that learners progress through stages of development in their knowledge of word structure. Knowledge increases in complexity from letter-sound patterns to spelling rules to meaning-based-patterns (Sawyer & Joyce, 2006).

Current research has challenged the understanding that children begin to spell only through using phonological skills with studies showing that children also use morphemic knowledge at the early stages of literacy development (Daffern, 2017; Devonshire, Morris, & Fluck, 2013; Adoniou, 2014). For example, beginning writers often use knowledge of morphemes to write plurals such as 'dogs' rather than 'dogz' even though the latter is phonologically correct (Adoniou, 2014). Teaching of other spelling knowledge such as morphemic and etymological alongside phonological knowledge can have benefits at the early stages of literacy development (Devonshire, Morris, & Fluck, 2013).

More recently, It has also been suggested that learning to spell does not follow a linear path (Daffern, 2017; Devonshire, Morris, & Fluck, 2013). The different strategies children use rise and fall over time with a gradual increase in efficiency and sophistication. This is referred to as the 'overlapping waves theory' (Siegler, 2000 cited in Westwood, 2008).

Constructivist theory

Constructivist theory has also been influential in thinking about how people learn to spell. These theorists propose that spelling knowledge is gained through writing and reading in personally meaningful contexts (Ferreiro & Teberosky, 1982 in Treiman, 2017). The learner will construct knowledge of spelling conventions in their own way by building on prior knowledge and extracting what they need when taking part in a rich variety of reading and writing experiences. This theory is particularly relevant in adult learning contexts where students have been found to learn spelling more successfully in real world contexts that are meaningful to them (Sawyer and Joyce, 2006; Grief, Meyer & Burgess, 2007).

Dual route theory and triple word theory

Dual route theory proposes that there are two separate routes to learning how to spell – phonological and orthographic (Sawyer & Joyce, 2006). The phonological route uses sounds, letter clusters, and syllables and graphemes. It is used for words with regular letter-sound spellings. The orthographic route involves tapping into a memory store of whole words. It

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is used to spell irregular words. This theory has been criticised for not taking into account morphology (Treiman, 2017), leading to the development of Triple Word Theory which understands spelling competency as the ability to manage phonological, orthographic and morphological components of language (Daffern, 2017).

According to Triple Word Theory, learning to spell requires the working memory to successfully store, process and analyse phonological, orthographic and morphological word-forms, which is fostered through explicit instruction (Daffern, 2017).

This theory intersects with the Overlapping Waves Theory in that it does not see spelling as a progression of stages from phonological to orthographic to morphological. Instead, the three components of language develop together (Daffern, 2017).

Spelling and memory

Memory plays a complicated role in the mastery of spelling and advances in neuroscience are providing more information about how people learn to spell. Neurocognitive analysis has found that with the right kind of practice, words become stored in long-term memory, resulting in automaticity (Richards, Aylward, Berninger, et al. 2006a in Daffern, 2017). The aim of instructional strategies is to build towards this automaticity so that students can achieve greater fluency with their writing. When spelling is automatic, cognitive resources can be used for other important aspects of writing such as sentence structure, planning, revising, etc (McCutchen, 2006 in Lesgold & Welch-Ross, 2012).

Spelling knowledges

A number of theorists have advocated the teaching of several spelling knowledges as a way of building the linguistic skills and processes that students need to become proficient spellers (Adoniou, 2014, Devonshire, Morris, & Fluck, 2013, Westwood, 2008). These include morphological, etymological, orthographic, phonological and visual knowledge. This approach has also informed the design of spelling components in the English Learning Area of the Australian Curriculum. In this book, there are chapters dedicated to morphological, etymological, phonological and visual knowledge, and orthographic knowledge is incorporated within these. Spelling knowledges are defined and discussed further in the next section.

IMPLICATIONS FOR ADULT LITERACY INSTRUCTION

Numerous studies of adult literacy learners indicate that there are similarities between the way that adults and children learn to spell (e.g. Bear, Trues & Barone, 1989, Viise, 1995, Worthy & Viise, 1996 cited in Sawyer & Joyce 2006). This suggests adults can benefit from developing a range of spelling knowledges. However, there are significant differences between children and adult learners in the type of spelling knowledge that they have acquired and how they apply this knowledge. Due to their previous experience, both in

formal education and everyday life, adults have developed different spelling knowledge to children.

