

Psychology of Exceptional Learning

Recommending a reading intervention

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Recommending a reading intervention : Areas of knowledge to target

<i>knowing the what</i> conventions of writing	<i>knowing the why</i> ; beliefs about how one reads, why it is useful	<i>knowing the how</i> ; reading and writing strategies
Knowledge use is managed by a decision-making process		
Oral language knowledge		

How do we use each type of knowledge:

- early stage of a reading act : getting ready or orienting
- while-reading stage: processing the text in depth
- post-reading or review stage

Teach readers to use their knowledge systematically by learning what to do at stages during reading

Stages of reading	Levels of text processing				
	Dispositional level	Topic level	Conceptual level	Sentence level	Word level
Getting ready or orienting stage activities	Focus on purposes for reading: <i>Why am I reading text ? What will I look for as I read ? What will I know when I have finished reading ?</i> Readers say how they will read, the strategies they will use	Link text with what reader knows; by using title, pictures. <i>What do I think text is about? What might the key ideas be ?</i> Extend knowledge necessary for understanding the text.	Link ideas in text with what you know, use mapping, networking. <i>What other ideas might come up with these ? What might happen next ? What questions can I ask about it ?</i>	Focus on how the ideas might be said: <i>How would I put these ideas into sentences ? How would It ell someone about them?</i>	<i>"What will I do as I read / come to a strange word?"</i>
While-reading stage: process text and self-monitor	Readers interact with the text; they select and process portion at a time. They work at <ul style="list-style-type: none"> • word level; use letter cluster recoding + context, etc., • sentence level; paraphrase, visualise, question, re-read • conceptual level; predict, tread further, relate what they read to what they expected, • topic level; scan, use topic sentence, main ideas, review, summarise, consolidate the ideas read, gradually build an impression of the text. 				
Post-reading or review stage	Respond emotionally to the text <i>How I liked the text ? Were the ideas useful/ interesting ? Why was the text written ?</i>	Review text understanding: <i>What did the text tell me ?</i> Review, evaluate reading strategies used: <i>What reading actions worked ?</i>	Learn by reading. What new ideas have been learnt; how has reader's knowledge changed ? <i>What new ideas will I remember ?</i>	Add to their knowledge of language, for example, paraphrase the sequence of ideas in the text, note new ways of saying ideas.	What new words were in the text ?

Your recommendations may need to consider

- modelling of strategies.
- helping students plan and get ready' for reading; help existing knowledge in nonverbal forms, to be recoded into a verbal form by talking about it..
- that knowledge gained by reading is 'fed back' to the various areas of knowledge.
- implement the programme on a developmental basis, taking account of what students know.
- help students learn to read an increasingly broad range of text that
 - increases in grammatical complexity; ,ideas sequenced in different ways
 - involves words with increasingly more complex and sophisticated meanings.

- requires a greater level of inference and prediction for its comprehension.

Types of oral reading activities: five types of oral reading activity:

- interactive reading aloud to learn and practise particular reading actions.
- solo reading aloud ; readers practise reading aloud, possibly onto an audio tape.
- paired reading ; readers read text aloud with another person
- shared reading of plays, novels, etc, with other readers and
- multiple or repeated readings of more difficult materials.

Interactive reading : Helping readers learn more effective reading strategies

Reading strategies are actions that connect or link ideas in two ways

- ideas in the text at any time with ideas that they have read earlier in the text.
- text ideas with their existing knowledge.

The WHAT of teaching comprehension strategies

Orienting strategies : Planning how one will read

The purpose for reading ?	Ask readers to describe <ul style="list-style-type: none"> • why they think they are reading • how they will need to use the information gained as a result of reading.
The likely theme of the text	<i>What might the text tell me ? How do I know ? What will tell me what it could be about ? What does the title tell me? "They can begin by asking the '4W and 1H' questions.</i>
Use what you know about the topic	<ul style="list-style-type: none"> • <i>"What do I know about this topic already ? What do ..(the pictures, title,) remind me of ? What picture do I make when I hear the title ?"</i> • <i>"What ideas / words might come up in the print ? What might the text tell me ? What questions might the story answer ?"</i>
How will you go about reading ?	They say the actions they might use before they begin to read.
How will I organize the ideas as I read ?	Students note whether text is a narrative, factual text, descriptive text, argumentative text, etc., and decide how they will act to organize the ideas.
Am I ready to read ?	

