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ABSTRACT
        Taking into account what research says about getting
all children off to a better start in becoming literate, this booklet
discusses recent "cutting-edge" research in the area of reading and
spelling acquisition, focusing on the practical implications. The
first part of the booklet notes what happens in the homes of early
readers, discusses the content of a phonemic-awareness program for
school beginners, looks at some tutoring ideas for at-risk readers,
and suggests phonics as a regular part of the beginning reading
program, provided it is easy to follow and systematic. The second
part of the booklet discusses the situation in New Zealand for
children reading to learn, how good readers get better, and "Project
Read," a set of metacognitive strategies that can be adapted to any
reading level. Contains 66 references and 5 charts. Two appendixes
present a list of 44 children's picture books that play with sounds.
(RS)

AT THE CUTTING EDGE

Recent Research on Learning To Read and Spell

Tom Nicholson

At the
Cutting Edge
Recent Research on Learning
To Read and Spell

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Foreword

Beginning school is usually a momentous occasion for 5-year-olds and their parents. Once the first adjustments to school life have been made, most parents follow with eager anticipation the progress of their youngster in that central early school activity—READING. Some are excited, some are perplexed, and some are disappointed.

Undeniably, the early primary school and preschool systems in New Zealand have much to be proud of as far as the manner in which most children learn to read, but equally undeniably, not all children master these beginnings without some heartache. The fairly obvious conclusion is that the current emphasis on the "top down" model of reading acquisition practised in new entrant classrooms, is not equally suitable for all. None more so than the minority who have not acquired, from an early stage, some minimal level of phonemic awareness—that is, a demonstrated ability to manipulate sounds in words. This skill is essential if children are to acquire knowledge of sound-symbol and symbol-sound correspondences.

This is where Tom Nicholson's latest book has an important contribution to make. Increasingly, there is research which identifies phonemic awareness as an important element in early reading success. This research suggests also that an environment which values books, parents who are skilled language users, plus the opportunity to explore, discuss, reproduce, and interact with adults about the structures and components of English, all help to establish foundations of knowledge that underpin early reading. But what of the plight of children who do not acquire this base of knowledge or understanding? Tom Nicholson is able to outline in a clear, readable way the case for focusing on phonemic awareness and the activities that promote these skills.

Phonemic awareness should not be confused with phonics, nor should this book be seen as a plea to shift reading instruction to a so-called "bottom up" approach. The thrust is that phonemic awareness is an important—but not the only—component of early reading. Children who enter the school system without these prerequisite skills for reading should be engaged in a programme from the earliest stages that helps establish these skills.

It is not a new finding to suggest that a "less structured" approach to language learning and teaching may not be the optimum for all, and that there are some learners who may well benefit from a "more structured" approach. Indeed, the late Professor Peter Freyberg pointed out, on the basis of his research in the early 1970s, that the less structured approach to spelling, as advocated by the late Dr Gordon Arvidson and incorporated in the NZCER Alphabetical Spelling Lists, did not cater for the less proficient 25 percent. Freyberg advocated a "more structured" approach for these learners. There is a clear parallel with Tom Nicholson's latest work.

Eclecticism has been a continuing feature of our primary school teaching, and the addition of this book to the resources now available will help maintain this healthy tradition. NZCER is pleased to bring to teachers another product of research and we hope it will take its place alongside our other widely-used publications in the language area.

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Cedric Croft
NZCER

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Acknowledgment

PART 1:

Developing Phonemic Awareness in Beginners

Starting Out

When you first started school, did you find it hard to learn to read? Most people cannot remember learning to read; nor can they remember any difficulties. What they sometimes do recall are the little primers they were given in school. And sometimes they remember activities set by the teacher. Yet they do not remember struggling with the reading task itself (e.g., trying to read "cat").

Although most of us do not remember the process of learning to read as being especially difficult, it certainly is so for a minority of children. Even for the average child, learning to read (and spell) is not all that easy. The fact that children start with little primers is an indication that learning to read is no overnight feat. For most children, reading and writing are their major tasks in the first few years of school.

Why then is learning to read and write so hard? And what new ideas are available to make these tasks easier? If you would like some answers to these questions, then please read on. We will be discussing recent "cutting-edge" research in the area of reading and spelling acquisition, especially the practical implications. The focus is not just on research itself, but on what research has told us about getting *all* children off to a better start in becoming literate.

Early Readers

If it is true that learning to read is hard, then why is it that some children learn to read even before they get to school? Surely they must have had help. If so, where does the help come from?

A brief review of Anbar's (1986) study of 6 preschoolers who had learnt to read provides some insights. The parents of each preschooler were interviewed by the researcher, especially on the stages that their children went through in learning to read, and on the parents' attitudes toward

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help ng them.

The data also included retrospective interviews, where the parents described how their toddlers had learnt to read. These data may be flawed, since the parents may not have remembered correctly. But the overall results were in line with those of other studies of early readers (e.g., Durkin, 1966; Clark, 1976). So Anbar's study is worth discussing in more detail.

In her study, Anbar (1986) found that each of the 6 children went through similar stages.

- First, there was a period of time where they became familiar with books. The children turned pages, their parents read to them daily, they played with magnetic letters, and with alphabet blocks.

- Second, they went through a stage where they learnt to recognise letters and some sight words.

- Third, they showed interest in the sounds of letters, using ABC books, invented sound games, and alphabet letters.

- Fourth, they started to use this knowledge to "make words", using plastic letters, blocks, or cards.

- Fifth, they got interested in sounding out new words, as long as the words contained only a few letters. Then they started reading for themselves.

What did parents do to help this process? In the interviews, they reported reading stories every day, helping with the alphabet, with spelling, with sound games, and with "making words" (Anbar, 1986):

> Data clearly show how these parents helped the subjects learn the names of the letters, playing letter games for hours and repeatedly reading from alphabet books. 'Show me an A, show me a B' and, 'What letter could you change that would make a new word?' were common games described by parents . . . (p. 75).

The above activities, involving letters and sounds, are supported by a great deal of research. Here are some other points made by Anbar (1986):

> Parents eagerly helped their children with spelling attempts and encouraged efforts in 'making words'. They daily read books to and with the child, often pointing at each word, and with much patience and enthusiasm listened to the children read aloud to them. They also enjoyed making rhymes with words. 'What rhymes with

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Mommy?' one of the mothers used to ask. (Her son's favourite response would be 'salami') (p. 75).

The above comments show the enc mous amount of time that these parents willingly put into their children's preschool reading. They seemed to have a massive armoury of books, alphabet letters, flash cards, dictionaries, workbooks, electronic games, and on and on (Anbar, 1986). There was only one case of a parent deliberately trying to "hothouse" her child. Most of the others got something personal out of it. For example (Anbar, 1986):

- In the case of Victor, the parents related how reading activities were used by them at first as a means of keeping him calm. This requirement was imposed on them by the child's paediatrician due to the child's asthmatic condition . . .

- In the case of Sean, it appears that reading development became something of a hobby for his parents . . .

- Mark's parents' fears may have been the driving force behind their special interest in, and sensitivity toward, reading. The father remarked on his concern that Mark would become a poor reader like Mark's uncle . . .

- In Marna's case, reading activities seem to have been the lifeline between the child and her parents, who felt guilty about leaving her with a sitter so much of the time . . .

- In the case of Betty, early reading development seemed to have justified for the mother the resignation from her 12-year-long teaching career (p. 80).

The point of these anecdotes is to suggest that parents do contribute to their children's literacy development. The parents in the above study seemed to enjoy helping out. They encouraged, but did not pressure.

However, these children were not "typical" children. They tended to be above average on verbal ability tests. So it may be that some children play a role in their own success. Some are quick to see what reading is about, and are more likely to request books, ask for pencil and paper, and so on. In the literature this is called "evocative organism-environment correlation" (Stanovich, 1986; 1992). So, in a sense, the parents in the above study may not have taught their children to read, so much as responded to their interests. In these special cases of early readers, it is hard to work out cause

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and effect; it may be a bit of both.

Another interesting point about the findings was that these children were "cipher" readers. The term "cipher" (as explained in Gough, Juel, and Griffith, 1992) refers to the ability to use letter-sound rules to read and spell words. An example of letter-sound rules in action would be misreading "canal" as "cannel", or "belief" as "belife", or misspelling "mother" as "muthr". The home experiences of these early readers covered all the things that are important in learning the cipher: the alphabet (e.g., plastic letters), phonemic awareness (e.g., sound games), an intent on working out the rules (e.g., making words), and lots of exposure to examples of how words are spelt, and what the spellings say (e.g., listening to stories, with their parents both saying and pointing to the words). So, given that these early readers were picking up cipher skills, can we come up with ways of including these skills in a beginning reading programme?

The answer is "yes". However, when it comes to specifics of teaching suggestions, it is important to be aware that unsolved difficulties remain. On the topic of how children should be taught to read and spell, there is a diversity of thinking (for a review, see Nicholson, 1992).

The "Simple View" of Learning To Read

A number of researchers have been attracted to what is called the "simple view" of how children learn to read and spell. This model is shown in Chart 1 (Juel, Griffith, and Gough, 1986), though it needs to be explained.

The model begins by stating that *ethnicity, intelligence*, and *oral language* initially influence the development of phonemic awareness.

- The ethnicity factor reflects second-language differences.

- The intelligence factor reflects those personal characteristics that enable tasks to be achieved more easily by some children than others.

- The oral language factor reflects in part those cultural differences (e.g., availability of books, exposure to language games) that vary from one home to another.

Some of the above factors are probably also influenced by the effects of socioeconomic variables (see Stanovich, 1986).

The mediating role of personal variables and home background appear to influence whether or not children have acquired *phonemic awareness* skills when they first start school. Skills of phonemic awareness can be seen when children have awareness of sounds in words; for example, they can point
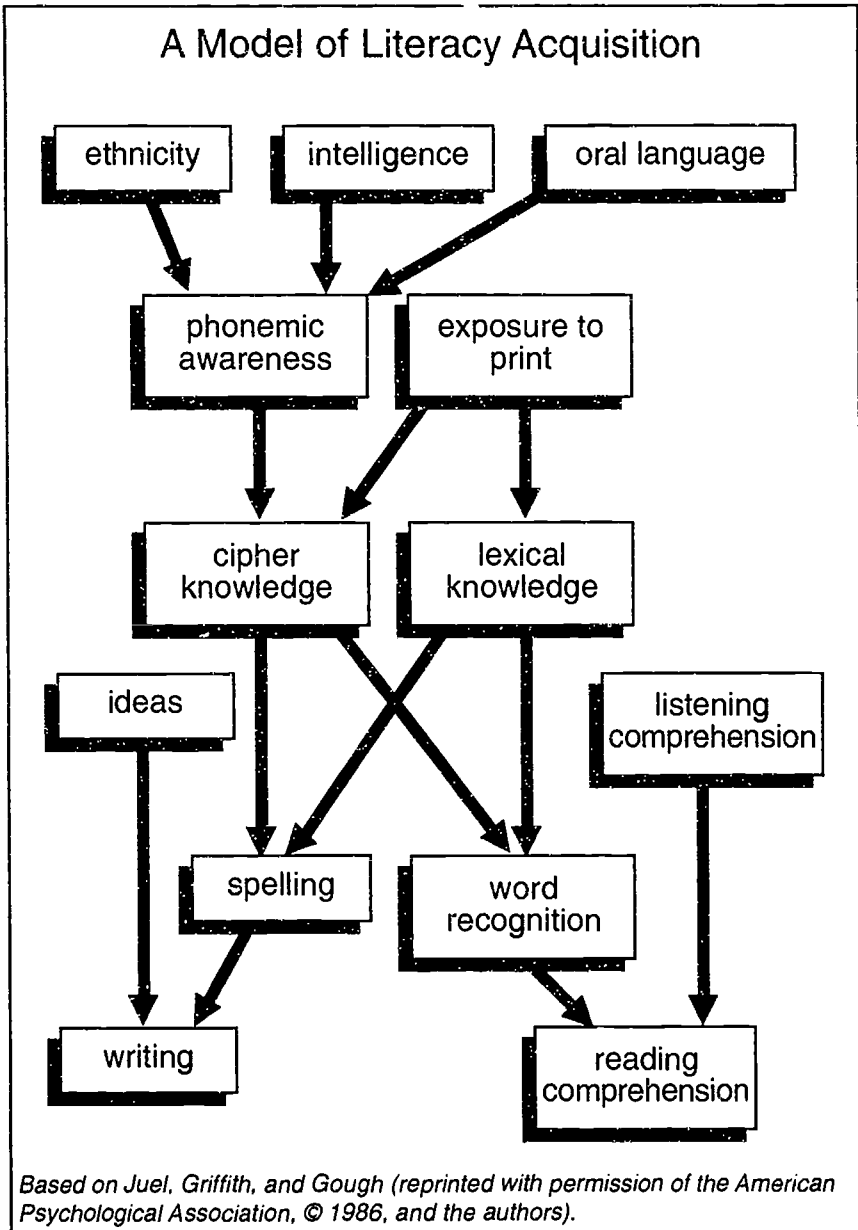
to picture cards where the object starts with the sound "f", or ends with the sound "s", as in a picture of a "frog", or a "house".

