

SYDNEY INSTITUTE



Ambition in Action

# Reading through Spelling

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# Learning Outcomes

## **You will be able to:**

- identify the key findings of neuroscience in relation to the reading process and adults with dyslexia
- develop age appropriate teaching strategies for adult learners with dyslexia that demonstrate best practice in reading instruction

# Population of learners

adults with dyslexia

BUT

research based best practice  
for all adult poor and non readers

# Dyslexia

*is a specific learning disability that is neurobiological in origin. It is characterized by difficulties with accurate and/or fluent word recognition and by poor spelling and decoding abilities*

*These difficulties typically result from a deficit in the **phonological component** of language that is often unexpected in relation to other cognitive abilities and the provision of effective classroom instruction*

(Lyon, Shaywitz, & Shaywitz, 2003)

# Reading

is not a natural process ...

it requires explicit and systematic teaching

(Lyon, 2009)

*The greatest potential barrier to significant and lasting improvements in student's literacy levels is some teachers' lack of knowledge of how (children) actually learn to read*

(Response of LDA to Draft Australian Curriculum .... 2010)

So ....

how do we learn to read?



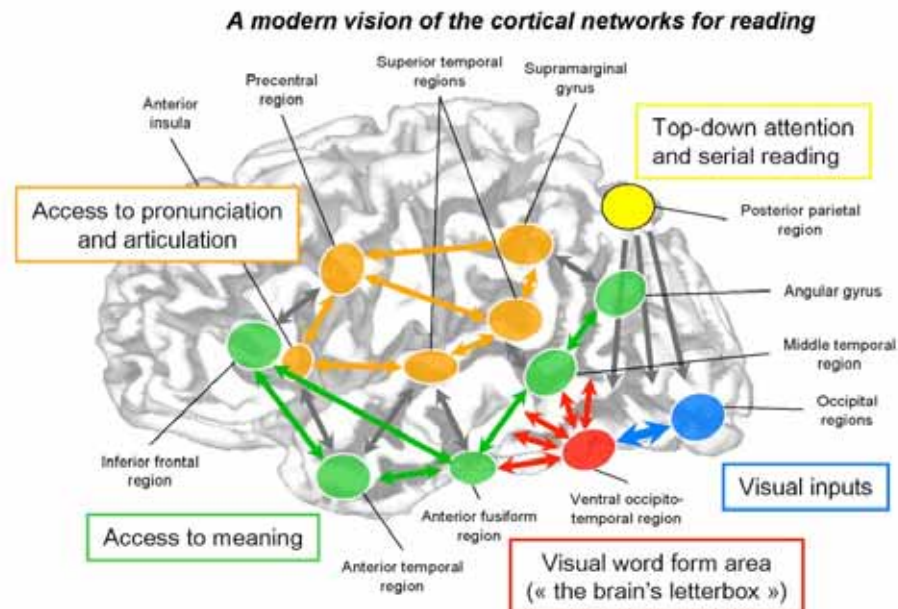
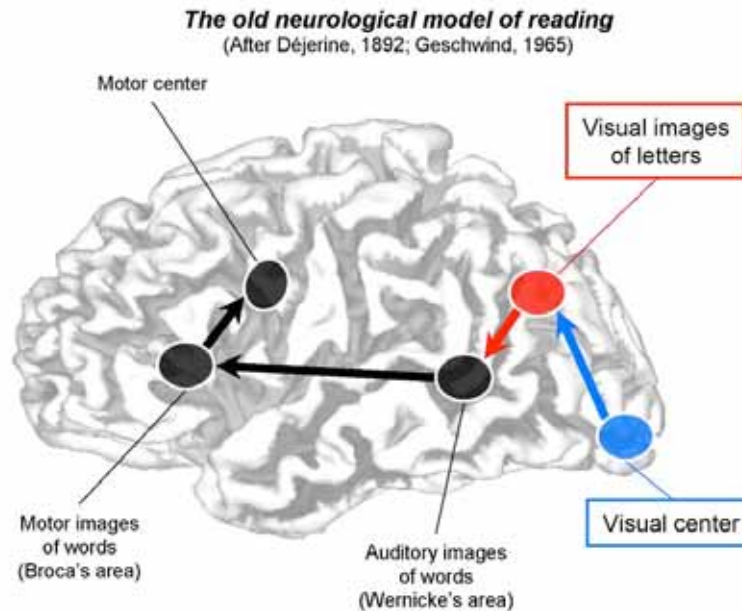


