

## Hypothesis

Teaching specific rime units to grade 5 and 6 children who are having difficulty in spelling and reading improves their spelling ability and reading at the word level.

## Abstract

A problem many senior students have is suitably identifying the correct rime pattern when spelling and reading unknown words. Research has shown that explicit teaching in rime and onset units leads to an improvement in spelling and reading at the word level.

This present study examines the improvement in spelling and reading at the word level when specific rime units are taught to children in grades 5 and 6.

The method used followed an Assessment / Intervention / Assessment model. Eight children were selected who demonstrated difficulties in the area of spelling. Four children were chosen to be a part of the control group where pre and post assessments were undertaken however no explicit teaching was given. Another four children were the experimental group. They received the same pre and post assessments along with explicit teaching sessions.

Initial assessments were carried out in word recognition, spelling and orthographic recognition prior to beginning the teaching.

The intervention targeted several rime units, which were explicitly taught to the four students in the experimental group. The 12 teaching sessions took place in the classroom setting in a small group situation over a period of three weeks. These sessions involved writing of the rimes and generating different onsets, making words with flash cards and revision of previous words and rimes learnt.

The findings indicated that the explicit teaching in rime units did improve spelling accuracy and reading at the word level, with all four students recording improvements in posttest results. This emphasizes the need to continue explicit teaching of rime units at the senior level with constant revision to assist children to automatise specific letter patterns.

## Introduction

Many children at the late primary level have difficulty identifying the correct rime pattern when spelling words. Many children are able to segment words correctly but often make errors when choosing the correct rime or blend to use. For example the 'er' sound in bird is commonly written as 'er' 'ir' or 'ur'. How can we assist children in remembering and recognizing which option is correct?

Reading and spelling are strongly related so it would be difficult to examine one without somehow including the other. Robert Savage et al (2005) indicates the theory that there is a close and probable causal link between metalinguistic phonological processing tasks and reading and spelling skills was first advanced by Liberman and colleagues. (liberman, Shankweiler, Fisher, & Carter, 1974; Liberman, Shankweiler, Orlando, Harris, & Bell-Berti, 1971) Subsequent research has produced a large, highly convergent body of evidence from various studies, showing a close link between phonological processing and the development of word reading, reading comprehension and spelling.

In this research many factors of reading come into discussion as there are several possibilities as to why children in the senior school who have been exposed to several strategies when spelling are continuing to have difficulties. Although it is less widely discussed Stahl and McKenna (2000) suggest that phonological awareness also relates to spelling as well as reading achievement.

The group of children involved in this study has demonstrated an ability to segment words, as they will often write letters representing the correct sounds but choose the incorrect option. This may also suggest they have a sound phonological base but may need to work on further developing morphemic strategies and look at the distinct visual features of words. Learning to read and write involves giving attention to the onset and rime sound units and linking them to spelling patterns (Juel & Minden-Cupp, 2001).

Rebecca Treiman (1985, 1992) supported, through her research, the use of onset and rime instruction as most effective for children, as they can see patterns in words and establish links between how a particular pattern is said in a particular word and transfer this to other words containing the same pattern (rime). Onset (the initial consonant or consonant cluster of a word) and rime (the vowel and following letter string in rhyme – also referred to as word families or phonograms) have been found to account for children's correct recoding of pseudowords better than phoneme blending (Moustafa, 1995). This research further indicated that most students learn new words by recognizing patterns used in known words. Thus it can be said that people pronounce new words using what they already know about similar words. Richek et al (2002) refer to this as decoding by analogy.

If a child has difficulty discriminating between or among various symbols, the teacher should present the child with other words that have the sounds similar to the ones that seem to be causing difficulties. The teacher should also model for the child what he is supposed to do and then they should do some examples together (Rubin, 2002).

With the above findings and recommendations in mind the present investigation aims to examine the influence of explicit teaching and learning of onset and rime units on spelling ability and reading at the word level.

It is predicted that this teaching of specific rime units to children in grade five and six leads to an improvement in the spelling of words containing the taught rime units and the reading of words containing the explicitly taught rime units.

## Method

### *Design:*

This study tests students reading accuracy at the word level and spelling accuracy. The study uses a case study oo – oxo design in which an experimental group is observed, treated and observed and results compared to a control group who have been observed only. The gain in spelling accuracy and word reading accuracy following explicit teaching of onset and rime units is monitored for senior students in grade 5 and 6 who have spelling and reading difficulties. The target group of students require a strategic plan of action to address specific spelling difficulties. Initial tests are conducted and subsequent data is analysed in order to determine the content of teaching material to correct the problem.

### *Participants:*

The participants are 8 children selected from a 5/6 multi age class at a suburban Catholic Primary School, who have a history of spelling and some reading difficulties. All children are below their grade appropriate levels in spelling however are often able to segment words and usually write letters for each sound represented in a word, often those sounds are phonologically correct but orthographically incorrect. Of the 8 children chosen three are in year 6 and five in year 5. All chosen are students who consistently apply themselves to the task of learning with inconsistent results. Some children have been involved in formal testing in past years with results concluding they have no diagnosed learning difficulties. However the students spelling skills appear to be at a standstill and insufficiencies become more apparent as the level of skill and expectation in the grade 5/6 class increases. The separation of the control group and test group was made with the knowledge that the 4 children chosen in the test group were in need of this explicit teaching sooner rather than later. A spelling analysis was conducted on all 8 children indicating that their errors were mainly due to letter substitution in the rime unit of the word. Although most of the 8 children are making similar errors and bringing similar prior knowledge to the sessions and are all in need of some intervention, those chosen had a consistently higher number of errors. It is planned that the control group will receive explicit teaching after the test group's post test results have been analysed and compared and devised activities result in an improvement. If this is not the case, recommendations will be put into action to formulate new activities that may be more suitable for action with another group.

The students' year level, age and entry levels are shown on table 1.

**Table 1 describes the students targeted in this research and initial test results.**

<b>Student</b>	<b>Control Group N</b>	<b>M</b>	<b>J</b>	<b>I</b>	<b>Target Group S</b>	<b>L</b>	<b>W</b>	<b>C</b>
<b>Year Level</b>	5	5	6	5	5	5	6	6
<b>Chronological Age</b>	10yrs 2mths	10yrs 10mths	11yrs 1mth	10yrs 8mths	10yrs 9mths	10yrs 11mths	11yrs 5mths	11yrs
<b>Orthographic Reading Test</b>	70/84 83%	68/84 80%	61/84 72%	64/84 76%	64/84 76%	48/84 57%	69/84 82%	65/84 77%
<b>Orthographic Reading Test (percentile) (at grade 4 level)</b>	10th	9th	9th	9th	9th	8th	10th	9th
<b>Spelling Test Orthographic words</b>	48/84 57%	46/84 54%	51/84 60%	43/84 51%	40/84 47%	27/84 32%	50/84 59%	53/84 63%
<b>Orthographic Recognition Test (John Monro)</b>	24/41 58%	30/41 73%	33/41 80%	23/41 56%	23/41 56%	26/41 63%	23/41 56%	34/41 82%
<b>Orthographic Recognition Test (own words)</b>	33/38 86%	27/38 71%	32/38 84%	23/38 60%	18/38 47%	23/38 60%	29/38 76%	31/38 81%

*Control Group*

Student 'N' is a year 5 girl who is very conscientious towards her learning. She is aware of her difficulties in spelling and works hard on specific spelling tasks at home. She has specific trouble in identifying the correct orthographic blend when spelling. She is grade appropriate in all other areas of her learning.

Student 'M' has an ESL background. He is a confident learner but spells phonetically, not using distinct visual features or morphemic knowledge when spelling. He has a limited concentration span.

Student 'J' is a quiet boy who is not confident in his ability his work. He is often inconsistent in his attempts to show any connections with prior knowledge to new words.

Student 'I' has a history of medical problems the main one being diabetes. This condition is not under control and a history of consistent hyper and hypos as well as current medication for epilepsy severely affects his concentration and learning ability. As a result his work and test results are always of an inconsistent nature.