The next factor that influences literacy development is *exposure to print* as in reading stories aloud to children, so that they find out what the print actually "says". So, if children can recognise some letters, and if they have some phonemic awareness, that is, awareness of sounds in words (e.g., they can point to picture cards that start with "f", like "frog", or that end with "s", like "house"), and if they realise that the letters in a word map on to the spoken form, and if they can get examples of that through exposure to print, then they may start to acquire *cipher knowledge*, that is, knowledge of the letter-sound rules of English, which they can then start to use to "sound-out" words.

However, the challenge is to get all these things coming together. As was noted above, in the study of early readers (Anbar, 1986), parents provided their children with exposure to print when they read them stories each night. But learning the cipher also required that these children learnt some letters of the alphabet, played sound games (i.e., had the opportunity to acquire phonemic awareness), and "made words". After they had gone through all these stages, they were ready to start working out words on their own. And they did.

But the cipher, though crucial, is still not enough. The cipher will help children to read regularly spelt words like "cat" or "fan", but not irregulars like "have" (child may say "hayve"), or "great" (child may say "greet"). However, as children continue to read and write on their own, they will "pick up" these unusual spelling. As they read, they will come across the irregular spellings, and will make a mental note of these unusual spelling patterns. The model calls this *lexical knowledge*. Also, as pointed out earlier, context clues can be valuable here. For example, a rough "sounding out" of the word, combined with context clues, may be enough to reveal the correct spoken form. And these "data" will help the child to figure out exceptions to the rules (Gough and Hillinger, 1980; Groff, 1983).

The child who acquires cipher knowledge first seems better equipped to acquire lexical knowledge. With both, the child will acquire skills of *word recognition* and *spelling*. The cipher speller can produce invented spellings, but will need lexical knowledge as well, in order to spell correctly the irregular patterns (like "come" instead of "cum"), or the ambivalent forms (like "green" rather than "grean"). Likewise, the cipher reader will misapply the rules, for example, reading "tongue" as "tingee" (Thompson, 1986). So the cipher reader must learn exceptions to the rules as well. The term "lexical knowledge" refers to the exceptions.

A Model of Literacy Acquisition

ethnicity → intelligence → oral language

phonemic awareness → exposure to print

cipher knowledge → lexical knowledge

ideas

listening comprehension

spelling → word recognition

writing → reading comprehension

Based on Juel, Griffith, and Gough (reprinted with permission of the American Psychological Association, © 1986, and the authors).

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Finally, word recognition skill, combined with the child's *listening comprehension* (i.e., general language ability), is the basis for *reading comprehension*. The reason for keeping "listening comprehension" separate is that decoding and listening make independent contributions to reading comprehension. For example, it is easy to think that a poor decoder is always a poor comprehender, when this may not be so. Some poor decoders can understand the content of written material. If the material was read aloud to them, so they could fully concentrate on the meaning, then they would understand it (i.e., their listening skills are fine). Where they have trouble is their lack of good decoding skills.

In other words, the good reader will have fluent decoding skills as well as competent listening skills. This way, the child is able to read the printed words on the page, and also understand them. But if decoding is poor, or listening is poor, or both these areas are poor, then reading will also be poor (*see* Gough and Tunmer, 1986).

Likewise with *writing*. According to the model, the child who can spell is not a writer. The writer needs *ideas* as well. The model keeps "spelling" and "ideas" separate because some poor writers can spell, but lack ideas, while others have ideas, but cannot get them out, because all their mental energy is going into spelling the words correctly. If they were asked to explain their ideas aloud, then they might be able to give a better impression of the extent of their ideas.

Implications of the "Simple View"

What is important about this model of learning to read and write, is that it gives a clear picture of what needs to be attended to in early reading and spelling. Initially the major task for beginners is to acquire cipher and lexical knowledge. Once these skills become automatic, further progress in reading and writing will depend on listening comprehension ability (i.e., language knowledge), and "ideas". The important implication is that research does support this model of literacy acquisition. The model does not endorse any one way of teaching. So, no matter what reading and writing programme is used in schools, teachers can still make adjustments, and theory and practice can come together. Such adjustments would involve keeping a check that the key areas are covered. These are:

- alphabet knowledge,
- phonemic awareness,
- cipher intent, and

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- data.

They are the basis of the cipher. And the cipher is the foundation of literacy.

But the critical ingredient in gaining cipher knowledge (i.e., letter-sound rules) seems to be phonemic awareness. This is a real problem for many new entrants. While they might know some letters of the alphabet, they often have no idea that there are sound segments in words. Hence, they cannot see what the teacher is driving at when the notion of letters and sounds is talked about.

Teaching Phonemic Awareness

There have been a number of attempts to teach phonemic awareness, both to preschoolers, and to children in their first year of school. For example, Elkonin (1973) used slowed pronunciation (e.g., m-ou-se) to unpack sounds in words. Other researchers have used the iteration technique, especially for consonants that do not stretch, such as p-t-d-b-k-g. An example of iteration is "d-d-d-duck" (see Wallach and Wallach, 1979; Lundberg, Frost, and Peterson, 1988). Another approach is to delete phonemes (e.g., tape → ape, meet → me). Children can also learn to add phonemes (e.g., and → sand → stand). Lewkowicz (1980) suggests that segmenting activities be combined with slowed pronunciation, so as to make the task easier. A number of researchers have tried such techniques, and with some success (for reviews, see Olson, 1990; Tunmer, 1991; Stanovich, 1992). Training programmes have usually shown gains in reading and/or spelling. It has also been found that 6-year-olds in Reading Recovery programmes finished 30 percent faster when extra phonemic-awareness training was added to their remedial instruction (Iverson and Tunmer, 1992).

Also, the correlation between phonemic awareness and reading progress is so strong that it is hard to doubt its value (for reviews, see Tunmer, Herriman, and Nesdale, 1988; Stanovich, 1993-1994). The question is, will such training really be any better than current efforts, such as "process writing", and the teaching of "prediction" skills, which are part of the whole language approach?

New Zealand Research
Evidence is just starting to accumulate on this question. For example, Castle, Riach, and Nicholson (1994) have recently reported 2 experiments on phonemic-awareness training carried out in New Zealand classrooms. In

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the first experiment 15 new entrants were taught phonemic awareness for 20 minutes, twice weekly for 10 weeks, in small groups, while a matched control group of 15 new entrants did "process writing", that is, where they wrote their own stories, and were encouraged to make their own spellings, for example, "hv" for *have*, or "kt" for *cat*. The study looked at whether children in the experimental group improved in spelling more than those in the control group, even though they both received equal amounts of extra teaching. The findings indicated that children in the experimental group did indeed improve more than the control group in spelling skill.

The second experiment also involved teaching phonemic awareness to new entrants, but with a focus on improvement of reading. In the experimental group, 17 children were taught phonemic awareness, while a matched control group of 17 other new entrants did alternative activities, such as categorising pictures (e.g., which pictures are "animals"?) and a second matched control group of 17 children were given no extra instruction at all. This study looked at whether the experimental group gained in reading, more so than the other groups. The training was also done in small groups, 20 minutes per week, for 15 weeks. And gains did occur. The phonemic training group made significant gains not just in reading skills, but in spelling as well. Also, a later follow-up of the progress of the children suggested that children who start school with low levels of phonemic awareness, and who do not receive training in this skill, will be more likely to need Reading Recovery remediation.

However, training in both the above studies was not confined just to phonemic awareness, in that the training also included attention to letters (e.g., children learned that *c* is the letter that starts *cup*). But these preliminary New Zealand findings are consistent with other research on the value of teaching phonemic awareness routinely, as part of the regular reading programme as soon as children start school. They add to similar findings from other studies already mentioned.

How Do You Teach It?

Teaching phonemic awareness is not a trivial task. For example, Byrne (1991), in a study of reading acquisition, found there was not much benefit in teaching things like *m* says "m" and *s* says "s". Croft and Boyd (1993), in a New Zealand study, found that teaching vowel sounds in isolation did not seem to help older children who were poor spellers. It seems that children do not generalise this knowledge (i.e., relate sounds to letters) unless they know about phonemic structure as well (e.g., "sun" and "sail" start with the same sound). Also, teaching about phonemic structure works even

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better if it is combined with activities showing how sounds relate to let-
ters. It is worth noting that Byrne and Fielding-Barnsley (1991, 1992) have
developed and researched a programme for preschoolers which does this
successfully. Some examples of tasks which require phonemic–awareness
skills are given in Chart 2.

Chart 2

Tasks That Assess Phonemic-awareness Skills

Tasks	Examples
1. Sound-to-sound matching	Is there an /f/ in calf?
2. Rhyme	Can you point to the picture that rhymes with cat? (Show picture of cow, hat, frog.)
3. Word-to-word matching	Do "pen" and "pipe" start the same?
4. Phoneme segmentation	What are the sounds in "wug"?
5. Invented spelling	Write the word "boat" (spellings should sound like the correct word, i.e., "bot" for "boat").
6. Phoneme blending	What word is /f/-/i/-/sh/?
7. Phoneme deletion	Say "cat" without the /k/ ("at"). Say "same" without the /m/ ("say").
8. Phoneme substitution	Instead of "k" start "cat" with "m" ("mat"). Instead of "k" end "lake" with "t" ("late").

Code: 1-6 = easier; 7-8 = harder

(Based on Lewkowicz, 1980; Yopp, 1988)

A good example of phonemic teaching comes from a study by Wallach
and Wallach (1979), where children from low-income families were taught

phonemic awareness. What happened was that the most typical sound was taught for each consonant, and the short sound (e.g., "a" as in *cat*) was taught for each vowel. Each phoneme was taught according to its order in the alphabet (e.g., "b", then "d", then "k", and so on). After teaching each sound, the children were then taught the letter that went with each sound.

In addition to teaching phonemic awareness, letters of the alphabet were also taught, and linked to sounds. When teaching sounds, these were sometimes distorted. For example, they would say "beh, beh, beh, bottle", even though the phoneme "b" had "eh" attached to it. Their explanation was that children would figure out that the "eh" was extra, because quite a few consonants all had the same "eh" sound attached to them.