Oral language, phonologically-oriented activities:

Narration activities	students talk about ideas, sequence ideas, recount experiences, describe familiar situations and events, communicate intentions and to anticipate in real-life contexts.
Active listening and aural activities	<p>Before learning to use reading strategies, practise matching oral strategies, for example, the student listens a text, etc., and</p> <ul style="list-style-type: none"> • visualise part of it, draws pictures, acts out or paraphrases what was heard, • predict what may happen next or earlier, suggest the general context, • use context and syntax to suggest meanings of words, test possible synonyms, • recognise miscues or errors in the text. • re-tell the story, suggest a title, describe the theme, the sequence of ideas in the story, discuss specific information, answers questions, completes a story. • describes the actions used while listening and modify them
Memory activities	<ul style="list-style-type: none"> • recall a word given its meaning and first letter/sound • recall what they know about a word, picture when they last heard it, what it may refer to. • suggest similes and opposites to a word. • recall words from a semantic category • are given a title (e.g., why I like ice-cream) and suggest likely words.
Story completion activities	<ul style="list-style-type: none"> • hear part of a text and predict what might happen, finish it, say how they predicted • complete a story given a title, • add to a group story, a paragraph, talk about ideas, pursue arguments or discussions, activities in which they write plays or scripts
Vocabulary-expansion activities	students add new words and meanings to their oral vocabulary, say when a word isn't understood, guess its meaning using its context, suggest synonyms and opposites, when they might use the word in the future.

Developing phonological and phonemic awareness knowledge . A developmental program needs to include

- (1) strategies for assessing it, children's accuracy of pronunciation of sounds
- (2) activities for teaching it to an automatized level and
- (3) helping students build their knowledge of how to use it.

Prep *Recall the pronunciation of words* through:

- spontaneously in conversation; talking about pictures seen, experiences.
- learning how to pronounce words, imitate words of increasing complexity in play contexts
- recalling the names of familiar objects and events, recalling names faster.
- recalling a sequence of names, for example, numbers one to ten, versions of "I went window shopping", for example, "I went to beach and saw a seagull", "I went to beach and saw a seagull and a fish ",
- recognising and producing rhyming words and words that alliterate.
- listening for and remembering a shared sound.

Grade 1 - Grade 2 Segmenting words into sounds and sound blending, for example, children

- segment words into onset and rime
- identify the first sound and the last sound in words
- segment a word into component sounds, tap for each sound in a word and count the number of sounds in a word
- blend onset and rime to make a word
- blend a sequence of sounds to make a word
- segment 2- 3- or 4- syllable words into syllables by syllabic clapping and by vocalising each syllable and
- segment 2- 3- or 4- syllable words into syllables and then into sounds
- comprehend short vs long vowel sound

Grade 3 *Manipulating sounds within 1- syllable words;*

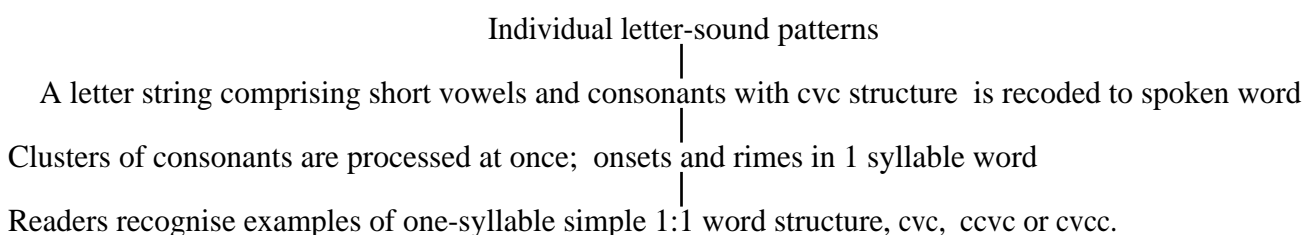
- delete a sound from a word and saying the word left.
- substitute one sound for another
- identify sound shared by 2 or more words
- syllabifying multi-syllabic words
- recognising syllables or morphemes in oral language, segmenting words into functional groups of sounds, (for example, look-ed, in-side , terr-ible),
- categorising sound groups, for example, long versus short sounds,
- listening for a sound pattern in multi-syllabic words,