### *Target Group*

Student 'S' is an enthusiastic boy who is beginning to make links with his spelling, he works well in small group situations. He has a history of spelling and language difficulties and is conscious of this challenge especially around his peers.

Student 'L' would have the most trouble with spelling in the chosen group. She is still conscious of the need to segment words and finds it very difficult to transfer knowledge from a learnt unit to other words. She comes from a difficult background and other siblings have also had learning difficulties.

Student 'W' is a very quiet boy who sits back and often gets 'lost' within a grade. Although a year 6 student he doesn't have a history of learning difficulties however his spelling is now standing out as below an appropriate standard for his level. He is able to segment words but gets many blends wrong when spelling.

Student 'C' has a long history of learning difficulties in the language area however is very competent in all other areas of school. He has some emotional problems, which affects his concentration. He is a willing learner and works well in small group situations.

### *Materials:*

Materials used include the following:

- *Orthographic Reading Test*: (Appendix 1) Stimulus sheet containing words varying in length and complexity; Record Sheet and Percentile Rankings (John Munro Lecture notes 2004). This test contains one syllable words that differ in complexity in the following ways:
  1. In their length (3-6 letters)
  2. In how the letters map into sounds (separate sounds or 2 letters map into one sound)
  3. Frequency of the word; whether the word is a high, middle or low frequency word.
- *Orthographic Reading Test words* used for spelling test. (Appendix 2)
- *Orthographic Recognition Test*: (Appendix 3) Student record sheet and teacher sheet. (John Munro Lecture notes 2004). This is a visual spelling test and contains words that gradually become more complex increasing in size syllables and blends. A sentence is read and children must circle the correct word out of four options
- *Orthographic Recognition Test 2*: (Appendix 4) As above but the words were chosen from children's own spelling tests.
- *Flash cards with specific onset and rime* (Appendix 5)
- *Paragraphs containing words with specific rime units* (Appendix 6)

### *Procedure:*

The Assessment tasks were administered to all the students in the following order:

- Orthographic Reading Test
- Orthographic Recognition Test 2
- Orthographic Reading Test (John Munro)
- Spelling Test

The results of the Orthographic reading and spelling test were analysed and compared. From this analysis 10 rime units were identified for explicit teaching because at least 6 out of the 8 students could not identify correctly the rime unit in the reading or spelling tests.

The 4 children chosen as the test group participated in 12 teaching sessions lasting for 30 to 40 minutes. These were conducted in the classroom as the teacher conducting the explicit teaching was the classroom teacher. These sessions ran in a similar fashion to other target teaching sessions also conducted in the classroom throughout the week. However the 12 sessions were run on consecutive days as part of the spelling curriculum while other children were working on independent assignments.

In session 1, children were given an overview of the lessons that were to follow, the format for each session was discussed and the 10 rimes were presented. The group discussed some of the errors made on pre tests and looked at the sessions as a way to make specific improvements in these areas. It was made clear to this group that they were not 'bad spellers' they just needed to gather a few more tools to use when attacking words. When working with all students but particularly senior students it is important to keep them enthusiastic, motivated and working with a high level of self efficacy. A discussion arose in regard to the importance of storing the information from each session into long term retrievable information so the children could retrieve it at a later date for use in either their own writing or post test activities.

Sessions 1 to 5 and 7 to 11 ran as follows. Sessions 6 and 12 were set aside for revision and testing.

- The chosen rime for the day was listed on the white board several times. The group would say the rime out loud and then each child would think of an onset to go with the rime to create a known word. They would then write this on the board using a different coloured marker.
- Each child read the words from the board out loud

- Using separate onset cards and rime cards children made the words from the list on the board.
- They wrote down each word in their books saying it out loud
- Each child took turns at reading a sentence from a paragraph prepared by the teacher containing words with the chosen rime. The child would highlight the rime word that was in their sentence.
- The children then folded their page over and had a quick test on the list of words from the session.

Each session ran the same except the list from the day before was revised before a new rime was introduced. For further details see Appendix 7.



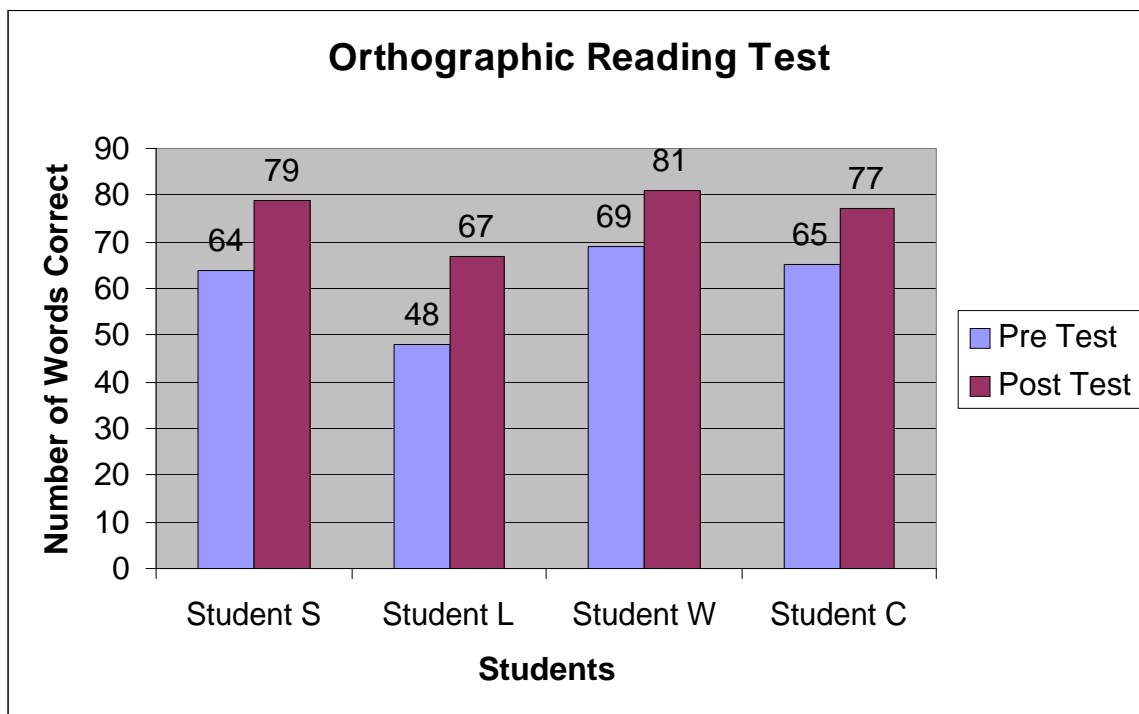
## Results

The effectiveness of teaching specific rime units to children in the senior grades having difficulty with spelling was examined as follows:

1. The influences of explicit teaching of 10 rime units on *reading* words from the Orthographic Reading Test.
2. The influences of explicit teaching of 10 rime units on *spelling* words from the Orthographic Reading Test.
3. Influences of explicit teaching of 10 rime units on identifying the correct spelling in the Orthographic Recognition Test (1 and 2)

### ***1.Orthographic Reading Test***

Trends for all four children part of the test group showed an improvement in the number of words they read correctly from the Orthographic Reading Test. (Appendix 1) These results indicate whether the words were said correctly or incorrectly it does not take into account whether the child hesitated or made several attempts and self corrected. For the purpose of the study, a right or wrong answer has been collated.