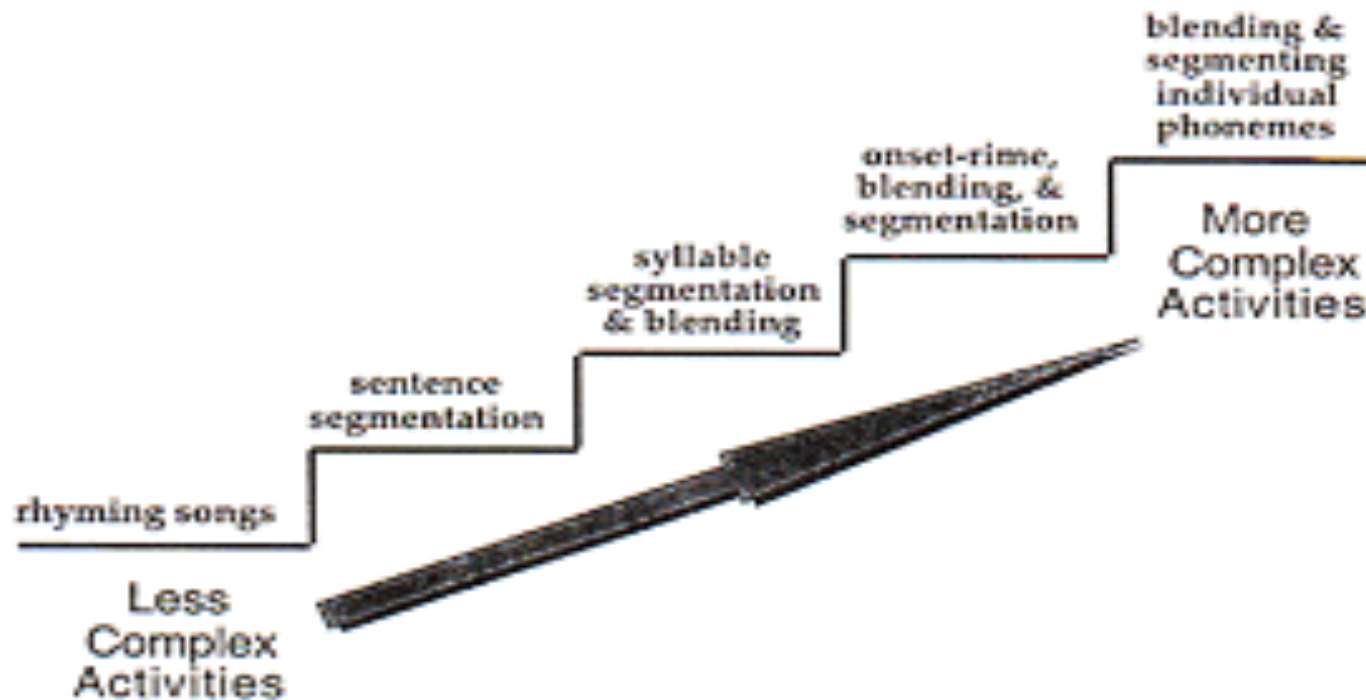
Figure 2.2. The classical neurological model of reading (top) is now replaced by a parallel and "bushy" model (bottom). The left occipito-temporal "letterbox" identifies the visual form of letter strings. It then distributes this invariant visual information to numerous regions, spread over the left hemisphere, that encode word meaning, sound pattern, and articulation. All the regions in green and orange are not specific to reading; they primarily



