ACCOMMODATIONS FOR COGNITIVE AND ACADEMIC DEFICITS

A Compendium of Accommodations and Instructional Strategies Corresponding to Woodcock-Johnson III Cognitive and Achievement Clusters

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SECTION ONE
ACCOMMODATIONS FOR COGNITIVE DEFICITS

LONG TERM RETRIEVAL DEFICITS:

Definition:

The student experiences difficulty with retrieval of learned information. While this student might learn information adequately, the student may nonetheless demonstrate difficulty efficiently retrieving it for use in future situations. Long term retrieval difficulties likely vary, however, for different types of information.

Accommodations:

- ✓ **Limit the amount of information to be learned during an instructional session**, giving the student fewer concepts or skills to retain at anyone time. Examples might be limiting the number of spelling words to learn for the week or number of definitions to memorize.

- ✓ **Provide "cheat sheets"** for the student to reference in order to compensate for memory deficits. These might be taped to the student's desk and should also be available at home.

- ✓ Allow the student to **use a calculator** during math computation in order to compensate for lack of recall of math facts.

- ✓ Since the student might have difficulty recalling important information, allow the student **access to a peer helper** to provide information needed to solve a problem or assignment.

- ✓ Allow the student to take **open book tests** where information can be found to respond to test items.

- ✓ **Employ test formats that require recognition** (multiple choice, matching, true/false and fill in the blank with an associated word bank) in favor of test formats that require recall (essay, fill in the blank without a word bank, writing definitions).

- ✓ Allow the student **free access to ask questions** should he forget information. Encourage the student to ask questions.

- ✓ **In grading, emphasize concepts understood** instead of memory for rote information (e.g., less important names, dates, locations, terms, etc.).

- ✓ During instruction **write information on the board** to provide a source of external memory.

- ✓ **Provide written directions** to supplement oral directions for a task.

- ✓ **Provide a written list of tasks** to be accomplished. In the case of tasks that require a sequence of steps, provide a written copy for the student to refer to. Such information might be written on an index card and taped to the student's desk as a reminder.

- ✓ **After directions are given in class, check** to insure that the student has retained sufficient information to work independently.

- ✓ **Limit the length of oral directions** and state directions in the order in which the student is expected to complete them.

- ✓ If the student is forgetful about some responsibility, put a **rubber band around the student's wrist** as a reminder and remove when the responsibility or task is accomplished.

- ✓ Provide a **daily planner** in which the student is instructed to **write homework and long term assignments** down as soon as they are assigned. It may be necessary to check accuracy of this information. A study buddy might be of help in this regard.

Instructional strategies/methods

- ✏ Before introducing a new concept or skill, **activate prior knowledge to enhance understanding**. Prior knowledge can be activated by:
  1.) asking questions about the topic being taught,
  2.) sharing personal experiences related to the topic,
  3.) brainstorming everything the student(s) knows about the topic,
  4.) asking the student to identify what the student still needs to learn about the subject matter,
  5.) asking the student to respond to opinion statements that prompt discussion regarding the topic (e.g., when discussing the defining characteristics of fruits and vegetables ask: What do you like best about spinach? About apples?, etc.).

- ✏ **Review rote information frequently**. Expand time for rehearsal and practice by using peer tutors or teaching assistants to employ structured practice activities. Rehearsing information immediately after it is learned and intermittently thereafter will likely be helpful.

- ✏ **Capitalize on the benefits of spaced practice** by providing the student opportunities to rehearse rote information for short periods several times per day. Rehearsal at home as part of a homework assignment might be helpful.

- ✏ **Employ multiple modalities** (e.g., writing, speaking, listening, etc.) when the student rehearses rote information.

- ✏ To teach rote information, **employ formal academic accommodations** (e.g., cover, copy, compare) which use a high rate of opportunities to respond, high rate of success, immediate feedback and formal error correction procedures.

- ✏ **Review information at the start of an instructional session** to refresh the student's memory for previously taught information.

- ✏ Prompt the student to **take notes during instruction**. Note taking strengthens recall ability and provides a hard copy of information to refer to later.
- ✏ Help the student **group information into meaningful categories** in order to facilitate memory. The more involved the student is in this process, the better the effect on retention.

- Help the student learn to **break a long list of information into small parts or chunks** of seven or fewer items. Encourage the student to master one small group before moving to the next.

- **Enhance meaningfulness** by relating new concepts and information taught to experiences familiar to the student (e.g., describe steam formed in a shower on a cold day as an example of condensation). Encourage the student to cite more familiar examples.

- **Discuss the meaning of a story or text immediately after it is read.** Ask the student to elaborate on what was read. Memory for information will be improved if the student has good understanding and makes associations.

- Provide opportunities for the student to **use a concept or skill to solve a problem**. The student is more likely to retain information which the student has put into practice.

- **Prompt the student to elaborate** on and reason with information and concepts taught. For instance, the student is more likely to remember that Paraguay is one of the poorest countries in South America if the student develops reasons for this condition (e.g., land locked, small country, lack of natural resources, arid climate, etc.).

- Help the student **use mnemonic devices** to retain information. It will be important that the student initiate such efforts and realize the benefits that can be experienced from their use. Following are some specific mnemonic strategies.

  Repetition: The student rehearses information by orally repeating it or writing it several times. Rehearsal will be most beneficial if it occurs shortly after learning and occurs intermittently thereafter.

  Acrostic: The student recalls a list of words or terms by forming a word using the first letters of the words to be remembered (e.g, HOMES to recall names of the Great Lakes).

  Acronym: The student forms a memorable (i.e., silly, outrageous, familiar) phrase or sentence using the first letters of the words or terms to be recalled (e.g., *My waffle is under the new car* to recall the seven mountain states of Montana, Wyoming, etc.).

  Method of Loci: This strategy involves the student imagining himself walking through a familiar location such as a bedroom or walking to school. The student imagines placing a term, word or element to be recalled in prominent locations along the route. When it is necessary to recall the information, the student mentally retraces the route. The mental image of the prominent locations along the route elicits the corresponding element to be recalled.

  Learning Something New: The student learns more information about a term or vocabulary word. The association of new information with the term strengthens memory for the term. An example would be the student reading some information about a state capital to become more familiar with the city.

  Visualization: The student forms a mental image associated with a term to be recalled

(e.g., mental image of Native American squatting in a corn field to recall the name Squanto).

- ✏ At the start of independent seat work, **monitor student functioning** to insure that he has necessary information available to complete the task.

- ✏ Have the student **serve as a peer tutor to help another student rehearse information** which the target student is also learning.

- ✏ Teach the student to **underline important information** in text to refer to later.

- ✏ Teach the student to **rehearse information just after learning it** to strengthen long term retrieval.

- ✏ **Consult with parents to rehearse** newly acquired information at home.

- ✏ **Employ computer programs** to help the student rehearse learned information.

- ✏ Provide **extra time for rehearsal** of such academic survival information as math facts and times tables.

- ✏ The student may experience difficulty learning from a lecture format. Retrieval of previously presented information during the lecture may be limited. As a result, **provide visual references** such as models and graphic organizers, write key concepts on the board, allow time for the student to take notes and repeat information.

SHORT TERM MEMORY DEFICITS:

Definition:

The student experiences difficulty holding information in immediate mental awareness. This problem often affects ability to follow oral directions, take notes or retain or understand information presented in a lecture format. Attention is a prerequisite condition supporting short term memory.

Accommodations:

- ✓ Seat the student in a location **away from distractions** in order to optimize attention.

- ✓ **Insure that you have the student's attention** before stating a direction. Gaining eye contact and proximity (i.e., be within arms length of student) are often helpful. Difficulty retaining orally stated directions/information will be further aggravated by poor attention.

- ✓ **Word oral directions clearly and succinctly**, avoiding extraneous words and digressions. When possible, limit the number of steps or requests made. State multi-step directions in the sequence in which they are to be completed.

- ✓ The student may have difficulty recalling oral directions given to the class. As a result, it will be important to **monitor student understanding** after group directions are given.

✓ When giving directions, **first provide a simple, global statement that describes the task**. Following the general statement, describe in clear terms the sequence of steps required to accomplish the task. Following is an example.

> "We're going to complete 15 subtraction problems in your math book now. Here's what you need to do....."

This approach facilitates memory for the instructions by associating the component parts with a clearly understood objective.

✓ During oral presentation, **write important information on the board**. Provide written directions that accompany oral directions.

✓ **Encourage the student to ask** for directions or information to be repeated if not understood or remembered.

✓ It may be helpful to **seat the student next to a peer helper** who can answer questions or repeat information if the student needs help.

Instructional strategies/methods:

✏ A deficit in short term working memory (holding information in mental awareness while manipulating or solving a problem with the information) can create difficulty with phonetic decoding. The student may not be able to hold phonemes associated with a word in mental awareness long enough to blend and decode. In this case, compensate for phonetic decoding difficulty by **teaching a sight vocabulary**, teaching the student to recognize root words and morphemes (prefixes and suffixes) and teaching the student to recognize words via contextual clues.

✏ **Use a top down approach to instruction** in order to lessen memory demands. In this approach, the product is presented as a whole before its component parts are described or taught. For example, when teaching phonetic decoding, say the word first and then help the student phonetically analyze the word.

✏ **Break instructions into parts**, presenting only one or two parts at a time. Establish understanding or mastery of one component before moving onto the next.

✏ **Teach information in easily recognized groups** or families to facilitate memory.

✏ When teaching, **provide a written or pictorial model** the student can refer to. Use of graphic organizers can be helpful in this regard. **Write key terms on the board** so that the student can readily refer to them.

✏ **Repeat important information** at a high rate, emphasizing key words by tone of voice.

✏ During periods of class recitation and discussion, **call on the student shortly after a question has been asked to the class** in order to prevent the student from forgetting the question and/or answer. It may also be helpful to **use a technique called positive questioning** in order to maintain attention of the student as well as classmates. In this method, the teacher asks a

question, pauses for the students to formulate a response and then randomly calls on a student.

- ✏ **Underline key words** in text the student will read. This will draw attention to this information as well as provide a reference the student can refer back to if memory fails the student.
- ✏ **Encourage the student to immediately write key concepts**, vocabulary or information down when it is presented during a lecture or when read in text. Recording such information in written form will reduce memory demands by providing a bank of information the student can refer to.

- ✏ The student may experience difficulty taking notes from a lecture. This may be the result of difficulty holding information in mental awareness while recording it in writing. As a result, **during lectures, move slowly, repeat key information often and write key words and concepts on the board.**

- ✏ While listening to a lecture, it may be helpful to provide a **formatted, written script for the student on which he can fill in blanks** (cloze method) with key words/concepts.

- ✏ **Provide the student lecture notes** either produced by the teacher or those written by another student.

- ✏ The student may experience difficulty at times copying information from a book or the board with speed and facility. This may be the result of difficulty keeping information to be copied in mental awareness (i.e., the student forgets information before getting it copied). As a result, the student may be able to only transfer short bits of information at a time. **Provide extra time to copy information, provide information already in copied form or reduce the demands of copying on tasks.**

- ✏ Consider presenting rote information (particularly sequential information) in the form of a **song or rhyme**.

PROCESSING SPEED DEFICITS:

Definition:

The student works at a slow rate on simple or rote tasks that are typically automatic in nature. This affects ability to copy, complete academic assignments in a timely manner, take notes with speed and ease or express self quickly and efficiently. Attention is a prerequisite condition to processing speed.

Accommodations:

- ✓ Slow processing speed can significantly reduce the rate of task completion and make long tasks unreasonably difficult to complete. Frustration or boredom can result. As a result, it is important to consider accommodations that emphasize **quality of work produced rather than volume and speed** of work completed.

- ✓ Allow **extra time** to complete tasks.

- ✓ Consider **shortening tasks** that are repetitive. For instance, the student might complete only odd numbered items on a math worksheet.

- ✓ **Reduce volume of writing and copying**, especially when it is not a critical component of an instructional task.

- ✓ On some written assignments consider substituting a **cloze procedure** in which the student completes a sentence or fills in a blank rather than writing an entire sentence.

- ✓ When appropriate, permit the student to **take work home** to be completed.

- ✓ **Make adjustments in the length of homework** assignments. Lengthy assignments may result in the student spending unreasonable amounts of time completing homework.

- ✓ In oral discussions allow the student **sufficient time to formulate a response.**

- ✓ During an oral discussion, **allow the student time to formulate responses** so the student can be an active participant. Questions to be discussed might be reviewed with the student prior to the discussion.

- ✓ **In grading, emphasize accuracy and quality** of items completed on an assignment. Disregard uncompleted items. As a result, a grade is computed by the percentage of correctly completed items rather than based on the total items assigned or present on a task or test.