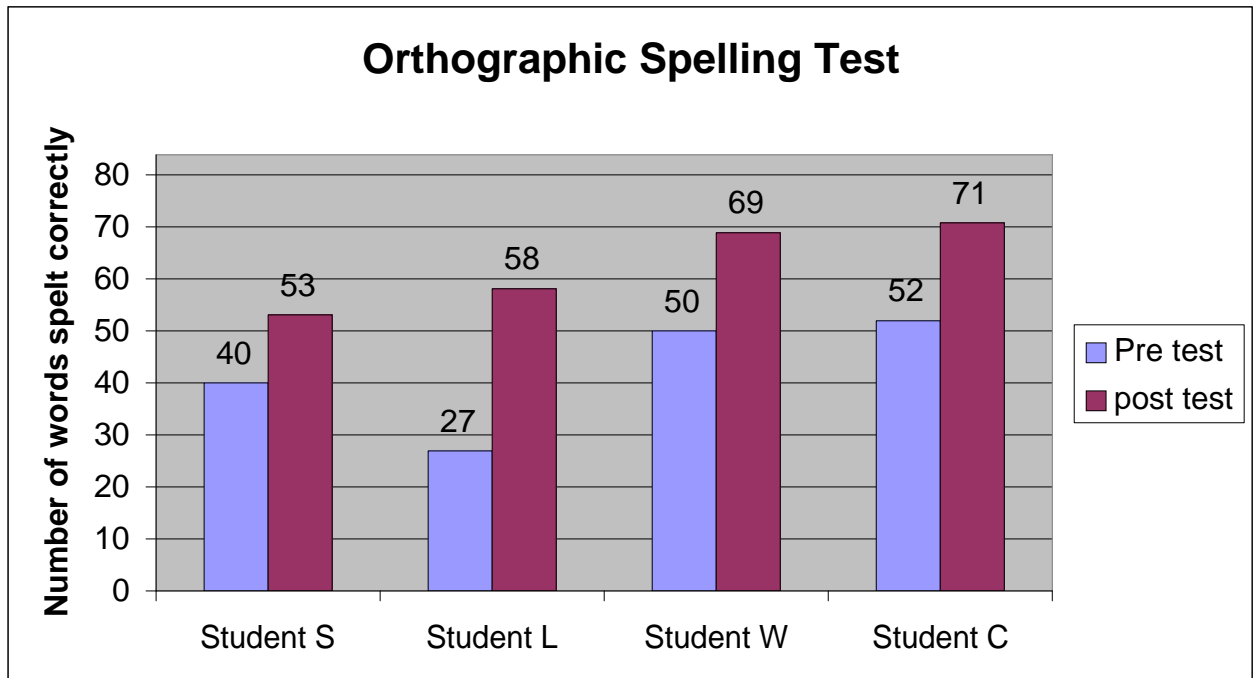


**Figure 1**

As can be seen by the results in figure 1 all students in the test group made an improvement in the amount of words they said correctly. The minimum improvement was 12 words ranging up to an improvement of 19 words. During the post testing it was noted that the words were read with greater speed and less hesitation however this information is not recorded in figure 1.

One factor that needs to be considered in these results are the amount of new words the children said correctly and the amount of words they made errors on during post test that they originally said correctly on the pre test. The words containing the ten rimes that were covered during each session were corrected all cases, however there were some words that children were not consistent with throughout the test

## 2. Orthographic Spelling Test



**Figure 2**

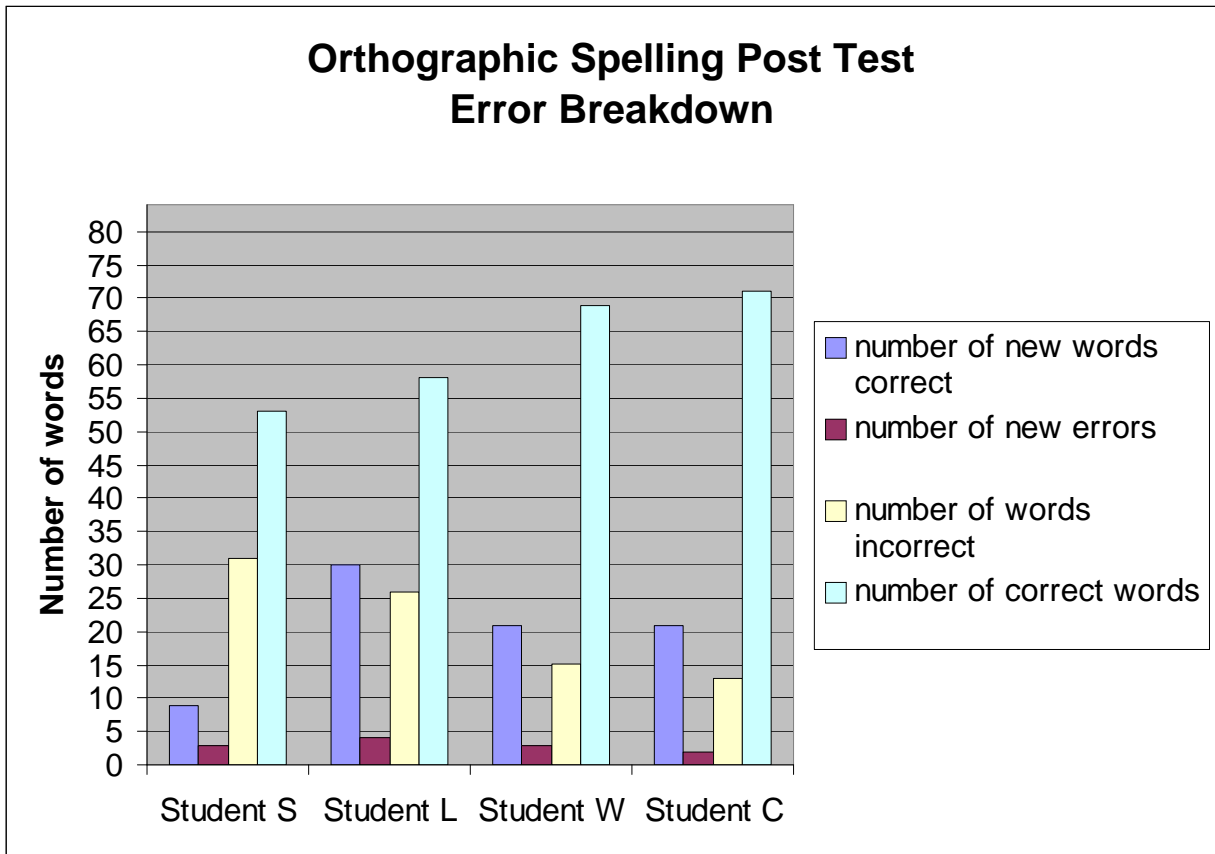
The words used in this spelling test were from the above Orthographic Reading Test. This test can be viewed as Appendix 2.

The trends noted in overall results indicate an improvement in the words spelled correctly. There was a great range in improvement from 13 words up to 31.

This works out to be an average improvement of 20 words or 23% after explicit teaching of rime units.

It is to be noted that the words selected for the spelling test were taken from the complete list of words on the orthographic reading test, therefore include a number of rime units that were not explicitly taught in outlined sessions. Due to this fact all children showed inconsistencies with words they spelled correctly and errors made in the post test to those of the pre test. See figure 3 below.

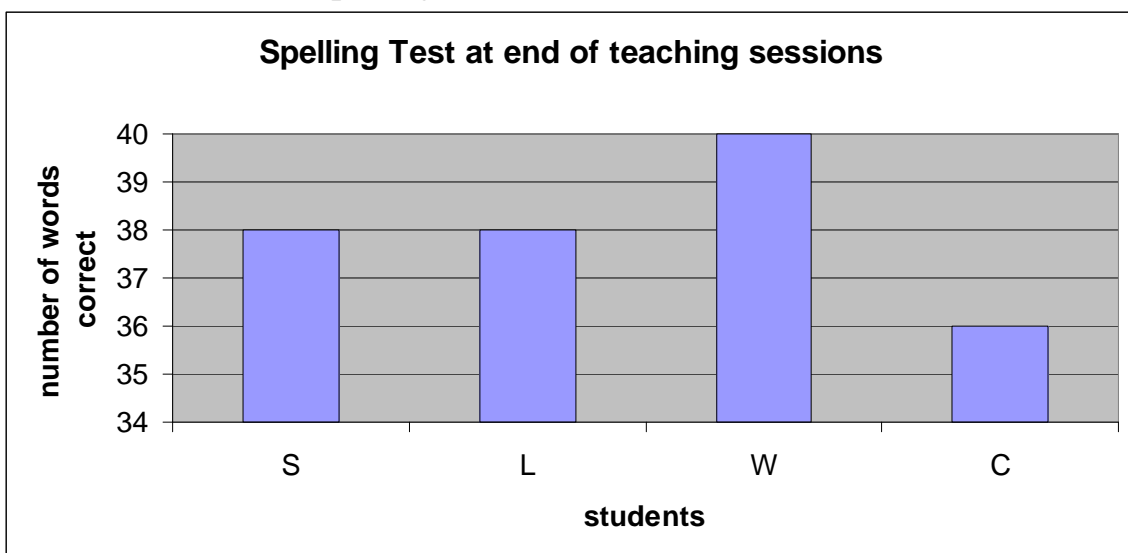
As mentioned above on average the group made an improvement of 20 words this needs to be compared to the average number of new errors that were made on the post test that were not evident on the pre test. The average number of new errors on the post test is 3 compared to an average of total errors being 21 out of 84 words.



