

**The hypothesis for this study is that teaching Year One children explicitly to make analogy between known and unknown words through the teaching of onset and rime will improve their word reading accuracy.**

### Abstract

Many students in the early stages of reading development pick up the initial skills of looking for distinctive visual features and sounding out individual letters when attempting to decode and read new or unknown words. However, after the successful acquisition of these skills, it appears that for a number of students their reading progress begins to slow. They continue to depend on the two skills previously mentioned when reading but the complexity of the texts increases and they are faced with an increasing number of unknown words. Decoding unknown words in this manner now becomes an arduous task but they are not equipped with the skills necessary to make the task more achievable.

The hypothesis of this action research project is that teaching Year One children explicitly to make analogy between known and unknown words through the teaching of onset and rime will improve their word reading accuracy. Research on the phonological development of young readers suggests that children need to be taught explicit decoding skills in order to be successful readers. In this study students were taught not only to recognise and read a particular rime, but how to segment a word into onset and rime, to replace the onset with another and transfer their knowledge of this rime from one word to another. Emphasis was placed on linking what we hear with what we see and the knowledge that if we can read a rime in one word then we can recognise and read it in another.

The study compared the results of two groups of Year One students, a control group and an intervention group. The intervention group participated in 10 lessons with the focus of explicitly teaching the students to make analogy between known and unknown words through onset and rime. Students' progress was monitored through pre and post testing along with anecdotal records. The data collected indicated an improvement in all participants, however the increase in the intervention group was greater overall than that of the control group.

Results of the study support the hypothesis as all of the students in the intervention group demonstrated a marked improvement in their word reading skills. The results suggest that it is of benefit to young readers to explicitly learn to make analogy between known and unknown words through the teaching of onset and rime and therefore they should be included in classroom instruction.

## Introduction

It appears to be a common trend amongst a number of children that their reading development slows dramatically in the second year of schooling. In their first year of school they achieve well and acquire a certain level of reading knowledge. These children begin to develop their phonological awareness. They develop the following basic reading strategies described in Munro's (1996) developmental trends. Children begin to link spoken and written words using individual letters and they do this by selecting and memorising distinctive visual features of words and converting each letter in a word to a sound and then blending each sound.

When equipped with these skills students are able to start to read words and therefore achieve some success with prose reading. Because of this students often continue to rely heavily on the above mentioned skills however reading becomes more difficult as they are faced with an increasing number of unknown words.

The students participating in this study all appear to have achieved as expected in their first year of schooling but this has not continued in Grade One. They seem hesitant to move beyond this point. Clay (1993, P9) describes that a young reader "may disregard obvious discrepancies between his response and the words on the page. He may be looking so hard for words he knows and guessing words from first letters that he forgets what the message is about. Unbalanced ways of operating on print can become habituated when they are practised day after day. They become very resistant to change. This can begin to happen in the first year of formal instruction."

It is hoped that the intensive and explicit nature of this teaching unit will be an effective way of trying to help these students to progress through to the next stage in their reading development. As Munro (2008) explains in his developmental sequence in learning to read words the next step for these students is that they develop an orthographic learning capacity. Children will be involved in lessons that focus explicitly on using analogy to read unknown words through the use of onset and rime. Munro (1998, P1) describes the process as follows, "To learn letter clusters, young learners need to recognise them in written words, break up the spoken forms of the words into smaller sounds and link the letter clusters and sounds. They also need to 'transfer' what they know about letter cluster-sound matches in one word to the same letter cluster in other words. This allows them to use what they know about some words to read others."

The benefits of focusing on the rime rather than individual phonemes are that individual letters can represent more than one sound making this a much more complex task. The consistent spelling of rimes helps to make them a more dependable unit for children to rely upon when trying to read unknown words. Ehri & Robbins (1992, P13) identified that it is harder for beginners to sound out and blend phonemic segments (eg., in peak /p/-/i/-/k/) than to sound out and blend larger subunits in syllables such as onsets and rimes (eg., in peak /p/ and /ik/). Clay (1998, P10) also agrees with the above and states "...it is the

consistencies in the spelling patterns or clusters of letters, rather than the letter-sound relationship, that assist the mature reader's reading."

It is often a cause of frustration for many teachers that although children are able to read a particular rime in one word they are unable to transfer this knowledge when faced with another word containing the same rime. This may be because as teachers we assume that students will make these links between words automatically and neglect to focus on analogy in our teaching. If students are taught explicitly to recognise the rime unit and match it with the sound it makes when it is said they will be able to look and listen for it in other words. Munro (1998) explains that "To make sense of any text we read, we need to connect the written words with our spoken knowledge. Our phonological knowledge helps us do this by giving us ways for linking letter clusters with what we know about how words are said. It helps us to detect sounds in spoken words." Children need to learn to make these links and know that if a letter cluster (rime) makes a particular sound in one word then it will sound the same in another eg. 'ew in 'new' sounds the same and 'few'. Ehri & Robbins (1992, P14) concur and explain that to "read an unknown word such as *peak* by analogy to a known word *beak*, readers must have enough letters in *beak* stored in memory to recognize how they resemble but are different from the letters in *peak*. Also, they must be able to break apart spellings and pronunciations into onsets and rimes to combine the new onset *p-* with the old rime *eak*."

It is important to note that children require both the early phonemic skills of recognizing and sounding out individual letters and the ability to segment words into onset and rime to be able to successfully use analogy to read unknown words. Juel & Minden-Cupp (2000, P462) explain that "when a child is armed with phonological awareness and letter-sound knowledge- and provided with a rich exposure to print- the child can ultimately teach herself to read. Indeed, she must do so, as the sheer number of words that are learned far exceed the number that are explicitly taught." This clearly highlights the need for teachers to equip students with the ability to become self-teachers. If students are given explicit instruction about how to recognise onsets and rimes and use analogy they will be able to identify these skills and transfer them from one situation to another. If students can do this successfully it will have a positive effect on their reading ability. Clay (1998) states "The end-point of early instruction has been reached when children have a self-extending system of literacy behaviours and learn more about reading every time they read, independent of instruction."

The present investigation aims to observe the effects of teaching a small group of Year One children the strategy of using onset and rime to make analogy between known and unknown words. This will equip students with more efficient skills for decoding unknown words than sounding out individual letters and looking for distinctive visual features. It will enable students to begin to see themselves as self teachers who are equipped with the skills to independently decode unknown words. The hypothesis for this study is that teaching Year One children explicitly to make analogy between known and unknown words through the teaching of onset and rime will improve their word reading accuracy.

## Method

### Design

This study uses a case study OXO (assess, teach, assess) design. Gains in word reading accuracy following the explicit teaching of using onset and rime to make analogy between known and unknown words will be monitored for a group of Year One students who are displaying reading difficulties at the word level. The study compares two groups of students, a control group and an intervention group.

### Participants

All of the students chosen to participate in the study are currently in Year One at a Victorian Catholic Primary School. Eight students were chosen to participate, with four students being in the Intervention group and four students being in the Control group. The students' chosen were all in the same class and were selected by their classroom teacher. The eight students were identified as a group of students who had progressed as expected in their Prep year, however their phonological development had appeared to stagnate throughout the first term of their Grade One year. The students' reading progress seemed to slow and they all demonstrated difficulties when decoding unknown words. The students were also selected based upon the results of their completed Clay Observation Survey (Table 1) in particular the results for the Word Test. The two groups were formed using the results of this testing. Each of the groups had students with a similar spread of results in the hope that they could be matched as closely as possible. The individual needs and learning styles of each student were also taken into account when selecting the four students for the intervention group. Students 1 through to 4 make up the Intervention group and Students 5 through to 8 make up the Control group. Table 1 includes a brief profile of each of the selected students.