- ✓ Consider **individualizing test taking**. For instance, some students with processing speed problems may have difficulty staying with the class during a spelling test. Let the student write the test at another time, provide additional time or allow the student to take it orally.

- ✓ **Provide lecture notes** for the student **or, using a cloze procedure, provide a formatted script of notes** in which only key words need to be added.

- ✓ Provide the student **extra time to read a text**, provide a shortened version of the text or have the text read to the student.

- ✓ With a beginning reader, slow processing speed can impede the time to decode a word. As a result, greater demands are placed on working memory causing the decoding process to fail. When the student attempts to decode an unfamiliar word, **assist decoding by saying the sounds and allow the student to blend**. Also, developing a strong sight vocabulary will reduce need for phonetic decoding.

- ✓ Slow processing speed can reduce reading fluency/rate and as a result impair reading comprehension. As a result, it may be helpful to **monitor comprehension of text reading and, if necessary, summarize information orally.**

AUDITORY PROCESSING AND PHONEMIC AWARENESS DEFICITS:

Definitions:

Auditory Processing: The student experiences difficulty analyzing, synthesizing, and discriminating auditory stimuli. Problems can affect receptive communication and may be

manifested in difficulty recognizing partially heard words, recognizing words from background sounds and blending sounds into words.

Phonemic Awareness: The student experiences difficulty with awareness of and efficient manipulation of the phonemes which comprise words. These problems most directly affect reading and spelling development and are manifested by difficulty segmenting words into parts, recognizing and producing rhymes, blending phonemes to make words and adding, deleting and substituting sounds in words to make new words.

Accommodations

- ✓ **Check for comprehension** after group directions are given.
- ✓ **Place in a well managed classroom** with control of extraneous activities that create auditory distractions and competing background noise.
- ✓ Provide **preferential seating** that supports monitoring of student comprehension.
- ✓ **Provide a peer assistant** or buddy to provide information when the student did not understand an oral communication.
- ✓ **Waive foreign language requirements** for graduation.

Instructional Strategies/Methods - Auditory Processing Deficits:

- ✏ When practical, **word instructions individually** to the student in order to avoid competition with extraneous background sounds.
- ✏ **Seat the student in proximity to the teacher** in order to facilitate monitoring and to individualize instructions.
- ✏ **Face the student** when speaking and be in proximity.
- ✏ **Articulate clearly** and avoid speaking quickly or slurring words.
- ✏ **Word directions and instructions clearly**, succinctly and in simple terms.
- ✏ **Encourage the student to ask questions** and seek help if the student does not understand.
- ✏ Supplement oral directions/instructions with a **written counterpart**.
- ✏ Be prepared to **provide a demonstration or concrete example** to accompany an oral explanation.
- ✏ **Write key words on the board** or on an overhead to support oral instruction.
- ✏ As a pre-teaching strategy, it may be helpful to **have the student read about a content area**

before information is presented orally. Familiarity with content will enhance oral comprehension despite an auditory processing deficit.

- ✏ The student may have difficulty interpreting information presented orally during a lecture. As a result, it may be helpful to **supply a written study guide** the student can follow during the presentation. A study guide might contain an outline of content and provide definitions for key words and concepts. In addition, a cloze technique (fill in the blank) might be incorporated into the study guide to facilitate note taking during the presentation.

- ✏ Auditory processing and particularly phonemic awareness deficits can interfere with learning to decode words. Until phonemic awareness skills are strengthened it will likely be helpful to compensate for phonetic decoding difficulty by **teaching a sight vocabulary, teaching the student to recognize root words and morphemes (prefixes and suffixes) and teaching the student to recognize words via contextual clues.**

- ✏ **Provide a signal to alert the student** when an oral direction/instruction is going to be given.

Instructional Strategies to Teach Phonemic Awareness

- ✏ Strong phonemic awareness skills predict ease in reading development. As a result, it is important that steps be taken to **develop and strengthen phonemic awareness skills** including segmenting words into syllables, development of rhyming ability, blending phonemes into words and segmenting words into phonemes. In addition, the student should develop skills to manipulate phonemes in words including deleting, adding and substituting phonemes to make new words.

- ✏ **Read books to the student that play with and manipulate letter sounds**. Such literature makes use of rhyming, alliteration and manipulation of phonemes. Dr. Seuss books are entertaining examples.

- ✏ **Read or recite poems to the student that use different rhyming patters**. Encourage the student to repeat the rhyme and perhaps raise a hand when the rhyme is heard.

- ✏ Use **phonemic awareness activities for which the student knows individual letter sounds** and sounds of letter combinations.

- ✏ **Discuss how phonemic awareness activities relate to reading and spelling words** (e.g., words that rhyme such as cat and hat have similar spelling).

- ✏ The student will likely recognize larger word parts and syllables before individual phonemes (specific sounds) in words. As a result, **start awareness building activities by breaking compound words into parts** (e.g., pan-cake, butter-fly, basket-ball). The student might manipulate pictures of the component words to create compound words. Move from compound words to recognizing syllables in words and in time to recognizing and manipulating individual phonemes in simple and then longer words.

- ✏ If syllabicating a word is particularly difficult for the student, **explain that when a word is said,**

the chin drops for each syllable stated. Also, a breath of air is expelled with each syllable stated. These physical cues may help the student understand that words are composed of parts that can be identified.

- ✏ The student will likely find greater success **segmenting and manipulating words with long vowel sounds and consonant sounds that can be elongated** or held when said (e.g., m, f, s).

- ✏ When segmenting words into syllables or phonemes, it may be helpful to have the student **move an object such as a block or poker chip for each syllable or phoneme heard or said.**

- ✏ When segmenting, the student will likely be able to most easily identify and manipulate the first and last phonemes in a word. As a result, **start by asking the student to identify and manipulate the first, then the last and finally the medial phonemes in words.**

- ✏ **As the student becomes proficient with segmenting words, include the blending process**. In time have the student both segment (i.e., move from whole to parts) and then blend (i.e., move from parts to whole) words.

- ✏ The student will likely benefit from the following **guidelines for teaching blending skills:**

  a.) Start by blending simple compound words, then syllables into words and finally sounds into words.

  b.) Initially start blending activities with words having long vowels and consonants that make a continuous or stretched sound.

  c.) When introducing blending, start by blending the initial sound to words (m-at), followed by completing words by blending the final sound (c-at). In time work toward blending all sounds.

  d.) Move from the instructor modeling the blending to the student independently blending without prompts.

  e.) Move from the student blending words for which the instructor states syllables or sounds to the student blending words from print. This will require that the student know letter-sound associations.

- ✏ Read pairs of words to the student, some of which rhyme and some of which do not. **Ask the student to raise a hand when the words rhyme** and not raise a hand when the words do not rhyme. Motivation might be increased by providing the student a token for each correct response. Tokens over time would be collected and cashed in for rewards.

- ✏ As the student becomes more proficient with rhyming, **ask the student to supply a rhyming word** to complete a line or to state a word that rhymes with another word.

- ✏ During instructional activities, **use concrete symbols to represent phonemes**. Slowly state a word phoneme by phoneme and place a poker chip on the table as each phoneme is said. Then say one of the phonemes in isolation and ask the student to identify which chip represents the

phoneme.

✏ **Identify a root word or sound and have the student produce variations of the word** or new words by adding initial or ending sounds (ake: bake, rake, baking, raking).

✏ Have the **student create new words by substituting medial sounds** for a base word (bat: bit, bet, but; fan: fun, fin).

✏ The student may find phonemic awareness activities uninteresting and tedious. As a result, it may be helpful to **present activities as part of a game**. Use a board from a common game such as Chutes and Ladders. Each time the student is correct in a response to the phonemic awareness activity, the student chooses a card with a number written on the back. The student moves this number of spaces on the game board.

VISUAL-SPATIAL THINKING DEFICITS:

Definition:

The student experiences difficulty perceiving and thinking with visual patterns. Visual spatial thinking can affect ability to store and recall visual information as well as difficulty with tasks that require awareness of visual detail.

Accommodations:

✓ The student may experience confusion gaining information from **charts, graphs and tables**. As a result, take time to explain these systems of representing information. It may be necessary to **individually assist the student** to retrieve information from such visual systems. **Pairing with a buddy** might be helpful when the student needs immediate help gaining information from charts, graphs and tables.

✓ Encourage the student to **clear desk of extraneous materials**, leaving only those that are required for a task.

✓ **Reduce extraneous visual stimuli on a page by highlighting the target stimulus** (underline key words), covering extraneous stimuli (using a marker when reading) or increasing the size of a stimulus (enlarge print). Also, when writing or solving math problems is required on a page, provide ample white space.

✓ **Highlight or underline in color important information** on a page to help the student scan.

✓ **Provide visual markers to guide the student** on tasks that are spatial and sequential. For instance, provide an arrow to demonstrate where to start and in what direction to proceed when computing a math problem. Visual markers might also be used to assist the student to organize information on paper (e.g., marker for name, marker for title, marker for where to place paragraphs.)

✓ On some tasks the student might benefit from **folding a paper to provide quadrants** within which specific tasks are to be accomplished.

- ✓ Provide **graph paper to help the student organize rows and columns** on math computation problems.

- ✓ Have the student **copy math problems with a color marker but work them in pencil** to help separate the student's work from the problem.

- ✓ The student may experience difficulty finding his place when copying from the board or a book. Such difficulty might slow rate of task completion. As a result, consider **providing pre-copied tasks**. When the student is expected to copy from a book, **provide a piece of sticky paper the student can use to mark the last line or item copied** from the text.

- ✓ **Assist the student to organize** by providing a box for tools, pocket folders color coded by subjects and guidance on how to organize materials in either desk or locker.

- ✓ **Reduce expectations on tasks that require spatial organization** such as art projects. Consider grading the student on skills gained rather than in comparison to peers.

- ✓ The student may experience difficulty telling time and understanding temporal relationships. **Provide assistance when time measurement, estimating time or temporal concepts are required on a task**.

Instructional Strategies:

- ✏ **Avoid relying excessively on visual models**, diagrams and demonstrations during instruction with this student. **Accompany visual demonstrations with oral explanations**.

- ✏ When using visual demonstrations or models to teach a skill or concept, be prepared to **move slowly and repeat visual demonstrations as needed.**

- ✏ **Break spatial tasks into component parts and provide a verbal set of instructions to match each part**. For instance, provide a sequenced verbal strategy to help a student work through the steps of a math computation problem such as regrouping in subtraction.

- ✏ The student may experience difficulty forming a visual representation of a concept in his mind (e.g., change of solar position with latitude). As a result, **provide hands on, concrete experiences and manipulatives when teaching an abstract concept that is visual in nature**. Accompany these concrete experiences with verbal explanations.

- ✏ The student may experience **difficulty with visual memory** for symbols. As a result, **provide a model to which the student can refer when completing tasks** (e.g., number line on desk, alphabet on desk, example on desk of a math algorithm including markers to show sequence of steps, etc.)

COMPREHENSION-KNOWLEDGE AND LANGUAGE DEFICITS:

Definition:

The student lacks background knowledge and/or language development to support academic learning. As a result, the student may demonstrate difficulty with comprehension of directions and material read, as well as difficulty with oral expression and content of written language.

Accommodations:

✓ The student may experience difficulty comprehending oral or written directions. As a result, provide **preferential seating to enhance monitoring** of comprehension.

✓ After group directions are given, **check with the student to insure comprehension of task demands**. This might be done by asking the student to paraphrase directions in the student's own words.

✓ The student will likely benefit from **oral communication that is individualized** and features the following elements:

1.) use of clear, concise language,
2.) use of vocabulary that is comprehensible,
3.) use of pauses between phrases or sentences to promote processing of information,
4.) avoidance of complex and lengthy sentences,
5.) check of comprehension after the communication is completed.

✓ **Encourage the student to ask for clarification** if a communication is not understood.

✓ **Seat the student near peer models who can clarify information** or directions and provide individual assistance.

✓ **Provide a word bank** from which the student can draw when involved in written expression.

✓ **Provide a glossary** of important terms the student can refer to in order to compensate for lack of background information and vocabulary

✓ Insure that **test items do not include vocabulary which has not been taught** or is not familiar to the student.

Instructional Strategies:

✏ **Review and/or teach key vocabulary words** before a lecture or before the student is asked to read from content area texts. It may be necessary to review individually with the student. Use of an aide or parent assistant might be helpful in this regard.

✏ During instruction, **write key words and terms on the board** to provide a reference to which the student can refer. It is likely the student will not retain information that is only presented orally since there is a lack of background information and related vocabulary.

- **Pair oral instruction with demonstrations**, visual examples and models. **Use concrete references** familiar to the student when presenting new vocabulary or concepts.