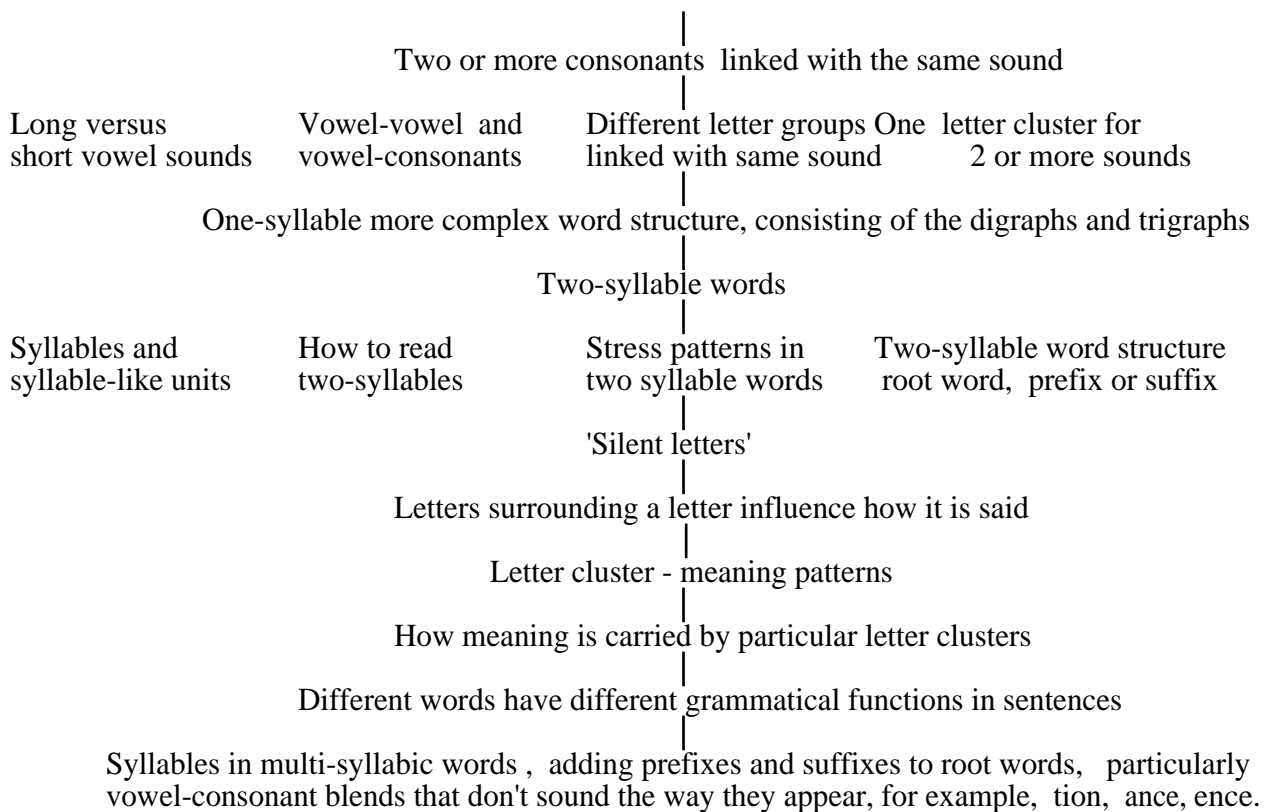
Grade 4 +

- pronounce more sophisticated words,
- recognise the same sound segment in 2- and 3- syllable words
- blend 2- and then 3- syllables to match a known word by modifying the stress pattern on one vowel
- discuss stress patterns in polysyllabic words, recognise the schwa in 2- and 3- syllable words
- segment 2- and 3- syllable words into sounds, recognising the schwa
- recalling multi-syllabic words that share a sound pattern, for example, "inside", "preside" or "microphone, microbe", or that rhyme, etc.