**Figure 3**

Focusing on the specific words in the spelling test that contained the explicitly taught rime units, 2 of the 4 children made errors on words that contained these rimes. Possible reasons for these errors will be discussed later.

The spelling test that was given to the test group only, at the completion of their session included specific rime words that were listed and discussed during each session. These words contained only the rime units taught. Below are the results of that spelling test.

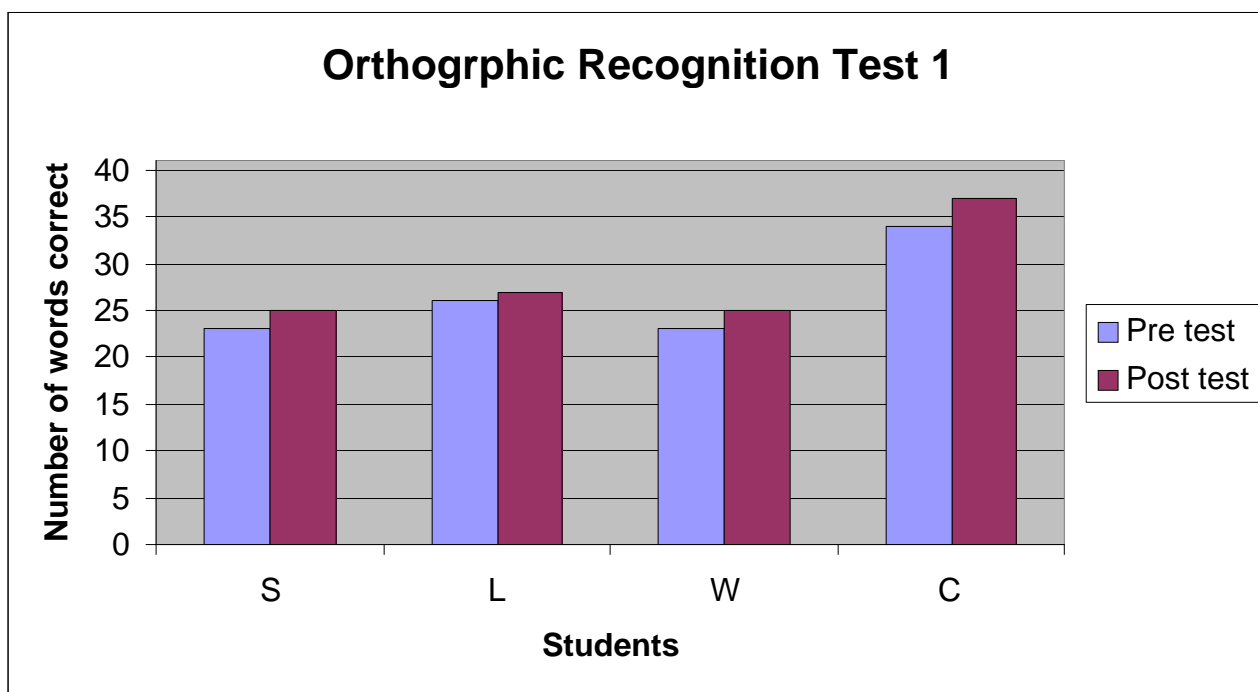


**Figure 4**

Figure 4 indicates that the children were able to record their words correctly in a test situation with an average of 95%.

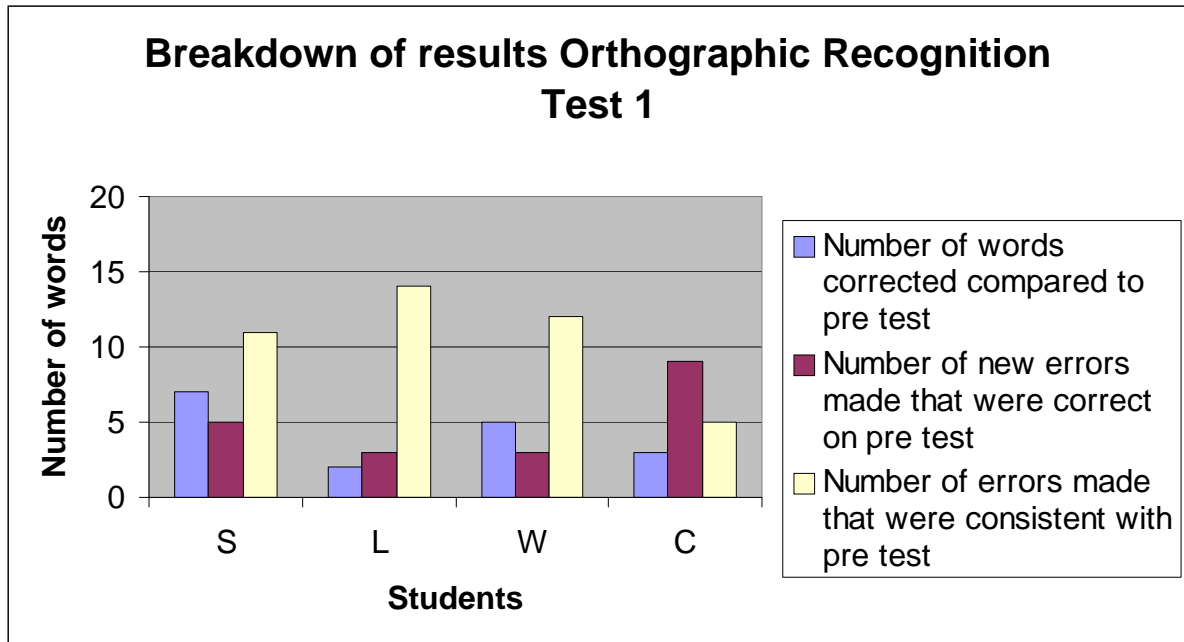
### ***3.Orthographic Recognition Test 1 (John Munro)***

This test was administered to find out whether the children involved in this research would be able to identify the correct spelling when presented with several incorrect spellings. This information would then influence the structure of the teaching sessions. It was originally surmised that if the children were able to identify the correct spelling when presented among misspellings then that would indicate they may be aware of particular rime units and blends and would need to practise recognizing distinct visual features in a word rather than learning specific rime units. The post test was given to show an improvement in this area. See figure 5 for test results.



**Figure 5**

The graph clearly shows very little improvement in the accurate number of words correctly identified. These results can be a little misleading looking at them as an end number as all children were very inconsistent with their answers. They all made errors in the post test on words they originally got correct in the pre test, so it is difficult to say if the words they did correctly identify in the post test was due to any explicit teaching or just coincidence. Figure 6 shows the breakdown of errors from pre to post test.

