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A Critical Examination of the Phonics and Structural Analysis Skill Development in the SRA Reading Laboratory IIIa

Florence B. Hay
Central Washington University

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A CRITICAL EXAMINATION OF THE PHONICS AND STRUCTURAL
ANALYSIS SKILL DEVELOPMENT IN THE SRA READING
LABORATORY IIIa

A Thesis
Presented to
the Graduate Faculty
Central Washington State College

In Partial Fulfillment
of the Requirements for the Degree
Master of Education

by
Florence B. Hay
August, 1968

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APPROVED FOR THE GRADUATE FACULTY

Azella Taylor, COMMITTEE CHAIRMAN

John E. Davis

John A. Schwenker

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CHAPTER I

THE PROBLEM AND DEFINITIONS OF TERMS USED

More than ever before, our society is being bombarded with written communication in mass media for all ages. Hafner has stated that we are literally engulfed by reading material, for in our day we read to be informed, entertained, enlightened, stimulated, and comforted. To attain these goals satisfactorily in this Space Age it is necessary to process much information through reading with a reasonable degree of speed and high degree of accuracy. Thus it is the schools who must be faced with the challenge of developing the skillful, discriminating, active reader; for it is the schools that are charged with the responsibility of teaching the various communication skills, the tools of learning--and earning (19:1). In an attempt to meet this challenge during the last decade, large sums of money have been appropriated (on the federal, state, and local level) for materials for secondary schools' reading programs to help the high school student improve his reading skills.

When the writer, a former elementary teacher, was asked in the fall of 1963 to become A. C. Davis Senior High School's reading instructor, she was also given the responsibility for immediately ordering materials for her reading program set up on the one semester elective course basis in English.

Realizing that it was essential to strive for the best means with which to give each student fundamental assistance in developing skillful reading techniques in a short period of time, she wanted to order multi-level materials containing high level interest stories and essential word attack skills to meet the needs of students performing at the primary and intermediate grade levels in reading with the innate ability to do better. The researcher ordered Science Research Associates Reading Laboratory IIIa, published in 1957, on the strength of Science Research Associates advertising in educational magazines and relying on the recommendations of high school reading teachers in District Number 7 and outlying districts.

Using the phonics and structural analysis individualized programmed materials, in Science Research Reading Laboratory IIIa, as the main course for helping underachievers during the first two semesters did not appear to prove as successful as this writer had anticipated. Therefore, toward the end of the third semester of school the writer informed her ninety-three students that she was planning to evaluate the phonics and structural analysis sections of the Power Builders and asked them to assist her by answering questions on the informal survey sheet (Appendix A). The following day the writer asked these same students to answer the survey on the use of Science Research Reading Laboratories prior to enrolling in their

course with this writer (Appendix B). The results of these surveys showed that:

1. The students with the least number of reading difficulties (who had no prior training in the Reading Laboratories) mentioned improvement in comprehension and speed only. Some of these students commented that some of the phonics and structural analysis rules were contradictory to what they had previously learned from other sources.
2. The students who had entered as poor readers stated that they had not noted any appreciable improvement in using the Laboratory, but they did enjoy the stories.
3. The results showed that several of the students who had used the Reading Laboratories in previous classes found them boring by now.
4. The results showed that many of the poor readers did not associate the word attack skills in the survey with the same skills the writer had assumed they understood when they had worked them in the Power Builders.
5. The results also showed that the poor readers possibly needed far more help than what the Science Research Associates Reading Laboratory IIIa was offering.

A review of the literature has indicated that Science Research Associates Reading Laboratories are fairly widely used; however, the literature has not mentioned anything specific about the phonics and structural analysis section of Laboratory IIIa.

I. THE PROBLEM

Statement of the problem. The writer examined critically every phonics and structural analysis skill exercise

(in the one hundred and fifty Power Builders) for the purpose of determining its value as a good source for strengthening the retarded and disabled readers word attack skills. Edited for the purpose of this thesis an attempt was then made to:

1. Tabulate the various kinds of phonics and structural analysis skills.
2. To tabulate the frequency of presentation of each phonics and structural analysis skill.
3. To tabulate the consistent and inconsistent (if any) rules and generalizations preceding each presentation of a phonics and structural analysis skill exercise.
4. To tabulate a direction accompanying the rule or generalization only when the writer felt it would make the explanation more clear to a reader of this thesis who is not familiar with the Reading Laboratory's Power Builders.

This study also attempted to find out through research what the leading authorities in reading had to say about the use of the phonics and structural analysis skills in Science Research Associates Reading Laboratory IIIa for disabled and retarded readers.