Learning to read words efficiently

A sequence for learning letter patterns is as follows:





Key aspects of the teaching programme Throughout the teaching programme a number of procedures are recommended. These include the following.

Ensure that the children develop the necessary phonological knowledge.

Activities for developing and automatizing relevant phonological knowledge include having readers

- say accurately each of the words they will read
- distinguish between words that have and don't have the sound targeted
- suggest other words that rhyme or alliterate with the rime .
- discuss the shared sound pattern.
- segment spoken words such as *first, skirt, squirm, smirk*, into onset and rime.

Readers comprehend the meanings of words they are learning. Links between word meanings allow readers to predict unfamiliar words in prose reading. Useful activities include

- using each word in a sentence that illustrates its meaning,
- writing a paragraph or a short story using the list words.

Readers learn relevant phonemic knowledge. Readers

- segment words into separate sounds.
- blend separate sounds into the types of words to be learnt
- identify shared vowel sounds
- recognise a specified sound by comparing 2 or more 1-syllable words
- categorise vowels into long versus short. Work on several examples.
- delete sounds from 1-syllable words
- substitute consonants or vowels in a spoken 1-syllable words of up to 6 sounds long.

Work on the letter cluster-sound links Introduce letter cluster in word families of 4 to 5 words:
frown town clown crown brown

Read each word Read each word with students. Students repeat reading each word 2 or 3 times.

Read each word in segments. The readers say the onset and rime of each word separately, pointing to each letter cluster as they say it, for example, for "town" say "t" and "own".

Blending letter clusters. Teach students to read letter clusters by saying each part and blending

- onsets and rimes into 1-syllable words
- two letter clusters into a 2-syllable word.

How the words are similar The readers read each word again and say

- the rimes of the words in each category, for example, own and
- what all members of the list have in common, both shared letter clusters and shared sounds.

Visualise each word and aspects of the pattern The readers read each word, close their eyes, make a picture of it and write it. They

- look at 2 or 3 instances, close their eyes, 'see' the words, imagine writing them and discuss how they are similar
- visualise the letter cluster in a word that has the sound, eg., the 'ow' in an image of a crown
- move the letter-sound cluster to other words.

Spell the words. Develop writing and spelling in parallel with reading. Show the letters that are in the correct sequential positions by ticking .

Transfer the letter-sound rime units to other words. Select other words that have the same rime but that you haven't taught. Use nonsense words with the rime, letter and rime cards to make up words that readers need to say as quickly as they can. Encourage readers to predict how to say unfamiliar words.

Write a sentence Readers make up a sentence about each word that illustrates its meaning.

Discriminate the word type from similar words. Students learning 'own' could read the following:

frown torn town fort clot clown moo tone
town trod thrown crown nod now brown slow

Reading prose Transfer the letter cluster to prose. The readers and / or the teacher can

- invent and write short stories that contain the words. They read them.
- read sentences containing some of the words.
- read words containing the unit in prose.
- scan prose they are reading for other words that have the letter cluster and list them.

Avoid prose that repeats rime units in high frequency, unnatural ways.

Read 2- and 3- syllable words

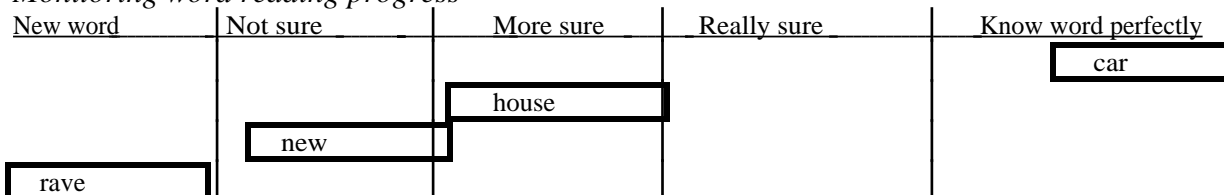
frowned	drowning	clown	frowning
crowned	browner	downer	

Dictation for sentences Provide dictation for sentences containing the words with the pattern.