# Three stages of reading

- logographic or pictorial stage
- phonological stage
- orthographic stage

# The reading process: Phonological awareness



**Figure 1.** *A continuum of complexity of phonological awareness activities.*

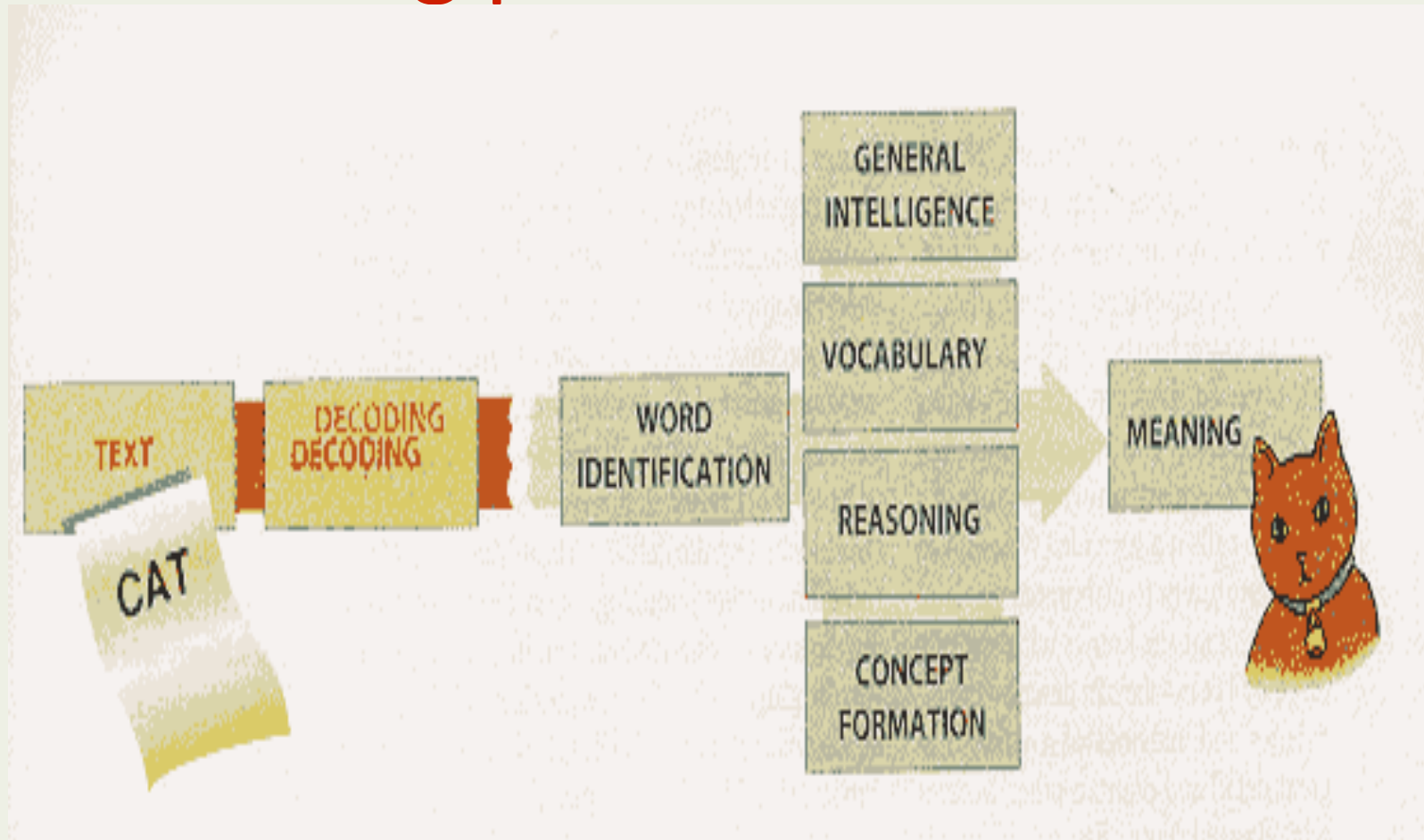
[http://www.idonline.org/ld\\_indepth/reading/chard\\_phono\\_awareness.html](http://www.idonline.org/ld_indepth/reading/chard_phono_awareness.html)

# Parallel systems

## Competent readers use parallel systems

- phonological route; words are very regular, rare or novel
- lexical route; words that are frequent or pronunciation is exceptional

# The reading process



<http://childdevelopmentinfo.com/learning/brain.shtml>

## In poor readers

- the substitution of synonyms when reading (*painter* for *artist*) may indicate poor phonological processing
- inability to read irregular words may indicate poor lexical processing

So .....