Morphemic knowledge

Adult literacy learners tend to have stronger morphological, spelling and vocabulary awareness than children with similar decoding skills but they have trouble using this knowledge when they are producing texts (Binder et al, 2015). For example, adult literacy learners use past tense when telling stories orally but are less likely to use '-ed' to indicate past tense when producing the stories as texts (Binder et al, 2015, p. 1044).

Adults are also less successful at spelling and reading morphological complex words as compared to simple ones, such as words with one morpheme (Tawler, Cote & Binder, 2014, p. 9).

The challenge for educators is to assist adult students to tap into and build on this morphological knowledge so that students can apply their knowledge and use it with more complex words. Bangs & Binder (2016) found that explicit teaching of morphemic knowledge, including suffixes, prefixes, and word sums and matrices had a positive effect on spelling. It is likely that students were able to build on and utilise their existing morphemic knowledge.

Building student confidence plays an important role because adults may be more cautious than children when trying to spell words, which may make them less likely to draw on their existing morphological knowledge (Binder et al, 2015). It is also important to consider that instruction for adult learners is most effective with explicit teaching using personally meaningful reading and writing activities (Sawyer & Joyce 2006).

Building phonological knowledge

Developing phonological knowledge is a crucial part of becoming a proficient speller and adults who experience difficulty with spelling show greater deficits in this area (Fracasso, Bangs & Binder, 2014 cited in Binder et al). Research indicates that adults who experience difficulty with spelling have an over reliance on visual knowledge and orthographic rules (Talwar, Cote & Binder, 2014, p. 4). A number of studies have indicated that the use of visual and orthographic knowledge is a way of compensating for weak phonological skills (e.g. Greenberg et al., 2002 cited in Kruidenier, MacArthul & Wrigley, 2010).

Applying research to the adult literacy setting

Research on spelling has progressed significantly in the last five years, developing a greater understanding of the way children acquire spelling skills. There is a need for further research into whether findings can be applied in the adult literacy setting or whether the heterogeneous nature of adult literacy learners indicates a need for more research focused solely on these learners.

About this book

This book is aimed at teachers who are working with adults or young people who have difficulty with spelling. It draws on current, evidence-based research to inform a strategic approach to teaching spelling. It is the result of a great deal of reading and thinking about what resources will help teachers to apply current research to adult learning situations.

Adult learners bring with them a range of existing knowledge and experience and require flexibility in the way they learn. Rather than provide a complete A-Z spelling program, this book offers a range of tools in the form of explanations, questions, activities and examples that teachers can select from according to the diverse needs of their students.

There are many other resources available that provide comprehensive coverage of spelling rules, letter sounds and word lists but implementing these in their entirety is not always feasible in adult learning environments. This book has a strong focus on developing spelling knowledge and a repertoire of strategies that will build students' confidence and independence.

It is important for teachers to be knowledgeable about the linguistic skills required to spell words correctly and this book provides information to assist teachers to identify students' existing skills and prioritise instructional approaches that will be most effective.

There are two sections to this book. The first section looks at four spelling knowledges – morphemic, etymological, phonological and visual. A chapter is dedicated to each of these types of knowledge and within each chapter there are definitions, explanations about how the knowledge can be applied, and activities to help students build the knowledge.

The second section is dedicated to applying spelling knowledge. It looks at effective selection of spelling knowledge, use of technology and effective assessment of spelling.

There is a student workbook to accompany this teacher resource. Each of the activities in the teacher resource has a corresponding activity in the student workbook. The student workbook is designed to support teacher instruction rather than for students to complete independently.

There are also online resources to support this book which can be found at www. multifangled.com.au

REPRESENTATION OF SOUNDS AND LETTERS

In this resource, sounds are shown with slashes and letters are shown with quotation marks.

E.g. The letter 'c' can sound like the /c/ in cake or /s/ in city.

FOUR SPELLING KNOWLEDGES

In this section, we provide teachers with explanations, examples and activities that they can use to teach spelling. These have been developed by drawing on the latest research around spelling and learning.

This section focuses on helping students to develop strategies using four types of spelling knowledge – morphemic, etymological, visual and phonological. It is important to note that while these knowledges are addressed in different chapters, they should not be seen as mutually exclusive. There is considerable overlap between them and they are often most effective when applied together.