However, as Griffith and Olson (1992) suggest, it may be better to introduce non-distorted, continuant sounds at first, to make the segmenting task easier (e.g., f, m, n, s, v, z, and r). The stop sounds, with "eh" attached, could follow later (e.g., b, d, g, k, j, p, t). Also, to make the task easier, start with initial sounds (e.g., *s*un), then final (e.g., su*n*), then middle sounds (e.g., s*u*n).

Wallach and Wallach Technique

To illustrate, here is a short version of their teaching steps (*see also* Chart 3), just to give an idea of how to teach phonemic awareness (based on Wallach and Wallach, 1979; for adaptations, *see also* Riach, 1993; Castle, 1993; Castle, Riach, and Nicholson, 1994). The teaching steps are as follows:

- *Step 1*: Introduce the phoneme in a tongue-twister sentence, like "Freddy frog found a funny freckle on his finger". The child repeats the sentence with you, this time separating off the initial phoneme (e.g., F- reddy, f- rog, f- ound . . .).

- *Step 2*: The child is shown 2 pictures and has to pick which starts with the phoneme being taught (e.g., picture of "mouse" and "cat"; the child names the pictures and says which one starts with "m"). This is repeated with, say, 5 more picture pairs.

  If the child chooses the wrong picture (e.g., says "cat" starts with "m"), the teacher shows how it is wrong (e.g., "No, that's 'cat', not 'mat'"). Then the teacher points to the picture of a "mouse" and says, "'Mouse' starts with 'm'. Say 'm- ouse'".

  If the choice is too hard, the teacher can give a clue, by breaking the phoneme off the word (e.g., "This picture is a 'c- at', this is a 'm- ouse'").

- *Step 3*: The teacher shows just 1 card, and child has to decide if it

starts with the critical phoneme. This is a bit harder. The teacher gives feedback and help as for Step 2.

- *Step 4:* The child is taught the letters that go with, say, the 2 phonemes being taught in that lesson (e.g., *m* says "m", *c* says "k"). The child then tries to match letters to pictures that start with the sounds of the 2 phonemes (e.g., sorting pictures into piles that start with the letters "m" and "c").

The above technique was used as part of Riach's (1993) study, noted above, in which groups of 5 children were given short lessons of 20 minutes. In each lesson they focused on just 2 or 3 letters at a time. In the training programme, the first lesson started with the sounds of *a* (as in "apple") and *b* (as in "box"). In later lessons, new letters were gradually introduced, and old ones reviewed:

a, b, c
c, f, m
a, b, c, f, m
p, r, s
i, n

The activities were similar to those of Wallach and Wallach (1979), as in:

Steps	Teaching script
1.	Teacher says names of the "a" picture cards . . . *apple ant alligator*
2.	Teacher segments the "a" . . . aaa—*apple*, aaa—*ant*, aaa—*alligator*
3.	Teacher repeats 1 and 2, using the "b" picture cards . . . *box bottle ball*
4.	Teacher scrambles the "a" and "b" cards; children unscramble and regroup them into "a" and "b" piles.
5.	Teacher turns all cards face down. A selected child turns up 2 picture cards. If they start with same sound, and child knows this, then child keeps pair of cards, and turns up another 2 cards, and so on. Child with most cards wins.

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Odd-one-out Technique

Riach (1993) also used other activities such as the "odd one out" technique, as in Bryant and Bradley (1983), where the child is shown 3 or 4 pictures, and chooses the picture that is the odd one out (*). For example, here are sets of words that can be illustrated with picture cards, for use in teaching initial, middle, and final sounds. Be sure to start with sets of only 3 pictures at first. Use 4 pictures as children get better.

Initial sound	Middle sound	Final sound
can	cat	cat
cat	tap	*cab
cup	*cup	mat
*dog	mat	pot

* = odd one out

Riach (1993) also used a bingo game where picture cards were spread face down on the floor. The child would pick up a picture card and try to match it to one of a series of letters on her own bingo card. If correct, the child put a counter on the matching letter of her card. The first child to fill up his or her card won the game.

Finally, a puppet was used. The puppet had the habit of leaving off the first sound in each word, and putting on a new one, as in: "Mello, mow, mar, moo, mooday?" The children were taught how to do this, so they could also make the puppet talk.

In Castle's (1993) study, similar activities were used, for example, the odd-one-out phoneme matching, using picture cards. Children were shown 3 cards, and a child in the group was then given a chance to select a pair of cards that fitted one of the following patterns:

Initial sound	Middle sound	Final sound
cat	*top	dog
*hat	cap	bag
cap	hat	*bat

* = odd one out

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Phoneme-segmenting Technique

Castle (1993) also taught children to segment sounds in words by stretching them out (e.g., frog ➔ f-r-o-g) Using a puppet, the researcher taught them to delete sounds (e.g., web ➔ eb) and add new ones (e.g., eb ➔ et; et ➔ pet) as well. This would initially be done just as a verbal game, using picture cards. Later in the training, it was possible to use pictures and also letters of the alphabet, so that children could delete and add letters, to form new words. Each lesson was focused on just 1 or 2 sounds, as in:

p, m
p, t
a, o, g
b, a
f, r

The picture cards included pictures of things like: *fish, turtle, pig, piano, mouse, cap, cat, hat, mop, rat, dog, log, flag, frog, peg, elephant, sun, gun, hen, bag.* As already mentioned, Castle used the Wallach and Wallach (1979) technique with these cards, and also the odd-one-out technique (Bryant and Bradley, 1983). Focusing on just a small set of sounds each lesson meant that most of the vowel and consonant sounds that have simple correspondences with letters were able to be covered. So, at a later stage, words that used these regular sounds (e.g., cat, bag, sun) were able to be spelt.

The above steps are only meant to indicate the kind of systematic teaching that can be done. More details are included in the references quoted in this and preceding sections. A demonstration lesson is given in Chart 3 as an example, and some sample pictures on pages 33–42.

Elkonin Technique

Another idea is to place counters in boxes drawn beneath a picture of the word to be analysed. Each square represents a phoneme. The child says the word slowly, while placing a counter in each square as each phoneme is said. Gradually, letters are introduced to replace counters (Clay, 1985). This idea is based on work by Elkonin (1973), and is used in Reading Recovery teaching (Clay, 1985). It was also used in the training programmes of Castle (1993) and Riach (1993):
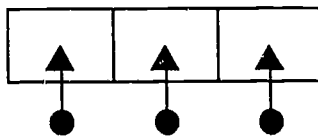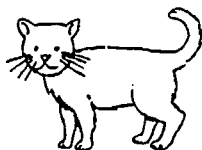
Chart 3

Demonstration: Teaching Phonemic Awareness
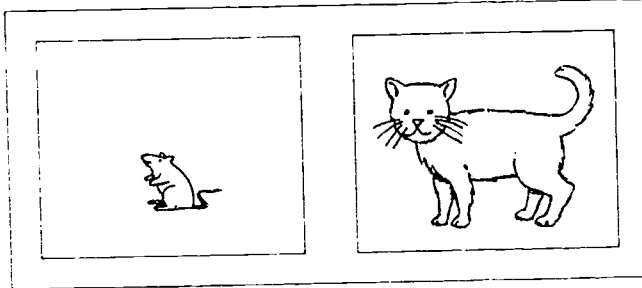
Starting point (sounds only)

1. Point to the picture that starts with "m".

2. Yes, that's right, "mouse" starts with "m",
   or
   No, that's "cat", not "mouse".

3. Let's look at the pictures again. Yes, this is *m-m-m*-mouse, and this is *c-c-c*-cat.

Revision (sounds only)

Does this picture start with "m"? (e.g., teacher points to picture of cat).

Extension (using letters of alphabet)

1. This letter (*m*) says "m"; this letter (*c*) says "k".

2. Can you point to the picture that starts with this letter? (c)

   Yes that's right. "Cat" starts with this letter (c) which says "k". Say k-k-k-cat.

3. Can you sort these pictures into groups that start with *m* and *c*?

(Use pictures of mouse, milk, moon, cat, cow, crab).

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Alpha Pictures

Yet another idea for introducing letter-sound correspondences is to use "alpha pictures", where the letter of the alphabet is drawn into the picture (e.g., the letter "f" is made to look like a flower). Again, the child has to say the sound of the letter by separating it from the word, as in "f- lower" (Wallach and Wallach, 1979; Ehri, Deffner, and Wilce, 1984; Adams, 1990).

Lip-popping Technique

A final idea for teaching the idea of speech sounds is to encourage children to attend to their articulation. So, instead of asking them to "listen carefully to the 'p' in 'spot'", the teacher has them play with "p" words (e.g., "pan", "pop", "top"), by popping their lips as they say the words. The idea is to help the child realise how the "p" sound is actually made. This can also be done with "b". They are "lip-popper" sounds (Calfee, 1991).

Other sounds can be fitted into different categories, like "tongue-tipper" for "t" and "d"; "tongue-back" for "k" and "g". These exercises can give children a basic sense of what sounds are all about, and how they are made. The aim is to explain the concept of "sound segments", rather than wait for them to infer it. A few exercises like these might be enough for them to understand what the notion of "sounds" is all about.

Once children have a sense of the phonemic structure of words, then they are ready to do more advanced word play with letters and sounds, such as deleting and adding, for example, changing *and* to *sand*, to *stand*, to *band*, to *brand*, to *branch*, and so on (see Bryant and Bradley, 1985).

Sound-play Books

To finish off this discussion, it is worth considering the use of "sound-play" books. The examples on page 17 have been suggested by Griffith and Olson (1992). More titles are listed in Appendix 1.

Is Phonemic-awareness Teaching Really Necessary?

The argument against teaching phonemic awareness is that children will

Type of sound play	Title	Example
Alliteration (same initial consonants)	*Animalia* (Base, 1986)	*l*azy *l*ions
Assonance (same middle sounds)	*Who Said Red?* (Serfozo, 1988)	gr*ee*n b*ea*n
	Sheep on a Ship (Shaw, 1989)	r*ai*n h*ai*l
Rhyme (same end sounds)	*Jamberry* (Degen, 1983)	shoe*berry* in my canoe*berry*
Phoneme switching	*Don't Forget the Bacon!* (Hutchins, 1976)	a *c*ake for *t*ea ➤ a *c*ape for *m*e ➤ a *r*ake for *l*eaves

do just as well if the new entrant programme includes process writing, and a "whole language" approach to teaching reading. Yet the above New Zealand studies (Castle, Riach, and Nicholson, 1994), carried out in "whole language" classrooms, suggest that phonemic-awareness training is more effective than just giving extra shared reading, and extra process writing.

If so, then this kind of addition to the regular programme will get children off to a better start, and may reduce the number of children who have to be given remedial tuition in Reading Recovery, keeping in mind that 28 percent of 6-year-olds went through this "catch up" programme in 1992 (Kerslake, 1993). And the numbers seem to keep increasing (cf. Boyd and Bennie, 1991). If we can reduce the number of children needing a catch-up programme, then we will be helping to take pressure off Reading Recovery, and we will be helping children as well.

Cross-age Tutoring

So far, the suggestion is that phonemic-awareness training could be just an extra to the regular programme. But there are other possibilities as well. For instance, such training is already included in Reading Recovery, which is a tutoring scheme for "at risk" children. Another example of tutoring for at-risk 6-year-olds was reported by Juel (1991). This tutoring was done by a group of university athletes who had themselves experienced academic problems in school, and who genuinely wanted to help. For example, one

of them commented (Juel, 1991):

> I was the little kid that had trouble reading, the one that used to do anything to get out of reading. I used to tell the teacher that I did not feel well, lost my voice, and used to try to get in trouble just so I wouldn't have to read and instead would be sent to the office or to the corner. Because of these experiences as a child, I understand how some of the children are feeling. I have been there. The worse thing that happened to me when I was a child was to be embarrassed. Not knowing how to read can be embarrassing to a child. The other kids in the class laugh at you and make fun (p. 180).