- the conversion of letters into sounds is the key stage in reading acquisition (Dehaene, 2009)
- teaching effort should initially focus on the grasp of the alphabetic principle

## Research based instruction ....

**must** enable the learner to identify:

- speech sounds in words
- graphemes for phonemes
- spelling patterns and ending rules
- morphemes and how they are represented
- history of the English language

(Moats, 2009)



# Reading through spelling

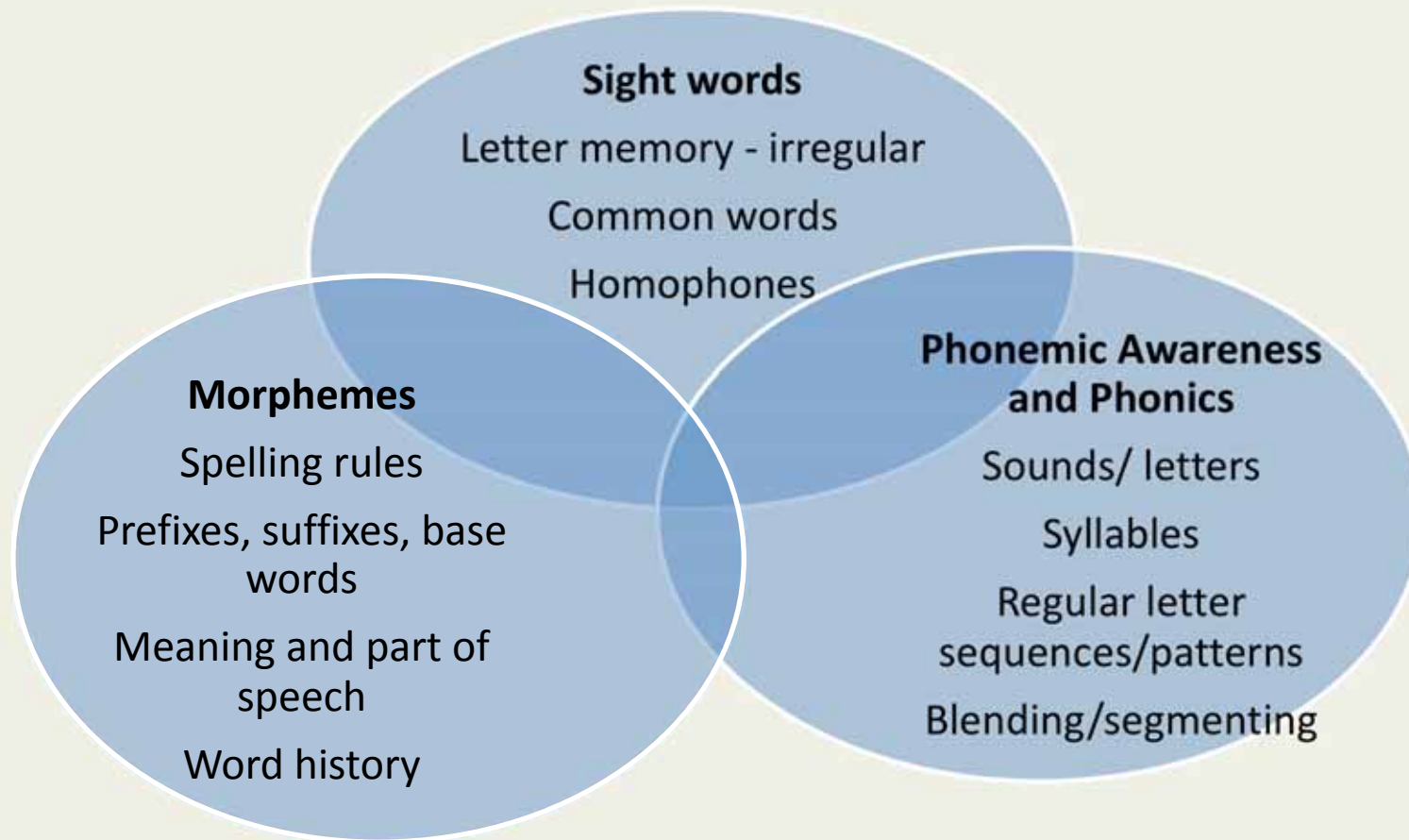
- *Spelling requires awareness of phonemes, syllables and morphemes as well as specialized memory for letter sequence (Moats, 2006)*
- Spelling and reading build and rely on the same mental representation of a word
- Knowing the spelling of a word makes the representation of it sturdy and accessible for fluent reading