Table 1

Clay Observation Survey

Name	Intervention/ Control Group	Age Yrs & mths	Sex	ESB	Learning Difficulty	Early Intervention	Letter ID (0- 54)	CAP (0- 24)	Word Test (0- 24)	Write Vocab (0-n)	HRSW (0- 37)
Student 1	I	6yrs 6mths	Male	Yes	No	No	53	14	10	10	30
Student 2	I	6yrs 7mths	Male	Yes	No	No	51	16	10	10	34
Student 3	I	7yrs 1mth	Female	Yes	No	No	53	20	13	26	34
Student 4	I	6yrs 11mths	Female	Yes	No	No	54	17	12	35	33
Student 5	C	7yrs 2mths	Male	Yes	No	No	53	14	11	21	34
Student 6	C	6yrs 2mths	Male	Yes	No	No	54	16	13	19	35
Student 7	C	6yrs 11mths	Male	Yes	No	No	53	17	13	26	32
Student 8	C	6yrs 6mths	Female	Yes	No	No	52	17	11	24	37

## Materials

\*Assessments - All students were pre and post tested using the Burt Word Test, Rime Unit Test (see Appendix 1) and running records were taken, using the PM Benchmark Kit, to find their instructional text level.

\*Student Journals - Each student was given an exercise book at the beginning of the unit to record their word lists and discoveries in.

\*Flashcards - A set of cards was made by the teacher for the rimes to be taught. (See Appendix 2 for list words) All of the students were given their own set of flashcards. The cards were colour coded according to their rime. These cards were given out at as each rime was introduced and the children cut them into onset and rime. The cards were revisited constantly throughout the unit. The children were given a plastic re sealable bag for storing their flashcards.

\*Onset and Rime Flip Books - Smart Kids

Word Family Flip Books – Lakeshore

\*Rhyming Word Fun Magnetic Learning Kit – Five Mile Press

\*Teaching Sequence – Ten lessons were given to provide explicit instruction on learning to use analogy through onset and rime. (see Appendix 3)

## Procedure

1. All students were pre tested using the Burt Word Test, Rime Unit Test and running records were taken to find their instructional text level. (see Table 2)

Each of the students was assessed using the BURT Word Test to establish their competency in word recognition and decoding. Strategies used when decoding unfamiliar words such as sounding out individual letters or looking for distinctive visual features were noted in anecdotal records.

The students' instructional text level was established using the PM Benchmark Kit. The instructional level indicates 90-94% reading accuracy.

Each student completed the Rime Units Test (see Appendix 1). This test is an isolated word reading test containing 38 rimes. Four words are listed for each rime and they vary in length from 3 to 5 letter words. The test demonstrated which of the rimes the children were familiar with and the strategies they use when faced with an unknown word. The method used to score this test was that a student had to recognize the rime in at least 3 out of the 4 words in order to get it correct. The results of this testing were used as an indication of rimes which needed to be taught in the unit.

Table 2

Name	Burt Word Pre Test (0-110)	Burt Word Post Test (0.110)	Rime Units (0-38) Pre Test	Rime Units (0-38) Post Test	Text Level Pre Test	Text Level Post Test
Intervention						
Student 1	24	38	14	37	12	18
Student 2	23	29	3	31	10	14
Student 3	26	48	22	36	14	20
Student 4	26	33	6	31	13	18
Average	24.75	37	11.25	33.75	12.25	17.5
Control						
Student 5	24	32	16	22	12	15
Student 6	28	31	11	15	9	12
Student 7	29	34	20	28	12	15
Student 8	24	36	24	29	15	19
Average	26.25	33.25	17.75	23.5	12	15.25

Data was also collected to see if the length of the word was of concern to the students. (see Table 3)

Table 3

Name	3 Letter Words Pre	4 Letter Words Pre	5 Letter Words Pre	3 Letter Words Post	4 Letter Words Post	5 Letter Words Post
Intervention						
Student 1	18	37	12	24	62	50
Student 2	17	16	4	24	51	31
Student 3	21	46	26	24	70	47
Student 4	11	19	3	24	61	39
Average	16.75	29.5	11.25	24	61	41.75
Control						
Student 5	20	39	20	21	44	22
Student 6	15	34	17	15	43	22
Student 7	19	47	23	23	59	29
Student 8	23	53	27	23	59	27
Average	19.25	43.25	21.75	20.5	51.25	25

2. Over a period of three weeks students in the intervention group participated in ten lessons. Lessons lasted between 30 to 40 minutes and all lessons with the exception of two occasions were conducted outside of the classroom. On 2 occasions the lessons took place in the classroom, as it is during this time that I release their teacher. All of the lessons took place in the morning at the time when the students would normally have their reading sessions.

### Objectives of Lessons

Children will learn to

- say words and letter clusters correctly
- segment words into onset and rime
- blend onset and rime to create new words
- transfer rime units from a known word to make a new word
- articulate what they are doing as they are doing it
- articulate the strategy of using analogy to transfer the rime unit from a known to an unknown word.

Each lesson will begin with students 'getting their existing knowledge ready'. Strategies and knowledge children already have are shared and previous lessons are reviewed.

The 'while reading stage' follows where the actions of what a reader can do when faced with an unknown word are the focus. Students are taught to segment and blend words into onset and rime to make use of analogy. The children are actively involved in cutting the flashcards of words into onset and rime and using these segments to make new words. As they complete these actions they are expected to say out loud what they are doing and why. "If I put 'str' and 'aw' together I have made 'straw'." The students write lists of new words containing the rime that is the focus of the lesson and these are read out loud as they are written so they can hear, write and see the word at the same time.

Each lesson concludes with a review of the new knowledge and skills gained and the children record these in their learning journal. The purpose of this phase is to add the new knowledge and strategies to what they already know and to reflect on their new learning and its value in helping them to read. This is extremely important as it contributes to the children's self-efficacy and their perception of themselves as independent learners. This model for teaching reading strategies is based on the model described by John Munro (2008)

3. All students participated in post testing of the Burt Word Test, Rime Unit Test and once again the instructional text level was established using the PM Benchmark Kit.

In both the Control and the Intervention group the Burt Word Test was used to see if there had been an increase in the number of words the students were able to recognize and their decoding skills when faced with unknown words.

The Rime Unit Test was re-administered to see if there was an increase in the number of rimes the children could now recognize and the number of 3, 4 and 5 letter words they could read correctly. Anecdotal records were taken to record the strategies they used when decoding unknown words.

Running records were taken for the eight students to see if their instructional text level had increased.

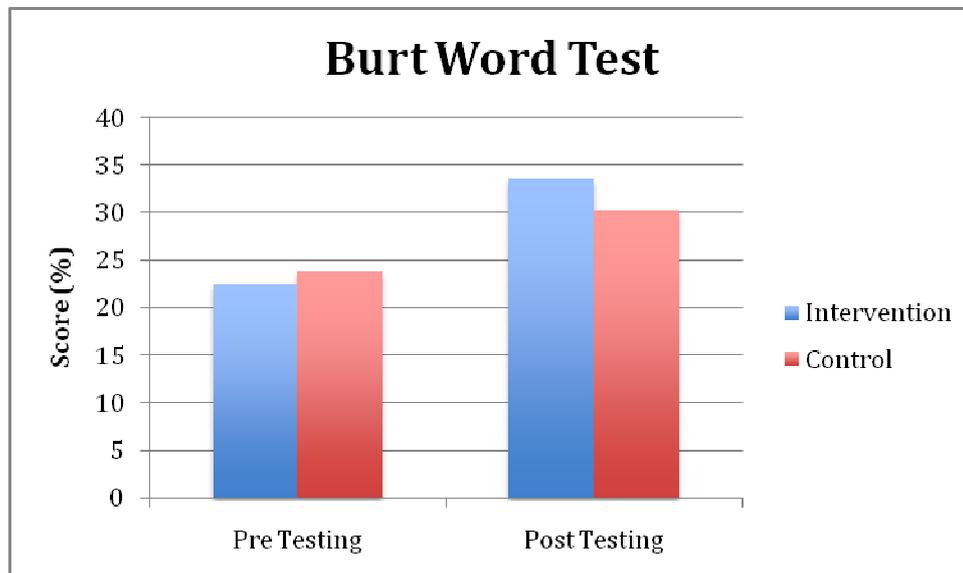
Throughout all testing the decoding skills students used were noted, in particular any use of segmenting, blending and analogy.