The first graders (6-year-olds) who were chosen for tutoring were those who started school with very little experience of books. The university athletes used a variety of tutoring ideas, which fitted with the "Simple View", as described above. For example, a basic concept in reading is that stories are made up of "words". To get this idea across, the tutors made up a "journal" for each child. It was just a folder with loose pages inside. The child told the tutor a word that could be recorded, and the tutor wrote it down. The word had to have some significance for the child. The child then copied it into the "journal". Gradually these journals started to include sentences, longer stories, and messages. The idea may be old, but it gives an example of how to build up these basic concepts about print.

Another activity was the "alphabet book". This involved using a computer to generate separate pages, each with a letter and an illustration (e.g., B, b, balloon . . . and a picture of balloons). The child would copy the letters, and write in other words that started with "b". Nothing new about this, but it covers another important basic skill.

How was phonemic awareness dealt with? The tutors tried various activities, such as reading Dr Seuss books, and playing with rhymes. They also used puppets that could only understand words that started with certain sounds, like the "f" in frog, funny, fantail, and so on. The children had to think of such words (e.g., "fow far foo fooday?"). They also did "word stretching", where the child had to guess the word, as in "f" . . . "u" . . . "n". Finally, as was described earlier, they used the Elkonin technique where the child has to put bottle tops or buttons into boxes, one for each sound. It was based on the same technique as in Reading Recovery (Juel, 1991):

> A sheet of paper was marked into a few columns. As the tutor slowly pronounced a short word like 'at', the child moved a penny into a new column each time he or she heard a new sound. *At* would need two pennies, *cat* required three pennies, and so forth (p. 182).

Teaching "cipher intent" involved making up printed words. The tutors would get the children to use letters instead of pennies for the above word boxes. They would also get them to change the words by changing letters. They tried to pick words from class readers, and then make changes (Juel, 1991):

> The tutor might put up *run*, for example. Then the child would be asked to change it to *sun* or *fun* and so forth. If the child had trouble with particular letter sounds, the tutor would show the child the key words in the alphabet book (p. 182).

Once children got the hang of letter-sound correspondence, they did do some writing on their own. They could use their emerging cipher knowledge to do invented spelling. The final step involved reading books. This was a source of "data". The tutors had a library of some 200 children's books, and could select one of these titles for reading time. Sometimes the tutor would do the reading; sometimes the children would read to their tutors. Children had a chance to put their cipher skills into action. In Juel's study, university athletes were the tutors, but there is no reason why parents or other adults could not be trained as tutors, if they were willing to volunteer their help.

Phonics

Should phonics be taught as well? The answer is "yes", but not as an endless set of unrelated lessons and rules. There is every reason to put some organisation into the teaching of phonics, so that children get a coherent view of what phonics is all about. At the moment, it seems that current programmes lack coherence. For example, even simple kinds of phonics activities are often not taught very well (Calfee, 1991):

> Competence in decoding requires strategies for carving up or 'chunking' complex words, compounds, and affixed combinations. Third graders know how to split compound words: rain/coat, fire/house, soap/suds, and so on. Youngsters willingly complete the assigned task, but what is the 'meaning'? Because the sample words are familiar from previous experience, students seldom see any point to the exercise. Suppose, instead, they are asked to reshape the words into new combinations—firesuds, soapcoat and rainhouse, for example, and to create definitions for each. Now previous experience is called on in a different, non-trivial manner (p. 85).

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There is nothing sacred about phonics. Like the whole language approach, phonics does not guarantee success. In New Zealand, 28 percent of children do not respond to whole language in their first year of school (Kerslake, 1993). But in the United States, Juel (1988) found that quite a few children do not respond to phonics either. The missing link seems to be phonemic awareness. Juel (1988) found that children who started school with good phonemic-awareness skills also did well in a phonics programme. In addition, Griffith, Klesius, and Kromrey (1992) found that children with good phonemic skills at school entry were also more likely to succeed in both "whole language" and "traditional" programmes. What this research is saying is that, no matter how children are taught, they need to know what sounds are, in order to learn letter-sound rules.

So why teach phonics? My reasoning is that phonics can help children to get a better feel for what decoding is about. However, as noted above, children have to understand what phonics is trying to do. They should not just complete work sheets to keep them busy. As Juel (1991) puts it:

> Perhaps phonics is successful with some children because it fosters both phonemic awareness and *cryptanalytic intent* ... In other words, phonics may (perhaps inadvertently) foster an attitude in the child of being a detective, a detective who is trying to break the 'code'. This attitude may help the child to become an active problem solver with regard to graphic information. Certainly the child will need such a spirit when faced with words that cannot be entirely decoded using the phonic rules the child has been taught. The child will also need to realize that the teacher can only give clues to the code and that there is an inexact match between the actual sounds of letters and the sounds that are taught in phonics (p. 782).

You may be thinking, "Yes, O.K., teach phonics. But which one?" There are many versions of phonics. According to Adams (1990), there are 100 different ways of teaching it. As Pearson (1976) also points out, some phonics programmes teach rules, some do not. The ones that *do not* teach rules give lists of examples, and the child infers the rules. The ones that *do* teach rules cover all the phonics rules, one by one. For example, they might teach the "silent e" rule, to indicate when a vowel has a long sound, as in "kit-kite". To summarise, there are many ways of teaching phonics, ranging from heavyweight to lightweight.

For most of us, phonics involves teaching *consonants*:

- single letters (e.g., f, s, m, t, etc.)

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- blends (e.g., "br", "st", etc.)
- digraphs (e.g., "ch", "th", etc.)

In addition we have to teach vowels:

- single letters, including the *long* sound (e.g., "made"), the *short* sound (e.g. "mad"), and sounds affected by "r" (e.g., "car") and "l" (e.g. "fall")
- vowel digraphs (e.g., *ow, ea, aw, ai,* etc.)

These rules may seem very dull, yet a child needs to know, for example, that "ch" says /ch/, and not /k/. So we should teach this. Also, there has been some progress in organising the various rules so that they seem more manageable (*see* Calfee and Drum, 1986). Also, Calfee and Drum's (1986) concise analysis has made the letter-sound rules seem much more teachable. At least you know the main points to cover (*see* Nicholson, 1991).

There are now some good new ideas on how to use lists of examples to illustrate rules, as is shown in Chart 4. By using such lists, children can see how the rules work, especially if the lists enable them to contrast different patterns, such as "hop-hope", "mad-made", and so on (Calfee and Associates, 1984; Henry, 1990; Nicholson, 1991). It may not be necessary to cover every pattern. Perhaps only some initial teaching of phonics is necessary in many cases (*see* Juel, 1991). Then, when children get the idea of the cipher, they could move ahead on their own. However, you have probably noticed that the above ideas all assume that the child has phonemic awareness. This is another reason why phonemic awareness is so important, and why it should precede, or run in parallel with, the teaching of phonics.

This general technique of studying patterns in words has also been used in a recent New Zealand study (Greaney and Tunmer, submitted), where poor readers were taught to make use of rhyme and alliteration by thinking of easier words with similar spelling patterns (e.g., they compared "gently", a hard word, with similar but easier words like *went, bent,* and *tent,* sharing the *ent* pattern). Of course, not all words have an analogy-rhyme to compare with, as Gough (1993) has pointed out. Words like *horse, zebra,* and *lion* lack rhyme partners. Yet a lot of words do have partners (e.g., *brand—sand, slope—rope*), and the analogy method may hold in these cases.

Chart 4

Demonstration: Teaching Phonics

c	m
cat	mat
can	man
cap	map
cop	mop
cuff	muff

Starting point

1. Let s read each list of words together.

2. Point to each word as I say them (e.g., can, mop, mat, cuff, etc.).

3. What's the same about each list? (the words in lists 1 and 2 have the same middle and end sounds, as in *cat, mat*).

4. What's different? (the words in list 1 as in *cat*, have different starting sounds to the words in list 2, as in *mat*).

Extension

Here is a short passage from a story.

Let's find some other words in the passage that start with the letters *c* and *m*.

For example:

c	m
car	*maze*
card	*me*
cow	*mussel*
cricket	*mud*

Let's play with the sounds in these words. What if we substitute "m" for "k" in the first list? How do we pronounce them now? (mar, mard, mow, mricket) and what if we put "k" for "m" in the second list? How do we pronounce them now? (kaze, kee, kussel, kud) and so on (e.g., final sounds can be added: "car" + t ➤ cart).

Summary

In Part 1 we have given some concrete suggestions about early reading. There are various ways of helping children acquire letter-sound rules, and we have looked at only some of them. To recap:

- We first noted what happens in the homes of early readers.

- We then discussed the content of a phonemic-awareness programme for school beginners.

- We then looked at some tutoring ideas for at-risk readers.

- Finally, phonics was suggested as a regular part of the beginning reading programme, provided it was easy to follow, and systematic.

There is no reason why phonics and whole language could not be taught together; in fact, phonics could be taught through to high school, to help students handle the longer and more complex words that crop up in later grades (Calfee and Associates, 1984). The logic of such teaching is that the better their cipher skills, the better their chances of becoming good readers. Put another way, children who have good cipher skills can concentrate on developing their general knowledge, through constant reading practice, which in turn will give them opportunities to think productively about what they read. These points are explained further in Part 2.

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PART 2:

Beyond Decoding --
Reading To Learn

The Situation

Many children, both in New Zealand and overseas, start school with inadequate preparation for learning to read and spell. As already discussed, children who lack phonemic-awareness skills seem to be most at risk. They start behind, and do not usually catch up. In fact, the gap between them and the rest gets wider as they proceed through school (Juel, 1988; Stanovich, 1986; Tunmer and Hoover, 1993).

The point of mentioning these statistics yet again is to keep us mindful of the fact that poor readers can slip through the net of the beginning school programme. They are in the middle and upper elementary school, in middle school, and in high school as well. The teacher has a great deal to do at these levels of schooling. Children are coming up against advanced material, with longer words, new meanings, and complex ideas. Most of them are still working on advanced decoding skills, while at the same time "reading to learn". Research on older poor readers shows that they are usually poor decoders; this is the typical pattern (Juel, 1988). But there will also be some (not many) who can decode, but have poor language skills (Dymock, 1993). Both groups need help.

In New Zealand, the usual teaching plan in the upper levels of elementary school is to have children in ability groups, working on different reading tasks. A recent interview survey of 77 teachers summarised their responses as follows (Henson, 1991):

> The great majority of teachers operated set ability groups, chosen as a result of pupils' attainment test results . . . The most common practice was for these set groups to be working on two- to four-day cycles with an instructional lesson being central. This was usually called guided silent reading, but a common practice for at least part of this lesson was for the teachers to be hearing pupils read. The other days were being used for follow-up activities, such as written compre-

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hension questions, vocabulary extension, cloze activities, further reading suggestions, or creative activities based on the original story (p. 8).

But is this kind of teaching plan sufficiently targeted to enable children to improve their decoding skills, as well as their vocabulary and comprehension? Perhaps not. It may be that children should be taught specific strategies that focus on *all* of these areas of reading. Also, in these middle years of school, it is especially important for poorer readers to continue to develop their *decoding* skills so that they can read longer words, such as "introduction", "inappropriate", "subantarctic", and so on. This is the vocabulary of more advanced text material. In addition, they need help in building their *vocabulary* and *comprehension* knowledge. Otherwise, they will get further and further behind.