- **Word instructions clearly**, using specific language and vocabulary that is familiar to the student. Avoid long and complex sentences.

- During instruction **stick to the point - avoid digressions and excessive language**.

- **Insure understanding for present** information before introducing additional information.

- Assist the student to express ideas by **providing necessary vocabulary words.**

- A lack of information and vocabulary may affect reading comprehension. As a result, **orally review information the student read about in a passage**. When necessary reinterpret information using familiar vocabulary, terms and experiences.

- **Use direct instruction methods to teach new words**. Model use of the word, cite concrete references to enhance understanding of the word, have the student use the word in various tasks and contexts, and provide immediate feedback/error correction. Attempt to link new vocabulary to prior learning and familiar experiences.

- Attempt to **expand the student's vocabulary by substituting more sophisticated or precise terms** for the student's. For instance, when the student says his dog "runs around and barks," restate the description by stating, "Oh, your dog is frisky."

- **Teach the student to use a thesaurus** to expand oral and written vocabulary.

- **Use catalogs to associate pictures with vocabulary**. Provide the correct vocabulary and ask the student to use the word in one or more sentences. It might be helpful to ask the student's parent to employ this procedure.

- Attempt to increase the student's fund of knowledge by **exposing the student to information rich mediums** such as newspapers, news magazines, television documentaries and television news programs. Provide opportunities to discuss information presented.

- Prior to a lecture, **provide an *advance organizer***. This might consist of an outline, written on the board, of the material to be presented. Refer to each topic on the board as it is presented.

- During oral presentations and lectures, **use a *cloze strategy*** to help the student be vigilant to key vocabulary and concepts to be presented. This method requires that definitions of key concepts and vocabulary be written out. Important terms are then substituted with a blank space on the cloze form. During the lecture, the student listens carefully and fills in the blank terms as they are presented in the lecture. It may be helpful to have a word bank of terms at the top of the page to which the student can refer. While lecturing, the instructor should use the exact wording of statements on the cloze page being completed by the student. Afterward, correct the student's responses.

✏ **Immediately correct grammatical or word usage errors** and require the student to respond correctly.

FLUID REASONING DEFICITS:

Definition:

The student demonstrates difficulty with reasoning which may be manifested by problems comprehending instruction and directions, generalizing learned skills and solving novel problems.

Accommodations:

✓ The student may not understand relationships between concepts and may not generalize learned rules or procedures to different or new situations. As a result, the student may often appear confused with task demands. It will be necessary to **monitor the student at a high rate to assess understanding** and provide assistance in a timely manner.

✓ While the student may initially appear to understand directions, problems may be encountered in applying directions as task demands and contexts change (e.g., generalizing from identifying latitude and longitude of a specific location on a map to new sites and with other maps). As a result, it will be important to **monitor functioning throughout a task and particularly when there are changes in task demands.**

✓ It may be helpful to **seat the student next to a peer helper** who can provide assistance when the student experiences confusion.

✓ **Start a task with the student** so that the initial items are done correctly and a model for completion of the assignment is established. This might most conveniently be done by assigning a peer with whom the student can do the first problem(s) of an assignment.

✓ **Avoid frustrating the student with problem solving** tasks that require reasoning beyond a level for which the student has demonstrated competency.

✓ **Provide practice tests** that include examples similar to those on a graded test.

✓ **Weight grades in favor of concrete information and skills** acquired instead of creative use or application of concepts and skills.

Instructional Strategies:

✏ Due to **difficulty with deductive reasoning**, the student may experience problems using a learned procedure or rule to solve problems. This difficulty might occur when content changes in story problems or when an algorithm is expressed in a different way. As a result, **provide various examples of how the rule or procedure can be used across different situations**.

✏ Due to **difficulty with deductive reasoning**, the student experiences problems using rules or a set of procedures to solve problems. As a result, **use discovery learning** to provide experiences to assist the student to understand why a rule or principal works. Work from the bottom up by

showing how observations result in formation of a rule. After the student understands why, the student might better be able to generalize use of a rule or procedure to solve new problems.

- Due to **difficulty with inductive reasoning**, the student may experience confusion with discovery learning in which the student is expected to arrive at a rule to explain examples. **This student appears to work best when a rule is stated or a well defined set of steps is established to solve a problem.**

- To promote understanding and generalization in use of a rule or procedure, **clearly describe the rule or procedure and provide numerous concrete examples**, particularly from the student's experience.

- **Develop understanding of abstract concepts by describing concrete, familiar elements of the concept** (e.g., fruit can be eaten, grows on trees, has a seed or stone and has skin). In addition, employ concrete examples including pictures, demonstrations and manipulatives.

- **Break complex tasks or procedures into component parts**. After the student masters one part, move onto the next.

- Help the student **sort our relevant from irrelevant information** when solving a problem.

- Move slowly when presenting new information and **tie new concepts into previously mastered concepts** and information.

- **Teach new information in groups** or families and clarify how the items or examples are alike.

- **Provide a routine or practiced sequence** for approaching a difficult or complex task. A practiced routine will help the student solve problems despite difficulty understanding how and why a procedure works. It may be necessary to define when and under what circumstances a procedure is to be used.

- Provide structured opportunities for the student to **use a concept or skill in real life contexts** (e.g., using subtraction to determine money left after a purchase).

- Consider **using a teaching assistant, volunteer or peer tutor to work individually with the student** to teach and demonstrate a new skill or concept. This may be most important when classmates have gained insight and the student still lacks understanding for a concept or procedure.

- **Explain the purpose of an assignment** in order to make the task meaningful to the student. This student may not independently perceive the relationship between completing a task and greater learning outcomes.

- Make an effort to **explain in clear, concrete terms why a procedure is being used** in a particular problem.

- The student demonstrates reasoning difficulties that might impede understanding of instruction. **A study guide might be beneficial** to help the student organize information, identify the most

relevant information and provide a conceptual framework to understand instruction (or passage reading). A study guide might consist of open ended questions, fill in the blank items or true false questions that the student reads prior to instruction. The student looks for answers during instruction (or while reading) and completes the study guide items.

✏ Before teaching a new concept or topic, **use semantic maps to organize key vocabulary and prior knowledge**. Following are steps to be followed.

1.) Write a sentence on the board that succinctly describes the topic (e.g., The climate of the west is varied).
2.) Ask the student(s) to brainstorm all words and phrases the student(s) can think of about the topic. Write these on the board.
3.) Write key vocabulary words on the board. Define these terms.
4.) Ask the student(s) to identify words and phrases that go together (e.g., rain, snow, hail as one category and hot, cold as another category). Write these in groups or categories.
5.) Encircle the categories and ask the student(s) to think of a label that describes the category (e.g., temperature, precipitation, etc.)
6.) Discuss how the categories relate to each other.
7.) Teach the lesson while referring back and adding to the semantic map.

SECTION TWO
ACCOMMODATIONS FOR ACHIEVEMENT DEFICITS

BASIC READING SKILL DEFICITS (Reading Readiness, Decoding, Word Recognition, Reading Fluency)

Definition:

The student lacks skills in reading readiness, phonetic decoding, word recognition and reading fluency.

Accommodations:

- ✓ The student will experience difficulty reading directions whether on the board, on assignments or in texts. It will be helpful to **orally review written directions with the student** and, when appropriate, provide demonstrations to support comprehension.

- ✓ Many seatwork tasks and activities that require independent reading as well as writing will be difficult for this student. As a result, **expectations will need to be adjusted**. It may be necessary to shorten such assignments, provide additional time, modify items, or provide individual help. The student might be assigned to work with another student on such tasks.

- ✓ Consider **seating the student next to a study buddy** who can assist the student when the student experiences difficulty with reading.

- ✓ Content area texts (e.g., social studies, science) may be difficult for the student to read. It may be helpful to **review information orally that is presented in expository texts**. In addition, reviewing content of text passages may provide context clues that will help the student read the passage.

- ✓ **Highlighting of content area texts** can be helpful to compensate for difficulties with reading efficiency. In this strategy key words, phrases and sentences are marked with a highlighter pen. As a result, the amount of reading is reduced and key information is emphasized.

- ✓ **Have a model student read** content area texts to the student to compensate for the student's difficulties with reading of the material.

- ✓ Since the student is identified as reading disabled, the student is eligible to receive **books on tape**. This may be necessary to compensate for the student's inability to read content area texts. Tapes may be borrowed from *Recordings for the Blind and Dyslexic*, which is a nonprofit organization serving the needs of blind and learning disabled individuals. It is required that a membership application be completed, which is available at the organizations's website, www.rfbd.org. The application requires the signature of an educational professional certifying that the student is unable to read standard print. The organization's address is

  Recordings for the Blind and Dyslexic
  The Anne T. Macdonald Center
  20 Roszel Road

Princeton, New Jersey 08540
Phone: 1-800-221-4792

- ✓ Given the student's weakness in basic reading skills, it may be necessary to make **adjustments in homework assignments**. It will be important to only assign tasks for which the student demonstrates independent reading skills.

- ✓ As the student demonstrates significant basic reading skill deficits, **tests might better be given orally.** Should reading and writing be required, consideration should be given to providing additional time to complete a test.

- ✓ Provide text with **larger print** (i.e., magnify photocopy).

- ✓ In order to enhance visual perception of print, require the student to **place a book marker under successive lines of text** as they are read. Or, provide the student a window to move down the page as text is read.

- ✓ To avoid embarrassment and an experience of failure, **avoid oral reading of difficult passages in public**.

Instructional Strategies to enhance motivation:

- ✏ Encourage the **student's parents to read high interest materials to the student**. Parental attention associated with reading will establish reading as a pleasurable experience that is valued by the parents.

- ✏ It is important that the student experience enjoyment and benefits from reading. Help the student's parents find reading materials in the library that match areas of student interest and are at independent reading level. **Encourage the student to read regularly at home**. The parents might be assisted to establish a formal reward program to encourage independent reading at home.

- ✏ **Have the student serve as a peer tutor who uses an academic accommodation to help a problem reader** is a lower grade class. The student might also read easy reading level stories to students in a lower grade class.

- ✏ **With the student, systematically plot reading performance on a graph to show progress**. First take a baseline measure of reading performance (e.g., reading rate in words correct per minute, percentage of words recognized in a passage, words read correctly per minute from a sight word list, etc.). Set a goal and thereafter take regular samples of reading performance, teaching the student to record data on the graph. Reinforce both effort and goal achievement. This method not only provides feedback to the teacher concerning success of an accommodation, but enhances student motivation as well.

Instructional strategies to teach letter names and sounds:

- ✏ **Teach the student to say the alphabet**. Familiarity with letter names will enhance learning of letter-name associations.

- **Use direct instruction procedures** of showing the target stimulus (i.e., the written letter), modeling the correct response (i.e., both name and sound of the letter), providing the student numerous opportunities to rehearse the correct response in the presence of the target stimulus, reinforce success and immediately correct errors in a positive manner.

- **Teach only one or two letter names and sounds at a time**. In teaching, show the letter and pair the name with the sound. Regularly review letter names and sounds previously taught.

- Capitalize on familiarity by first teaching the student the **letter names and sounds in the student's name**.

- **Pair letters with pictures** associated with the letter name or sound. For instance, when teaching the letter a, associate the letter with a picture of an apple and the /a/ sound. Some letters lend themselves to such associations (e.g., m taught as two mountains, s taught as a snake, e taught as an egg).

- Provide cut out letters and **have the student match letters** in order to establish discrimination of letter forms.

- Provide **opportunities for the student to play with letter forms** by drawing them in sand, making them out of clay, tracing and writing letters on the board and on paper and even making letters out of dough followed by baking and eating them. The student might also play the game *Go Fish* with letter cards. In such activities make a point to have the student say the letter name and sound often.

- Encourage the student's **parent to review letter names and sounds at home**. Communicate regularly so that the parent is working on the same letters taught in class. Suggest specific activities that have been found helpful in class.

- **Capitalize on the benefits of spaced practice** by providing several short opportunities (i.e., 10 minutes) spread across the day for the student to practice association of names and sounds with letters.

- **Employ an upper grade peer tutor or parent aide** to review letter names and sounds on a regular basis.

- Enhance motivation by using a **positive reinforcement program**. For instance, each time the student demonstrates mastery of a letter name and sound, the student pastes a cut out of the letter on a drawing of a ladder. At designated steps on the ladder, reinforcers are earned.

- **Use *delayed prompting* as a drill activity**. Three letters for which the student knows neither name nor sound are written on flash cards. The instructor shows each card and says the name and sound. The stack is presented three times in this manner. Afterward, the student is told that in the next presentations, the student is to say the name and sound. The student is also told to only make a response if absolutely certain. If uncertain, the student is to remain silent following the flash. If the student is correct, a praise statement is issued. If the student waits, the correct response (i.e., letter name and sound) is provided by the instructor followed by the student making the correct response. If the student makes an erroneous response, the student is reminded

to only respond if the name and sound are known.