The key concepts at the start of each activity are included to help teachers formulate explicit learning intentions and success criteria. They provide information that will help teachers to clearly explain the reasons for doing the activities.

It is important to consider that spelling is best taught in context. A range of activities and words have been provided in each section to give teachers scope to incorporate them into literacy programs where appropriate. The activities should be seen as ideas for building students' knowledge and to create opportunities for discussion around strategies that can be used to improve spelling. They should be adapted to suit the needs of students.

Morphemic knowledge

Morphemes are the smallest meaningful linguistic units. They cannot be broken down into smaller meaningful parts. They include base words, suffixes and prefixes and indicate changes in verb tense, possession and plurality. For example, the word below has three morphemes. The prefix, 're-' meaning to repeat, withdraw or return, the base word 'act', and the suffix '-ed' which makes the word past tense.

prefix	base word	suffix
re	act	ed

Base words can also be joined together to make compound words e.g. wheelchair.

WHY USE MORPHEMES?

- Morphemes have been underutilised in spelling programs but developing knowledge about them has many advantages. Letter sounds in the English language are inconsistent—only 56% of its words can be predicted by sound-symbol correspondences (Crystal, cited in Devonshire, Morris & Fluck, 2013). Morphemes, on the other hand, are more predictable because they are almost always spelled the same across words e.g. 'jumped', 'wanted' and 'loved' all have the suffix '-ed' even though '-ed' is pronounced differently in each word.

- Morphemes have consistent rules that can be applied when adding to them. E.g. dropping the 'e' when adding '-ing' (brake-braking, hope-hoping).

- Without knowledge of morphemes, spellers must rely on letter sounds or memory to spell words correctly.

- Understanding how morphemes change the meaning of a word can build word knowledge, which can improve spelling and reading.

- Morphological interventions produced improvements in children's spelling (Binder et al, 2015). Such interventions are likely to be effective with adult literacy learners and have been found to increase vocabulary (Bangs & Binder, 2016, p. 51).

- Morphemic awareness is a tool for morphological problem solving and can increase vocabulary by helping students to work out the meaning of words (Bangs & Binder, 2016, p. 50).

- Breaking words into morphemes helps students by allowing them to spell one morpheme at a time.

KEY INFORMATION

Prefixes and suffixes

Knowing the meaning of different prefixes and suffixes and understanding how they change the meaning of words provides very useful information about how a word is spelled.

Example

When spelling the word 'loudest', after identifying the base word 'loud', a writer faces the choice between the suffixes '-ist' and '-est', which sound the same.

Knowing that '-est' makes a word into a degree of comparison, and '-ist' shows a person who practices or is concerned with something or holds certain principles will help them to spell the word correctly.

It will also help to remember other words with this suffix (e.g. 'coldest', 'largest', 'oldest', 'loudest', and 'flattest') and think about how the suffix changes the meaning of the base word in the same way.

Similarly, with the word 'magician', the suffixes '-ian', '-tion', and '-sion' all have the same sound. Knowing that '-ian' means a person that practises something will help a writer to choose the correct suffix.

Here are some common prefixes and suffixes:

Prefix	Meaning	Examples
dis-	undo, reverse, opposite	disagree, dislike, disadvantage, disappear, disable
anti-	against, opposed to	antibiotic, antidote, antiseptic, antisocial, antioxidant
non-	not	nonfat, nonbeliever, nonappearance, nonexistent, nonessential
sub-	under, lower, below, secondary, inferior	submarine, subatomic, subset, subdivision, subordinate
pre-	before	premix, prepaid, premade, preview, premix
ex-	out of, outside of, former	exchange, excavate, exhale, extract, expire
re-	again, back or backward	rebound, rewind, react, reheat, reappear

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		multicolour, multicultural, multinational, multistorey, multitask
multi-	many	multicolour, multicultural, multinational, multistorey, multitask
post-	after	postpone, postnatal, postpaid, postwar, postgraduate

Suffix	Meaning	Examples
-less	without	useless, helpless, fearless, colourless, heartless
-able	capable of, worthy of	doable, lovable, achievable, treatable, avoidable
-ion	act or condition	celebration, completion, navigation, action, conversation
-ness	state or condition	weakness, kindness, shyness, happiness, sadness
-ous	full of, having, possessing	humourous, ponderous, laborious, furious, studious
-ly	having a quality of, every	sadly, madly, deeply, truly, badly
-ed	makes a verb past tense (e.g. crossed), changes a noun to an adjective (e.g. bearded)	walked, looked, shaded, booked, cared
-ist	a person who practices or is concerned with something or holds certain principles	artist, communist, activist, pianist, scientist
-est	a degree of comparison	coldest, largest, oldest, loudest, flattest

Consistency of morphemes

While the sounds of morphemes can change, they are almost always spelled the same across words.