# Effective instruction strategies

## Must be:

- explicit
- repetitive: at least 40 repetitions
- sequential: easiest to hardest/more complex
- within the learners current knowledge of graphemes and phonemes
- multisensory

# Fluency/ Automaticity



# Phonemic Awareness

Spoken words and syllables are made up of a sequence of sounds

**Phonemic awareness is :**

- the awareness of sounds in spoken words
- the ability to manipulate those sounds
- an essential precursor to spelling and reading

# Effective instruction activities

## Verbal/oral activities

- syllabification
- segmentation
- blending
- substitution
- additions

*The most pedagogically sound method of phoneme awareness training is one that eventually makes explicit the complete letter to-sound mappings in segmented words*  
(Griffith and Olson, 1992)

# Phoneme to grapheme: phonics

## Sounds are regular:

- 50% words – regular sound/ letter correspondence
- 37% words – one irregular letter pattern
- 4% words – totally unreliable

“Spelling” International Dyslexia Assoc, 2008



# Consonants

- consonants
- consonant digraphs
- consonant blends – beginning and ending
- alternative spellings for consonant sounds

## Spelling conventions - consonants

- 'ff' 'll' 'ss' 'ck' 'dge' 'tch' (directly after short vowel) 1 syllable words
- c = /k/ or /s/
- g = /g/ or /j/; 'gu' words
- 'qu' = /kw/ or /k/
- 'ch' = /ch/ or /k/ or /sh/

## Vowels = a, e, i, o, u (y)

- 5 vowels = 17 sounds (phonemes)
- 17 sounds = 44 spellings (graphemes)

# Syllables

- each syllable has one vowel sound
- 6 syllable types

*Information about syllable types was the single most reliable key to vowel pronunciation*

(Shankweiler, D and Fowler, A 2006)

# 1. Closed syllables (50%)

- 1 vowel + consonant/s
- vowel will say its (short vowel) sound

Examples

ap	op	et	ut	ig
cap	lop	ret	lut	sit
stap	clop	cret	shut	stit
strap	clomp	crest	shunt	stilt

# Effective instruction activities

## Word Lists closed syllables

Oral and written

- highlight vowels
- sound out and blend
- read
- sort words into vowel groups
- verbalise sounds as writing letter/s

/a/	/o/	/i/	/u/	/e/
fab	yof	sig	rup	ped
nat	cos	wid	hux	lem
mag	bot	fim	dut	fet
dax	zog	nid	tup	jep
sap	mob	mit	fug	beg



nup	bol	hod	nuk	vil
nic	dat	ret	bap	rof
sek	mig	fud	dit	deg
gat	fob	rab	com	gux
lum	jub	fid	mez	tad

# Effective instruction activities

## Letter tiles

- provide the vowel and consonant tiles for those sounds you have studied
- teacher says word/syllables. Student repeats and segments into phonemes, then build word/syllable with letter tiles. Touch each tile and say phoneme
- practice segmentation, substitution, deletion and addition of phonemes

o

a

e

i

m

p

f

d

r

u

g

n

s

t

l

# Chaining

Chain 1	Chain 2	Rules
mot bot bop bap bip bep	blep blup brup brip brap brosp bosp bop	<ol style="list-style-type: none"><li>1. Instruct the student carefully as to the process</li><li>2. Only use the sounds you have taught</li><li>3. Only change one sound per word</li><li>4. Make your chains in advance</li></ol>

# Effective instruction activities

## Closed syllables: multisyllable words

Break words into syllables

1. Find the vowels
2. Start at the **end** of the word
3. Go past the vowel and take a consonant/s

Eg.           fantastic  
              fan / tas / tic

7

ab/sent    ab + sent = absent

insect        +        =

fabric        +        =

dentist       +        =

conflict      +        =

infect        +        =

convent      +        =

helmet        +        =

indulgent    +        +        =

## 2. Open syllables 27%

- single vowel at the end of the syllable
- the vowel will 'mostly' say its name (long vowel sound)

a	i	o	u	e
pa	si	bo	tu	de
pla	sli	blo	tru	dre
pra	sti	bro		



# Double or not?

## How do you say that?

- supper                      super
- dinner                      diner
- glutton                      gluton