- **The *drill sandwich method* is recommended as a flash card activity** to teach letter names and sounds. An upper grade peer tutor or parent aide may be necessary. Three unknown (i.e., neither name nor sound is associated with the letter) letters and seven known letters are selected. The unknown letters are initially taught by a tutor by showing the student the letter, saying the name and sound and asking the student to repeat it several times while looking at the letter. The tutor then employs a flash card method in which the unknown letters are placed in positions 3, 6 and 8 while known letters are placed in the other positions. The set of letters is presented several times. Occasionally the position of known letters is changed while unknown letters remain in positions 3, 6 and 8.

Instructional strategies to teach phonetic decoding and phonological awareness skills:

- Using words for which the student knows individual letter sounds, **teach the student to read the word by blending individual sounds**. Likewise, help the student break known words into individual sounds. Always use words the student is readily familiar with. **Employ direct instruction methods** of modeling the blending process, providing the student many opportunities to practice and providing immediate feedback/error correction.

- **Teach the student that words can be broken into syllables** and that often simple words are contained within a larger word.

- **Use letter cards or magnetic letters to teach the student to combine letters into words**. First, the instructor says the word, then repeats it phoneme by phoneme while pointing to the corresponding letters sequenced in correct fashion to spell the word. The instructor then scrambles the letters and asks the student to form the word with the letters.

- **Make new words by changing individual letters in a base word**. Write a simple word such as cat. Read the word several times with the student. Change one letter (e.g., p/t or u/a) and have the student read the word. The student might suggest letter substitutions. Afterward, have the student read the list of new words that were created.

- **Use word families** (e.g., cat, hat, sat, mat, etc or run, bun, fun, etc.) when teaching phonetic decoding skills.

- Use the game board from a familiar game to **play a phonics game**. Write phonetically regular words on cards. Also, randomly assign point values to each card. Each time the student correctly decodes a word written on a game card, the student moves the corresponding number of spaces on the game board. This activity can be played with peers and supervised by an upper grade peer tutor. In time, add more challenging words to the stack as the student gains skills.

Instructional strategies to teach a sight vocabulary:

- Should the student experience difficulty with a phonetically based word building approach, **employ a more linguistic, whole word method in which words are taught by families and/or grouped by root words**. Meanwhile, attempt to address underlying auditory/phonemic or short term memory weaknesses that cause difficulty with phonetic analysis and decoding.

- When teaching a sight vocabulary, **choose words the student regularly uses in oral expression**. Or, teach the meaning of the word before it is taught.

- **Teach the student the 300 sight words which make up approximately 65% of written material**. These words were identified by Fry in 1977 (Fry, E. *Elementary Reading Instruction* published by McGraw-Hill).

- Teach only **three or four sight words at a time**.

- **Use a multi-method, multi-sensory approach to teach sight words**. Teach individual sight words by reading the word to the student, having the student read the word back several times, having the student use the word in sentences, having the student trace over the written word while saying the sounds, and having the student write the word from memory while checking and correcting after each attempt. Provide immediate feedback/error correction. Assigning a peer tutor or parent volunteer might be necessary to accomplish this routine.

- Write sight words on **flash cards** and have the student drill frequently with a peer tutor.

- Help the student recognize common sight words in print by having the student **scan a text and highlight each example of a specific sight word**.

- **Incorporate sight words being taught into the student's weekly spelling list**.

- Identify a specific sight word to be learned. **Ask the student to dictate a story using the sight word** several times in the story. Afterward, the student reads the story back to the instructor. This strategy can be employed with a peer tutor.

- **Teach the student survival sight words** that occur frequently in the student's environment (e.g., stop, men, women, exit, etc.)

- **Review sight vocabulary words from a reading passage by the *delayed prompting method***. Unknown words from a passage are written on flash cards. Stacks of five or six cards are formed. The tutor shows each card while reading the word aloud. Using this procedure, the tutor presents the stack twice. The student is then told that he will be asked to read each card in the stack. The student is also instructed to only say the word if he is certain he knows it. He is instructed to wait for the correct answer if uncertain. The stack is presented six times. If the student does not respond in four seconds, the tutor reads the word. The student then reads the word twice before the next card is flashed. If the student gives the wrong answer during the four second delay, the student is reminded to wait till the word is read by the tutor. Unprompted correct responses are followed by an enthusiastic praise statement while prompted responses are followed by a simple praise statement. It may be helpful to provide points associated with a reward program to maintain motivation.

- **The *drill sandwich method* is recommended to preview and teach key vocabulary words** from a basal reading text or content area text that will be read in class. Three unknown (i.e., unfamiliar) words and seven known words are selected from the passage. The unknown words are initially taught by showing the student the word, saying the word and asking the student to repeat it several times. The tutor then employs a flash card method in which the unknown words

are placed in positions 3, 6 and 8 while known words are placed in the other positions. The set of words is presented several times. Occasionally, the position of known words is changed while unknown words remain in positions 3, 6 and 8. Afterward, the passage from which the words are taken is read orally by the student.

✏ **Use the *simultaneous reading of vocabulary words method* to preview reading vocabulary words from content area texts** that will be read in class. In this procedure five or six difficult vocabulary words are identified and written down a page. The instructor produces an audio tape in which the words are read in sequence. The tape is played as the student follows along. A peer tutor who reads the words can be substituted for the audio tape. After listening to the words read, the student then reads the list. The procedure is repeated until the student demonstrates mastery for the vocabulary words.

✏ For reading vocabulary words which have been particularly resistant to instruction, **employ a variety of multi-sensory approaches in which visual, auditory and kinesthetic stimuli are used with a variety of tasks at various cognitive levels**. Use of a peer tutor or aide might be required for some of these. The student might hear the word in various sentences, create oral sentences using the word, hear and identify rhyming words, see the word in print, hear the word read, hear the component phonemes and syllables articulated when read, read the word repeatedly, read individual syllables and graphemes that comprise the word, write the word while saying it, draw the word in shaving cream or sand while saying the word, write the word on the board, draw the word in the air with large muscle movements, pick the word out from other words, move letter blocks into position to spell the word, and dictate the word in sentences which the student then reads.

✏ Use an **overhead transparency** to show text on a screen. **Point to words on the screen as they are being read orally** in class.

Instructional strategies to improve reading fluency:

✏ Provide opportunities for the student to ***preview passages* from the basal reading program** before the passages are read in class. In this procedure, the student listens to a peer tutor read a passage or reads along with a peer tutor.

✏ **Employ a *home based reading previewing program***. This will require regular communication between school and home as well as a copy of the basal reading text at home. The parent spends about 15 minutes at least four nights a week listening to the student read a passage that is scheduled to be read within the next couple of days at school. The parent responds to substitution, omission or mispronunciation errors by merely stating the word and asking the student to re-read it twice. The student then starts reading at the beginning of the sentence in which the error occurred. After the passage is read, story content is discussed and the student re-reads the passage.

✏ **Use *listening previewing* as an individualized instructional strategy** to build rate and fluency. This strategy is also helpful to preview passages that are at frustrational reading level. The student and a peer tutor read passages from the assigned basal reading text within a day before the passage is read in class. The student listens and follows along as the tutor reads a sentence or short paragraph. The student then orally reads the paragraph. This process is continued until the

passage is completed and the student reads the passage aloud independently. Errors are corrected by the tutor saying the word correctly and the student repeating the word three times while looking at the word. After an error correction, the student starts reading at the beginning of the sentence in which the error occurred.

✏ **Use the *repeated reading method*** to improve reading fluency. In this strategy a baseline reading rate of words correct per minute is established for a passage from the student's basal reading text. The instructor assists the student to plot this information on a graph and set a goal. Across daily sessions the student re-reads the same passage orally and plots his reading fluency (i.e., words correct per minute) on the graph. Reinforcement is provided when the student reaches the reading fluency goal and the process begins again with a new passage. Goal setting and regular plotting of data by the student are important parts of this method.

✏ **Employ a *simultaneous or choral reading strategy*** (also known as neurological impress method) with a peer tutor to improve fluency and to read passages that are at frustrational reading level. The student and a tutor read orally together (simultaneously) from the student's reading instructional text. The tutor reads at a rate approximately 1/3rd faster than the baseline rate of the target student. After a paragraph or several lines are read in chorus, the student orally reads the passage alone. It is helpful for the tutor to follow along with his/her finger when modeling. If the student mispronounces a word or fails to identify a word while reading alone, the tutor immediately says the word and the student repeats it and continues reading. Passages should be material to be read in class within the next couple of days.

✏ **Employ a *previewing and audio tape strategy*** in which the student previews a passage to be read within the next day from the student's reading instructional text. The student listens to a tape recording of the passage while reading along with the tape. Afterward, the student re-reads the passage orally.

READING COMPREHENSION DEFICITS

Definition:

The student demonstrates deficiency in comprehension of information read.

Accommodations:

✓ A lack of knowledge to which the student can relate information from a passage may contribute to lack of comprehension. As a result, it will be important to **provide background information about the topic before a passage is read**. The more information the student has about the topic, the better will be the student's comprehension when reading about the topic.

✓ **Monitor comprehension after passages are read in class**. It may be helpful to ask the student to paraphrase or summarize information read in order to assess level of comprehension.

✓ On assignments, **orally review the content of written directions**.

✓ **Encourage the student to ask for assistance if the student lacks understanding of information read**. It may be helpful to seat the student next to a **study buddy** who can provide such assistance.

- ✓ Provide texts with **key phrases and vocabulary highlighted**.

- ✓ **Provide a study guide prior to the student reading a passage**. The study guide might consist of open ended questions, fill in the blank items or true false items which the student responds to. The student first reviews the study guide and then looks for responses while reading the passage.

- ✓ A lack of basic reading skills, including adequate reading fluency, is inhibiting comprehension with this student. As a result, it will be helpful to **orally review information in a passage before it is read**, provide a tape recording of a passage, or have a peer pre-read the passage with the student and discuss its meaning.

- ✓ **Provide extra time for the student to read a passage or shorten the amount to be read**. Reading comprehension difficulties often result in a need to re-read a passage or engage in other cognitive strategies to gain meaning from a passage.

- ✓ **Review the meaning of key vocabulary words and concepts before a passage from a content area text is read in class**. It will likely be helpful to relate the vocabulary to the student's experience. Also, have the student use the vocabulary in sentences. Briefly discuss how this vocabulary will be used in the passage in order to facilitate understanding of the words when read in the text.

- ✓ Avoid testing the student on content that is only presented through reading. Make sure that **information on tests is taught orally** prior to a test.

- ✓ It may be necessary in some circumstances to **read a test to the student or to employ oral testing methods**.

Instructional Strategies:

- ✏ **Encourage the student to read regularly**. Provide reading material of interest at independent reading level and assign time for the student to read. In addition, consult with the student's parents to encourage independent reading in areas of interest at home.

- ✏ Enhance motivation by clearly **identifying concrete and meaningful purposes for reading a passage** (e.g., you will learn ....., after you have read this passage you will know how to ....., the information in this passage will be on tomorrow's test, etc.).

- ✏ **Teach the meaning of key vocabulary** and new or unfamiliar terms before the student reads a passage.

- ✏ Have **the student and a cohort read a passage with the goal of asking each other questions**. This activity can be turned into a game by assigning points for questions correctly answered.

- ✏ Pair the student with a peer. Both students read a passage paragraph by paragraph. **At the end of each paragraph the students suggest questions that were answered by the paragraph and each summarizes the information** in a couple of sentences. Each student then predicts what the next paragraph will reveal.

- **Teach the student that expository texts (i.e., content area texts) are usually written in a typical style**. A chapter is divided into sections by bold print headings. Each section discusses a topic which is summarized by the bold print heading for the section. Within each paragraph of a section are main ideas. **Show how this organization applies to texts used in class**.

- Prior to reading expository text, **activate the student's prior knowledge of the subject matter**. This might be done by:
  1.) asking questions about the topic,
  2.) sharing personal experiences related to the topic,
  3.) brainstorming everything the student(s) knows about the topic,
  4.) asking the student(s) to identify what the student(s) still needs to learn about the subject matter.

- Using expository texts, **teach the student to summarize or paraphrase information read** in each paragraph and again at the end of sections.

- **Teach the student to identify questions that an expository text passage will answer**. Help the student turn a heading for a section in a content area text into a series of questions (e.g. Lewis and Clark Meet Native Americans: Where did they meet the Indians? What Indians did they meet? What happened when they met?). It will be important to model this procedure for the student and provide guided practice.