Importance of the study. Learning to read well is of prime importance to today's high school student because society is constantly pressuring the schools to produce skilled and efficient readers. Bamman reported:

There are many reasons for this great public concern about reading instruction. In the first place, there is the prestige factor: the child or adult who reads poorly tends to lack status, and Mrs. Doe is greatly distressed whenever her young Johnny does not keep up with Joey Hocum, next door. Second, reading is the tool by which pupils learn their various lessons throughout the elementary and secondary

schools. Next, industry and the professions alike call for much reading on the part of working citizens as they go about earning a living. Last of all, the average citizen must read his papers, magazines, tracts, and books if he is to keep abreast of science and medicine, inventions, this season's improvements in cars or labor-saving devices, the latest capers or achievements of prominent citizens, the newest do-it-yourself hobbies, and dozens of other timely topics (3:1-2).

So much of a student's learning challenges him to be a proficient reader because of the great number of new and varied purposes for which he must read. The academic curriculum comprehends the expanding world of literature, mathematics, science, and social studies, as well as the extensive heritage in these areas. The role of reading in today's curriculum is also increased by activities such as small group work, reports to the class, panel discussions, and the use of wide sources in material. A student with poor reading ability has such a difficult time achieving success in any of these activities associated with the subject matter areas that he often withdraws from high school rather than continue to face daily defeat. The abundance of research as reported by Loren Grisson (17:1-5) gives evidence that from one-fourth to one-third of the students in any given high school class may be academically handicapped, even crippled, by deficient reading skills. To support this evidence, Roswell and Natchez state:

Today both laymen and professions are concerned about the large numbers of children who, because of their difficulties in reading, cannot cope with schoolwork. Authorities have variously estimated the number of children with inadequate reading skills to be as high as thirty per cent of the total school population (40:1).

Many secondary instructors and administrators who complain that students are no longer provided with the basic academic skills, at the elementary level, have failed to recognize the change in the kind of population attending high schools during the past half-century. Before the creation of the child labor and compulsory school attendance laws, the slow learners were not encouraged to go beyond the elementary level. After social legislation was passed, the slower learners began to enter the schools in numbers. Hence, the educational problems of these youngsters have emerged upon the secondary schools.

The 6-3-3 downward expansion of the secondary schools plus the widely practiced policy of social promotion has brought the problem of the slow reader and disabled reader to the forefront in the secondary schools during the past two or three decades. Abraham (1:51-63) related that substantial and effective steps toward the achievement of a solution to the problem has been minimal because the majority of teachers at the secondary level have not been trained to teach reading in their specific fields.

Burnett answers the question of why in all these years there has been so little progress in making the teaching of reading an integral part of the high school curriculum:

The pre-service education of teachers is one obvious reason. Generally the junior or senior high school

teacher is a product of a college or university which emphasized majoring in a content area, such as English, history, biological sciences, chemistry, or mathematics. Courses are usually textbook-centered, and teaching is likely to be mostly by lectures. Time to consider materials and methods of instruction in the content field is begrudged by content area instructors as valuable time taken from studying the subject itself. . . . The content area instructor is often not inclined to consider reading in his subject area; and even if he is so inclined, he probably lacks the necessary training or experience (10:324).

According to Johnson, the thinking of teachers, administrators, and the general public and the resulting practices of secondary schools are still geared primarily to the average and superior students. The main objectives are to prepare students to continue their formal education in institutions of higher learning or to take a productive place in society, primarily in business. States require minimum numbers of courses in civics, history, English or grammar, and physical education. Courses in these areas are assumed to provide the students with the information and understanding they need to live a personally fuller life and to participate more intelligently in community, state, and national affairs. Beyond the basic core of subjects, a student usually has the choice of college preparatory, general education, commercial, fine arts, or home economics and industrial arts courses. Some high schools during the past year have added several vocational skills and training courses to their curriculum in an attempt to meet the occupational needs of the retarded reader and the disabled reader.

Despite the rather wide diversity of courses available at the secondary level, seldom has a curriculum been designed specifically for the retarded and disabled reader, except in a clinic or laboratory situation. The early inherited objectives of the secondary schools have influenced the training program for teachers and administrators as well as course offerings. The secondary teacher in most cases is a specialist trained in a specific subject matter field. He is provided with techniques of instruction in his particular field, techniques that have been found valuable for the majority of the students. Those that cannot "keep up" are either failed or occasionally given meager supplementary help (25:21-23).