This negative "Matthew effect"* of a widening gap between good and poor readers was noted in Henson's (1991) survey which also reported that teachers had to rely on outside help for poor readers. This help came from teacher aides and parents, and other pupils, who would tutor poor readers. However, the survey also found that many teachers felt frustrated by their lack of success. For example, one commented, "Probably don't have much success. Try to make them feel happy to come to school" (p. 12). In contrast, teachers reported that good readers did not need as much remedial help. They did their own thing. The teachers' only worry was about how to make them even better. The good readers were given independent reading and their own research projects. As one teacher put it, "They're masters of their own destinies" (p. 13).

How Do Good Readers Get Better?

Good readers read more. It appears that the sheer volume of reading they do enables them to enhance their existing decoding skills, as well as improve their vocabulary and comprehension. These are positive Matthew effects (for a review, *see* Stanovich, 1986, 1992). However, for poor readers to bootstrap themselves in this way requires that the material they read is not too difficult for them. Henson (1991) suggested that poor readers were struggling with text that was too hard.

* The terms comes from Matthew, Chapter 25, verse 29, "To everyone who has will be given more, and they will have more than enough; but from those who have not, even what they have will be taken away" (Stanovich 1986)

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A large number of teachers commented that these particular pupils were given a disproportionate amount of teacher time and attention. This involved hearing them read every day, giving more intensive monitoring, carefully selecting resources, and setting up special activities (p. 12).

The fact that poor readers struggle with text that is too hard for them, shows how important it is to select material they can cope with. There is evidence, from a study of fourth and sixth graders in the United States, that poor readers are not very good at selecting reading material for themselves. In this study (Anderson, Higgins, and Wurster, 1985), children were asked to keep a log of book titles that they chose during "free reading" time. But instead of choosing easy material, poor readers tended to choose text that was too difficult. In contrast, good readers chose suitable material. Why did poor readers choose hard material? A possible reason is that they wanted to disguise their problems:

> Children could be picking books for 'show' rather than pleasure reading. Real or imagined appraisal from peers, teachers and librarians may prevent them from selecting suitable books (p. 329).

It could also be that poor readers choose what they think will be interesting to read, without realising that the books are too hard. In other words, they unknowingly set themselves up for failure. As was noted in a longitudinal Texas study, where 54 children were followed from first to fourth grade, poor readers appeared "doomed" (Juel, 1988, p. 444). They were far behind in decoding, listening, spelling, and ideas for writing. These various negative effects reflected the Matthew principle, in that poor reading ability prevented these children from improving across a wide range of skills (Stanovich, 1986). Poor readers will not become good readers overnight. But the Texas study made one practical suggestion to compensate for the fact that they do not read very much (Allington, 1980). This was to use "the age-old technique of reading to children" (Juel, 1988, p. 446; *see also* Carver, 1987). This would at least help them to keep up their listening comprehension, and they might learn some new words as well, especially if they later revisited some of the new words in the text, and discussed what they meant (Nicholson and Whyte, 1992).

"Project Read"

We will close this topic with a brief review of "Project Read". This programme, developed at Stanford University in California (Calfee and Asso-

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ciates, 1984; Calfee and Henry 1986) is simple, costs little, and is amazingly flexible. It can be used creatively while at the same time being very focused and structured. It is being used in more than 100 schools in the United States (Stanford's "Inquiring School", 1991), and it has also adapted well to New Zealand schools. As shown in Chart 5, it covers decoding, vocabulary, and comprehension. This approach could be included in the reading programme across all grades. It is really a set of metacognitive strategies that can be adapted to any reading level. It is not meant to be "the" programme, but it could be an important idea for enhancing an existing programme.

- *Decoding* (or phonics) is divided into the teaching of regular words, compound words, and structural analysis. Some brief examples are given on the chart. The *regular* rules were briefly looked at earlier (when phonics was discussed). The teaching of *compound words* shows children how to make new words out of existing ones (e.g., forklift, knitwear, workload). Finally, children can be shown how *new words* are formed from base words, by using *prefixes* and *suffixes* (e.g., make, remake, remaking; open, reopen, reopening).

  In the "Project Read" approach, decoding rules are usually explained "up front" by the teacher. The rule is then illustrated by using lists of 5 or 6 examples. An example of this list approach is given in Chart 4. Lessons are usually scripted for small-group teaching, and may run for 20 minutes or so. This approach can be followed by lists with some extra text reading (*see* Nicholson, 1991, 1993). The particular text for the lesson is selected because it has examples of the rule that was taught; children can then see its relevance.

- *Vocabulary* is taught by using "webs", "continuums", "weaves", and "hierarchies" (Calfee and Drum, 1986). The web is like a spider web. The idea is that it helps the child to remember more about new words, since they are deliberately related to other words and ideas. For example, a general concept like "birds" can have information built around it in web form, with subheadings like "kinds of birds", "what they eat", "where they nest", "common features", and so on. Many new words can become part of the web.

  The *weave* is like a tapestry. Ideas are more strongly connected, in a matrix fashion. For example, a matrix pattern could compare and contrast different countries, like New Zealand and the United States,

in terms of size, population, main exports, famous persons, favourite foods, popular sports, and so on.

A *continuum* pattern may be a time line, that could show, say, events in New Zealand history, but in chronological order. A *hierarchy* pattern could illustrate the way different things like spiders, insects, and whales are all animals.
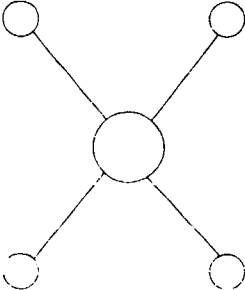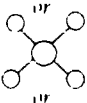
A final vocabulary strategy is to use structural analysis as a way of unpacking the meaning of words, for example, to show that "dis" (meaning "not") and "re" (meaning "again") can clarify words like "disappear" and "reappear". Again, as in decoding, the technique is to use lists of examples to illustrate prefixes and suffixes. Many children benefit from this explicit teaching, since they often do not infer the meanings of words that they read (Nicholson and Whyte, 1992).

- *Comprehension* is taught by separating narrative text from expository, so children can "see" them differently (Calfee and Chambliss, 1987). Again, diagrams are used to show the different structural patterns. The simple definition of *narrative* is that it is a story. The idea is to get across to children that there is a plot, and characters. One way to show the plot is to use a *story graph* which can be drawn on a large sheet of paper to show the high and low points of the story over time. Children write in the key events, in chronological order, according to their relative importance in the flow of the story (i.e., very exciting; not exciting).

Another technique with narratives is to break the *plot* into a few chunks, and then list the supporting details that go with each chunk; this helps to make the story more memorable. The chunks can be very simple, like "beginning", "middle", and end". A final narrative technique is to break the *characters* into "major" and "minor", and to group the various characters under each heading. This again puts some structure on the way the children see the characters.

In teaching children about *expository* text, "Project Read" gets across the idea that this kind of text is "not a story". This separates it from narrative. Children then learn about different kinds of expository text. The *sequence* text can show something happening over time, like the life cycle of the monarch butterfly. There is a cause-effect structure in this pattern: the events follow a set order; they cannot be scrambled. A *description* text can have a list structure, where there

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Chart 5

Later Reading

Things to try		
1	**2**	**3**
Regular words a) single lists (e.g., ou) (couch, mouse, house) b) contrasting lists (e.g., ou, oa) (couch, coach, bout, boat, out, oat) c) mixed lists (paint, grease, coat, grouch)	*Compound words* a) single lists (e.g., out) (outside, outdoors, outlaw) b) contrasting lists (e.g., air, fish) (air/line, air/port, gold/fish, king/fish) c) mixed lists (run/away, volley/ball, rain/coat)	*Structural analysis 1* (focus on decoding) a) single lists (e.g., ing) (acting, singing, jogging) b) contrasting lists (e.g., ing, er) (think/ing, think/er, eat/ing, eat/er, runn/ing, runn/er) c) mixed lists (a/live, jump/ing, dream/er, sleep/y)
Webs 	*Weaves* a) matrix, (e.g., NZ vs USA) SPORTS FOOD NZ USA b) *continuum* c) *hierarchy*	*Structural analysis 2* (focus on meaning) a) single lists (e.g., re = again) (rerun, return, rewrite) b) contrast lists (e.g., bi = 2, tri = 3) (bicycle, tricycle) c) mixed lists (video, audio, harmful, harmless)

Narrative
 	
a) *Story graph*
Hi
 	
action
 	
Lo
   start   time   end
b) *Plot*
 	
c) *Characters*
  More   More
	Expository
	
	a) sequence (e.g. life cycle of butterfly)
	
	b) description (3 kinds)
	list
	
	     or
	topical
	net
	
	     or
	matrix
		Other strategies
		
		Free reading at appropriate reading levels (i.e., not too hard)
		
		Read *to* children material they might not be able to decode, but would enjoy and could learn from

Row labels (left column): Decoding, Vocabulary, Comprehension

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is no set order. For example, it may be a list of things to take when you go fishing, of animals found in Australia, or products made in Japan. The order of items in the list does not matter. Other kinds of description text include the *topical net* structure (like a web), and the *matrix* structure (like a weave).

To sum up, we have looked at "Project Read" as an example of what can be covered in the school reading programme. It gives the teacher some extra ideas for teaching decoding, vocabulary, and comprehension. These ideas can be adapted to help both good and poor readers, as long as the examples chosen are at the right level of difficulty. The aim is to improve children's thinking skills, and to urge them to start looking for patterns, not just decoding patterns, but structures that connect words and ideas. The hope is that children learn to look for order and simplicity in what they read. Put another way, they begin to read more productively and effectively.

Final Summary

We have discussed a "simple view" of reading acquisition that puts the cipher as the key to literacy. The discussion also covered some teaching ideas that were in line with the simple view, such as teaching phonemic awareness. It was argued that such ideas can be added to a whole language programme, right from the first day of school. Indeed, phonics can also be included. This will get children off to a good start in learning how to decode words on the page.

Some final points related to tutoring strategies for use with at-risk readers, and to later stages of reading development, to show that decoding skill is also good for comprehension. A quick review of survey data showed that reading practices in the middle and upper elementary school were very open-ended, an approach that may disadvantage poor readers, who tend to choose text material that is too hard for them. Many poor readers also come from working-class homes, where parents may not be able to provide the same educational help as occurs in most middle-class homes. So they will start school at a disadvantage, and will not catch up (*see* Nicholson and Gallienne, 1993).

We concluded with a brief overview of "Project Read". Its appeal is that it tries to improve all aspects of the reading process: decoding, vocabulary, and comprehension. It can be used at all levels of schooling, as long as it is tailored to suit the age and ability of children at each level. It is consistent with the "simple view" presented here, and gives teachers some definite

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ideas about how to improve children's higher-level skills of comprehension.

Concluding Statement

When children start school they are good at talking. For example, they can put a compelling case to their parents, while at the supermarket, as to why they need to have "le snaks", "snackers", or "fruit roll-ups" in their lunch bags for school next day, even though their parents may have doubts about the health value of such treats.

Children are also very good watchers of television. They are happy to watch a wide variety of shows, for long periods of time. In other words, they are not only good producers of language, but they are good consumers as well. However, most children when they start school, lack the ability to read and write. And this is where teachers have the opportunity to make a real difference to the futures of their pupils.

The major thrust of this book has been to show teachers how they can make the best of this opportunity, by using some of the exciting new ideas that have emerged in the research literature in recent years. You will have fun as well; here is a great example:

> Teacher: What are the sounds in "cat"?
>
> *Child:*   *Meeow.*

Notes

1. This monograph is based on material prepared for the Advanced Studies for Teachers Unit, College of Education, Palmerston North.