- If an expository text contains questions at the end of a chapter, encourage the student to **review these questions before reading the text**.

- Encourage the student to make a **mental image of material read.**

- Teach the student to **take notes when reading**. This can be done by helping the student learn to identify and paraphrase the topic of a section of text and the main ideas presented in the section. Writing the topic and main ideas will enhance memory for this information, which in turn will improve comprehension of additional text read.

- **Teach the student the *SQ3R (i.e., Survey, Question, Read, Recite, Review) Method* of expository text reading**. In this approach the student first surveys a chapter to be read in order to become familiar with the general topic. The student then reads bold print section headings and turns these into questions. The student reads each section in search of answers to the questions asked. The student recites or restates the answers in the student's own words and moves to the next section of text. Upon completion the student reviews the information learned. Writing out questions and answers helps this process.

- **Use an *anticipation guide*** to activate the student's interest in and prior knowledge about a topic in an expository text. This approach requires that key concepts of a passage be written on the board and defined. Then the student responds to a survey form either agreeing or disagreeing to statements about the topic (e.g., deserts are always hot, living at the equator would be fun, etc.). Responses to the survey can be shared and discussed with peers in a group or in a classwide format. The passage is then read and the student is given the chance to change position on survey items.

✏ **Employ a *cloze procedure*** to enhance comprehension for expository text. A set of statements describing a passage is written. Key words in the statements are deleted and replaced with a blank space. The incomplete statements are reviewed with the student. The student reads the passage once, rereads while filling in the blank spaces and then reads it a third time to check answers. In this procedure it is important to review responses with the student to assess student understanding. Cues might be given on the cloze page by providing first letters or letter combinations for the missing words. Also, a word bank might be provided at the top of the page.

✏ **Provide an *advance organizer*** before the student reads from a content area text. This might consist of writing an outline on the board that reviews the content of material to be read. In addition, orally summarize the passage in understandable terms before the student reads the passage.

✏ **Have the student write questions for a test based on material read**. In this strategy, the student should first read the passage, then re-read it to formulate possible test questions. A group of students might share and discuss their test questions.

✏ **Teach the student that narrative texts (i.e. novels, stories) have a typical structure** that consists of a setting, characters, a problem or set of problems, resolution(s) of the problem(s) and an ending. Identifying these components of a story will assist the student to comprehend the story.

✏ **For reading of narrative text, break the story into parts, asking the student to guess what each part will reveal**. After a section is read, the student decides if the prediction(s) was accurate and provides support based on story content. The student then makes predictions for the next section to be read. In this way story content is discussed as the story is being read. This strategy can be employed with a small group of students to facilitate further discussion.

SPELLING DEFICITS:

Definition:

The student experiences difficulty correctly spelling words in written expression.

Accommodations:

✓ On tasks requiring written expression, **weight grading in favor of content and ideas expressed** rather than accuracy of spelling.

✓ **Encourage the student to express himself freely in written expression with the understanding that help will be provided for spelling errors**. Instruct the student to merely circle words for which spelling is uncertain as the student writes. These can be corrected with assistance after the student completes the writing activity.

✓ Seat the student next to a **study buddy who can provide help** with spelling errors.

✓ Provide the student a **poor speller's dictionary**. Encourage the student to look up the word if the student is uncertain about the correct spelling.

- ✓ Teach and encourage the student to **use a word processing program** to assist with correction of spelling errors.

- ✓ Provide **individualized spelling tests** since words from the standard spelling list are inappropriate or the student takes additional time to complete a dictated spelling test.

- ✓ Consider employing **an alternative spelling test scoring procedure.** Provide partial credit (e.g., 1/4 credit, ½ credit, etc.) based on the number of correctly sequenced letters.

Instructional Strategies:

- ✏ Assemble the student's **spelling list from words being taught in the reading instructional program**. In this way reading and spelling instruction will reinforce each other.

- ✏ The student's spelling problems are sufficiently severe that written communication is significantly inhibited. As a result, **select spelling words from the 300 most common words used** in writing as identified by Fry.

- ✏ Include in the student's spelling list **words that the student frequently misspells** when completing assignments.

- ✏ This student may be overwhelmed with a long spelling list presented at the outset of the week. Instead, **estimate how many words a student will be able to learn in one session (e.g., perhaps 2 or 3). Then introduce this many words** each day or every other day. Continue to practice newly learned words.

- ✏ **Use a *flow method* rather than a standardized set of weekly spelling words**. In this method a master list of words to be learned is established. The list is derived from words being taught in the reading curriculum, words from the Fry most common word list and words the student often misspells. The student is tested daily on a short set of these words. When the student is successful in spelling a word three days in a row, the word is replaced by a new word from the master list. Be sure to occasionally review words that have been identified as learned.

- ✏ When possible **group spelling words according to spelling patterns** (i.e., root words and word families). Memory is enhanced when an individual groups information into categories. As a result, it will also be helpful to teach the student to find similarities (e.g., same root word, same ending, etc.) among spelling words and place the words into groups based on these similarities.

- ✏ **Devise a spelling list comprised of a root word(s) and its derivatives created by various morphemes** (i.e., prefixes and suffixes). For instance, the list might be created using the root word welcome with its derivations of unwelcome, welcoming, welcomed and welcomes.

- ✏ **Establish a reasonable number of new spelling words introduced each week**. If the student is unable to learn to spell 80% of the words correctly, further abbreviate the list. To enhance success and not draw attention to an abbreviated list, include on the list two or three words which the student has recently mastered.

- **Insure that the student is able to read, understand and use spelling words in oral expression**. When introducing spelling words, have the student use them orally in sentences to insure an adequate level of comprehension.

- When possible, **incorporate spelling words into daily reading and writing activities**.

- **On written assignments, provide feedback for spelling errors** by writing the correct spelling of incorrectly spelled words. Encourage the student to take time to study these corrections.

- **Teach the student to break spelling words into component parts of syllables and sounds.** Use direct instruction procedures of modeling the skill, providing many opportunities for the student to practice the skill and providing immediate feedback/error correction.

- **Communicate and consult regularly with the student's parents** concerning strategies to rehearse spelling words at home.

- The student usually spells words in a phonetically accurate manner but **often makes orthographic errors** (i.e., incorrect letter combinations). Inform the student of this problem and **encourage the student to study the letter sequences in words**, how words look, and to form a mental image of the word when practicing spelling words. To form a mental image the student should be taught to close his eyes and see the word on a mental screen.

- **Use of a *cloze procedure*** might help the student overcome orthographic errors (i.e., spelling phonetically and making errors in letter sequences). In this strategy the instructor or tutor writes the word at the top of a piece of paper. Underneath the model, the word is written several times with progressively more letters replaced by a blank space. The student fills in the blanks to complete the word. After completing this task, the student turns the paper over and spells the word from memory.

- **The student might improve orthographic skills by looking for a word in print**. Each time the word is found, the student underlines the word, reads it and orally spells the word while looking at each letter. Looking for the word and looking at each letter while spelling the word may help form a mental image of the word that will facilitate spelling.

- **Capitalize on the benefits of spaced practice**. Provide opportunities for the student to practice spelling words on a daily basis, several times a day, for short periods, at spaced intervals (e.g., self starter in morning, self starter after lunch, peer tutoring activity before end of school, spelling homework assignment).

- **Pair the student with a peer to play a spelling game**. A common game board such as from Chutes and Ladders is used. Each spelling word is written on a card. The student chooses a card, reads the word and then chooses to spell the word by copying it from the card or turning the card over and writing it from memory. The student moves two spaces if the word is spelled from memory, one space if copied and no spaces if misspelled. A peer tutor or parent volunteer serves as the referee.

- **Turn spelling tests into an instructional opportunity.** It will be important to provide immediate feedback following each test and a method to rehearse the correct spelling of each misspelled word.

- During instruction, **provide a high number of opportunities for the student to successfully spell the word from memory** (i.e., not just copy). Provide immediate feedback about accuracy. Immediate feedback might consist of self checking and correcting.

- **Use visual, auditory and kinesthetic modalities** in instructional activities. The student sees the word, hears the word read, reads the word, studies individual letters and letter combinations, hears the word pronounced by syllables and phonemes, hears the word spelled, orally spells the word, copies the word in the air with arm movements while saying each letter, traces the word with his fingers while saying the letter names, copies the word on paper and spells the word from memory.

- **Employ the *Fernald Method* to teach spelling of phonetically irregular words or words the student especially struggles with**. Follow the steps below.

  1.) Write the word on a piece of paper.
  2.) As the student looks at the word, the instructor clearly states the word followed by the student clearly articulating the word.
  3.) The student studies the word to form a mental image. This might be facilitated by the student visually studying the word, saying the word and spelling it aloud and tracing the word.
  4.) Only when the student is absolutely certain he can spell it correctly, the student turns the page over and writes the word from memory.
  5.) The student checks his product with the master.

- **Provide the student an opportunity to rehearse spelling words presented on a tape recording**. The student hears the word read, then spelled, while looking at the word on a spelling word list. The tape repeats the spelling several times as the student responds in chorus. The tape then directs the student to pause the recorder, cover the word on the list and write it from memory. The student immediately compares the product with the model. If correct, the student moves to the next taped word. If incorrect, the student copies the word three times and attempts again to write it from memory.

- **Employ a modification of the *delayed prompting* procedure** with a peer tutor to rehearse spelling words. From a short list of words being practiced, the tutor reads the first word. The student is instructed to orally spell the word if the student knows how. If the student is uncertain, the student is instructed not to respond. The tutor then spells the word orally followed by the student spelling the word. Two points are awarded for spelling the word without a prompt and one point for spelling it with a prompt. If the student attempts to spell a word for which the student is uncertain, a reminder is provided to only spell the word if certain. The list is presented several times or until the student feels comfortable trying to spell words from dictation.

- **Teach the student to use the *Cover-Copy-Compare* procedure** to rehearse spelling words. The instructor writes a short list of spelling words several consecutive times (a,b,c,a,b,c, etc.) down the left-hand column of a piece of paper. The student reads the first word, orally spells the word, covers the word and writes the word from memory next to the covered model. The student then removes the cover and compares the word with the model. If the word is spelled correctly, the student moves to the second word and repeats the process. If the word is misspelled, the student copies it three times, covers the model and writes it from memory. This error correction routine is continued until the word is written correctly from memory. If the student experiences

difficulty with this procedure, reduce the number of new words by sandwiching new words between two words the student knows how to spell (i.e., new, known, new, known, etc.).

✏ With the help of a peer tutor or aide, **employ magnetic letters or letters on cards with the cover-copy-compare procedure**. In this strategy, the peer tutor orally states a word and then spells the word. The student says the word, and orally spells the word while assembling the word using magnetic letters or letter cards. The student then looks at the word, orally spells the word, covers the model and writes it from memory. The student then compares his product with the model. A new word is introduced if the student is correct. If the student is incorrect, the student copies the word three times while orally stating the letters as copied and tries again to write it from memory. In this procedure a few words are repeated in sequence several times.

✏ Employing a peer tutor or aide, **use the *Add a Word* method to rehearse spelling words**. Ten words are taken from a master list and copied by the student down the left-hand column of a piece of paper. As the student copies, the student first reads the word and says each letter name as it is written. After copying the words, the student covers the words. The tutor dictates the list to the student who writes each word next to its covered model. After the ten words are dictated, the student compares his spelling to the model. Each word spelled incorrectly is copied with the student saying the word and saying each letter as it is written. The procedure is carried out daily. Words that are spelled correctly on two consecutive days are replaced with new words from the master list.

✏ For particularly difficult words that have been resistant to accommodation, associate a tune with the spelling of the word.

Five letter words: Use the tune *You Are My Sunshine*. The word will need to be spelled six times to finish the tune.

Six letter words: Use the tune *Happy Birthday*. The word will need to be spelled four times to complete the tune.

Seven letter words: Use the tune *Twinkle Twinkle Little Star*. The word will need to be spelled six times to complete the tune.

BASIC MATH SKILL DEFICITS

Definition:

The student experiences deficits in skills prerequisite to computation (e.g., number recognition, math facts) or in computation itself.

Accommodations:

✓ **Provide a number line on the student's desk** to help the student identify numbers, write numbers, visualize number relationships or for use in simple addition and subtraction.

✓ **Provide a "cheat sheet" with math facts**. Allow the student to use this reference tool on assignments and tests until math facts have been memorized. However, encourage the student to guess before looking for the answer on the cheat sheet. The "cheat sheet" will provide immediate

feedback for the guessing response. Such immediate feedback supports learning.

✓ Lack of math facts can inhibit practice of algorithms with this student. As a result, **allow the student to use a calculator to access math facts** when practicing math calculation skills.