## Results

Results indicate support for the hypothesis that teaching Year One children explicitly to make analogy between known and unknown words through the teaching of onset and rime will improve their word reading accuracy. Throughout this time all of the students in both the Control and Intervention group have demonstrated an improvement in all the areas of testing however the gains made by students in the Intervention group were greater than those made by the students in the Control group.

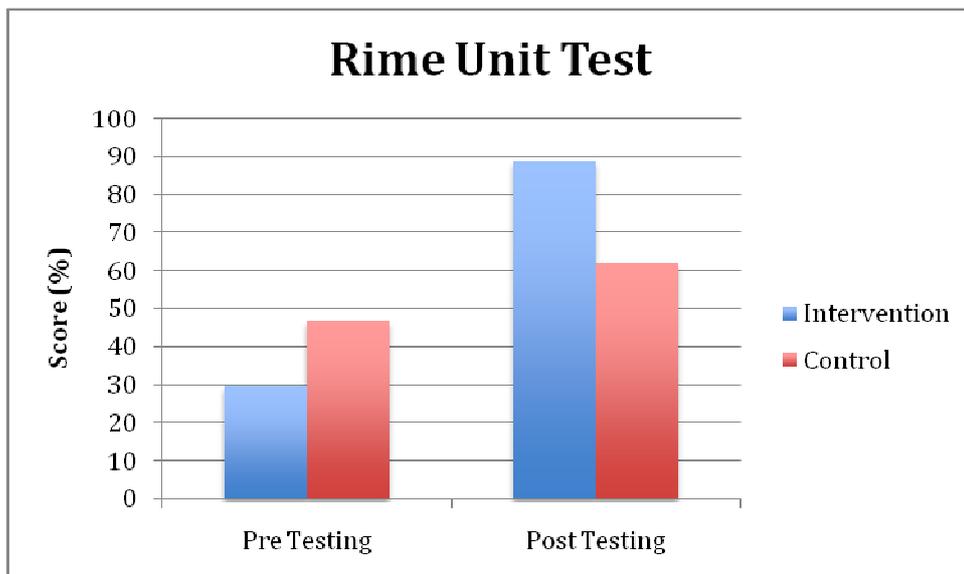
The post testing results of the Burt Word Test show an improvement for all students involved in this research however the increase in the number of words being read correctly was greater in the students in the Intervention group than those in the Control group (see Table 2). When faced with difficult words these students could be seen to be attempting to segment the words into letter clusters and then to blend these whilst the students in the Control group reverted to the strategies of sounding out individual letters and looking for distinctive visual features and guessing. The following graph (figure 1) demonstrates the gains made by students in the Control and Intervention group. It is interesting to note that prior to the teaching sessions the average number of words correctly read was higher in the Control group (26.25 words) than the Intervention group (24.75 words) however post testing shows that the Intervention group now has a higher average (37 words) than the Control group (33.25 words)

Figure 1



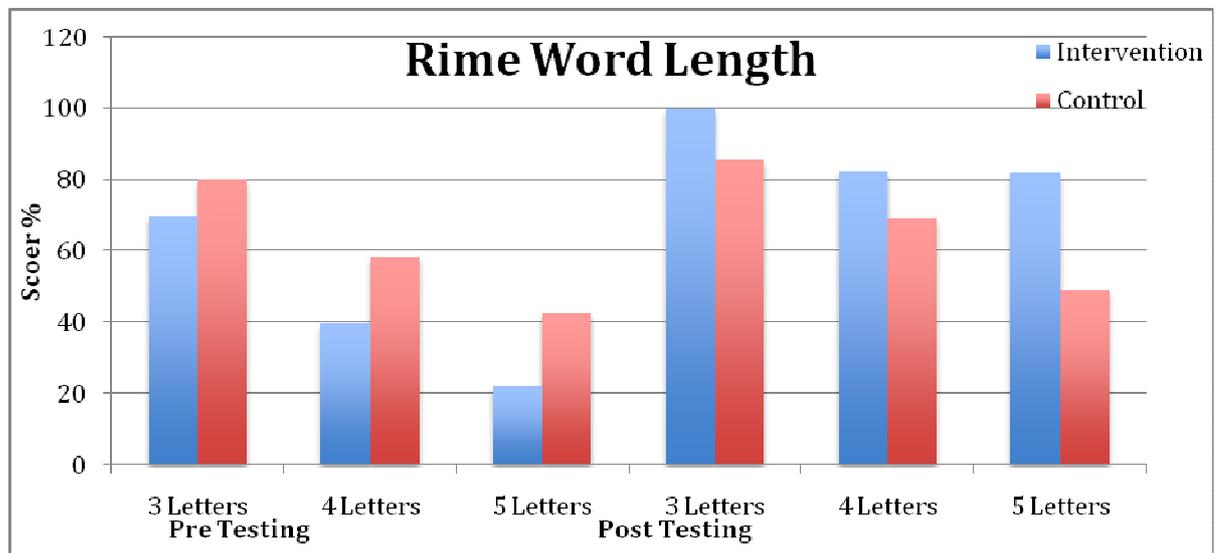
The results for the Rime Unit Test have also demonstrated a greater increase in the Intervention group than the Control group in the post testing (see figure 2). Prior to the teaching sessions there was little apparent consistency in rime recognition from one word to another in the students of Intervention group. The average number of rime units recognized by students in this group was 11.25 in the pre test being lower than the Control groups' average of 17.75 at the same time. It is pleasing to note that once again the Intervention group has demonstrated a greater increase in the number of rime units being recognized (33.75 rimes) in the post-test results in comparison with the Control group (23.5 rimes). The students in the Intervention group made substantial gains in not only the rimes that had been taught but also those rimes not included in the teaching sessions. These students could be observed touching words and saying letter clusters out loud before blending them when attempting to decode. They were able to recognize a rime unit in a word they didn't automatically know and would often say the rime first and then blend the onset. This would frequently lead to the word being correctly read. It is important to note that on some occasions the strategy of using analogy to read and transfer a rime was correctly followed but because the rime had been incorrectly read on the first occasion the students continued to read it incorrectly in the following three words. This happened for Student 3 who read the rime 'ail' as 'ell' in the word 'tail' and so continued to read the following words incorrectly eg. 'mell' instead of 'mail' and 'snell' instead of 'snail'. Student 4 also did this by incorrectly reading the rime 'ail' as 'ill' and the rime 'ide' as 'id'. The students in the Control group were still observed relying on sounding out individual sounds or making guesses based on distinctive visual features. The following graph demonstrates the increase made by both groups with the stronger results of the Intervention group being evident.