For example, the suffix '-ed' can be pronounced in several different ways:

jumped, picked, slipped, tripped, licked	'-ed' pronounced as /t/
wanted, flooded, hated, rated, waited	'-ed' pronounced as /id/
loved, rolled, named, joined, signed	'-ed' pronounced as /d/

Identifying the base words and knowing that '-ed' indicates past tense will eliminate errors made by using only phonological knowledge.

Example

A writer attempting to spell the word 'reacted' with only phonological knowledge may come up with 'riactid'.
Identifying the based word 'act', the prefix 're-' (meaning again) and the suffix '-ed' (making the word past tense) will help to spell the word correctly.

Base words can also sound different when used in different words but still have the same spelling. E.g. sign/signature, know/knowledge, heal/health, mean/meant. Writers who think about the meaning of these words and understand how they are built are more likely to spell them correctly.

Example

Breakfast means breaking the fast after a night's sleep. Thinking about the meaning of the word will help to spell it correctly.

Morphemes and spelling rules

There are consistent rules that can be applied when joining morphemes, which can be very helpful with spelling. However, keep in mind that memorising too many spelling rules can be overwhelming. They are most effective when targeting specific words that students are finding difficult.

Providing the opportunity to discover spelling rules through word investigations is a good way of avoiding overwhelming students with spelling rules.

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Spelling rule	Examples
Change 'y' to 'i' when adding a suffix. (When there is a consonant before the y) Exceptions: • '-ing' words • shyness	happy (happiness, happier) friendly (friendliness, friendlier) manly (manliness, manlier) busy (business, busier, busied) healthy (healthiness, healthier) empty (emptiness, emptier, emptied) lonely (loneliness, lonelier)
Drop the 'e' when adding '-ing', '-ed', '-er', '-y' (When two vowels are separated by a consonant) Exceptions: • dyeing	write (writer, writing) have (having) make (maker, making) love (lover, loved, loving, lovey) take (taker, taken, taking) move (mover, moving) save (saver, saving)
Add an extra consonant at the end of a word when adding '-ed', or '-ing'. (When words have a short vowel-sound followed by one consonant) Exceptions: • words ending in x (fix, fixed, fixing)	run (running) club (clubbing, clubbed) forget (forgetting) regret (regretting)

QUESTIONS TO ENCOURAGE STUDENTS TO USE MORPHEMIC KNOWLEDGE

- What do you think the word means?

- Do you know the meaning of any of the parts of the word?

- What do you know about the meaning of the word that could help with spelling?

- Can you identify the base word?

- Can you identify a suffix or prefix that sounds familiar?

- Is the word made up of more than one base word (compound word)?

- Are there any spelling rules that you can use when adding morphemes?

USEFUL VOCABULARY

Base word: a word that can have a prefix or suffix added to it. Also called a root word.

Compound word: two or more base words that join together to make a single word.

Morpheme: a unit of language that cannot be divided into any more meaningful parts (includes prefix, suffix and base word).

Prefix: letters that are added to the beginning of a word to change its meaning.

Suffix: letters that are added to the end of a word to change its meaning.

ACTIVITIES

The following are a few ideas for building students' morphemic knowledge and to create opportunities for discussion around strategies that can be used to improve spelling. They should be adapted to suit the needs of students.

Activity 1: What is a morpheme?

This activity introduces prefixes, base words and suffixes. It encourages students to look for the morphemes in words and consider their meaning.

Key concepts
- Identifying base words, prefixes and suffixes helps to break words into more manageable parts.
- Knowing the meaning of prefixes and suffixes helps understanding of how words are constructed.
- Not all words can be spelled by sounding them out. Morphemic knowledge provides useful information about how a word is spelled.