✓ **Allow the student to use the *touch point math procedure*** to compensate for lack of memory of addition and subtraction facts.

✓ **Provide adequate space on the page** to write and erase numbers during computation.

✓ **Provide graph paper to help the student organize** rows and columns when computing math problems.

✓ **Monitor student performance at a high rate to insure the student is not practicing errors**. It may be helpful to enlist a peer helper in this regard.

✓ At the start of an independent seat work assignment, **monitor the first couple of items** to insure the student understands how to complete problems.

✓ **Avoid confusing the student by mixing problem types** (e.g., subtraction and addition) until the student has achieved mastery.

✓ **Reduce the length or number of problems on an assignment** in order that the student complete the assignment in the same time as average classmates.

✓ Due to computation difficulties, the student is slow to complete math assignments. **Establish a reasonable limit on the amount of time spent on math homework**. This might require adjusting the length of some assignments.

✓ **Allow additional time on math tests or reduce the number of items on the test.**

Instructional Strategies to Teach Counting:

✏ Identify to what number the student reliably counts. Establish **realistic instructional goals by introducing only two or three additional numbers at a time**. When these numbers have been mastered, progress by another two or three numbers.

✏ **Employ direct instruction procedures** when teaching the student to count. Model the counting skill, allow the student numerous opportunities to practice the skill and provide immediate feedback/error correction.

✏ **Employ choral responding** when teaching the student to count. In this procedure the student counts several times in chorus with the instructor before counting independently.

✏ **Use objects to help the student learn to count**. Use of meaningful objects such as pictures of students, toys or pieces of candy will be helpful. Alternate objects counted across trials to maintain interest. Emphasize one to one correspondence.

✏ **Provide numerous opportunities for the student to use counting in daily activities** (e.g.,

count the friends you are playing with, count the legos in your building, count the cars in the parking lot, count the steps taken to the drinking fountain, count specific objects in catalog pictures, etc.)

- **Capitalize on the benefits of spaced practice**. Rehearse counting several times a day for short periods of time. Providing counting activities for the parents to employ at home and using an upper grade peer tutor to practice counting activities will be helpful in reaching this goal.
- Provide the student regular opportunities to **play games that require counting**. Many early childhood games (e.g., Chutes and Ladders) require counting spaces on a game board.

Instructional Strategies to Teach Number Recognition and Number Writing:

- Emphasize recognizing **numbers** that are **within the range of the student's counting ability.**

- Establish realistic expectations by **introducing only one or two new numbers at a time**. Provide opportunities for the student to practice previously learned numbers while rehearsing a new number(s).

- **Employ direct instruction procedures**. Model reading or writing of a number(s), provide the student numerous opportunities to practice the skill and provide immediate feedback/error correction.

- **Capitalize on the benefits of spaced practice**. Practice number recognition and writing of numbers on a daily basis, for short periods, several times a day (e.g., at the outset of school, after recess, at the end of school and as homework). It may be necessary to provide a cross age peer tutor to accomplish such a schedule.

- **Tape a number line to the student's desk or table**. The student can refer to the number line to identify numbers via counting. The student can also copy number forms from the number line.

- The student will better learn to recognize and write numbers which have meaning, for which the number concept is established. As a result, **when introducing a new number, take time to have the student use the number in activities which enhance meaning** (e.g., name five toys you like, show me five fingers, slap my hand five times, etc.).

- Provide opportunities for the student to become familiar with numbers by **activities employing visual and tactile modalities**. Activities such as matching numbers, tracing numbers, copying numbers in wet sand, playing with number puzzles and manipulating plastic number pieces will be helpful. **Encourage the student to say the number name when engaging with it.** This might require modeling by the instructor.

- When teaching a new number, **integrate activities to identify the number by name as well as write the number from memory**. Learning to identify a number will help the writing process and learning to write a number will help the identification process.

- **When teaching, sandwich a newly introduced number among known numbers**. Identify numbers the student knows and does not know. Introduce an unknown number by pointing to it and saying its name several times followed each time by the student saying the number name. Write the number in an array of two known numbers (e.g., known 1, unknown, known 2). Read

the array of numbers in chorus with the student followed by the student reading the array independently. Rehearse the number several times in this manner while changing the position of the target number among different known numbers.

- **Employ *delayed prompting* as a strategy to teach and rehearse number names**. Organize a set of five flash cards consisting of three known numbers and two unknown numbers to be learned. At the outset, the student is told to only say the number when certain of its name. The cards are flashed by a tutor. If the student recognizes the number, the student says its name. The student remains silent if the number is not recognized and the tutor says the number name which is repeated by the student. The student is praised for correct answers and reminded to wait when not certain. It is helpful to occasionally change the order of cards in the stack.

- **Use a guided practice procedure moving from large to small muscle activity to teach number writing**. The student first forms the number by large movements of the arm. Next the student traces the number on paper several times and then writes the number on paper with the tip of the index finger. The student then copies the number with paper and pencil from a model followed by writing the number from memory.

- Since some numbers will be more difficult for a particular student to write, **move onto writing new numbers while providing individualized help to learn to write difficult numbers.**

- **Capitalize on the benefits of spaced practice** by employing number recognition and writing activities several times per day for short periods of time. An upper grade peer tutor can be of help to run practice activities with the student. In addition, practice at home will be beneficial. It will be important to confer with the student's parents to insure that numbers being practiced at home are those being taught at school.

Instructional Strategies to Teach Math Facts:

- **Explain to the student the value of learning math facts**. Knowing math facts will help the student complete assignments with greater ease and accuracy and make learning of new math procedures much easier.

- **Discuss with the student how math facts can be used to quickly solve many daily problems faced by the student**. Provide examples (e.g., addition facts used to determine points earned in a game, subtraction facts used to determine point differences between players) and have the student identify more examples.

- **Provide adequate drill and practice** so that math facts become automatic. During drill and practice activities, provide immediate feedback/error correction.

- **Capitalize on the benefits of spaced practice**. Provide opportunities to practice math facts on a daily basis, for short periods, several times a day (e.g., at the outset of school, after recess, at the end of school and as homework). It may be necessary to provide a cross age peer tutor to accomplish such a schedule.

- Emphasize success by **introducing only a few** (e.g., perhaps one, two or three) **math facts each day** or every other day.

✏ During instruction, provide a **high number of opportunities for the student to successfully state or write math facts from memory** (i.e., not just copy). Provide immediate feedback about accuracy. Immediate feedback might consist of self checking and correcting.

✏ **When teaching addition facts, first teach the commutative law (e.g., 1+2 = 2+1) and then present math facts in the following sequence**:

+ 0 and + 1
Doubles: 2+2, 3+3, etc.
Doubles + 1: 2+3, 3+4, 4+5, etc.
Doubles + 2: 2+4, 3+5, 4+6, etc.
Plus tens: 2+10, 3+10, etc.
Plus nines: [(any number -1) +10]: 2+9, 3+9, etc.
Remaining facts: 2+5, 2+6, 2+7, 2+8, 3+6, 3+7,
3+8, 4+7, 4+8, 5+8

✏ **When teaching multiplication facts, review the commutative law (e.g., 3x4 = 4x3) and use the following order of presentation:**

x0 and x1
x2 and 2x
x5 and 5x
x9 and 9x
Perfect squares: 1x1, 2x2, 3x3, etc.
Remaining facts: 3x4, 3x6, 3x7, 3x8, 4x6, 4x7,
4x8, 6x7, 6x8, 7x8

✏ **Teach multiplication facts even if all addition and subtraction facts are not known.**

✏ Help the student **record math facts that have been learned on a chart to enhance motivation**. A useful chart consists of a computation table (i.e., a table with numbers 0 to 12 across the top and side) that lacks answers within cells. As the student learns a math fact, allow the student to place the answer in the corresponding cell.

✏ **Teach the addition, subtraction and multiplication processes prior to knowledge of all math facts.** Understanding of these processes will assist memory for associated math facts.

✏ **Employ *delayed prompting* as a strategy to teach math facts.** Write math facts to be learned on flash cards. Organize the cards into stacks of five or six. A flash card is shown by the instructor and read by the student. The instructor immediately provides the correct answer followed by the student rereading the card and stating the answer. The cards are successively shown until the stack has been reviewed twice in this manner. At this point the student is told that on the next flashes to only give an answer if certain it is correct. If uncertain, the student is to wait for the instructor to give the right answer. The pack is then presented six times. If the student does not respond to a card in 5 seconds, the instructor says the answer, the student rereads the item and states the answer. If the student gives a wrong answer, the student is reminded to wait when uncertain. A peer tutor or aide can be used to present this program.

✏ Teach a peer tutor or parent volunteer to **use the *cover-copy-compare method* with the student**.

A few math facts to be learned are written down the left-hand margin of a piece of paper. The student reads the first item, covers it with a card and rewrites it to the right of the now covered model. The student uncovers the model, comparing the product with the model. If the student is correct, the student proceeds to the next item. If the student is incorrect, the student copies the model 3 times to the right of the error. The student then covers the work, writes the response from memory and again compares the product with the model. The sequence of items repeats itself several times down the page to allow a high rate of opportunities to respond.

✏ **Employ the *add a fact method*** to teach math facts. In this method ten math facts to be learned are selected from a master list of unknown facts. The student copies the ten facts down the left-hand margin of a piece of paper. The student covers the column of facts. The instructor dictates each problem which the student writes to the right of the covered model. The student writes the answer to the problem, uncovers the model and compares the product with the model. If the answer is correct, the next fact is dictated. If the answer is wrong, the math fact is copied again. This procedure is carried out daily. When the student responds correctly to an item on 2 consecutive days, it is removed from the list of 10 facts and replaced with another fact from the master list.

✏ **Employ the *drill sandwich method*** to teach math facts. Three unknown and seven known math facts are identified and written on index cards. The unknown facts are taught by reading them successively to the student and having the student repeat the facts. The unknown facts are then placed in positions 3, 6, and 8 of the stack of ten flash cards. The set of flash cards is presented several times. Across presentations the position of known facts is changed while the unknown facts remain in positions 3, 6 and 8. When the student makes an error, state the correct response and have the student re-read the item and state the correct response three times. A peer tutor can be taught to run this program.

✏ **Employ *daily math fact timings***. A graph is made with the date along the x axis and the number of correct responses per minute along the y axis. Daily, the student is given one minute to complete a page of math facts. Afterward, the number of correct responses is plotted on the graph. The student's performance is compared with past performance as well as a goal line which represents the desired number of correct facts per minute. This procedure allows the student to assess progress.

✏ **Communicate with the student's parents about establishing a home based tutorial program** to help learn math facts. It will be important to consult regularly with the student's parents so that they are rehearsing the same facts practiced in class. Provide the parents easy to use tutorial procedures such as *cover-copy-compare* or the *drill sandwich method*. Regular communication increases the likelihood of a home based tutorial program being followed.

✏ **Teach the student the *touch point math procedure*** to be used to compensate for lack of math facts until these facts are learned.

Instructional Strategies to Teach Algorithms:

✏ **Employ direct instruction methods.** Model how to compute the algorithm, provide numerous opportunities for the student to practice the skill and provide immediate feedback/error correction.

- ✏ Individually, or in a small group, **preview a computation skill with the student before it is taught to the class**. This will likely enhance effectiveness of the classwide teaching procedure for the student.

- ✏ **Use manipulatives to demonstrate application of an algorithm**. Such concrete references will enhance the student's understanding of the process and therefore memory for the procedure.

- ✏ Whenever possible, **use real life examples** from the student's experience to demonstrate use of a math computation skill.

- ✏ **Provide ample space on the page for the student to organize work** and erase and correct errors. This is particularly important when a skill is first being learned and practiced.

- ✏ When first teaching a new computation skill, **provide the problem written on the page rather than requiring the student to copy the problem**. This will insure that the problem is written neatly with adequate room between rows of numbers. It will also eliminate the issue of confusing the problem from the work done to solve the problem.

- ✏ **Place a model algorithm at the top of the page** to which the student can refer when practicing.

- ✏ Since the student does not know all addition and subtraction facts and uses finger counting to compensate, **teach the student to count up from the largest number when adding** single digit numbers and to **count down from the largest number when subtracting** single digit numbers.

- ✏ **Break an algorithm into component parts**, teaching one part of the computation procedure at a time. It will also be beneficial to **provide a verbal set of steps** for the student to follow (e.g., when dividing, first estimate, divide, multiply, and subtract).

- ✏ **Teach the student that all computation except division begins at the left of the problem and works right**. Explain to the student that math is different from reading in this way. On the first few items of a computation worksheet involving addition, subtraction and multiplication problems, it may be helpful to **place a left facing arrow at the right-hand side of problems**.