Figure 2



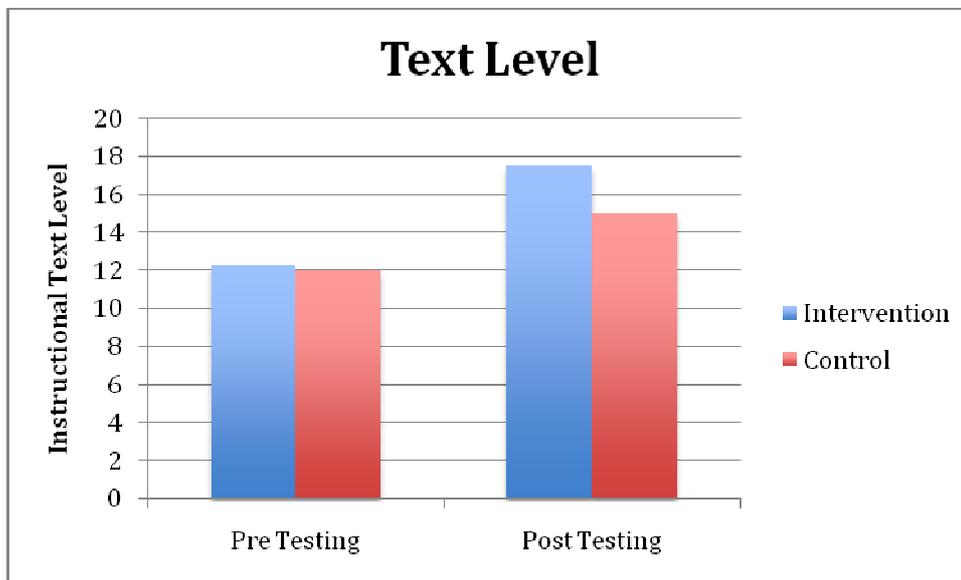
When the results were analyzed according to the number of letters in each word in the testing prior to the teaching sessions it was clear that the students in both groups did appear to find the words containing 5 letters harder to decode than those containing 3 letters (see table 3). The strategies they used could be seen to change as the words became longer. When having difficulty with three letter words the students appeared to rely heavily on sounding out individual letters however when trying to decode words containing 5 letters the students would make guesses based on distinctive visual features, on most occasions focusing on the beginning and final letters. In the results of the post testing it is pleasing to note that the discrepancy between the 4 and 5 letter words is no longer apparent in the Intervention group. The students in this group were able to segment words into onset and rime and use analogy to transfer their knowledge of a rime from a 3 letter word to a 4 and 5 letter word. In the Control group the distinctions between the results based on the length of the word are still apparent, although they have made improvement in each area. In observation it was clear that although the students in the Control group were able to read a rime correctly in a 3 letter word when faced with a 5 letter word containing the same rime they were unable to use analogy to transfer this knowledge. Figure 3 demonstrates the gains made by students in words according to the number of letters.

Figure 3



The following graph (figure 4) demonstrates improvement in text reading level. Accuracy in reading is measured by converting the number of words incorrectly read to percentage accuracy. (Clay 1993) In pre testing results the children were at a similar standard with the Intervention group average being 12.25 and the Control group average being 12 however in post testing results greater gains have been made in the Intervention group with an average reading level of 17.5 compared with the Control group average of 15.25. Although there have been increases in the level of both groups the benefits of having additional decoding strategies has clearly had a pleasing impact on the text levels being read by the students in the Intervention group. It is important to note that in this study word reading is the focus and so any increases in comprehension that may result as a consequence of the improvement in decoding skills have not been considered. This would certainly be of interest as the subject of further study into the impact of this project.

Figure 4

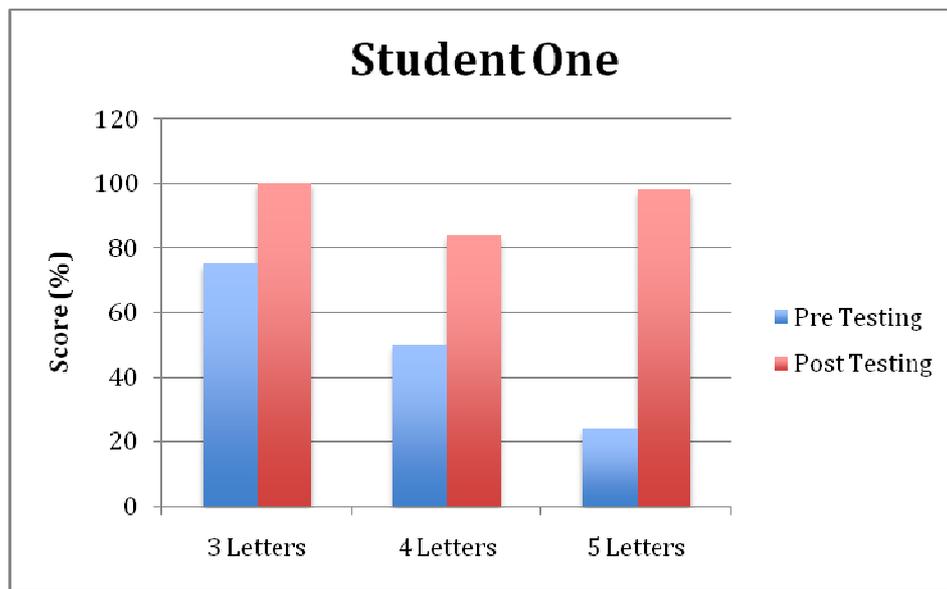


Student One was chosen to be a part of the Intervention group because he presents as a passive and shy student who appears to lack the confidence to attempt learning that is new or challenging. It was thought by his class teacher that the opportunity to work in a small group could provide a less intimidating environment where he could be supported emotionally as well as academically. It was extremely important that Student One was frequently reminded of his developing knowledge and skills and that he was able to articulate these.

It is pleasing to note that Student One made significant gains in all of the areas of testing. Figure 5 represents his results for reading 3,4 and 5 letter words in both pre and post testing. The pre testing results indicated in table 2 show a recognition of only 14 out of 38 rimes and the post testing results indicate he was able to read 37 of the rimes correctly. This is an improvement of 61%. The Burt Word pre test results indicate that he was able to read 24 words correctly and in the post test 38 words. This is an improvement of 13 %.

Student One's instructional text has increased from 12 to 18. In pre testing Student One was reluctant to attempt any of the 5 letter words and was only able to read 12 out of the 51 words (23.52%) correctly. However post test results indicate a significant improvement where he was able to read 50 of the 51 words correctly (98%). Of the 50 words there were 4 words that were initially said incorrectly but he self corrected these without prompting. In post testing this student could be seen to be touching the words as he read, looking for letter clusters and saying rimes out loud whilst touching words. He appeared to have developed a confidence in his knowledge and skills and this enabled him to attempt all words.

Figure 5

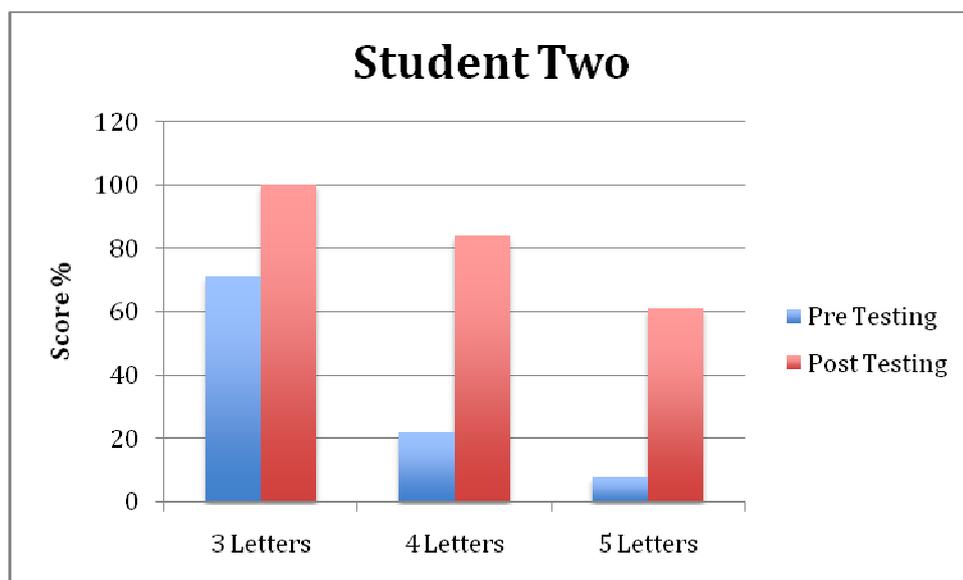


Student Two was chosen to be a part of the Intervention group because he presents as a student who has great difficulty staying on task in all classroom sessions. The classroom teacher has serious concerns with his ability to focus on a task however no intervention strategies are in place for this student at this point in time. It was thought that a small group could provide less opportunity to become distracted and he could be given more support in remaining focused on the task at hand. It was necessary for this student to be reminded to stay on task frequently. He needed extra support for any of the tasks requiring hand writing as this is an area of difficulty for him. He was expected to complete all written tasks however I would re-write them for him because he was unable to read his writing.