# Effective instruction activities

- practise reading mixed open and closed syllables lists – highlight the vowels
- make words with tiles

open 'a'	open 'i'	open 'o'	open 'u'	open 'e'
ba	ti	ro	tu	me
ra	bi	co	mu	te
sha	di	go	du	re
tha	tri	sho	flu	bre
cra	bli	tro	gru	gle
bla	swi	plo	stu	sme

ad	ri	em	mas	vul	dis
na	pen	ne	plu	gri	si
tis	lu	do	whim	fu	cab
e	ban	com	ab	ath	spro
op	en	bo	sup	wa	splin
pep	hu	ob	ro	hu	mol
mi	fe	gra	hin	cri	fa
sta	wis	clum	pro	fo	no
mis	le	in	kid	be	grub
rub	can	bla	De	ha	mo

# Effective instruction activities

## Syllable cards

- work in pairs or on your own
- make words by matching these syllable cards
- write the words you make on your syllable grid



## Beginning syllables

pro

de

hu

re

di

glo

e

## Ending syllables

gram

rect

tach

mid

gest

bal

gret

regret \_\_\_\_\_ + \_\_\_\_\_ = \_\_\_\_\_

gluten \_\_\_\_\_ + \_\_\_\_\_ = \_\_\_\_\_

reflect \_\_\_\_\_ + \_\_\_\_\_ = \_\_\_\_\_

global \_\_\_\_\_ + \_\_\_\_\_ = \_\_\_\_\_

program \_\_\_\_\_ + \_\_\_\_\_ = \_\_\_\_\_

digest \_\_\_\_\_ + \_\_\_\_\_ = \_\_\_\_\_

humid \_\_\_\_\_ + \_\_\_\_\_ = \_\_\_\_\_

erect \_\_\_\_\_ + \_\_\_\_\_ = \_\_\_\_\_

romantic \_\_\_\_\_ + \_\_\_\_\_ + \_\_\_\_\_ = \_\_\_\_\_

### 3. + e syllables

**one vowel + consonant + e**

the first vowel now says its name (long vowel sound); the e on the end is silent

hat	hate
bit	bite
pet	Pete
hop	hope
cut	cute

- these syllables are found at end of longer words but may be followed by a suffix eg eng<sup>a</sup>ement



a-e	i-e	o-e	u-e	ee
date	time	tone	tube	seen
make	kite	vote	cute	meet
same	hive	code	dune	feed
hake	tike	chone	scune	creel
lape	lipe	crode	dube	theet
shabe	fline	stome	thupe	cleep
thane	trise	prote	spute	sween

ad	ri	eem	mase	ig
na	pen	ne	plu	oc
tis	lu	do	whim	cobe
e	bane	com	ab	nug
ope	en	bo	supe	bri
pep	hute	obe	ro	vule
mi	fe	gra	hin	sele
sta	wis	clume	pro	doc
mise	le	ine	kide	scal
rub	can	bla	de	dist

# Effective instruction activities

## Segmenting sounds on grid paper

- listen to the word
- repeat the word
- segment the sounds and count with fingers-  
how many sounds?
- mark the grid
- write letters to match the sounds

## Name: \_\_\_\_\_ Date: \_\_\_\_\_

[illegible]

# Effective instruction activities

## Syllable grid

- listen to word
- orally segment word into syllables – count number of syllables with fingers
- segment each syllable into phonemes and write matching letters
- in final column combine syllables to make whole word

Syllable 1	Syllable 2	Syllable 3	1+2+3

## Multisyllable word list closed, open, +e

decompose	atmosphere	galvanise
transfuse	juvenile	confiscate
complicate	compensate	cellulose
aptitude	concentrate	electrode
captivate	introduce	reproduce
presume	accurate	fascinate
illustrate	candidate	vaccinate

## 4. Vowels +r

Contain a vowel followed by an r. The r controls the sound of the vowel.