- ✏ Provide numerous examples, **slowly walking through each step while simultaneously verbalizing the step**. Have the student work the problem as the instructor works the problem.

- ✏ **Check for accuracy at the outset of an independent seatwork task** involving practice of computation problems. It is important that **correction be made immediately** so that the student does not rehearse errors.

- ✏ **Pair the student with a model student** who can immediately answer questions, check and correct performance, provide guidance, demonstrate the calculation process and encourage. Initially, the study buddy might demonstrate a problem followed by the student doing the next problem of a worksheet. The pair might trade problems at first until the student is ready to work more independently.

- ✏ The student will benefit from **a template that provides boxes to be filled in when completing a computation problem**. The template also provides signs on each line to cue the student to the correct procedure (e.g., subtract, etc.) In time the template can be faded and eliminated as the

student gains mastery of the skill.

✏ After the student has mastered an algorithm, **provide opportunities for the student to teach other students the skill**.

✏ **Capitalize on the benefits of spaced practice** by providing opportunities for the student to practice newly taught math computation skills for short periods several times a day. This might be accomplished by use of peer tutors as well as **providing the parents a tutorial procedure to use at home**. It will be important to consult regularly with the student's parents so that they are rehearsing the same skills practiced in class. Also, regular communication increases the likelihood of a home based tutorial program being followed.

MATH REASONING AND PROBLEM SOLVING DEFICITS

Definition:

The student demonstrates difficulty with understanding mathematical concepts and using math skills to solve problems.

Accommodations:

✓ **Reword mathematical vocabulary in simpler terms** to compensate for the student's lack of knowledge (e.g. *reduce* means to state a fraction in terms using smaller numbers). It may be necessary to provide concrete examples for some abstract terms.

✓ **Check for comprehension after explanations or directions are given that use mathematical terms**.

✓ **Reduce expectations concerning the student's ability to solve problems**, including story problems. Provide problems which the student has the conceptual ability to understand and solve.

✓ The student lacks automaticity with math facts and some algorithms. This deficit will interfere with math problem solving. As a result, **modify story problems so that they require computation skills the student has mastered**. It may be necessary to **allow the student to use a calculator** to solve problems in order to compensate for these deficits.

Instructional Strategies to Teach Math Concepts:

✏ **The student is lacking a quantitative vocabulary** (e.g., big, little, more, less, same/equal, wide, tall, etc.). This condition makes instruction and understanding of mathematical concepts, as well as solving story problems, difficult. It will be important to **teach a quantitative vocabulary** by direct instruction procedures.

✏ The ability to classify objects into abstract categories is important to developing quantitative concepts and engaging in math problem solving. As a result, **help the student compare attributes of common objects in order to group them into categories** (e.g., students by eye color, school implements that write vs. don't write, toys that are electronic vs. mechanical, etc.). In addition, have the student quantify the number of objects within a category by counting them.

- **Use familiar situations from the student's experience to demonstrate mathematical concepts** (e.g., demonstrate circumference, diameter and radius using a basketball).

- **Use manipulatives and concrete objects to teach math concepts** (e.g., fractions, place value, subtraction, etc). This might also include the student drawing objects. Provide opportunities for the student to not only observe but actually manipulate objects during instruction. Move from the concrete to the abstract making sure that comprehension is established before progressing to the next step.

- This student demonstrates **stronger inductive than deductive reasoning. As a result, the student might profit from a discovery or bottom-up approach to instruction** in which numerous examples are shown which lead the student to understanding an abstract concept or rule.
- This student demonstrates **stronger deductive than inductive reasoning. As a result, the student will more likely benefit from a top-down approach to instruction** in which a rule or concept is clearly stated (e.g., when adding fractions with a common denominator, add together the numerator and keep the denominator the same) and demonstrated followed by the student then using the concept or rule to find examples or solve problems.

- Supplement instruction by **having a peer tutor or model student explain a concept to the student**. This might also extend to solving story problems. The student might profit from hearing another student explain how he or she solved a problem.

- When introducing a new concept, do not take for granted that a student has retained understanding of previously taught concepts. **Review previously taught concepts regularly**. Also, review concepts that are prerequisite for learning a new concept.

- **Preview a concept individually with the student** or with a small group before it is taught classwide. This method will improve comprehension as well as attention when the concept is taught in class.

Instructional Strategies to Teach Story Problems:

- Teach the student to **use manipulatives or drawing a picture to represent information presented in a story problem**. This procedure will help understanding as well as reduce demands on working memory.

- **Model the process of solving a story problem by orally talking through the solution steps**. After modeling, provide the student opportunities to orally talk through the same or very similar problems.

- **Teach key vocabulary words and terms in story problems that signal use of a particular operation** (e.g., and, plus or all together signals addition; less, left or remain signals subtraction; of signals multiply).

- **Teach the student to first paraphrase a story problem, identify what question is being asked and identify what information is given in the story**. It may be helpful for the student to write the question and then each piece of information on separate lines of paper in order to help separate and discriminate this information.

✏ **Help the student identify the various steps required to solve a word problem**. These might be sequenced by writing them out on paper.

✏ Help the student **sort out relevant from irrelevant information** in story problems.

✏ **Have the student create or write story problems**. It will be helpful for the student to write problems that involve classroom materials so that with peers the student might act out solving the story problem.

PENMANSHIP AND COPYING FLUENCY DEFICITS

Definition:

The student experiences difficulty with letter formation, spacing, organization of the page or speed of putting written information on paper. As a result, writing is often laborious for the student and difficult to read.

Accommodations:

✓ **Reduce volume of writing and copying**, especially when it is not a critical component of an instructional task.

✓ **Reduce the number of items on a page** or assign fewer items (e.g., complete only odd numbered items).

✓ **Use a closure procedure** on worksheets. In this method the student fills in a blank rather than writing an entire sentence.

✓ **Provide additional time** to complete written tasks.

✓ Permit the student to **respond orally rather than in writing** or use a scribe to whom the student can dictate responses.

✓ Performance on tests might be affected by penmanship and copying fluency difficulties. Consider some **test taking accommodations**. These might include an individual testing session to provide additional time, fewer test items, taking tests orally, use of fill in the blank or multiple choice items, or dictating test responses to a scribe.

✓ Provide opportunities for the student to **learn keyboarding and word processing skills.**

✓ At the outset of a task requiring writing, **assist the student to organize work on the page.**

✓ **Provide wide lined paper** that has both a baseline and dotted midline.

✓ **Provide expanded space on a page** for the student to write responses.

✓ **Provide sufficient visual markers on a page** to prompt a student where to write and organize

responses.

- ✓ **Use grid paper** for the student to complete math **computation problems**.
- ✓ **Provide lecture notes for the student** or provide notes in which only key words need to be added.
- ✓ Encourage the student to **use and maintain appropriate posture** during a task requiring writing.
- ✓ When copying from text, **provide a magnified text copy**. Encourage the student to use a ruler to mark location of text being copied.
- ✓ When copying from the board, provide **seating close to the board.**
- ✓ When copying from text, **provide a sticky note that the student can move along under the line being copied**. This will help to visually isolate the print being copied as well as provide a visual marker to locate text after a unit of words has been copied.
- ✓ **Monitor performance at a high rate** and provide prompts when necessary to assist the student to organize writing or copying on a page.
- ✓ **Provide a stress ball** that the student can manipulate for a few minutes as a **warm-up activity** before writing or copying.
- ✓ **Provide a pencil grip** to facilitate manipulation of the pencil.

SECTION THREE
RESEARCH SUPPORTED
ACADEMIC ACCOMMODATIONS

THE SQ4R METHOD OF TEXT BOOK READING

SURVEY, QUESTIONS, READ/REFLECT, RECITE, (W)RITE, REVIEW

SURVEY

Skim text book pages to identify the topic, some of the main ideas, what is to be learned, how the text is organized and how much time it will take to read the assigned passage.

Give special attention to bold print items, headings, charts/tables, and key vocabulary and technical terms.

QUESTIONS

Develop a set of questions that will be answered in the text. These should be written as they are formulated.

The student is taught to turn information gained from surveying into questions that serve as reading guides. Headings and information in bold print are turned into questions. Both factual and higher level reasoning and interpretive questions are posed.

READ AND REFLECT

The student reads the text with an eye to answering the questions posed. This approach helps organize the reading process and maintains attention.

Reflect by rereading key passages and underlining key information that answer questions. The student explains to himself the answer to the question.

RECITE

The student restates or rehearses the answer using his/her own words.

(W)RITE

After an answer is recited, it is written as a response to the appropriate question.

REVIEW

Read answers to questions.
Add additional information or elaborate.

THE SQ4R METHOD OF STUDYING FOR A TEST

SURVEY, QUESTIONS, READ/REFLECT, RECITE, (W)RITE, REVIEW

SURVEY

Survey text pages, lecture notes, and handouts.

Give special attention to bold print items, headings, charts/tables, and key vocabulary and technical terms.

QUESTIONS

Develop a set of questions that might be on the test.
Always include questions or problems presented in text or presented by instructor.

READ AND REFLECT

Read text, class notes, and handouts to find answers to questions.
Reflect by rereading key passages and underlining key information that answer questions.
Explain to yourself the answer to the question.

RECITE

Restate answers to questions.
Use your own words to describe relationships between information or concepts

(W)RITE

Write the answers to your questions, using information from more than one source when appropriate.

REVIEW

Read answers to questions.
Add additional information or elaborate.

CLASSWIDE PEER TUTORING

PURPOSE:

To teach rote skills such as math facts, spelling words or capitals of states.

THE PROCEDURE:

Students in a class are randomly assigned into pairs in which, during a 20 minute tutoring session, each takes a turn as tutor and tutee. A script is provided the tutor such as a series of spelling words or math problems which are dictated to the tutee one at a time. The tutor checks performance immediately after the tutee completes each problem. Two points are provided by the tutor for a correct response. An error requires the tutor to provide the correct response and the tutee to rehearse it three times correctly to earn one point. The item list is presented as many times as possible in ten minutes and then the pair switches roles. Afterward, team points are reported to the teacher and recorded for rewards.

RESEARCH INDICATES:

1. Academic gains greater than those produced by traditional instruction.
2. Students who have been exposed consistently to classwide peer tutoring in elementary school show greater achievement than controls in secondary school.
3. ADHD students demonstrate improved behavior under this condition.

WHY PEER TUTORING WORKS:

High rate of opportunity to practice target response.

Increased engaged time.
Rapid pacing.
Immediate performance feedback.
High rate of success.
Consistent monitoring.
Use of token reinforcement.
A novel experience.

PREREADING

PURPOSE:

To assist reading deficient students, especially those asked to read a text above instructional level or experiencing frustration in present text. Math and other academic skills can be substituted.

PROCEDURE:

A student reads orally from the instructional text each evening with a parent or at school with a peer tutor.
Short sessions - about 15 minutes.
The student reads the passage to be read tomorrow in class.
Sessions follow this sequence:

1. Student reads orally for six minutes.
2. Parent (tutor) asks comprehension questions for three to four minutes.
3. Student orally reads passage again.

A "painless" error correction procedure is employed:

1. If child fails to recognize a word, wait only briefly.
2. Ask the child to point to the word. The parent (tutor) orally reads the word and the child says it twice.
3. The child rereads entire sentence.

LISTENING PREVIEWING

PURPOSE:

To improve word recognition, oral reading rate and fluency. A good procedure when a passage is beyond a student's instructional level.

PROCEDURE:

The student follows along as a tutor reads a passage from the reading instructional materials to be taught in the next lesson. After the tutor reads, the student is asked to read the passage orally.

ERROR CORRECTION: If the student mispronounces a word or fails to identify a word in 5 seconds, the tutor says the word and asks the student to repeat the word twice while looking at the printed word. The student rereads the sentence.

MODIFICATIONS:

1. Pre-reading is done one paragraph at a time.

2. The student rereads the entire passage orally after the prereading procedure is completed.
3. Comprehension questions are asked and content discussed following the procedure.
4. The student listens to a tape recording of the text in place of the tutor.

SIMULTANEOUS (CHORAL) READING

PURPOSE: To improve reading rate and fluency.

PROCEDURE:

The student and a tutor read orally together (simultaneously) a passage scheduled to be read within the next day or two from the student's reading instructional text. The tutor reads at a rate about 1/3rd faster than the baseline rate of the target student. The tutor also reads with expression and consistent with punctuation. After a paragraph or several lines are read in chorus, the student orally reads the passage alone. It is helpful for the tutor to follow along with his/her finger when modeling.

ERROR CORRECTION: There is no error correction during choral reading. However, if the student mispronounces or fails to identify a word while reading alone, the tutor immediately says the word and the student repeats it and continues reading.