Student Two's pre test results (see table 2) for the Rime Unit Test indicate that he was able to read only 3 rimes out of the 38 rimes and his post testing results indicate that he could read 31 rimes correctly. This is an increase of 74%. When attempting words in the pre test he seemed to become more tired and less focused as the test continued. He sat slumped in the chair and appeared annoyed at having to complete the task. Most words read were guesses with little in common with the original word other than the first letter.

It was pleasing to note that in the post test he made comments such as "We've been practicing 'aw' words." and "There's 'ice", we did 'ice words." In all attempted words he made an effort to segment into onset and rime and then blend. He appeared very pleased with his ability to call upon this strategy and his focus was not an issue. In the pre test results for the Burt Word Test he was able to read 23 words correctly and the post test results were 29 words. This indicates an improvement of 5%. Student Two has improved his instructional text reading level from 10 to 14. As demonstrated in the following graph (figure 6) Student Two has made significant gains in reading 3, 4 and 5 letter words. Unlike the other three students in the Intervention group he still appears to find the increasing length of the word to be a contributing factor to its difficulty when decoding.

Figure 6

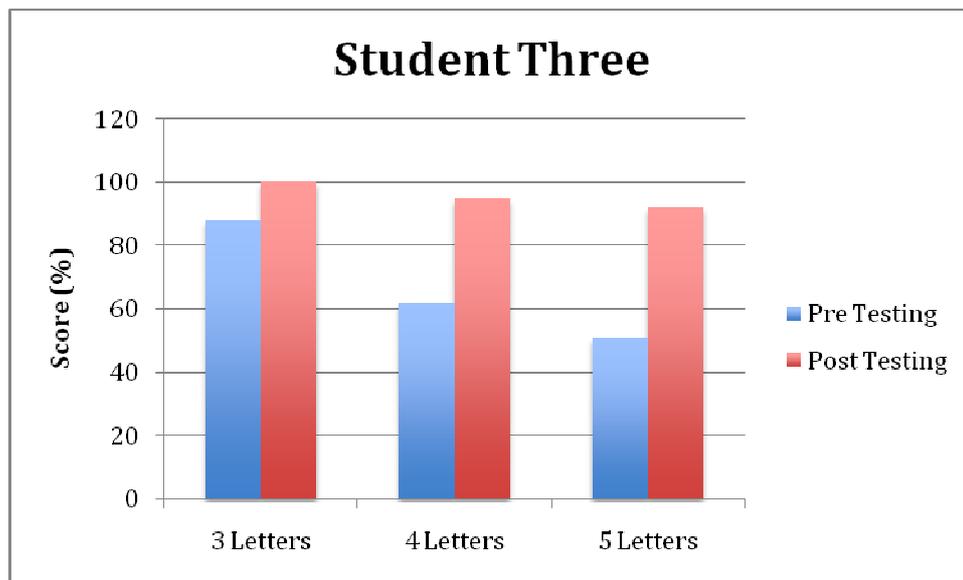


Student Three was chosen to participate because she didn't appear to be achieving as expected. This student has made pleasing progress throughout Prep and up until the early part of Grade One, however her progress has slowed significantly. She is a shy student and at times appears to lack confidence in her ability.

Her pre test results (see table 2) indicate recognition of 22 rimes and in post testing she recognized 36 rimes. This is an improvement of 38%. Student Three scored 26 words in The Burt Word Test pre testing and in post testing she scored 48 words. This is an improvement of 20%. In post testing Student Three presented as a confident student who willingly attempted to read as many words as possible when completing the Burt Word Test. She touched words as she read them and was able to read most of the words in the Rime Unit test in an automatic fashion. Student Three's text level was level 14 in pre testing and had improved significantly to level 20 in post testing

The following graph (figure 7) shows a comparison between her pre and post test results for reading 3,4 and 5 letter words. In pre testing Student Three found the 5 letter words to be the most difficult however in the post test results there is little difference in her ability to correctly read 3,4 and 5 letter words. She confidently practiced the strategy of using analogy to transfer a rime from one word to another and this has contributed to her self-belief that she can decode unknown words. It was pleasing to observe that as we entered the second half of the teaching unit Student Three began to support other students in the Intervention group as they were trying to decode words and would explain the strategy of using analogy to them.

Figure 7

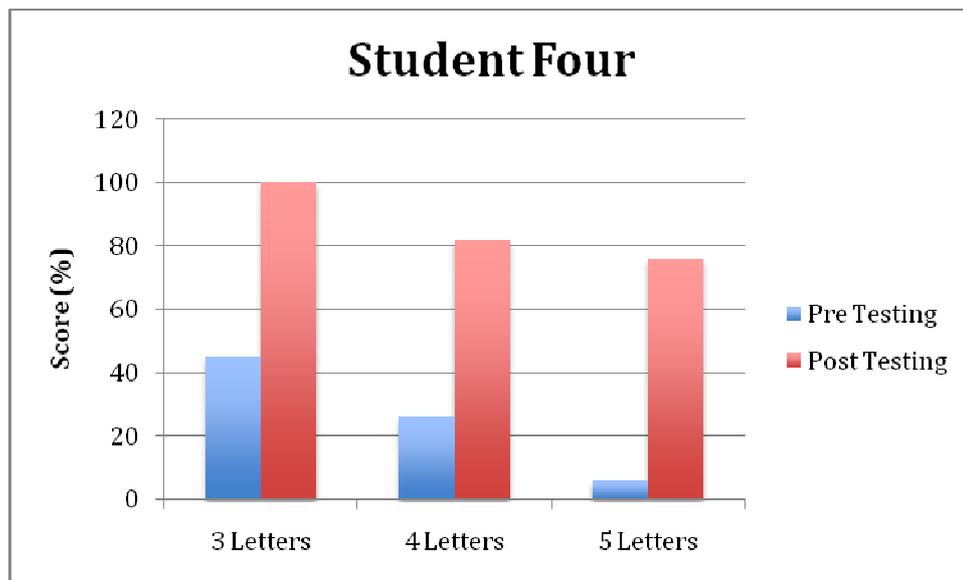


Student Four was chosen to be a part of the Intervention group as she is a student who often has trouble staying focused on activities in the classroom and often appears to be unmotivated. The classroom teacher felt that working in a small group could be beneficial as there is less opportunity for distraction and lots of encouragement could have a positive effect on her approach to her learning. In pre testing Student Four needed lots of encouragement to stay on task and to try to read unknown words. Most words were read with a correct onset and from this point she would make a guess.

The Burt Word Test results (see Table 2) in pre testing were 26 words and post test were 33. This indicates an improvement of 6 %. In pre testing Student Four was able to recognize only 6 rimes however her post test results indicate a significant improvement of 66 % with a recognition of 31 rimes. Her text level prior to the teaching unit was level 13 and in post testing increased to level 18. In post testing Student Four presented as a happy participant who like Student One and Student Three appeared more confident in her ability to try to decode unknown words and applied the strategy of using analogy successfully.

In the following graph (figure 8) Student Four has shown a significant increase in successfully reading all of the words in the Rime Unit Test. It was pleasing to observe a change in her approach to activities as her knowledge and skills developed. Her application and focus showed a great improvement and this along with her developing skills and knowledge have been contributing factors to her pleasing results. In pre testing she was able to correctly read 11 three letter words, 19 four letter words and 3 five letter words. In post testing Student Four read 24 three letter words, 61 four letter words and 38 five letter words correctly.