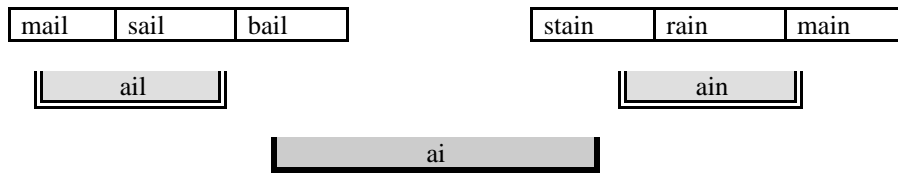
Teach meta-phonemic knowledge directly. For the -own pattern, they discuss

- what they know about letter cluster patterns
- how they can use what they know about some words to read others
- how they could make bigger words from the smaller words.
- how they segment words, why segmenting words into 2 or 3 parts is useful .
- talk about their developing knowledge of word patterns
- recognise familiar letter cluster patterns in unfamiliar words
- see themselves as 'self teachers'.

Monitoring word reading progress



Abstract the letter cluster pattern. Students use regularities and patterns in rime letter clusters to learn more abstract patterns and use them to predict words.



Organize changing knowledge in a systematic easy-to-use way

pattern	examples of each type of pattern	
oa	boat	boar
ai	train	fair
ee	feed	

Orthographic activities

- Categorizing, sorting, matching activities
- Reading unfamiliar words by analogy
- Memory activities .
- Awareness of word structures Which of nam, mna, amn, man could be words ?
- Discuss aspects of the pattern.
- Develop the letter cluster pattern in applied and game activities
- Teach students how to segment or chunk written words
- What goes with what ? Students predict the likely letters/ clusters that might follow a particular cluster in a word. for example, n n n a w .
- Check readers can remember the letter cluster

Two syllable words

Difficulties reading multi-syllabic words Some readers

- use distinctive visual features; select part of the letter information and made a rapid guess
- select the first few letters after which they 'bog down'.
- have difficulty handling the unstressed vowels that are softened and blurred; 'schwa' sound. Children's awareness of it as a vowel needs to be developed orally initially.

Teaching students to recognise syllabic units by word building ; students

- combine syllables, note how they join, how words are built and what the building units are.
- use this to read syllables in words, to compare segmenting words in different ways.

Students can note how the syllables are linked in 2-syllable words. Types of 2-syllable words:

- those with an identifiable, familiar root word and a prefix or suffix (such as 'jumping', 'beside')
- those in which the root or stem is not a familiar word (for example, 'insect', 'predict', 'begin'.

Developing an awareness of the syllabic structure of words : teach students to

- **learn how to unstress syllable** Readers need to learn how to use different stress patterns and to handle unstressed or silent sounds. Many can read single syllable letter strings relatively efficiently. They need to learn how the schwa links with different letter clusters.
- **become aware of the syllable structure of words** in two ways: by
 - *recognising and using each syllable* Students segment 2-syllables word in 2 ways,

<i>Pre-tend</i>	<i>Pr-etend</i>
has syllable-like units	doesn't have syllable-like units,
<i>Which one sounds better ? Why ?</i> Have them suggest their definition of 'syllable'.	
 - *saying either part, vocalise each syllabic-like units.* They can break words into syllables. "Listen to how I say wander. Wan-der. Pause between the syllables. I said each part of the word by itself You copy how I say it.

hear 2 or 3 separate syllables said with equal stress and blend them into a word, for example, *hel - met*, *garb-age*, by modifying the stress pattern.
 hear 2- and 3- syllable words and say the unstressed syllable, for example, *attract*, *flannel*, *happen*, *kennel*, *kitten*, *standard*, *customer*, *permanent*. They say whether the unstressed syllable/s can be first, second or third and discuss how to say it.

- making a gesture for each syllable they hear in a word, for example, they can clap, tap the table, stamp, click fingers, or shake a musical instrument such as a tambourine.
- **combining two or more syllables to make a word.** Many reading underachievers can't move from dealing with single syllabic to multiple syllabic units. They say the first part of a word and then can't progress. They can practise holding the first part in short term memory, say the second part, blend them into a word and then alter the stress pattern to match what they say with a word they know.

cap	ture	mix	ture	man	age	gar	age	cap	tain
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Readers need to learn how to modify the stress pattern of the two syllables to match the sound sequence with a known word.