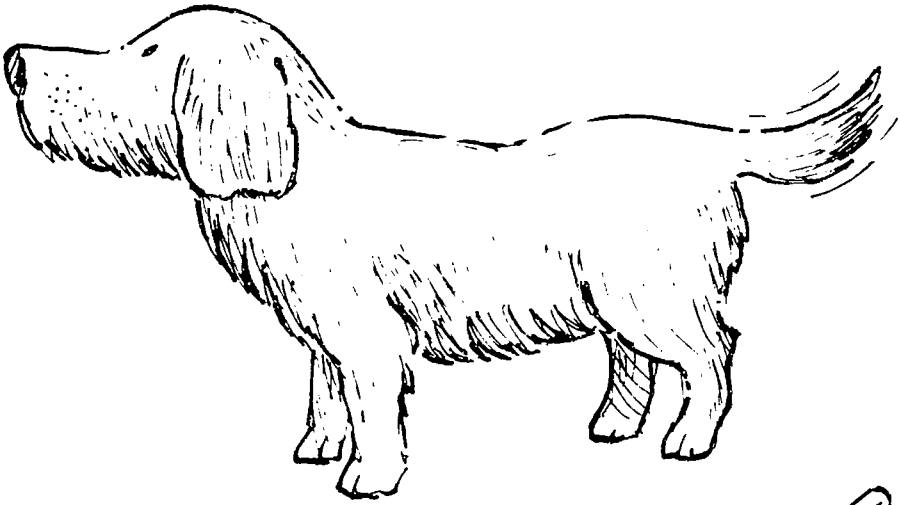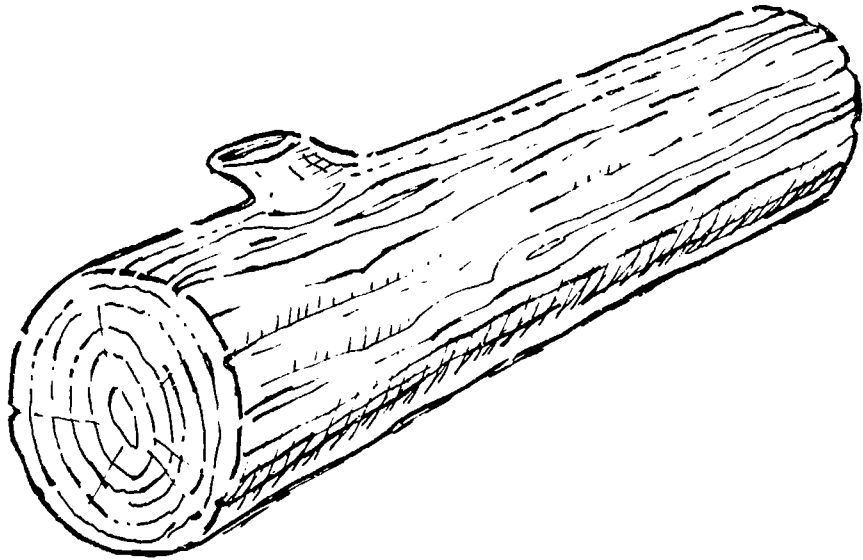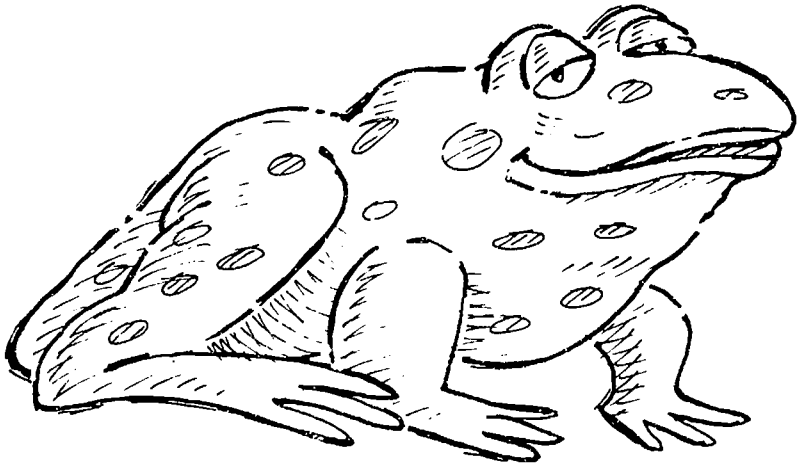2. Thanks to Shirley Hardcastle for the "meeow" anecdote.