Figure 8



## Discussion

In reflecting on the results of this study there is support for the research and the hypothesis which states that teaching Year One children explicitly to make analogy between known and unknown words through the teaching of onset and rime will improve their word reading accuracy. All students participating in the study demonstrated an improvement in their word reading accuracy over time however the increases made by students in the Intervention Group were significantly higher. The comparison of Burt Word Test results prior to the intervention program with the post test results indicate word reading accuracy increased by 11.1% and the increase in results for the Rime Unit Test indicate an improvement of 59% in the number of rimes recognised. Pre test observations show little use of segmenting and blending with students frequently guessing and looking for distinctive visual features. In post testing the students independently applied their skills of segmenting and blending and the use of analogy to decode unknown words. This change was not evident in the students of the Control group. The further development of the phonological knowledge in the students of the Intervention group has been evident through both the results of testing and anecdotal records taken of their actions whilst reading. The students demonstrated their knowledge of sound patterns by segmenting and blending, by transferring what they know about one word to read another and they were often able to use this knowledge in an automatic fashion.

A pleasing aspect of the study was the evidence that although only 14 out of the 38 rimes were taught throughout the unit there was a significant improvement in the accurate reading of all rimes. This development has come about as a result of the students developing the skill to use analogy to transfer what they know about one word to read another. This adds support for Clay (1993, P19) who suggests that “given a knowledge of some items, and a strategy which can be applied to similar items to extract messages, the child then has a general way of approaching new items. We do not need to teach him the total inventory of items.”

Being able to withdraw the children from the classroom setting and work in a small group was of benefit for the particular children chosen. The children had all come to rely heavily on the two strategies of sounding out individual letters and looking for distinctive visual features and were having difficulty moving beyond this. The intensive lessons with explicit instruction provided conditions to help support the children to move beyond this point and add a new strategy to their list of decoding skills. Having to participate in 10 lessons over a period of only three weeks gave children the opportunity to practice their new skills frequently and enabled them to become habituated. It is now extremely important that the children be given opportunity to continue to use their new skills and restate their new knowledge so that they will retain them and continue to develop further from this point.

Having the students say the letter clusters and words out loud as they were working with them appeared to have a beneficial effect upon their learning. It enabled the students to make the connection between what they were saying and what they were seeing. This is consistent with the Juel and Minden-Cupp (2000) findings that learning to read and write words involves perceiving the sound units in spoken words and knowing which spelling patterns are linked to them in which words.

The children were prompted to constantly verbalize their actions as they were participating in teaching sessions and as a result the meta-cognitive thinking strategies of students have been enhanced. Great emphasis was placed on the use of analogy, that is transferring what is known about one word to read another. Children were given lots of opportunity to practise and verbalize this action so that it could become automatic. It was apparent in the post testing that the students could do this independently and the knowledge of their new ability appeared to have a positive effect on their self-efficacy. The structure of the lessons remained constant throughout the teaching unit and in the early lessons a strong scaffold was provided with teacher modelling of all actions. As the unit progressed there was less need for modelling as the students were able to apply their new skills and knowledge in an independent manner. It must be a goal of teaching units such as this that as teachers we can provide children with skills and knowledge that will allow them to work independently and see themselves as self-teachers. As Clay (1993, P18) explains "The end-point of early instruction has been reached when children have a self-extending system of literacy behaviours and learn more about reading every time they read, independent of instruction."

An unexpected result of the student's use of analogy, as mentioned in the results section, was that using analogy on some occasions led to words being incorrectly read. This occurred when the initial rime was misread and then transferred in the same form from one word to another. In this case such emphasis was placed on the strategy of using analogy that the students were not concerned whether or not the words made sense. The importance of reading for meaning needs to continue to be emphasised so that children will self correct when what they have read doesn't make sense. This research project focussed on isolated words and an implication for further teaching would be to include prose reading to allow for words to be read in context.

A limitation of this study was the number of students that were able to be involved. It would be of great interest to complete this study within a classroom with all students involved and observe the results.

A suggestion for future research would be to extend the project to include the effect these new skills have on prose reading. It would be interesting to observe children using these skills in a more meaningful context. Testing could be extended to look at the influence not only reading accuracy but on fluency and comprehension. In Munro (1998, P6) the research showed that “children’s level of phonological awareness correlated with several aspects of reading aloud; their ability to read words accurately, to comprehend what they read and to read fluently. It is also stated that it’s influence is not restricted to learning to read isolated words but it also affects the quality of prose reading.”

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Appendix 1

**RIME UNITS TEST - TEACHER RECORD SHEET**

(Underneath each attempted word, the teacher ticks words read correctly and records the student's response for incorrect and self corrected attempts)

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

3 letter words

4 letter words

4 letter words

5 letter words

4 letter words

5 letter words

bin	pin	thin	spin		rock	sock	block	clock		jump	pump	thump	stump
can	man	plan	than		bell	well	shell	spell		test	rest	chest	crest
day	say	play	stay		back	pack	black	track		-	-	light	night
saw	paw	draw	thaw		hill	fill	chill	spill		meat	beat	cheat	treat
cab	tab	grab	crab		ring	wing	thing	bring		cake	make	shake	snake
bug	mug	plug	slug		duck	luck	truck	stuck		date	late	plate	state

hot	not	shot	spot	sick	pick	brick	thick	name	came	shame	flame
fat	pat	chat	that	tail	mail	snail	trail	rice	mice	slice	spice
cap	tap	clap	trap	bank	tank	thank	drank	ride	hide	slide	bride
hop	top	stop	shop	mask	task	flask	-	fine	mine	shine	spine
lip	zip	drip	ship	junk	bunk	trunk	chunk	more	core	store	snore
hit	pit	spit	grit	pink	wink	think	stink	woke	poke	broke	spoke
								rain	main	brain	chain
								sale	male	whale	stale

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## Appendix 2

### Rime units to be introduced and corresponding word lists

#### **Lesson 1 – aw**

law, jaw, claw, straw

#### **Lesson 2 – ab**

jab, lab, drab, stab

#### **Lesson 3 – ock**

lock, tock, shock, flock

#### **Lesson 4 – ell, ill**

sell, fell, hello, jelly

jill, pill, till, still

#### **Lesson 5 – ick, ack**

Nick, tick, click, flick

tack, lack, crack, shack

#### **Lesson 6 – testing and revision**

#### **Lesson 7 – ank, ink**

sank, rank, blank, crank

sink, link, drink, blink

#### **Lesson 8 – ank, ink, unk**

hunk, sunk, skunk, drunk

#### **Lesson 9 – ate, eat**

rate, mate, gate, crate,

heat, seat, wheat, bleat,

#### **Lesson 10 – ice, ine**

nice, lice, dice, twice

wine, line, dine, twine,

### Appendix 3

#### Lesson One

\*List words: law, jaw, claw, straw

Introduce words containing the rime 'aw' on flashcards. Both the teacher and the students will read the words together out loud.

\*Break the words into onset and rime. Eg. 'j' + 'aw' Flashcards will be cut into segments. Teacher will model how to say each segment separately, touching each segment as it is read. Focus will be placed on the letter clusters that make up each segment. Teacher will explain that the beginning segment is the onset and the onset is followed by the rime. Children will be given their own copy of flashcards to cut into segments. Children will say each segment out loud as they touch it.

\*Teacher will model blending segments to form words. Each child will say each word in the separate units and then blend to make the words, eg 'j' + 'aw' is 'jaw'. Teacher will ask, What is the same about each word? What is different about each word?

\*Children will be asked to repeat saying the rime unit and try to think of any other words they may know of which could contain this rime. New words will be written on flashcards and then cut into onset and rime. Teacher will model reading each new word in separate segments and then blend to make the word, eg 'dr' + 'aw' is 'draw'. Children will be asked to do the same with their own flashcards.

\*The teacher and children will record list of words in learning journals. Each rime unit will be written using a particular colour to highlight the constant nature of the rime whilst the onsets will be written in varying colours.

\*Teacher will ask, What is the same about each word? What is different about each word? How can we use what we know about one word to help us read or write another word?