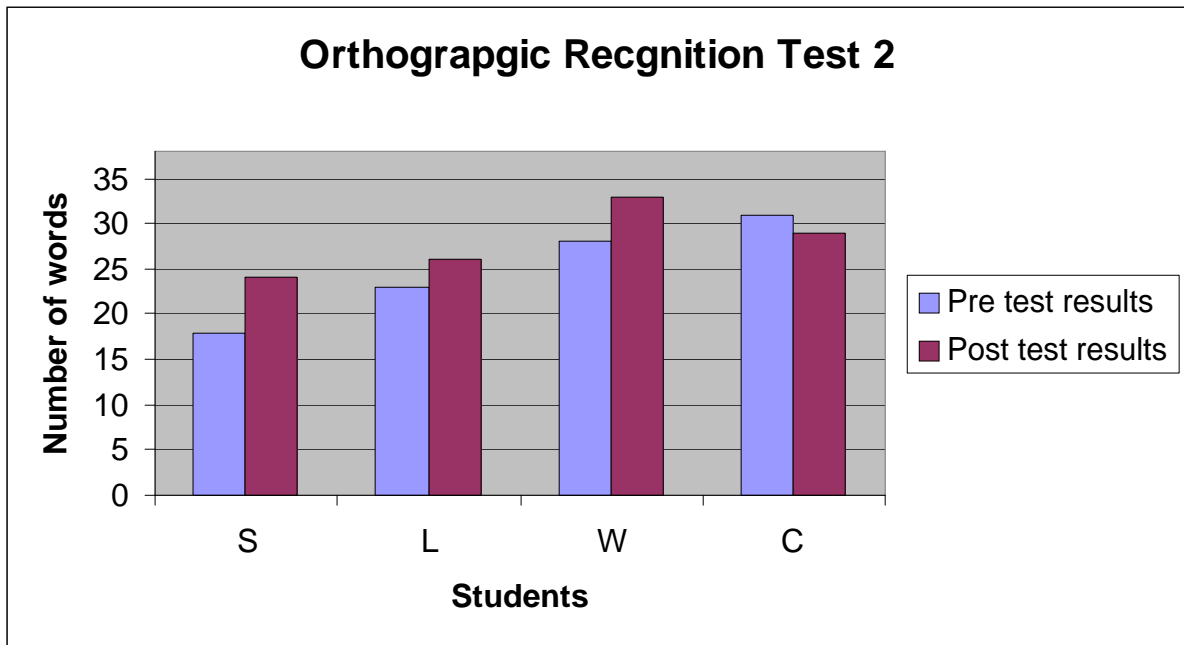


**Figure 6**

These results are too inconsistent to say if they support the hypothesis. Possible reasons for these results will be discussed later.

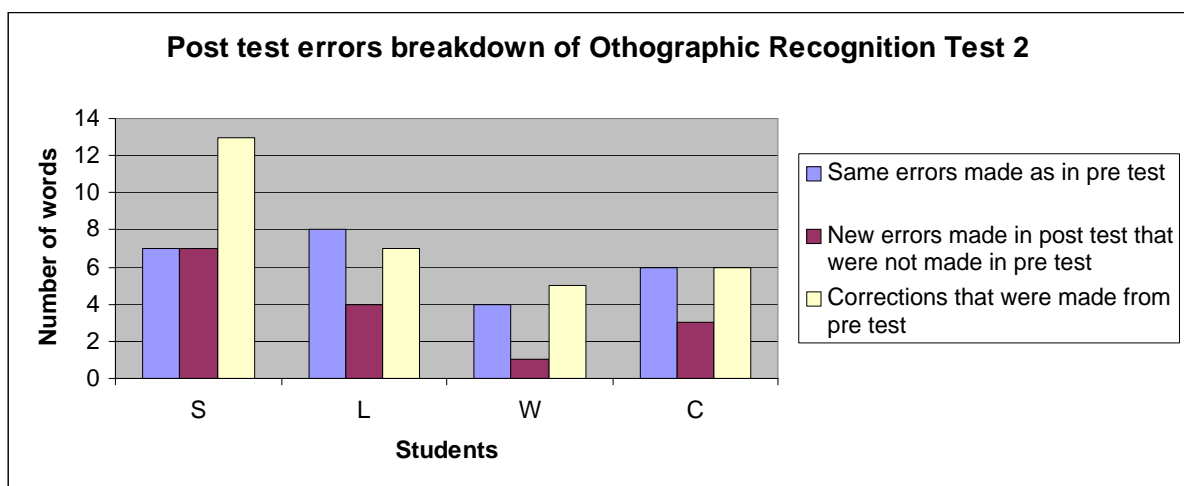
### ***Orthographic Recognition Test 2***

The Orthographic Recognition test 2 was self-devised. It was based on the same format as the original test design by John Munro however the words chosen for this test came from the pre test results of the Orthographic word spelling test. The words chosen were ones the children had spelt incorrectly and their incorrect attempts made up the options of other words to choose from.



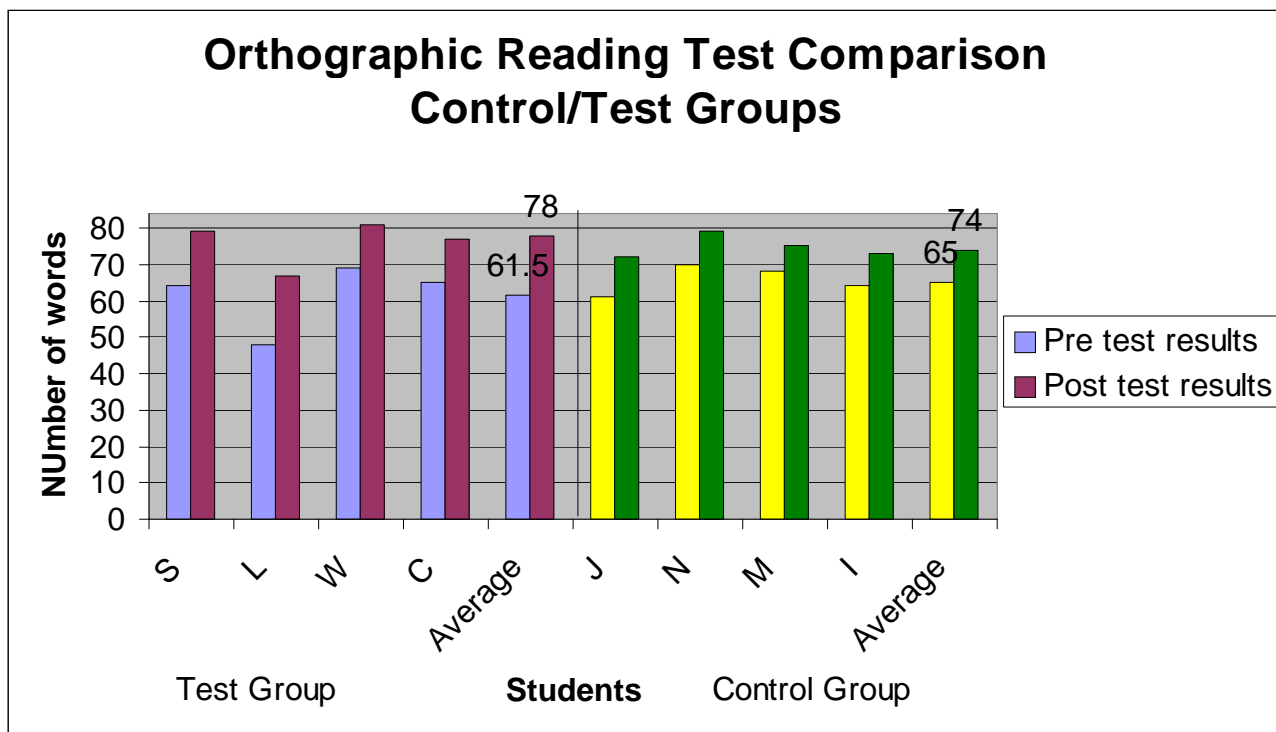
**Figure 7**

As seen in the graph (Figure 7) only 3 of the 4 children made an improvement in this test. The words for this test were chosen from the children's errors but not all rimes contained in words on this list were explicitly taught. As in the above test (Figure 6) several inconsistencies exist comparing the pre test results to that of the post test. Again children made errors in the post test where they had not in the pre test, which indicates an inconsistency in their knowledge of how these words are spelt. The graph below shows a breakdown of the number errors in the post test.



**Figure 8**

The above graphs have only compared the results of the test group during pre and post testing. Results now need to be compared to the control group so an analysis can be made of the effectiveness of the explicit teaching.