A number of authorities on reading have given evidence that a great many of these youngsters are capable of making a substantial gain if given special instruction in reading. The modern elementary schools using experience units, individualizing instruction to the level of the child, forming small instructional groups within the classroom, and concerning themselves with the fundamentals in the skills, content, and personal relationship areas, have designed a meaningful curriculum to offer the disabled reader. Secondary schools have been slow in assuming responsibility to assist these young people who are required by law to complete work for which they lack proper skills. However, it is encouraging to see at the secondary level a recent increase in efforts to provide not

only remedial programs for the retarded readers, but also developmental work for capable readers who are performing below their potential--especially those planning to do college work. A. C. Davis Senior High School, Yakima, Washington, has this past year not only increased its number of vocational skills and training courses, it has also included courses for the accelerated student.

There is a constant need for a re-examination of the ongoing programs and the establishing of improved programs in the future in secondary schools. Hence, it was necessary for this writer to scrutinize materials and programs that have been incorporated into the present reading program and those that may be included in the future at Yakima A. C. Davis Senior High School.

Limitation of the study. A number of authors have expressed opinions concerning secondary reading and reading failures among high school students. The literature for this study was reviewed for the purpose of ascertaining if prominent reading authorities had evaluated critically the phonics and structural analysis skills exercises in Science Research Associates Reading Laboratory IIIa.

The writer felt that the primary limitation of this study was the lack of research in the field. This study would have been strengthened by the use of an experimental and control group. This study lasted twenty-two consecutive months,

October 1966 to July 1968, which may have been too short a time for locating adequate evaluations by leading authorities on the growth made by disabled and retarded readers using the phonics and structural analysis skill exercises in the Science Research Associates Reading Laboratory IIIa.

II. DEFINITIONS OF TERMS USED

Smith's definition of terms of the different kinds of reading will be used in this study to avoid confusion to those persons who do not specialize in that area:

Accelerated pupil. The accelerated student is classified as (1) a child who has negotiated the school grades more rapidly than one grade per year; (2) a child whose achievement or mental growth is beyond that of the average child of the same chronological age (14:88).

Analytic methods. The analytic methods of teaching reading . . . the word method, the phrase method, and the sentence method. They are called analytic methods because they begin with the word, phrase, or sentence, and these larger units then are broken down into their basic elements (12:179).

Base or root word (stem). A word in its simplest form to which may be affixed prefixes, suffixes or inflectional endings. (Example: unmanly) (16:102).

Breve. A short half circle placed over a vowel to indicate the short sound.

Consonant. A speech sound made with some obstruction of the air passage by the lips, teeth, tongue, or palate. In the English language, there are 22 consonant sounds and two combinations of sounds. The underscored parts of the following words represent the consonant sounds: be, dog, fun, go, hit, keep, lap, man, no, song, pay, run, sit,

show, tap, thin, this, vim, well, yes, zebra, measure (zh). The ch of each and the tch of itch represent the combination of t and sh; the j of job and the dg of ridge represent the combination of d and zh (16:99).

Consonant blend. The combining of two or more sounds in a word with each sound retaining its identity. Consonant sounds may be blended. The knowledge that the letters representing these sounds cannot be separated in reading or writing the words is useful in dividing words into syllables and in pronouncing words so divided. (Examples of consonants that are blended are stop, scream, gasps, and stripe) (16:99).

Consonant digraph. A digraph consists of two consonants that represent a single sound. The initial consonant digraphs are ch, kn, ph, sh, th, wh, and wr (23:15).

Consonant trigraph. A combination of three letters used to spell a single sound, tch (4:2082).

Corrective reading. Corrective reading is used to designate the type of work done with less serious cases, those who perhaps are retarded only a year or so in terms of potential, who apparently have no deep-seated causes of difficulty, and who respond readily to treatment. Such students usually are taught in groups according to their particular needs and ability (45:116).

Developmental reading. The secondary school developmental reading program is concerned fundamentally with the continued refinement and development of the more mature aspects of the self-same types of abilities that were being refined and developed in the elementary school. This refinement and development likewise continues as long as the individual continues to learn. The newer the demands made on reading by the secondary school curriculum make it unreasonable to expect the elementary school to complete the developmental process (45:116).

Diphthong. A succession of two vowel sounds that are joined by a single syllable under a single stress. A diphthong is made by a continuous glide of the tongue from one vowel position to the other. The vowel sounds heard in boy, toil, house and cow. Other diphthongs are ei, ey, oo, ou, au, aw, ew, and ui (16:102).

Disabled reader. The term "disabled reader" refers to any child who is reading one to two years below his innate capacity (21:32).