ar car		
or for		
er her	ir first	ur turn



# Effective instruction activities

## Word/syllable lists

Develop fluent reading of word lists or text

- repeated practice of same words
- teacher listens to first reading and whenever possible after that
- student self times or teacher times reading for one minute

pag	che	crope	gurb	thirm
flort	sheg	bla	crube	thine
glame	sherg	drim	chi	tro
phu	cheem	starsh	pron	slub
chote	clat	spish	blurst	shi
thu	skeep	slupe	blent	storn
firnt	tra	sme	spike	crosp
strug	clerg	clarp	bro	smale

# Effective instruction activities

## Anagrams

- use anagrams to look at regular letter patterns in English language and also to practise the vowel pattern being targeted
- teach strategies for solving anagrams
- rearrange the letters to make a word that contains the nominated vowel pattern

## 'or' words

robn \_\_\_\_\_

tkosr \_\_\_\_\_

rtfo \_\_\_\_\_

nocr \_\_\_\_\_

ofr \_\_\_\_\_ trspo \_\_\_\_\_

othrs \_\_\_\_\_

tnor \_\_\_\_\_

tonhr \_\_\_\_\_

rotms \_\_\_\_\_

rkco \_\_\_\_\_

onhrt \_\_\_\_\_

## 5. Vowel teams

- **vowel pair:** team of letters that make a distinct long vowel sound

a-e	ai train*	ay day*
ee	ea sea*	y happy
i-e	igh night*	y my
o-e	oa boat*	ow row *
u-e	ui suit*	ew new

\*The first vowel says its name and the second is silent.

## 5. Vowel teams

- **vowel diphthong**; vowel team that contains a distinct sound

oo    book	oo    moon
oy    boy	oi    noise
ow    cow	ou    out
aw    saw	au    August

## Effective instruction activities

- introduce each vowel team one at a time
- use **Effective instruction activities** to practise all patterns
- teach that the vowel position in a word assists with spelling
- use sorting activity as a way to draw attention to the sound and/or letter patterns

The game of **rugby** was really **dynamic**. It was **probably** the **sympathy** of the crowd that urged the team to do better than their **typical** game. The coach was able to **justify** his use of the young **mystery** player he had brought in from another **Sydney** team.

*Sort the y words into the table to match the correct y sound.  
Don't forget to look at the position of the y as well as listen to the sound.*

y= /ee/	y=/ie/	y=/i/



# Effective instruction activities

## Dictations

Before testing spelling – give student a copy

- student will study text
- highlight words with sounds that are being targeted
- break words into syllables
- find morphemes and base words
- find irregular words

# Effective instruction activities

## Dictations

- teacher says sentence slowly
- student repeat
- student makes a line for each word they will write
- when finished, student uses model of text and self corrects

**NB: Oral repetition of phrases and sentences that are being written will reduce the load on working memory**

# Effective instruction activities

## Self Dictation

- teach student to break sentences into chunks/ phrases
- say the phrase aloud, cover and write

## Dictation

We had a delightful lunch on Sunday. The mayonnaise on my salad was fantastic but must have had an absolutely huge fat content. Of course the alcohol flowed freely.

I ran into an old acquaintance who had disappeared overseas many years ago and we had failed to maintain contact. His appearance hadn't changed at all. For the remainder of the afternoon we entertained everyone with tales of our escapades.

## 6. -le syllables

End in 'consonant le' which sounds like /ul/

- -ble able
- -cle uncle
- -dle handle
- -fle rifle
- -gle struggle
- kle ankle
- ple apple
- sle hassle
- tle rattle
- zle puzzle

# The Schwa

- is an unaccented syllable which sounds like /u/  
eg relataive, cigarette.
- if you are not sure of which vowel letter to write for the schwa, go to another word in the same family

eg relatate , cigar

# Effective instruction activities

*Work out the missing vowel by thinking of another word from the same family which has a clearer pronunciation.*

- def\_nition \_\_\_\_\_
- sed\_tive \_\_\_\_\_
- expl\_ation \_\_\_\_\_
- pr\_servative \_\_\_\_\_
- inv\_tation \_\_\_\_\_
- obl\_gation \_\_\_\_\_

## Useful resources

- [engagemenow.wikispaces.com](http://engagemenow.wikispaces.com)



## Useful reading

- LDA of Minnesota – Net News
- Ldonline
- Reading Rockets.org
- Adlit.org

# References

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