- **experiencing the effectiveness of having words syllabified for them.** Help them see the value of syllabifying; a word may be easier to read when it is syllabified.

Teaching each type of multi syllabic word Multi syllabic words vary on several dimensions

- whether the word consists of a stem or root word + prefix and /or suffix, two smaller words or less common segments (for example, 'chaos').
- whether the stem is an identifiable, familiar root word (such as 'jumping', 'dived', 'unfit') or is not an identifiable, familiar root word (such as 'happy', 'receive')
- the syllable/s that are and are not stressed.

Explore different 2-syllable patterns and how these lead to different segmenting strategies To segment words, note where the two separate vowels are. Three patterns arise and that affect how easily the word can be segmented

- words in which there are two or more separate consonants (that is, not part of a digraph) between the two vowels; in confuse, consent or lantern. Split between the two consonants.
- words in which there is one separate consonant between the two vowels; decide, protect, eject, tropic, refer, serious, nervous, primary, silence, payment, label and total. These have the -vcv- structure and are called 'open syllables'.
- words in which the two vowels, though separate, are adjacent as in 'create', 'chaos'.
- words that have a repeated consonant, for example, traffic, summer, accept, cabbage, pretty, gallop, tennis and collect.

Students can experiment with segmenting these words in different ways and see which ways help them read them most easily.

The sequence for learning each type of 2-syllable word is similar to that for 1-syllable words:

- learn the prerequisite sound knowledge by segmenting spoken words into syllables.
- build 2-syllable words from an identifiable root words by adding a prefix or suffix

hop ----->	hopping	jump ----->	jumping	tap ----->	tapping
stop ----->	stopping	come ----->	coming		

and discuss how

- the 2-syllable word differs from the 1-syllable word
- the letter cluster that is shared by all of them
- we can talk about the 'stem' telling you what the words mean and the 'added part'
- in some of the stem words the last letter is doubled.
- exploring several instances of the 2-syllable words, eg., for the re- word family: **repeat**, **remark**, **refuse**, **receipt**, **receive**, **recur**, **refine** They
 - link each word both with what they know about similar words and how it is said

- segment each written word into two letter clusters that match how they segmented the spoken word into syllables.
- visualise writing each word, predict how to spell and read similar words and gradually automatise this knowledge
- exploring the prefix-stem structure of 2-syllable words .
- teaching the meaning of the prefix/ suffix, for example,

What people can do	law	tour	run	teach	drive	work
Person who does it	lawyer	tourist	runner	teacher	driver	worker

The aim is for students to learn to recognise prefixes and suffixes such as 'de', 'tion' in words. They need to

- learn the sound patterns that go with them and their effect on meaning.
- discuss what the stem means and how its meaning is changed by the prefix/suffix.
- practise reading two-words by 'stripping away' the prefix or suffix.
- **using 2-syllable reading strategies** Students practise reading sets of words by segmenting them into syllables as they go. They say each syllable aloud and blend and if necessary modify the stress pattern.
- **reading words by using analogy strategies**

A developmental orthographic program needs to include

- teaching functional letter clusters directly.
- an integrated approach across the year levels .
- an assessment device be used to test orthographic knowledge of students on program entry and at various stages.
- that students be familiar with the notion of orthographic knowledge, what it means and the journey that they are taking through learning it.

The focus is on students' ability to process each orthographic pattern relatively automatically in prose. Students will read a clusters in individual words before they develop the general pattern.