**Figure 9**

Focusing on the average score of each group the control group have a higher average score in pre test but a lower average score in post test. Looking at the average movement for each group, the test group have made an improvement of 16.5 points (19.6%) whereas the control group made an improvement of 9 points (10.7%).

The comparisons for the following tests are represented in table below.

		Pre Test Average	Post Test Average	Improvement in points	Average improvement as a %
Orthographic Reading Test	<b>Test Group</b>	<b>61.5</b>	<b>78</b>	<b>16.5</b>	<b>19.6%</b>
	Control Group	65	74	9	10.7%
Orthographic Spelling Test	<b>Test Group</b>	<b>42</b>	<b>63</b>	<b>21</b>	<b>25%</b>
	Control Group	47	57	10	12%
Orthographic Recognition Test1	<b>Test Group</b>	<b>26</b>	<b>28</b>	<b>2</b>	<b>5%</b>
	Control Group	27	31	4	10%
Orthographic Recognition Test 2	<b>Test Group</b>	<b>25</b>	<b>30</b>	<b>5</b>	<b>13%</b>
	Control Group	28	30	2	5%

**Figure 10**

The results indicate that while both groups made improvements in all test areas the test group made greater improvements than the control group. These results suggest that those students who received explicit teaching of specific rime units made a greater improvement than those who did not.



## Discussion

The trend in the results indicates that the explicit teaching of onset and rime did lead to an improvement in the students spelling and reading ability at the word level.

Although all children showed some improvement, the amount varied amongst children within the test group. This is expected as the learning potential of each individual varies according to a number of factors. The structure of the teaching sessions may have suited some learning styles better than others. This was catered for in that words were teacher and child written, read together and read individually and words were made physically with flash cards.

As these lessons were taught in a classroom situation there are several factors which could have had an effect on the results. The teacher's attention while focused on the test group was possibly distracted by other class members so instructions and discussions were sometimes interrupted. Focusing on 10 rimes in 3 weeks may have not been enough time for children to automatise these letter patterns.

The tests that showed the greatest improvements were the Orthographic Reading and Spelling tests. The words and rimes chosen to focus on were taken directly from this list, so children were seeing them in the same context.

One explanation for the improvements in results for both groups that needs to be taken into consideration is the familiarity of the tests. By the time the post test were taken the children had several opportunities to see and read the test words as they were common on all tests.

One outcome that was surprising was the inconsistencies shown in the Word recognition tests. All of the children made errors in the post test where they did not in the pre test, while they also all made corrections the question needs to be asked whether correct answers were due to correct guesses as three choices were given.

Orthographic Spelling test results indicated that some children in the test group spelt words wrong that were specifically taught and practiced. This may be due to those words not being automatised. Due to the fact that other words containing the same rime pattern were spelt correctly it cannot be assumed that the child is not familiar with that rime. They may have heard the word incorrectly when read out by the teacher at that time, they may have been distracted by class noise or general class movements as was mentioned earlier all components were completed in the classroom environment. The children

may have just made a simple mistake that if given the chance to self correct may have realized that some letters were accidentally transposed.

When the experimental group were tested on the list of words covered in each session only, they showed a very high success rate. This may be due to the fact that they actually know the words or that they were fresh in their mind from recent revision. It may also have been of benefit to them that there were no other words included in this test to think about, so their options for spelling these words were narrowed down to 10 possible rime units.

Orthographic recognition test 2 (self designed) was administered before test 1. The possibility of the self designed test being too easy was a concern so test 1 (designed by John Munro) was given. There was so much inconsistency in these results that it is obvious the children are not familiar with the spelling of some of these words (especially the more difficult ones towards the bottom of the page) as discrepancies were recorded not only in the number of errors in pre and post test, but children did not choose the same option of spelling but chose a different incorrect spelling option. The words towards the end of this test where most children made their errors were not words that included the explicitly taught rime units. This supports the hypothesis in that both the test and control groups the results were similar.

The MLOTP model of reading is to be considered for future teaching. This model assists in the gathering of accurate assessment of all areas of literacy. By breaking the process of reading into a number of levels it enables the teacher to engage in specific assessment and evaluation at the level relevant to the student. For example this particular research was developed around difficulties at the word level. These difficulties may begin in the area of reading and be seen in other areas of literacy such as spelling. Through accurate assessment and evaluation a specific program that caters for the individual student involving explicit teaching can be developed. Explicit teaching is the key to successful pedagogy, it should consistently work on specific objectives with measurable outcomes that show the movement in the students progress. This teaching involves regular and structured sessions to ensure the development of automaticity, while encouraging children to take ownership of their own skills and develop them, not just seeing the skills as being the teacher's possession. These skills practiced in the classroom should be supported at home which can assist the communication with parents so that everyone is involved in the explicit teaching process.

## References / Bibliography

**Juel, C. & Minden-Cupp, C. (2001). Learning To Read Words: Linguistic Units and Strategies.** University of Virginia.

**Moustafa, M. (1995). Children's Productive Phonological Recoding.** *Reading Research Quarterly*, Vol 30, No 3 July-September 464-76

**Munro, J.K. (1998) Assessing and Teaching Phonological Knowledge.** Melbourne , ACER

**Munro, J.K. (2004) Early Intervention Course Notes.** University of Melbourne

**Peterson, Shelly (2002) Phonemic awareness: one piece of the learning to read puzzle; (1).** *Orbit*, Vol 33, Iss. 1.

**Savage, R.S. , Frederickson, N. , Goodwin, R. , Patni, U. , Smith, N. & Tuersley, L. (2005) Relationships Among Rapid Digit Naming, Phonological Processing, Motor Automaticity, and Speech Perception in Poor, Average, and Good Readers and Spellers.** *Journal of Learning Disabilities*, Vol 38, No 1. January/February 12-28.

**Stahl, S.A. & McKenna, M.C. (2000) The Concurrent Development of Phonological Awareness, Word Recognition, and Spelling.** CIERA 1-7

**Rubin, D. (2002). *Diagnosis and Correction in Reading Instruction* (4<sup>th</sup> ed)** Boston: Allyn & Bacon

**Treiman, R. (1985). Onset and rimes as units of spoken syllables: evidence from children.** *Journal of Experimental Child Psychology*. Vol 39, 161-181

**Treiman, R. (1992). The role of intrasyllabic units in learning to read and spell.** In Gough, Ehri & Treiman (Ed), *Reading Acquisition* (pp65-106). NJ : Erlbaum

## Appendix 1

### Orthographic Reading Test

#### Orthographic Reading Test

#### Reader Record Sheet

claim	plate	ford	men	hiss	dart	drill	counts	boil
new	all	stripe	place	eat	braid	den	dune	ale
screen	send	foal	burst	stamp	fend	crawl	spoon	pew
burnt	shy	prompt	sprung	ash	pen	cramp	toil	squirm
still	scream	she	swoop	train	skirts	tune	aid	twirls
drawn	stream	gloom	kiss	ground	cow	strike	grill	horn
aim	splint	dew	ear	strive	goal	sprout	clamp	miss
string	cart	bend	grape	sort	spleen	low	spread	road
tow	part	street	spurt	soil	strict	spawn	ate	tea
ape	cube	throng						

## Appendix 2

Orthographic Words Spelling Test. (Child's example)

Emily clam <sup>ai</sup>	plate ✓	ford ✓	men ✓	hiss ✓
new ✓	alel ail	stripe ✓	place ✓	eat ✓
scree <sup>ee</sup>	send ✓	foal ✓	burst ✓	stamp ✓
bernt <sup>ur</sup>	shie <sup>shy</sup>	promted <sup>pt</sup>	sprung ✓	ash ✓
still ✓	scream <sup>ea</sup>	she ✓	swoswup <sup>oo</sup>	train ✓
drawn ✓	stream ✓	glumie <sup>oom</sup>	kiss ✓	ground <sup>ou</sup>
ame <sup>aim</sup>	splint ✓	jue <sup>dew</sup>	ear ✓	strive ✓
string ✓	cart ✓	bend ✓	grape ✓	sort ✓
tow ✓	part ✓	street ✓	spert <sup>ur</sup>	sole <sup>soil</sup>
ape ✓	cube ✓	trong ✓		



## Appendix 3

### Orthographic Recognition Test. John Munro

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

*Student Record Sheet*

Which word is spelt correctly?