Children will review new knowledge and skills gained and together the group will write statements regarding this in our groups learning journal.

#### Lesson Two

\*Children will review "aw" words from lesson one. They will be given a copy of the statements written together at the end of the last session to paste in their own learning journals. We will read these out loud together.

\*List words: jab, lab, drab, stab

Introduce flashcards of words containing the rime 'ab'. Both the teacher and the students will read the words together out loud.

Teacher will break the words into onset and rime. Eg. 'j' + 'ab' Flashcards will be cut into segments. Teacher will model how to say each segment separately, touching each segment as it is read. Focus will be placed on the letter clusters that make up each segment. Teacher will explain that the beginning segment is the onset and the onset is followed by the rime. Children will be given their own copy of flashcards to cut into segments. Children will say each segment out loud as they touch it.

\*Teacher will model blending segments to form words. Each child will say each word in the separate units and then blend to make the words, eg 'j' + 'ab' is 'jab'. Children will be asked, What is the same about each word? What is different about each word?

\*Children will be asked to repeat saying the rime unit and try to think of any other words they may know of which could contain this rime. New words will be written on flashcards and then cut into onset and rime. Teacher will model reading each new word in separate segments and

then blend to make the word, eg 'dr' + 'ab' is 'drab'. Children will be asked to do the same with their own flashcards.

\*The teacher will record list of words in learning journal. Each rime unit will be written using a particular colour to highlight the constant nature of the rime whilst the different onsets will be written in varying colours. Children will then record these words in the same manner in their own learning journal.

Children will be asked, "What is the same about each word? What is different about each word? How can we use what we know about one word to help us read or write another word?"

Children will use 'aw' and 'ab' flashcards to play memory.

Children will review new knowledge and skills gained and together the group will write statements regarding this in our groups learning journal.

### Lesson Three

\*Children will review "aw' and 'ab' words from previous lessons. They will be given a copy of the statements written together at the end of the last session to paste into their own learning journals. We will read these out loud together.

\*List words: lock, tock, shock, flock

Introduce flashcards containing the rime 'ock' on flashcards. Read words out loud.

Teacher will break the words into onset and rime. Eg. 's' + 'ock'

Flashcards will be cut into segments. Teacher will model how to say each segment separately, touching each segment as it is read. Focus will be placed on the letter clusters that make up each segment. Teacher will explain that the beginning segment is the onset and the onset is followed by the rime. Children will be given their own copy of flashcards to cut into segments. Children will say each segment out loud as they touch it.

\*Teacher will model blending segments to form words. Each child will say each word in the separate units and then blend to make the words, eg 's' + 'ock' is 'sock'. Children will be asked "What is the same about each word?", "What is different about each word?"

\*Children will be asked to repeat saying the rime unit and try to think of any other words they may know of which could contain this rime. New words will be written on flashcards and then cut into onset and rime. Teacher will model reading each new word in separate segments and then blend to make the word, eg 'bl' + 'ock' is 'block'.

\*The teacher will record complete list of words in learning journal. Each rime unit will be written using a particular colour to highlight the constant nature of the rime whilst the different onsets will be written in varying colours. Children will then record these words in the same manner in their own learning journal.

Children will be asked "What is the same about each word", "What is different about each word?" and "How can we use what we know about one word to help us read or write another word?" Children will look at related rime flip books and read words out loud.

Children will play with 'aw', 'ab' and 'ock' flashcards. "Who can make the most words?"

Children will review new knowledge and skills gained and together the group will write statements regarding this in our groups learning journal.

#### Lesson Four

\*Children will review “aw’ ‘ab’, ‘ock’ words from previous lessons. They will be given a copy of the statements written together at the end of the last session to paste into their own learning journals. We will read these out loud together.

\*List words :     sell, fell, hello, jelly

                    Jill, pill, till, still

Introduce flashcards of words containing the rime ‘ell’. Both the teacher and the students will read the words together out loud.

Teacher will break the words into onset and rime. Eg. ‘b’ + ‘ell’ Flashcards will be cut into segments. Teacher will model how to say each segment separately, touching each segment as it is read. Focus will be placed on the letter clusters that make up each segment. “The onset is ‘b’ and the rime is ‘ell’.” Children will be given their own copy of flashcards to cut into segments. Children will say each segment out loud as they touch it.

\*Teacher will model blending segments to form words. Each child will say each word in the separate units and then blend to make the words, eg ‘ b’ +‘ell’ is ‘bell’. Children will be asked “What is the same about each word ?”, “What is different about each word?”

\*Children will be asked to repeat saying the rime unit and try to think of any other words they may know of which could contain this rime. New words will be written on flashcards and then cut into onset and rime. Teacher will model reading each new word in separate segments and then blend to make the word, eg ‘sp’ + ‘ell’ is ‘spell’.

\*The teacher will record complete list of words in learning journal. Each rime unit will be written using a particular colour to highlight the constant nature of the rime whilst the different onsets will be written in varying colours. Children will then record these words in the same manner in their own learning journal.

Children will be introduced to the ‘ill’ rime and repeat the above process.

Children will be asked “When you see the rime i.l.l. in a word what will you say?” and “When you see e.l.l. in a word what sound will you hear?”

Children will read new list words together and be asked “What is the same about each word”, “What is different about each word?” and “How can we use what we know about one word to help us read or write another word?”

Children will play with ‘ill’ and ‘ell’ magnetic rime tiles. Adding different onsets make and say real and nonsense words out loud.

Children will review new knowledge and skills gained and together the group will write statements regarding this in our groups learning journal.

#### Lesson Five

\*Children will review “aw’ ‘ab’, ‘ock’ ‘ill’ & ‘ell’ words from previous lessons. They will be given a copy of the statements written together at the end of the last session to paste into their own learning journals. We will read these out loud together.

\*List words :     Nick, tick, click, flick

                    tack, lack, crack, shack

Introduce flashcards of words containing the rime ‘ick’. Both the teacher and the students will read the words together out loud. Teacher will break the words into onset and rime. Eg. ‘t’ + ‘ick’ Flashcards will be cut into segments. Teacher will model how to say each segment separately, touching each segment as it is read.

Focus will be placed on the letter clusters that make up each segment. "The onset is 't' and the rime is 'ick'." Children will be given their own copy of flashcards to cut into segments. Children will say each segment out loud as they touch it.

\*Teacher will model blending segments to form words. Each child will say each word in the separate units and then blend to make the words, eg 't' + 'ick' is 'tick'. Children will be asked "What is the same about each word?", "What is different about each word?"

\*Children will be asked to repeat saying the rime unit and try to think of any other words they may know of which could contain this rime. New words will be written on flashcards and then cut into onset and rime. Teacher will model reading each new word in separate segments and then blend to make the word, eg 'tr' + 'ick' is 'spell'.

\*The teacher will record list of words in learning journal. Each rime unit will be written using a particular colour to highlight the constant nature of the rime whilst the different onsets will be written in varying colours. Children will then record these words in the same manner in their own learning journal.

Children will be introduced to the 'ack' rime and repeat the above process. Children will be asked, When you see the rime i.c.k. in a word what will you say? When you see the rime a.c.k. in a word what sound will you hear? Can you hear the difference between the rimes 'ick' and 'ack'?"

Children will be asked, What is the same about each word, What is different about each word? How can we use what we know about one word to help us read or write another word?"

Children will play with flashcards. Each child will be asked to write as many words as they can recall from our collection of flashcards. 'Who was able to make the biggest list?"

Children will review new knowledge and skills gained and together the group will write statements regarding this in our groups learning journal.

### Lesson Six

Review rimes already taught (aw' 'ab', 'ock', 'ill', 'ell' 'ick' & 'ack') and new knowledge and strategies that have been taught so far.

Children will participate in the following activities involving all of the above rimes.

\*Make as many words as you can using your flashcards. Read these out loud to the group.

\*Read through onset and rime flip books.