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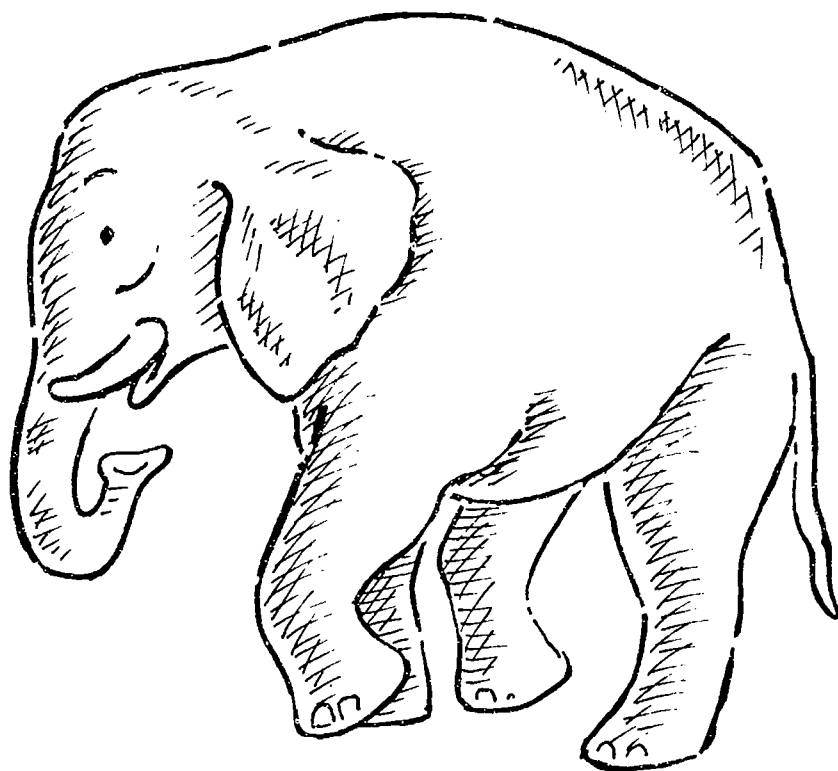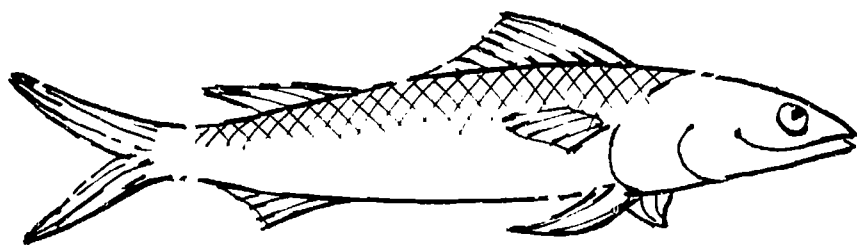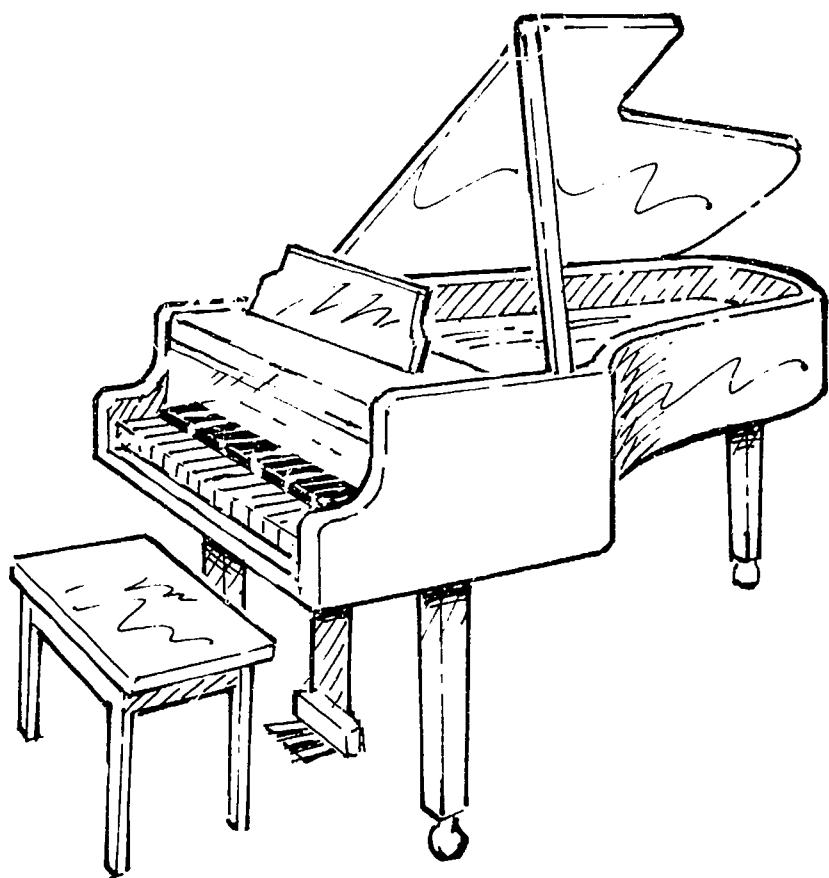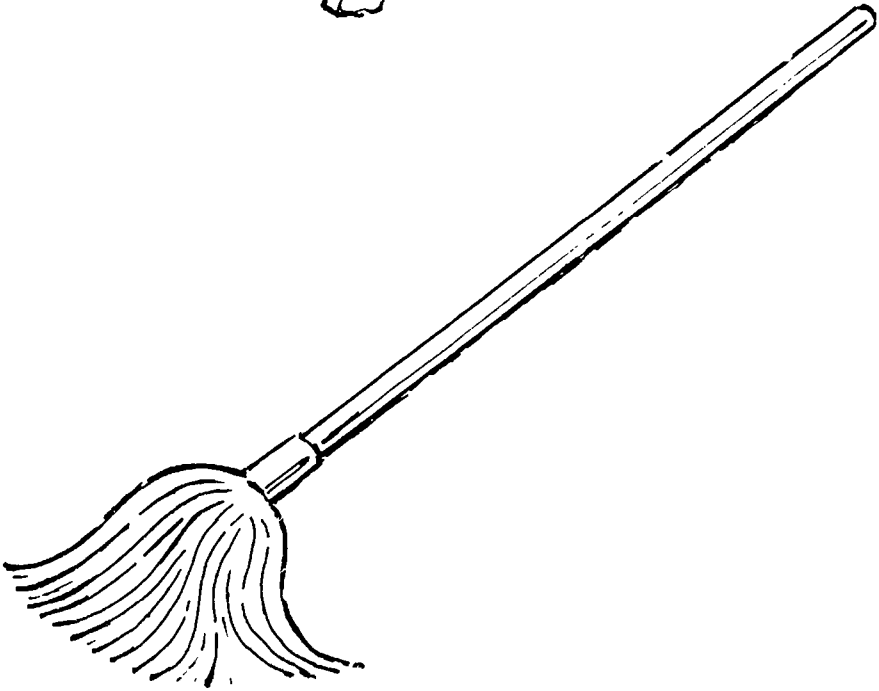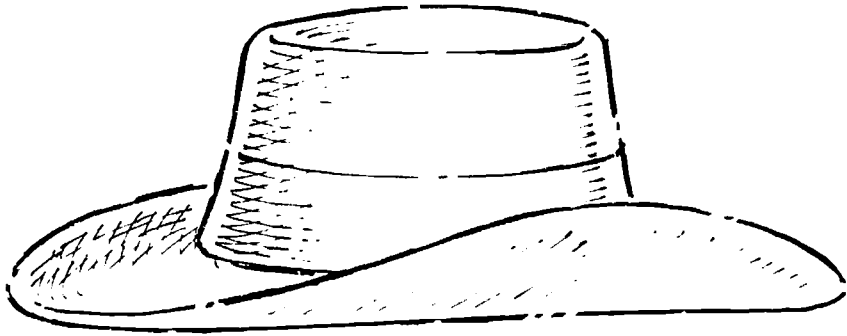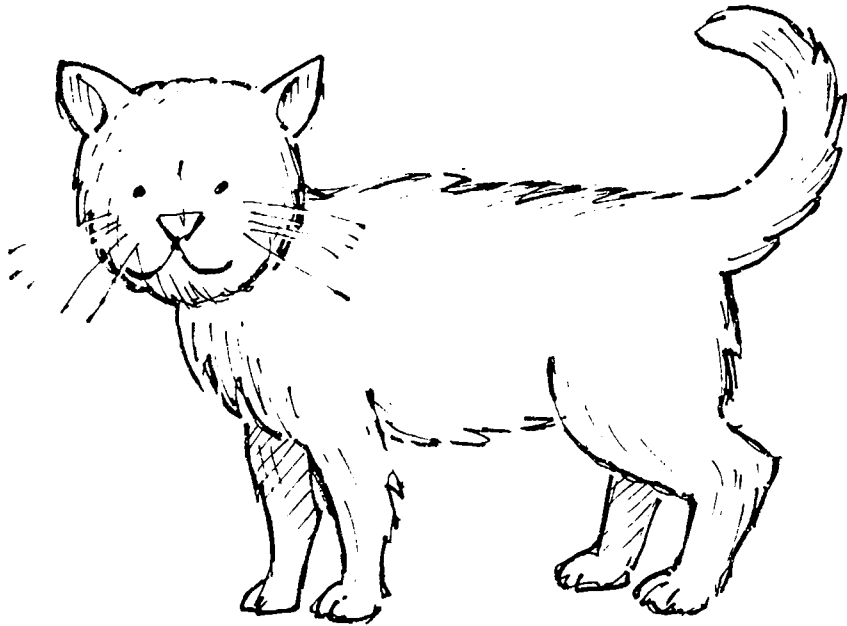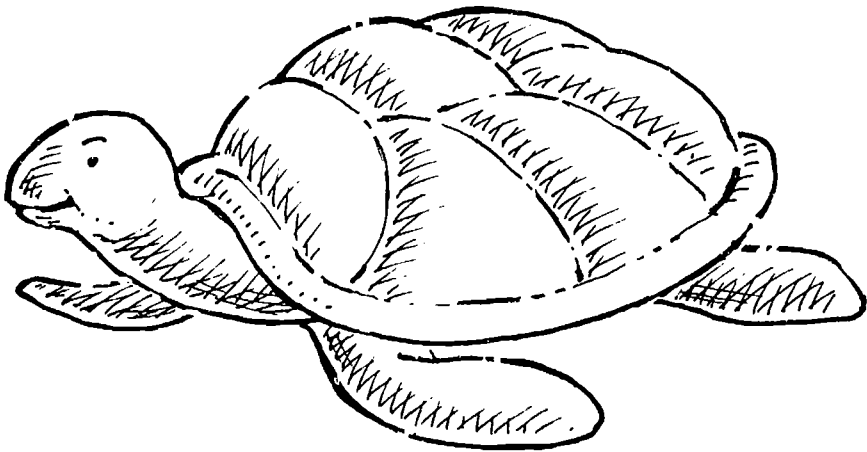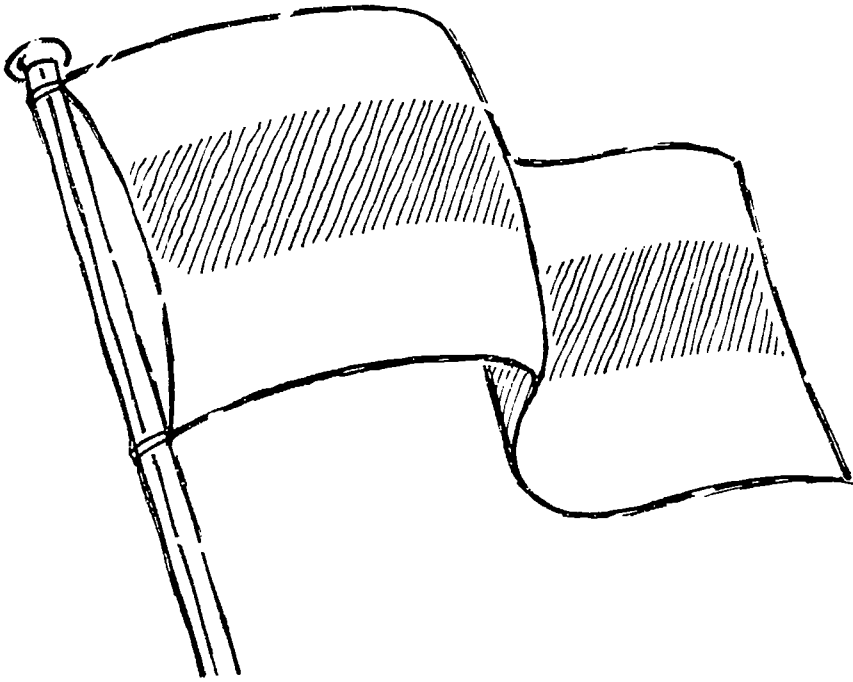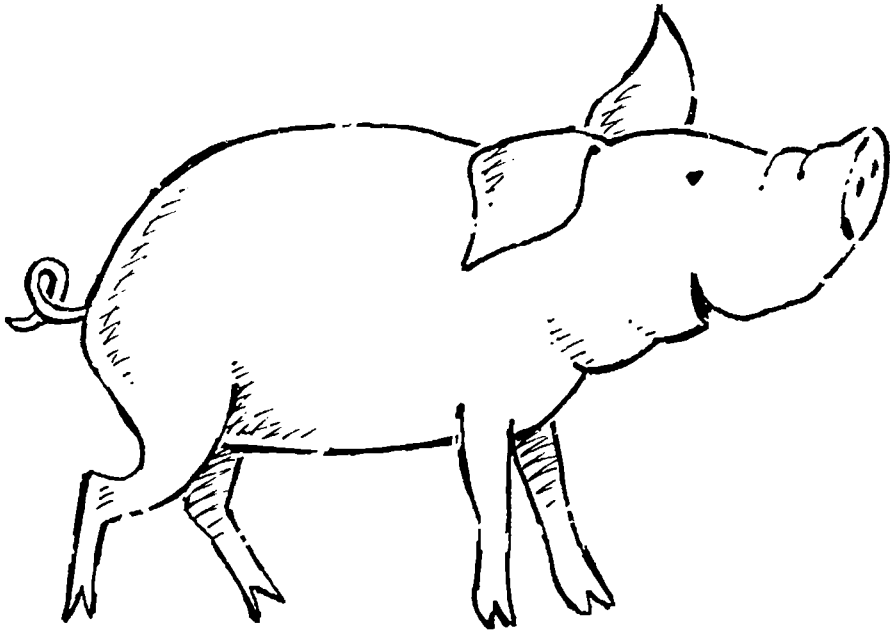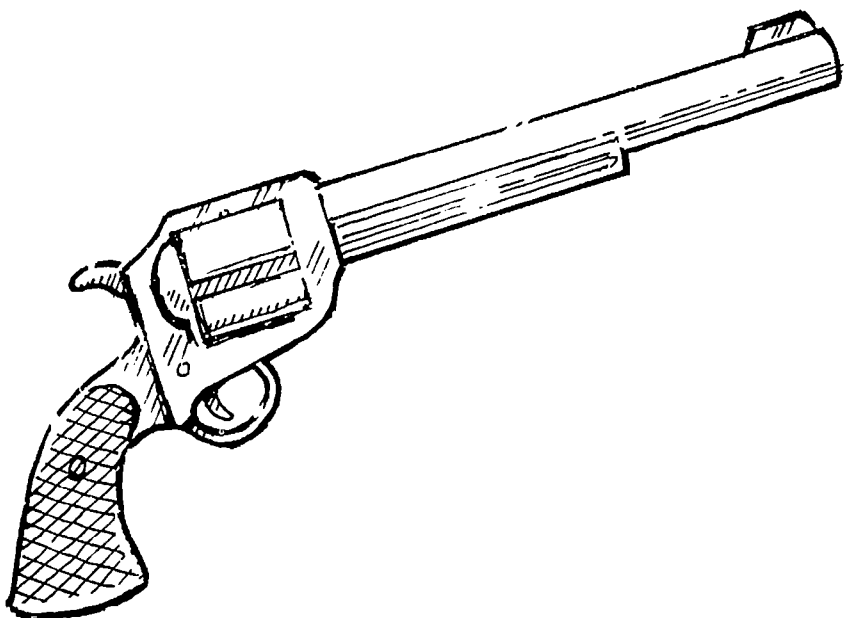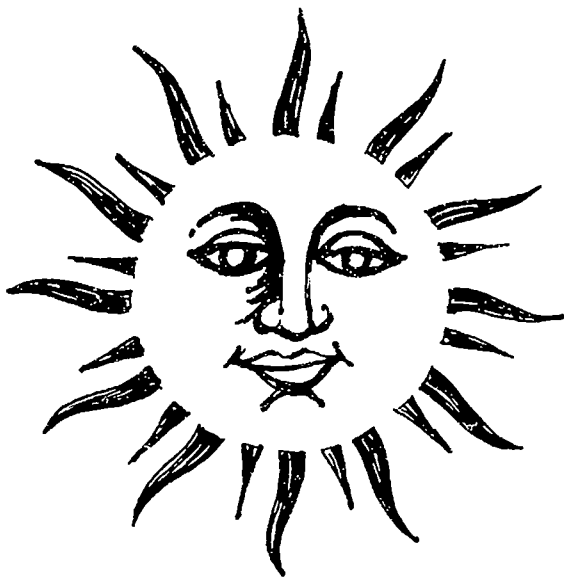
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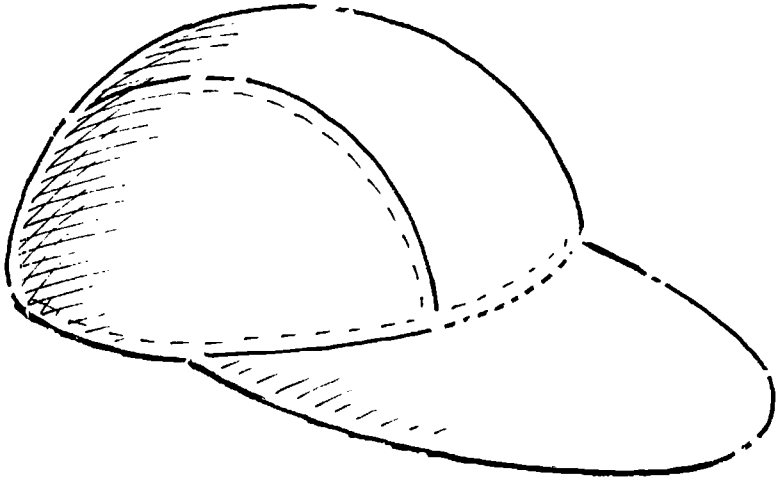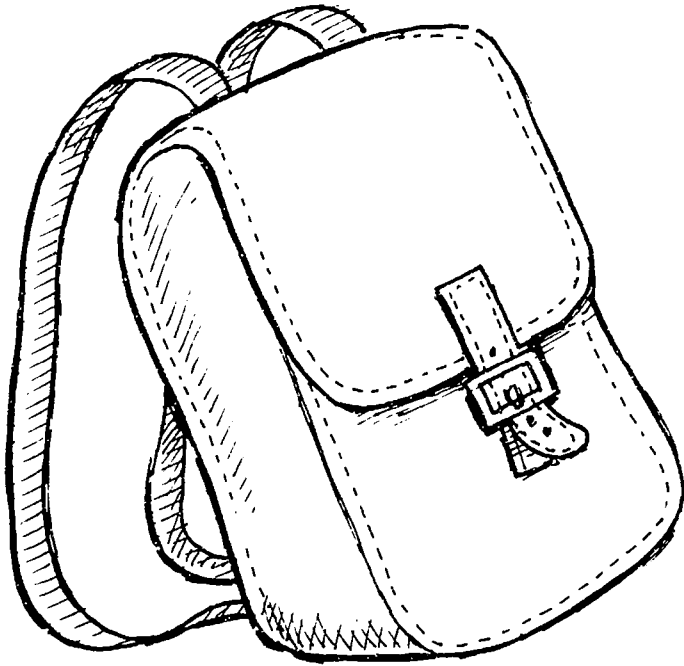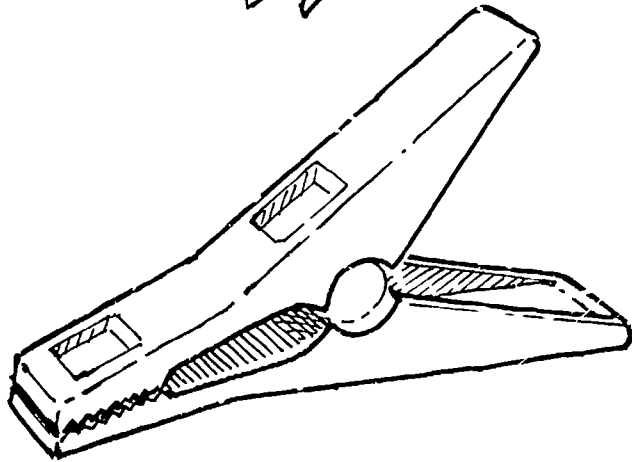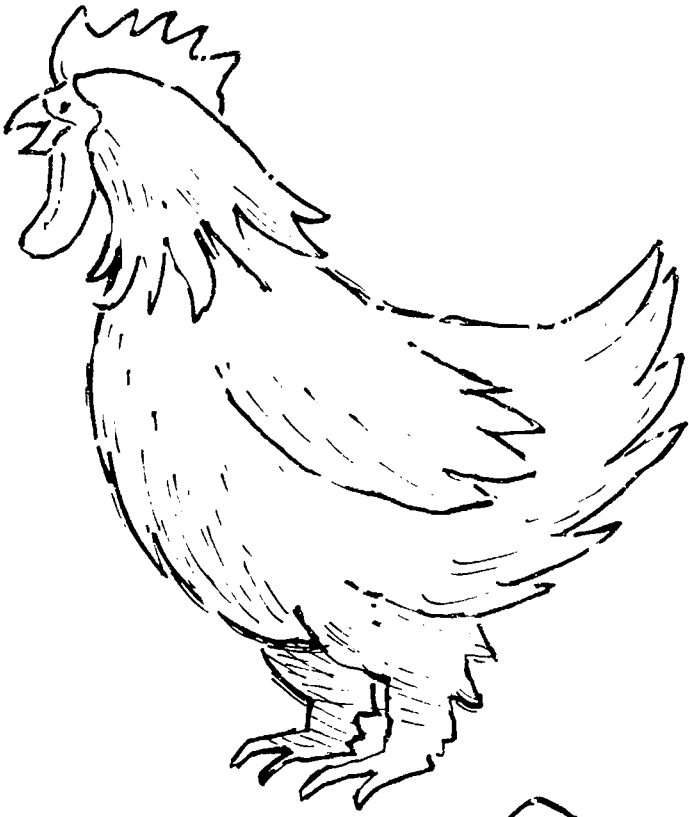Allington, R.L. (1980). Poor readers don't get to read much in reading groups. *Language Arts, 57*, 872-876.