1	hed	hid	hit	hite
2	passd	pat	pastd	past
3	sett	set	sete	sad
4	car	kar	care	karr
5	parte	part	prat	pait
6	cou	cowe	cau	cow
7	madd	med	mad	made
8	when	wenn	wen	whenn
9	fowl	flow	floa	floe
10	gev	givv	give	giv
11	way	why	wy	wiy
12	skip	scip	skipp	scipe
13	bred	brede	bread	brad
14	girl	gerl	gurl	gril
15	caggs	cages	cags	cajes
16	meat	meet	mete	meete
17	lern	learn	lirn	lurn
18	whether	weather	wheather	wether
19	tiger	tigger	tigar	tiggar
20	minnute	minnet	minute	minet
21	seezon	seasen	sezon	season
22	iseland	ialand	iland	island
23	station	staition	stayshun	staition
24	smoulder	smowlder	smoalder	smolder
25	breckfast	brekfest	breakfast	brekfest
26	prevent	prevvent	pravent	preventt
27	traveled	travveled	travelled	travvelled
28	bizness	bussiness	busyness	business
29	seremony	caremony	ceremony	ceramony
30	ordience	audience	audiance	ordiance
31	meazure	measure	measure	messure
32	brilliance	brillyance	brilliance	brillience
33	infomation	information	infamation	enformation
34	arregent	arregant	arrogant	aregant
35	marraige	marriage	marridge	marrige
36	government	govermment	gubernment	goverment
37	monacky	monarchy	monechy	monnachy
38	adolescent	adolesent	adloescent	adolecent
39	critticise	critisise	critisice	criticise
40	paediatrician	peadiatrician	peediatriician	peidiatrician
41	nagotiate	negosiate	negotiate	negociate

John Munro ©

## Appendix 4

Orthographic Recognition Test (Self devised)

Name: *Elizabeth*

Orthographic Recognition Test  
Read through the words below and  
circle the word which is spelt correctly.

seend	send	sennd	sind
Clame	claim	clam	cleam
Bornt	bount	burnt	bernt
drawen	drawn	drwn	Drawn
shie	shi	shiy	shy
sceem	screm	scream	screem
stream	stream	strem	straem
spint	splent	slint	splint
cub	quebe	cube	qeub
stripe	strip	sripe	stirp
foul	fole	foal	fol
promed	prompt	promt	promd
glum	glom	glome	gloom
dew	gew	guw	joow
trough	thong	throng	ferong
berst	burst	bust	houst
sprun	sproung	spring	sprung
swop	soup	swoop	swope
spurt	sprit	spert	spourt
grond	grand	ground	grownd
sourt	sort	sout	soort
sole	Soil	soul	soll
braid	brade	brad	briad
scorts	skirts	skerts	skurts
goule	golle	goal	gole
splen	spline	Spleen	speln
strikt	strick	stricked	Strict
crall	crawl	cral	croll
tune	tuen	cheun	choon
striek	strike	strick	stike
spon	spown	sporn	spawn
dune	june	jown	gune
spown	spon	spone	spoon
clamp	clap	clanp	clap
spried	spreed	spred	spread
sqerm	squirm	squm	squrm
twirls	twils	twolls	twerls
rowd	rord	road	rod

[Appendix 5](#) Rime units and onset flash cards

**i r m**

**i r m**

**i r m**

**i r m**

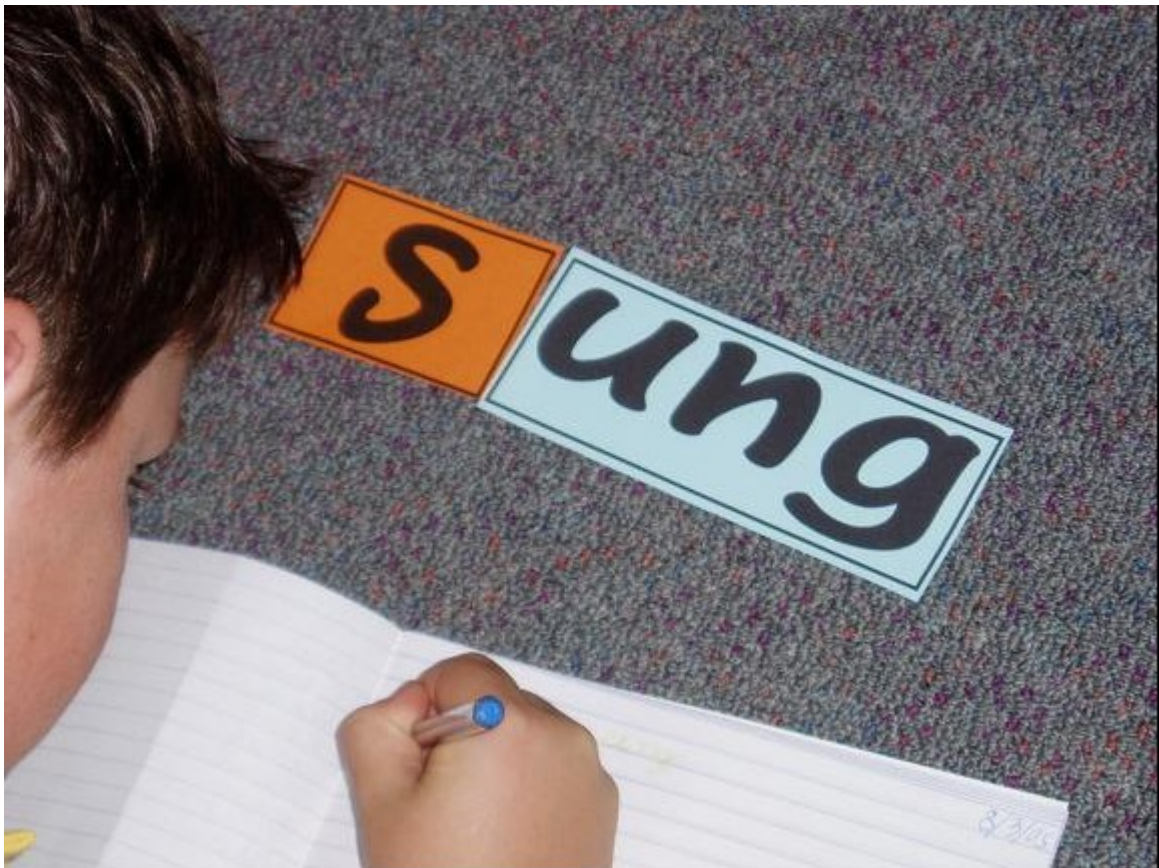
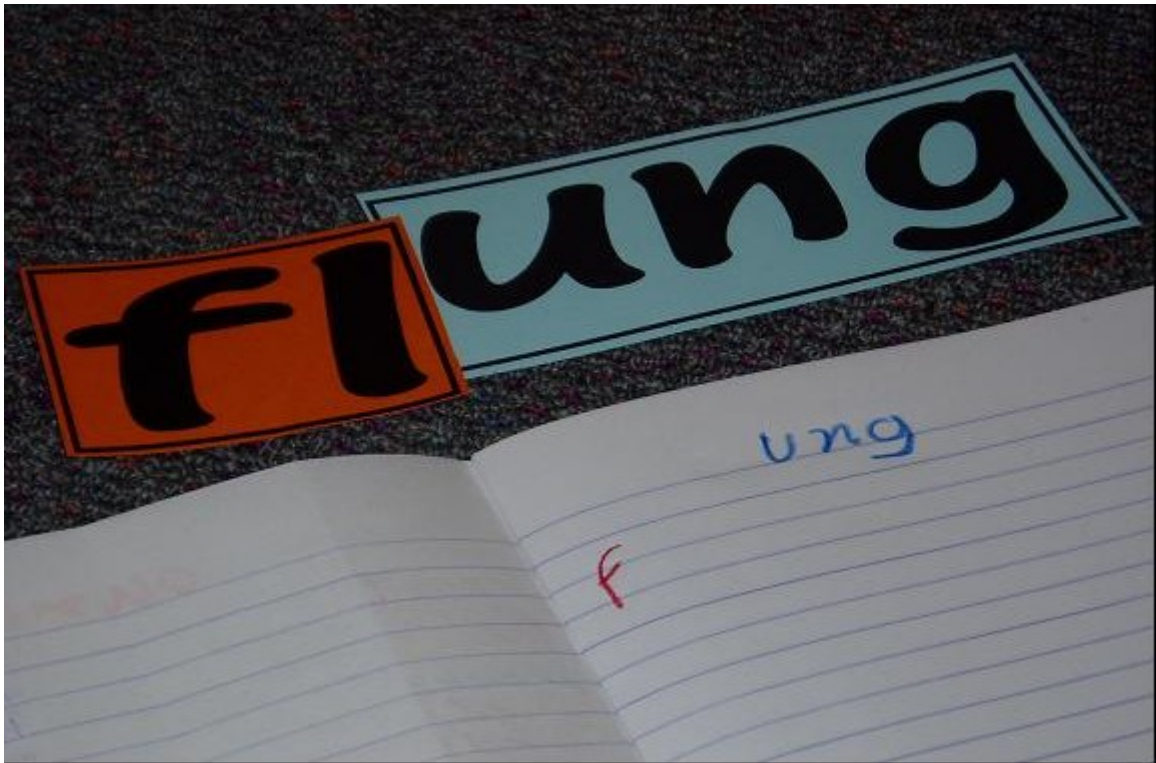