Provide students with an example of a word that contains a prefix, base word and suffix. E.g. 'unhelpful'. Identify the different parts of the word.

prefix	base word	suffix
un	help	ful

Brainstorm other words that have:

- the base word 'help' ('helped', 'helping', 'helper', 'helpfulness', 'helpless', 'helplessness', 'helplessly')

- 'un-' as the prefix ('unhappy', 'unable', 'unaffordable', 'unafraid', 'unaware', 'unbelievable', etc.)

- '-ful' as the suffix ('useful', 'painful', 'hopeful', 'truthful', 'careful', 'beautiful', 'wonderful', etc.)

Ask students what the prefix 'un-' and suffix '-ful' might mean ('un-' means not or opposite of and '-ful' means full of).

Give students a number of words such as the ones below and ask them to identify the base word and any prefixes and suffixes.

unlucky	recovering	disagreement
unarmed	reordered	unequally

Make a list of all the prefixes and suffixes that students have found.

Activity 2: Investigating the meaning of prefixes and suffixes

This activity gives students the opportunity to discover how words can be built from base words using prefixes and suffixes.

> ### Key concepts
> - Identifying base words, prefixes and suffixes helps to break words into more manageable parts.
> - Knowing the meaning of prefixes and suffixes helps understanding of how words are constructed.
> - Not all words can be spelled by sounding them out. Morphemic knowledge provides useful information about how a word is spelled.
> - Knowing a range of prefixes and suffixes can build vocabulary.

Demonstrate to students how words can be made up of base words, prefixes and suffixes. E.g. the word 'misdirected' comes from the base word 'direct', the prefix 'mis-', indicating something has been done badly or wrongly and the suffix '-ed', indicating past tense.

prefix	base word	suffix
mis	direct	ed

Divide students into groups and give each group a base word. Discuss the meaning of the base words. Ask students to brainstorm as many words as they can containing the base word. Students might also come up with some compound words where two base words are put together.

Have students share their words. Make a list of all the prefixes and suffixes that students have used. Ask students to think about the meaning of each of these prefixes and suffixes and how they changed the base word.

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OTHER RESOURCES FROM MULTIFANGLED

NUMERACY

Having fun with maths: Activities and games for developing maths language and skills by Dave Tout

The games and activities in this book focus on the development of fundamental maths skills through co-operative group work and the use of hands-on materials, as well as on enjoyment and having fun in order to build confidence and overcome maths anxiety. The photocopiable activities are designed to encourage students to work together and use and talk about mathematics and its language and share their understandings and knowledge. The activities are suitable for a wide range of mathematics and numeracy students, especially for the middle years, year 11 students studying practical mathematics subjects, and adult numeracy students. There are four sections: co-operative logic problems, dice games, calculator games and word games. Skill areas covered include: numbers and calculations, shape, location and direction and introductory algebra.
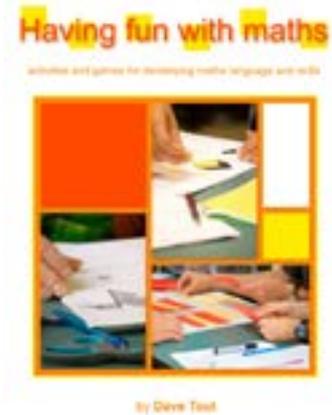
Car costs: A numeracy workbook by Dave Tout

This workbook uses the topic of cars to introduce and teach a range of maths and numeracy topics. It is ideal for a range of young people needing maths that links to real life contexts, and who also want to learn about the costs related to buying, running and driving a car. Each chapter has a different focus and includes explanations and activities followed by investigations, worksheets and handouts.

The book has a substantial final chapter titled Brush up you skills which provides explanations and exercises on the mathematics required to undertake the activities.
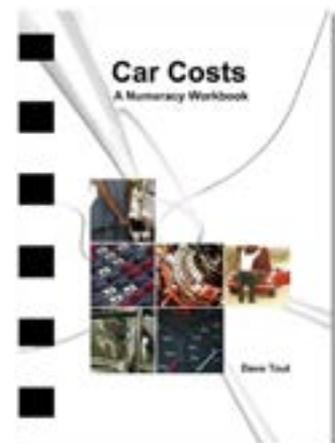
Numeracy: Teaching maths in context by Dave Tout

Numeracy: teaching maths in context describes an approach to teaching mathematics based on applied and contextual learning principles. This means that the teaching and learning of mathematics proceeds from a contextual, task-based and investigative point of view—where the mathematics involved is developed from a modelled situation or practical task. Practical investigations and projects are key vehicles for student learning in such an approach.