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Tunmer, W.E., & Hoover, W.A. (1993). Language related factors as sources of individual differences in the development of word recognition skills. In G.B. Thompson, W.E. Tunmer, & T. Nicholson (Eds.), *Reading acquisition processes* (pp. 123-147). Clevedon, England: Multilingual Matters.

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Appendix 1

A list of children's picture books that play with sounds as recommended by Griffith & Olson, 1992 (reprinted with permission of the International Reading Association, holders of the copyright, and the authors).

Allen, P. (1983). *Bertie and the bear*. Auckland, New Zealand: Hodder & Stoughton.

Barret, J. (1980). *Animals should definitely not act like people*. New York: Macmillan.

Base, G. (1986). *Animalia* New York: Abrams.

Degen, B. (1983). *Jamberry*. New York: Harper & Row.

Geisel, T.S. (Dr.Seuss) (1957). *The cat in the hat*. New York: Random House.

Geisel, T.S. (Dr.Seuss) (1960). *Green eggs and ham*. New York: Random House.

Geisel, T.S. (Dr.Seuss) (1963). *Dr. Seuss s ABC*. New York: Random House.

Geisel, T.S. (Dr.Seuss) (1972). *Marvin K. Mooney, will you please go now!* New York: Random House.

Geisel, T.S. (Dr.Seuss) (1987). *I am not going to get up today!* New York: Random House.

Hoberman, M.A. (1982). *A house is a house for me*. New York: Penguin.

Hutchins, P. (1972). *Good-night owl*. New York: Greenwillow.

Hutchins, P. (1976). *Don't forget the bacon!* New York: Greenwillow.

Leedy, L. (1989). *Pingo the plaid panda*. New York: Holiday House.

Lord, J.V. (1972). *The giant jam sandwich*. Boston, M.A.: Houghton Mifflin.

Peet, B. (1962). *Smokey*. Boston, M.A.: Houghton Mifflin.

Peet, B. (1983). *No such things*. Boston, M.A.: Houghton Mifflin.

Pomerantz, C. (1974). *The piggy in the puddle*. New York: Macmillan.

Pomerantz, C. (1987). *How many trucks can a tow truck tow?* New York: Random House.

Raffi (1987). *Down by the bay*. New York: Crown.

Rounds, G. (1989). *Old MacDonald had a farm*. New York: Holiday House.

Serfozo, M.K. (1988). *Who said red?* New York: McElderry.

Shaw, N. (1986). *Sheep in a jeep*. Boston, M.A.: Houghton Mifflin.

Shaw, N. (1989). *Sheep on a ship*. Boston, M.A.: Houghton Mifflin.
Terban, M. (1984). *I think I thought*. Boston, M.A.: Houghton Mifflin.
Van Laan, N. (1990). *Possum come a-knockin'*. New York: Knopf.
Wadsworth, O.A. (1985). *Over in the meadow*. New York: Penguin.

Appendix 2

More Books

A list of even more books that play with sounds (as recommended by Joan Gibbons, Deputy Librarian, School of Education, University of Waikato).

Ahlberg, J., & Ahlberg, A. (1978). *Each peach pear plum*. New York: Viking.

Bemelmans, L. (1963). *Madeline*. New York: Viking (several titles in this series of stories that rhyme—see also *Madeline in London*).

Fox, M. (1985). *A cat called Kite*. Sydney, Australia: Ashton Scholastic. (The words in the pictures, "right" and "wrong", contrast with the sounds of the words in the rhyme, -ong and -ite).

Hessel, J. (1990). *Grandma McGarvey*. Auckland, New Zealand: Oxford University Press. (Rhyming book).

Hoban, R.C. (1986). *The great fruit gum robbery*. London: Methuen. ("Fruit gum" turns into "Guit Frum". Other titles include *The battle of Zormla*, *The flight of Bembel Rudzuck*, and *They came from Aargh!*).

Jennings, P. (1992). *Spooner or later*. Melbourne, Australia: Viking. (A book of spoonerisms).

Keller, C. (1989). *Tongue twisters*. New York: Simon & Schuster.

MacDonald, A. (1990). *Rachel Fister's blister*. Boston, MA: Houghton Mifflin. (Rhyming book).

McNaughton, C. (1992). *Who's that banging on the ceiling?* London: Walker.

Mahy, M. (1987). *17 Kings and 42 elephants*. London: Dent.

Mahy, M. (1991). *Bubble Trouble*. London: Hamish Hamilton. (The title story poem in her book is a tongue twister that plays with sounds).

Martin, B. (1970). *Fire! Fire! said Mrs McGuire*. New York: Holt, Rinehart & Winston.

Merriam, E. (1989). *Chortles*. New York: Morrow Junior Books. (New and selected word-play poems).

Parish, P. (1964). *Amelia Bedelia*. Sydney, Australia: Ashton Scholastic. (Several titles in this series, which play with word sounds).

Sharratt, N. (1993). *Don't put your finger in the jelly, Nelly!* Auckland, New Zealand: Ashton Scholastic.

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Steig, W. (1980, new ed.). *C D B!* New York: Simon & Schuster. (Plays with the sounds of letters, as in "see the bee!").

Strauss, B., & Friedland, H. (1987). *See you later, alligator.* Los Angeles, CA: Price, Stern, Sloan. (A book of rhyming word play).

Vaughan, M. (1984). *Wombat stew.* Sydney, Australia: Ashton Scholastic.

Wiseman, B. (1989/1974). *Morris and Boris.* New York: Putnam. (Several titles in series, which play with word sounds, about Morris the Moose and Boris the Bear).

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AT THE CUTTING EDGE

About the Book

Why does learning to read and write take so long? Why do some children find it so difficult? What can we do for them to make the task of learning to read, write, and spell easier?

If you are interested in some answers to these questions, this book is for you. Tom Nicholson examines the latest research, both from New Zealand and overseas, and describes how teachers of young children can apply that research in helping children to acquire letter-sound rules—c says k-k-k *cat*—and to develop their decoding skills. A return to simple phonics is not advocated, but a clear case is developed for the more powerful and recent concept of phonemic awareness.

The ideas he suggests and the techniques he explains can be started from the first day at school and they can be used as part of existing language programmes. Clear demonstration charts show "how to" and simple illustrations are included for teachers to photocopy for classroom use. This is more than just a book—it is a resource. For teachers of young children, who wish to understand the importance of phonemic awareness and promote this in their classrooms, it's a must.

Parents with an interest in, but no special knowledge of, how children learn to read, will better understand the complexity of the process by delving into this book. And the author's lists of books which play with sounds and enhance phonemic awareness are an invaluable guide when selecting books from the shelves of libraries or book stores.

About the Author

Tom Nicholson is an Associate Professor in Education at the University of Auckland. His career started in Australia, where he taught in schools in New South Wales, and was a Research Officer in Reading at the Education Department of South Australia. He gained his PhD at the University of Minnesota, where his thesis won an award from the International Reading Association. He was a lecturer at the University of Waikato, and a Visiting Scholar at the University of Texas at Austin, Stanford University, and the Australian Council for Educational Research. He is the author of several books and monographs, including *An anatomy of reading, The process of reading, Reading and learning in the junior secondary school*, and *Overcoming the Matthew effect: Solving reading problems across the curriculum*. He is also co-author of *Reading acquisition processes*.

58   Cover design by Don King