f

conf

squ

Photos of children working with flash cards.



## Appendix 6

Paragraphs containing words with specific rime units.

### *Paragraphs containing specific riming words*

<b>Rime unit</b>	<b>Paragraph or sentences</b>
ound	Scott heard a sound and found that it was his pet hound scratching the carpet. His hound had made a mound out of the fluff found in the lounge room. Scott wound the fluff into a round ball and put it in his pocket, as he knew that if his mother found out the hound had made a mess he would have to run around outside for the rest of the night and possibly sleep on the cold ground.
ung	William enjoyed singing in the shower. He sung so loudly that his lungs were sore! This annoyed his sister who flung a towel over the shower curtain at him. It really stung and he slipped over. Luckily he hung onto the curtain, but it was about to rip away from the rungs. Thank goodness his Dad had strung the curtain with strong plastic and it didn't rip.
awn	Elizabeth's favourite part of the day was dawn. She would get out of bed with a big yawn. Her first job of the day was to mow the lawn. Once that was done she would sit down to a hearty breakfast of garlic prawns. Her friend Rebecca was coming over to her house today, luckily she had drawn her a map to show her the way. They may even play a game of chess, although Elizabeth hated loosing even her pawn.
amp	Louise was looking at her stamp collection under the lamp. Some of the stamps were damp but she couldn't work out why. Her dog Champ was moaning, she thought he may have a cramp. She was worried that Champ may be the reason why her stamps were damp.
aid	Tuesday is our school photos. I think I might wear my hair in a braid but I'm afraid I'll look a bit silly. Although I do love the way our maid does my hair. I will get her to give me a braid but I'll have to wait until she has laid the table for breakfast.
irt	I was so disappointed when my new shirt was a different colour brown to my new skirt. I really did want them to match, although I was worried I might look like a mound of dirt. I could give the shirt a squirt of dye that may change the shade of brown but may also shrink the shirt, then I might just look like a flirt.
Irl	The girl knew it was a school rule that you were not allowed to play in the swirl. It is very dirty as well as dangerous. But

	she wanted to twirl in the mud. Now she will have to explain to her mother why this sweet little girl is covered in soil.
oil	The large pile of soil is going to spoil the new mat. Maybe if I boil the kettle the hot water will wash it away. But that may spoil the new mat. Oh well I'll just boil the kettle any way and have a cuppa while I think of a way not to foil the mat.
eam	I awoke from the strangest dream with a startling scream. I had just eaten the most beautiful cream cake when I fell into a stream. It wasn't cold as the stream was steaming. I tried to balance on a nearby beam but fell in and ripped the seam of my dress. No wonder I woke with a scream.
Eet	I hate it when my feet get cold under the sheet. When it is raining and sleeting outside in my street. It was so nice to greet my friend from up the street as she had bought me some bed socks as well as something sweet to eat.
Ail	I collected the mail although it had begun to hail. Then more bad luck I slipped on a snail that had left along trail and crushed its shell but I know it was frail. Would you believe that when I fell I not only broke my nail but stood on my dog Gail's tail. Boy did she let out a wail. I grasped the rail just near the fence pail and rushed inside to avoid the hail.
Ipe	The cherries were so ripe that I had to wipe the juice that had squirted on the couch, otherwise my mother would gripe about the mess I had made. It was only a small stripe of red.
Irm	I started to squirm at the sight of the snake. It was my turn to have a hold. I held its head firm and far away from me, I hope I don't catch any germs from it.

## Appendix 7

### Lesson Plan

### Lesson Procedure

- List the specific rime on the white board. Copy the rime a number of times in a row, leaving a space for the onset to be written by the children. Eg.       ound  
                          ound  
                          ound
- Say the rime sound out loud and get children to repeat it back ensuring they are all saying and pronouncing the sound correctly.
- Generate as many words as possible containing the specific rime. As children suggest words orally break up the onset and rime unit. Eg found *f- ound*. The child writes the letters of the onset on the board in front of the rime unit. This can be done using a different colour to assist as a visual cue. Ensure all children repeat each word as it is written.
- When children have brainstormed as many words as they can read through the whole list together.
- Stress the fact that the rime sound eg *ound* does not change, so when you think about the letters that spell words with the ound sound in them you really only need to think about the letters in the onset as we can group the letters o u n d together.
- Give each child a flash card with the specific rime unit on it. Eg. 

ound
------
- Have the onset (or initial letter) part of all the brainstormed words on another coloured flashcard. All possible solutions will be pre prepared  
Eg. 

f
---

gr
----

ar
----
- Each child selects a particular onset or initial letter to match with its rime flashcard. They must say the word out loud and then write down the word down. They continue to swap the onset or initial sounds until they have made all the words on the list.
- Each child reads their list out to another child in the group.
- Have a paragraph or sentences prepared containing the list of words form the specific rime unit. Each child has a turn at reading out a sentence and identifying and underlining the words from the list.
- Teacher reads out words form the list one at a time. Each child listens to the word repeats it back out loud then writes it down.
- The teacher will look at the list and note and record the success rate of each child.
- **Before the commencement of each session the rime unit taught in the previous session will be revised by recreating the words using the onset and rime flashcards and revising the list the children recorded.**

## Rime units to be taught

<b>Rime unit</b>	<b>One letter onset</b>	<b>Two letter onset</b>	<b>Three letter onset</b>
ound	Found Pound Mound Round Sound Wound Hound	Around Ground	
ung	Hung Dung Lung Rung sung	Clung Flung Stung	strung
awn	Dawn Fawn Lawn Pawn yawn	Drawn Prawn spawn	
amp	Damp Lamp ramp	Cramp Clamp Champ Tramp Stamp	
aid	Maid Raid laid	braid	afraid
irt	Dirt	Flirt Shirt skirt	squirt
irl	girl	Twirl swirl	
oil	Boil Coil Foil Toil soil	spoil	
eam	Seam beam	Cream Dream Gleam steam	Scream stream

eet	meet	Sheet Fleet Greet Sleet sweet	street
ail	Bail Fail Gail Hail Jail Mail Nail Pail Rail Sail Tail wail	Frail Snail trail	
ipe	Pipe Wipe Ripe	gripe	stripe
irm	firm		squirm

This document was created with Win2PDF available at <http://www.daneprairie.com>.  
The unregistered version of Win2PDF is for evaluation or non-commercial use only.