The approach used will be helpful for teachers of students (middle years through to adult) who need a practical rather than formal mathematical background for their everyday life skills and further education, training or work aspirations. The text illustrates how this approach works through some sample contexts such as cars and driving, sport, cooking and catering, and draws together mathematics from the areas of number, measurement, space, data and statistics, and algebra.

This book is a new version of a book originally titled 'Foundation numeracy in context' by Dave Tout and Gary Motteram.
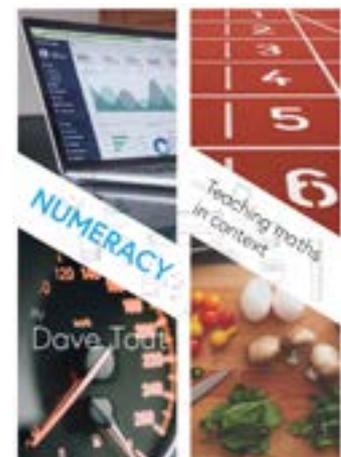
My neighbourhood: literacy in context by Jan Hagston

My neighbourhood contains activities designed to support students to develop literacy skills in context. Some activities take just a few minutes while others extend over a number of sessions. Each activity contains information for the teacher alongside activity sheets and/ or handouts for the students. In addition there are a number of skill sheets to support students in completing the activities. The activities also encourage the use of technology and have been designed to support teachers who aren't 'tech savvy' but are interested in starting to explore the digital world. Those teachers who are comfortable with using a range of 'e-things' will be able to further develop the ideas in the activities and, of course, those students who are 'digital natives' will have lots of opportunities to apply and extend their skills and ability.
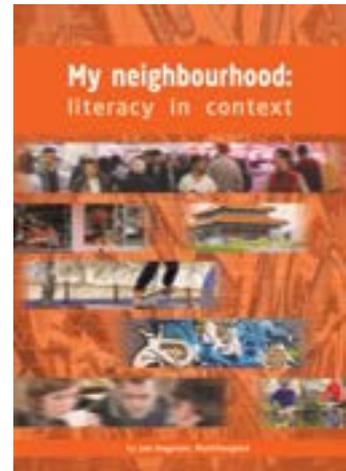
Ten radical ideas for reluctant writers by Lee Kindler

Ten immediate, accessible and inspiring writing activities for students that may not always feel comfortable getting their ideas out there.

This book contains hands-on activities that encourages students to dive straight into writing without fear of failure. There are notes for teachers that explain the features of different text types, where to find examples, and ideas for classroom activities.

Activities are supported by free online materials that include infographics, videos, links, maps and game source files that students can use to gain a deeper understanding of each text.
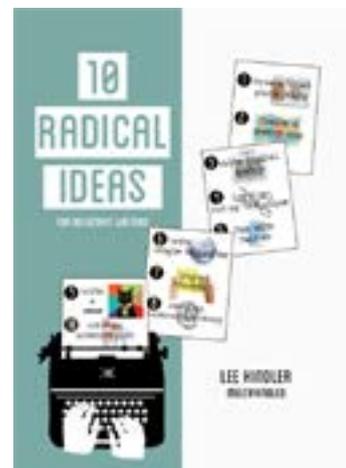
SPELLING - A STRATEGIC APPROACH

Lee Kindler & Jan Hagston

This book is aimed at teachers who are working with adults or young people who have difficulty with spelling. It draws on current, evidence-based research to inform a strategic approach to teaching spelling. It is the result of a great deal of reading and thinking about what resources will help teachers to apply current research to adult learning situations.

Adult learners bring with them a range of existing knowledge and experience and require flexibility in the way they learn. Rather than provide a complete A-Z spelling program, this book offers a range of tools in the form of explanations, questions, activities and examples that teachers can select from according to the diverse needs of their students. It is important for teachers to be knowledgeable about the linguistic skills required to spell words correctly. This book provides information to assist teachers to identify students' existing skills and prioritise instructional approaches that will be most effective.

This resource is accompanied by a STUDENT WORKBOOK

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