Linking phonological and letter cluster knowledge

grade 5

phonological outcomes	phonemic outcomes	letter-cluster outcomes	orthographic outcomes
<ul style="list-style-type: none"> • say the syllable /s shared by two or more spoken 3-syllable words • segment 3-syllable words into morphemes • say how many syllables are in common morphemes • delete, substitute morphemes in 3-syllable words 	<ul style="list-style-type: none"> • compare two 3-syllable words in terms of shared morphemes • say the sound in a 3-syllable word that comes after / before a morpheme. 	<ul style="list-style-type: none"> • read 3-syllable words by segmenting them into morphemes and say each morpheme • read 3-syllable words by using analogy with known words • recall the meanings of particular stems, prefixes and suffixes. • assemble a list of bound morphemes (that is, prefixes and suffixes) • guess the meanings of words by analysing the morphemes in them 	<ul style="list-style-type: none"> • categorise written 3-syllable words, match identical words, words with the same morphemes • read 3-syllable words automatically in isolation and in prose • write 3 syllable words in spelling and dictation • identify the structure of 3-syllable words, distinguish between letter clusters that are / are not 3 syllable words

grade 6

<ul style="list-style-type: none"> say the syllable /s shared by two spoken 4- or 5-syllable words segment 4-syllable words into morphemes delete, substitute morphemes in 4-, 5-syllable words 	<ul style="list-style-type: none"> compare two 4-, 5- syllable words in terms of shared morphemes say the sound in a 4- or 5-syllable word that comes after / before a morpheme. 	<ul style="list-style-type: none"> read 4-, 5- syllable words by segmenting them into morphemes, say each morpheme read 4-syllable words by analogy with known words guess the meanings of 4-, 5-syllable words using their morphemes 	<ul style="list-style-type: none"> categorise written 4-, 5-syllable words, match identical words, words with the same morphemes read 4-, 5- syllable words automatically isolated/ in prose write 4-, 5- words in spelling and dictation identify structure of 4-, 5-syllable words
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Grade 6 Weeks 3-4

Students work on the morphographic structure of words, learn the concept of the morpheme and to use morphemes to read longer words. 2 sets of 3-syllable words. Work on the following sets of words that each shares a morphographic feature:

- micro- words such as microscope, microbe, micro-second, microphone.
- video words such as vision, visible, revision, video, vista,
- 'or' words such as inventor, governor, editor, actor, instructor, projector
- 'ion' words such as invention, action, edition, instruction, projection.
- 'dis' words such as disease, disagree, disease, disarm, disallow, disconnect, distort.

Work on each set at a time by segmenting words into syllables, practise reading the words by noting each syllable and learning how to recognise syllables in words.

phonological outcomes	phonemic outcomes	letter-cluster outcomes	orthographic outcomes
Teach students to <ul style="list-style-type: none"> identify morphemes in words by identifying shared syllables in each set, for example, microscope, microbe, micro-second, microphone all contain the micro- unit. see how all words share a meaning. They guess at what 'micro', 'or' and 'tion' mean by using what they know about the words in each set. They learn the term 'morpheme'. decide whether a morpheme is the same as a syllable. They say how many syllables are in the morpheme 'micro'. suggest other words that have the morpheme in each set. 	Teach students to <ul style="list-style-type: none"> compare two 4-, 5-syllable words in terms of shared morphemes say the sound in a 4- or 5-syllable word that comes after / before a morpheme. 	Teach students to <ul style="list-style-type: none"> read 2-, 3- syllable words by segmenting them into morphemes and say each morpheme guess the meanings of 3-syllable words by analysing the morphemes in them recall the meanings of 'micro', video begin to assemble a list of bound morphemes (-or, dis- and ion). guess the meanings of words by analysing the morphemes in them 	Teach students to <ul style="list-style-type: none"> categorise written 3-syllable words, with the same morpheme, match identical words, words read 3- syllable words automatically in isolation and in prose by noting morphemes write 3- words in spelling and dictation.

Modifying Instruction in the Classroom

The regular classroom can demand a high level of literacy for learning. There is a range of teaching procedures that teachers can use to modify the demand made on students to be literate while at the same time helping them to improve their ability to read.

- Modify the text
- Experiment with print
- Have a range of printed materials
- Match students and texts to be read
- Encourage students to write.
- Provide alternative ways of communicating
- Teach readers how to learn
- Use learner-friendly questioning techniques for example, ensure that you
- Clarify different purposes of reading/writing
- Have a systematic feedback schedule
- Model reading
- Develop specialist reading strategy areas

- Encourage readers to work together on reading tasks
- Use learning centres
- Develop useful reading evaluation checklists
- Encourage liaison with students' parents