DELAYED PROMPTING

PURPOSE:

To teach rote information such as math facts, definitions, capitals of states, letter-sound associations, etc.

PROCEDURE:

1. A set of flash cards is written to prompt a response (e.g., 2 X 4 = _____).

2. Flash cards are distributed into small packs of five or six each.

3. A flash card is shown. The student reads the card and the instructor immediately states the correct answer. The student then rereads the card and says the right answer. Cards are successively shown until the pack has been presented twice.

4. The student is told to only give an answer if he is certain it is correct. He is instructed to wait for the correct answer if uncertain.

5. The pack is presented six times. If the student does not respond in 4 seconds, the instructor says the answer. The student rereads the item and says the correct answer. If a student gives a wrong answer during the 4-second delay, remind the student to wait if he is not certain and provide the correct answer.

6. Provide an enthusiastic praise statement ("Wow, that's terrific!") for unprompted responses that are correct and a simple praise statement ("Good.") for prompted responses.

COVER-COPY-COMPARE

PURPOSE:

To improve memory for rote information such as math facts, spelling words, capitals of states, symbols of elements, abbreviations, etc.

PROCEDURE:

1. A few items such as spelling words or math facts are written down the left side of a piece of paper.

2. The student reads the first item, covers it with a card and rewrites it to the right of the now covered model.

3. The student uncovers the model and compares his product with the model.

4. If the student is correct, he proceeds to the next item. If incorrect, the student copies the model three times to the right of the error. He then covers his work, writes the response from memory, and again compares his product with the model.

5. The sequence of items repeats itself several times down the page to allow a high rate of opportunities to respond.

MODIFICATION: The student provides himself points for each correct response. Points are collected to earn a reward.

ADD A WORD

PURPOSE:

To teach spelling words.

PROCEDURE:

1. From a master list of spelling words, 10 words are identified.

2. The student copies the ten words down the left side of a piece of paper.

3. The student covers the column of words. The instructor dictates the words which the student writes.

4. The student uncovers the copied words to compare with his/her spelling.

5. Each word spelled incorrectly is copied again.

6. The procedure is carried out daily. If a student spells a word correctly for 2 consecutive days, it is removed from the list of 10 words and replaced with another word from the master list.

COMMENTS:

This procedure uses a mastery learning model with a high rate of opportunities to respond. For the unmotivated student, words mastered over time could be collected to earn a reinforcer.

SIMULTANEOUS READING OF VOCABULARY WORDS

PURPOSE:

To improve recognition of vocabulary words in content subjects such as science, health, and social studies, particularly when the student lacks adequate decoding skills.

To improve reading rate of content subject passages due to lack of word recognition.

PROCEDURE:

1. Vocabulary words from a content area lesson (science, social studies, health, etc.) the student will be reading in the next few days are identified.

2. The words are listed down a page.

3. The instructor makes a tape recording of the word list. The words on the tape are presented at a rate somewhat higher than the baseline rate of the student's oral reading.

4. The student, while following along on the list, listens to the words being read from the tape.

5. The student reads the list orally.

6. The procedure is repeated until the student demonstrates mastery of oral reading of the list.

MODIFICATIONS:

1. A tutor might be substituted for a tape recording.

2. A teacher might employ the procedure with a whole class or group. The teacher first models the reading of the word list followed by choral reading by the students.

FOLDING IN

PURPOSE:

To establish word recognition for unknown words in a passage.

To improve reading rate in a passage with a high number of unknown words.

To assist a student to read a passage successfully that is at frustration level (greater than 7% unknown words).

PROCEDURE:

1. SELECT A PASSAGE. Select a passage the student is working on in class. The passage must not contain more than 50% unknown material.

2. CONDUCT A ONE MINUTE TIMING. Have the student read a paragraph from the

passage for 1 minute. Record the number of words read correctly on a vertical bar graph.

3. IDENTIFY TWO UNKNOWN AND EIGHT KNOWN WORDS. Identify two unknown words from the passage read and eight known words. The known words should have meaning (not words such as the, a, and, etc.). Write each of the words (2 unknowns, 8 knowns) each on a 3 x 5 index card.

4. TEACH THE FIRST UNKNOWN WORD. Present the first unknown word by showing it, reading it aloud, defining it and using the word in a sentence. Ask the student to read the word and also use the word in a sentence.

5. SUCCESSIVELY SHOW THE UNKNOWN WORD SANDWICHED BETWEEN KNOWNS. Show a known word and ask the student to read it aloud. Then show the unknown word and ask the student to read it aloud. Follow with a different known, then the unknown word once again. In this way the student successively reads the unknown word followed by a new known word until all known words have been presented (unknown(1) - known(1) - unknown (1) - known (2) - unknown (1) - known (3) etc.)

6. TEACH THE SECOND UNKNOWN WORD AND REPEAT THE PROCEDURE. The second unknown word is presented. The original procedure of showing the word, reading it aloud, giving a definition and using the word in a sentence is employed. The student is then asked to read the unknown word between successive flashes of known words as described in Step 5. The original unknown word is included as a known.

7. SESSION ENDS WITH THE STUDENT REREADING THE PASSAGE AND GRAPHING RATE DATA. The student is asked to reread the passage to the point where he stopped in Step 2. Measure the number of seconds taken to read the passage and compute the words read correctly per minute using the following formula:

# of words correct / # of seconds x 60

Assist the student to graph the results on the bar graph used in Step 2. The session ends.

8. SESSION TWO. THE WORD LIST FROM SESSION ONE IS REVIEWED. ANY UNKNOWNS THAT ARE REMEMBERED REPLACE KNOWNS USED IN SESSION ONE. Session 2 begins by asking the student to read the original set of flash cards from Session 1. If the student is able to recognize the original two unknowns taught in Session 1, they are now included among knowns. For each of these new knowns, an original known from Session 1 is removed from the pile to keep the number of knowns at 8.

9. ONE MINUTE TIMING AND IDENTIFICATION OF TWO NEW UNKNOWN WORDS. The student reads the next portion of the passage for one minute. Rate data is again graphed. Two unknown words are identified and written on an index card.

10. THE PROCEDURE CONTINUES ACROSS SESSIONS WITH NEWLY LEARNED WORDS REPLACING ORIGINAL KNOWN WORDS. The procedure used above is employed to teach unknown words. Sessions continue with newly acquired words replacing original known words. Graphing of data at the beginning and end of each session is also continued.

ERROR CORRECTION PROCEDURE: If the student fails to identify a word, the word is read by the instructor. The student reads the word, gives a definition and uses the word in a sentence.

COMMENTS:

This is virtually an errorless procedure that provides a high rate of opportunities to respond. The procedure can be used by a teacher, aide, peer tutor or parent. Folding in might best be used for passages from content area texts (science, social studies) in which new words are frequently presented.

THE DRILL SANDWICH METHOD

PURPOSE:

To establish word recognition for unknown words in a passage.

To improve reading rate in a passage with a high number of unknown words.

To assist a student to read a passage successfully that is at frustration level (greater than 7% unknown words).

PROCEDURE:

1. The student reads a passage. Three unknown words and seven known words are identified and written on 3 x 5 index cards. The known words should have meaning (not words such as *the, a, this,* etc.).

2. The unknown words are taught by reading them successively to the student and having the student repeat.

3. The unknown words are placed in positions 3, 6 and 8 in the stack of index cards.

4. The set of words is presented multiple times. Across presentations the position of known words is changed while the unknown words remain in positions 3, 6 and 8.

5. The passage is reread at the end of the session.

COMMENTS:

As with the folding in technique, it is helpful to assist the student to graph rate data (words correct per minute) each time he reads. Comparing the rate of the second reading after the drill sandwich procedure to the baseline rate of the initial reading of the passage can be motivating since the student can see the improvement he makes. This procedure can be helpful in content area texts where there are a high number of unknown words.

PREVIEWING COMPREHENSION QUESTIONS

PURPOSE:

To improve student comprehension of a passage by prompting attention to specific information.

PROCEDURE:

1. The content of the passage is orally summarized by the instructor.

2. New vocabulary words are identified and definitions provided.

3. Comprehension questions are reviewed and the student is asked to find the answers while reading the passage.

COMMENTS:

This simple method is sometimes incorporated in more elaborate accommodations addressing reading comprehension. The overview provides a cognitive framework from which to make sense of the passage. Reviewing specific questions prompts the student to the most relevant information. This strategy can be applied to both content area passages (science, social studies) as well as narrative text.

READING COMPREHENSION LEARNING STRATEGY

PURPOSE:

To provide the student a specific, sequential strategy to enhance comprehension for reading material.

PROCEDURE:

1. The student reads the title of the passage (story, chapter, etc.).

2. The student skims the passage by reading headings, words in bold print, and reviewing illustrations. This provides the student a general idea about passage content.

3. The student reads the story looking for the main ideas and how the passage is organized.

4. A series of comprehension questions is provided by the instructor which asks for specific information.

5. The student rereads the passage, stopping to answer comprehension questions.

COMMENTS:

This cognitive strategy can be used by the student to enhance comprehension for a variety of reading materials. The procedure has been taught through self-instruction training involving modeling by the instructor and successively more independent trials.

STORY MAPPING

PURPOSE:

To improve reading comprehension of stories by helping the student understand how parts of a story interrelate.

PROCEDURE:

1. The instructor orally summarizes story content to the student.

2. Specific comprehension questions are provided to the student and reviewed.

3. The student reads the story.

4. The student fills in sections of a map or chart asking information about:

A. Setting

Characters
Time
Place

B. The Problem

C. The Goal

D. Action that takes place

E. The outcome

COMMENTS:

The mapping strategy must initially be taught through modeling and guided practice. This strategy helps the student associate parts of the story to enhance comprehension and retention of information. Studies show that with use this strategy generalizes as the student employs it without prompts.

CONTINGENCY MANAGEMENT TO IMPROVE READING COMPREHENSION

PURPOSE:

1. To improve reading comprehension.

2. To increase motivation for acquiring information from a passage.

PROCEDURE:

1. Questions are provided to the student prior to reading a passage.

2. The student is informed that a reward is made contingent upon responding correctly to comprehension questions after the passage is read. Criterion can be a specific number of

questions answered correctly or improvement over past performance.

COMMENTS:

Self monitoring has successfully been used with this procedure. Group contingencies might also be employed.

RATE CONTINGENT REINFORCEMENT

PURPOSE:

To increase the *rate* of correct responding in math computation.

PROCEDURE:

1. A baseline is taken of the rate of math computation problems correctly completed in a unit of time (e.g., 10 minutes).

2. A reinforcer is identified (e.g., free time, activity, mystery reward, treat, privilege, etc.).

3. The reinforcer is provided if the student completes math computation problems to a criterion level of performance based on rate. Criterion is first set at baseline. After 3 consecutive days of reaching the criterion (baseline) level, the criterion is raised 5%.

4. The procedure is carried out daily with results graphed by the student.

COMMENT:

This accommodation addresses students who are able to demonstrate proficiency in a computation skill but lack speed. Rate deficits may be due to deficiencies in processing speed, motivation, attention or other factors.

ACADEMIC STRATEGY TRAINING

PURPOSE:

To provide students a cognitive model to follow when solving a specific type of problem or accomplishing a task (e.g., math operations, math story problems, following written directions, learning a social skill, etc.)

PROCEDURE:

1. The instructor, through task analysis, determines the most efficient steps to solve a problem or complete a task.

2. The steps are displayed in written form to the student and reviewed.

3. The instructor models use of the strategy by orally repeating the steps as he/she works the problem.

4. The student performs the steps as the instructor orally describes them.

5. The student solves the problem while orally guiding himself through the steps. The instructor provides prompts when necessary.

6. The student performs the steps while orally describing them without instructor prompts.

7. The student performs the task independently with private speech.

EXAMPLE: Expressing a part as a fraction of a whole.

A. Count how many objects there are all together.

B. Write this number down.

C. Count how many objects there are in the part.

D. Write this number on top of the first number to make a fraction.

COMMENTS:

This strategy uses self instruction training and has been found to generalize well across a variety of academic tasks. It can be modified for use in individual or group instruction. In the literature the procedure is called both academic strategy training and self-instructional training.

TEXT HIGHLIGHTING

PURPOSE:

To assist students with deficient reading skills, particularly in the area of fluency, to read content area texts such as social studies, science, or health.

PROCEDURE:

1. With a magic marker underline key sentences, phrases and vocabulary in a content area text book.

2. Require the student to read only the underlined material.

3. Supplement this activity with discussion and oral presentation of associated content.

COMMENTS:

The reading difficulty level of a passage can be significantly reduced by this practice. Many content area text books are written at a reading level substantially above the grade level of the readers. As a result, it may be helpful to have a number of highlighted texts on the shelf for use by students with reading deficits.