\*Write as many words as you can using the rimes and share these words with the group.

Discussion. Children will share their new knowledge and discuss the strategies they can use when they come across a word that they don't know.

### Lesson Seven

\*Children will review "aw' 'ab', 'ock', 'ill', 'ell' 'ick' & 'ack' words from previous lessons. They will be given a copy of the statements written together at the end of the last session to paste into their own learning journals. We will read these out loud together.

\*List words :     sank, rank, blank, crank

                    sink, link, drink, blink

Introduce flashcards of words containing the rime 'ank'. Both the teacher and the students will read the words together out loud.

Teacher will break the words into onset and rime. Eg. 't' + 'ank' Flashcards will be cut into segments. Teacher will model how to say each segment separately, touching each segment as it is read. Focus will be placed on the letter clusters that make up each segment. "The onset is 't' and the rime is 'ank'." Children will be given their own copy of flashcards to cut into segments. Children will say each segment out loud as they touch it.

\*Teacher will model blending segments to form words. Each child will say each word in the separate units and then blend to make the words, eg 't' + 'ank' is 'tank'. Children will be asked, "What is the same about each word? What is different about each word?"

\*Children will be asked to repeat saying the rime unit and try to think of any other words they may know of which could contain this rime. New words will be written on flashcards and then cut into onset and rime. Teacher will model reading each new word in separate segments and then blend to make the word, eg 'bl' + 'ank' is 'blank'.

\*The teacher will record list of words in learning journal. Each rime unit will be written using a particular colour to highlight the constant nature of the rime whilst the different onsets will be written in varying colours. Children will then record these words in the same manner in their own learning journal. "What is the same about each word?", "What is different about each word?"

Children will be introduced to the 'ink' rime and repeat the above process.

Children will be asked "When you see the rime a.n.k. in a word what will you say?" and "When you see the rime i.n.k. in a word what sound will you hear?" "Can you hear the difference between the rimes 'ank' and 'ink'?"

Children will play with flip books. Each child will be asked to read words out loud. "How can we use what we know about one word to read another?"

Children will review new knowledge and skills gained and together the group will write statements regarding this in our groups learning journal.

### Lesson Eight

\*Children will review "aw' 'ab', 'ock', 'ill', 'ell' 'ick' & 'ack' words from previous lessons. They will be given a copy of the statements written together at the end of the last session to paste into their own learning journals. We will read these out loud together.

\*List words :    hunk, sunk, skunk, drunk  
                          sank, rank, blank, crank  
                          sink, link, drink, blink

Introduce flashcards of words containing the rime 'unk'. Both the teacher and the students will read the words together out loud.

Teacher will break the words into onset and rime. Eg. 'j' + 'unk' Flashcards will be cut into segments. Teacher will model how to say each segment separately, touching each segment as it is read. Focus will be placed on the letter clusters that make up each segment. "The onset is 'j' and the rime is 'unk'." Children will be given their own copy of flashcards to cut into segments. Children will say each segment out loud as they touch it.

\*Teacher will model blending segments to form words. Each child will say each word in the separate units and then blend to make the words, eg 'j' + 'unk' is 'junk'. Children will be asked, "What is the same about each word? What is different about each word?"

\*Children will be asked to repeat saying the rime unit and try to think of any other words they may know of which could contain this rime. New words will be written on flashcards and then cut into onset and rime. Teacher will model reading each new word in separate segments and then blend to make the word, eg 'tr' + 'unk' is 'blank'.

\*The teacher will record list of words in learning journal. Each rime unit will be written using a particular colour to highlight the constant nature of the rime whilst the different onsets will be written in varying colours. Children will then record these words in the same manner in their own learning journal. What is the same about each word? What is different about each word?

Children will be review the 'ank' and 'ink' rime list words. Children will be asked, When you see the rime a.n.k. in a word what will you say? When you see the rime i.n.k. in a word what sound will you hear? When you see u.n.k. in a word what will you say? Can you hear the difference between the rimes 'ank', 'ink' and unk?

Children will play Tic,tac,toe with flashcards for the above rimes. Each child will be asked to read words out loud. "How can we use what we know about one word to read another?"

Children will review new knowledge and skills gained and together the group will write statements regarding this in our groups learning journal.

### Lesson Nine

\*Children will review words from previous lessons. They will be given a copy of the statements written together at the end of the last session to paste into their own learning journals. We will read these out loud together.

\*List words :     rate, mate, gate, crate,  
                          heat, seat, wheat, bleat,

Introduce flashcards of words containing the rime 'ate'. Both the teacher and the students will read the words together out loud.

Teacher will break the words into onset and rime. Eg. 'm' + 'ate' Flashcards will be cut into segments. Teacher will model how to say each segment separately, touching each segment as it is read. Focus will be placed on the letter clusters that make up each segment. The onset is 'm' and the rime is 'eat'. Children will be given their own copy of flashcards to cut into segments. Children will say each segment out loud as they touch it.

\*Teacher will model blending segments to form words. Each child will say each word in the separate units and then blend to make the words, eg ' m' + 'ate' is 'mate'. Children will be asked What is the same about each word? What is different about each word?

\*Children will be asked to repeat saying the rime unit and try to think of any other words they may know of which could contain this rime. New words will be written on flashcards and then cut into onset and rime. Teacher will model reading each new word in separate segments and then blend to make the word, eg 'cr' + 'ate' is 'crate'.

\*The teacher will record list of words in learning journal. Each rime unit will be written using a particular colour to highlight the constant nature of the rime whilst the different onsets will be written in varying colours. Children will then record these words in the same manner in their own learning journal. "What is the same about each word? What is different about each word?"

Children will be introduced to the 'eat' rime and repeat the above process.

Children will be asked, When you see the rime e.a.t. in a word what will you say? When you see the rime a.t.e. in a word what sound will you hear? Can you hear the difference between the rimes 'eat' and 'ate'?

Children will play with magnetic onset and rime tiles. Children will be asked to make words and read words out loud. "How can we use what we know about one word to read another?" "Can we build lists of words for each rime?"

Children will review new knowledge and skills gained and together the group will write statements regarding this in our groups learning journal.

### Lesson Ten

\*Children will review words from previous lessons. They will be given a copy of the statements written together at the end of the last session to paste into their own learning journals. We will read these out loud together.

\*List words : nice, lice, dice, twice

wine, line, dine, twine,

Introduce flashcards of words containing the rime 'ice'. Both the teacher and the students will read the words together out loud.

Teacher will break the words into onset and rime. Eg. 'm' + 'ice' Flashcards will be cut into segments. Teacher will model how to say each segment separately, touching each segment as it is read. Focus will be placed on the letter clusters that make up each segment. The onset is 'm' and the rime is 'ice'. Children will be given their own copy of flashcards to cut into segments. Children will say each segment out loud as they touch it.

\*Teacher will model blending segments to form words. Each child will say each word in the separate units and then blend to make the words, eg 'm' + 'ice' is 'mice'. Children will be asked What is the same about each word? What is different about each word?

\*Children will be asked to repeat saying the rime unit and try to think of any other words they may know of which could contain this rime. New words will be written on flashcards and then cut into onset and rime. Teacher will model reading each new word in separate segments and then blend to make the word, eg 'sl' + 'ice' is 'slice'.

\*The teacher will record list of words in learning journal. Each rime unit will be written using a particular colour to highlight the constant nature of the rime whilst the different onsets will be written in varying colours. Children will then record these words in the same manner in their own learning journal. What is the same about each word? What is different about each word?

Children will be introduced to the 'ine' rime and repeat the above process.

Children will be asked When you see the rime i.c.e. in a word what will you say? When you see the rime i.n.e. in a word what sound will you hear? Can you hear the difference between the rimes 'ice' and 'ine'?

Children will play with flip books. Each child will be asked to read words out loud. "How can we use what we know about one word to read another?"

Children will review new knowledge and skills gained and together the group will write statements regarding this in our groups learning journal.