Follow Through Program. In 1967 the Office of Economic Opportunity launched the "Follow Through" program for "graduates" of the Head Start program and others--a development in elementary education that offers the disadvantaged child a very real chance to meet, on a competitive basis, the challenge and opportunity of education in kindergarten or first grade. In future years it may be extended to children throughout the third grade (36:1).

Generalization. The process of forming a general conclusion applicable to a class of data or a total situation on the basis of a number of specific instances, or the statement of a general conclusion so formed (14:245).

Head Start Program. On January 9, 1965, under Title 45--Public Welfare, the Office of Economic Opportunity established funds and rules for assisting the Head Start program (a prekindergarten program for children) and other programs for elementary and secondary schools in depressed areas (33:28-30). The learning style of disadvantaged pupils is made of the following: (1) poor language skills, (2) inability to distinguish meaningful sound from noise, (3) short attention span, (4) negative attitude toward intellectual tasks, (5) inability to recognize adults as a source of information, (6) response better to physical rather than verbal stimuli, (7) present rather than past oriented, (8) slow to perform mental tasks, (9) inability to deal with more than one problem at a time, (10) induction rather than deduction (26:26-27).

Homonym. Homonyms are words that are sounded alike but that have different spellings and meanings--blew, blue (12:333).

Macron. A short horizontal mark placed over a vowel to indicate the long sound (14:327).

Phonics. Phonics is the study of the speech equivalents of printed symbols, and their use in pronouncing printed words; it is therefore a part of phonetics (21:324).

Power reading. Power reading is similar to developmental reading except that in this type of reading the student is supposed to achieve a power in speed and comprehension far above that normally expected at his grade level. . . . The students are high achievers and excellent readers (45:117).

Prefix. A meaning element affixed to the beginning of a word to modify its meaning. (Example: unhappy) (16:102).

Reading. Reading is the act of responding to printed symbols (21:10). It involves four different processes: word perception, comprehension, reaction, and integration (16:35-37).

Reading readiness. Albert J. Harris defines readiness as a "state of general maturity which, when reached, allows a child to learn to read without excess difficulty." Reading readiness involves the following factors: maturity, intelligence, auditory and visual perception, physical fitness, physical maturity, lateral dominance, experience, language; emotional and social maturity, and interest in books (21:26).

Remedial reading. The term remedial reading at present is commonly applied to work with those students who are seriously retarded in reading, and who need highly specialized diagnosis and intensive treatment. Often these students are taught individually, sometimes in small groups, each of which is made up of students who have the same type of difficulties, who are reading at about the same instructional level and who require similar treatment in reading. Contemporaneously, some of these cases may be receiving treatment for other difficulties from specialists in other fields. It often takes a comparatively long period of treatment for such students to reach their mental potential in reading (45:116).

Retarded reader. A retarded reader is one who is reading below his present general level of development. This includes limits set by the pupil's physical, emotional and social, as well as his mental development (44:420).

SRA. SRA is the abbreviation for Science Research Associates.

Slow learner. For the purpose of this thesis the term "slow learner" will be synonymous with the term "special education students"--the mentally subnormal students who deviate so far physically, mentally, emotionally, or socially from the relatively homogeneous groups of so-called "normal" pupils that the standard curriculum is not suitable for their educational needs; involves the modification of the standard curriculum in content, methods of instruction, and expected rate of progress to provide optimum educational opportunity for such pupils; carried on in special classes, in special curricula, or in special schools (14:515, 49:242).

Structural analysis. William S. Gray defines structural analysis as the analysis of a word for its meaning and/or pronunciation units. A meaning unit is a root, a prefix, or a suffix. A pronunciation unit is a syllable or an inflectional ending (16:102).

Suffix. A meaning element affixed to the end of a word to modify its meaning. (Example: prompt, promptness) (16:102).

Syllable. A word or part of a word pronounced with a single uninterrupted utterance of the voice or one or more letters written together to indicate a place where a writer might divide the word. Spoken syllables do not always correspond to written syllables. (Examples: serpent [ser'pent], serum [ser'əm] (16:102).

Synthetic method. A method of teaching reading based on putting together simple elements into larger elements (52:329).

Vowel. A speech sound made with relatively little obstruction of the passage of air through the throat, mouth, teeth, and lips. The vowel letters are a, e, i, o, u (and y and w when they serve the function of i and u respectively) (16:102).

Vowel digraph. A vowel digraph consists of two vowels that represent a single speech sound (ear) (16:102).

Vowels modified or murmuring diphthongs. The consonant sometimes influences the sound of the vowel. The letter r, when following a single vowel, changes the sound of the vowel. The vowel is neither long nor short. The following lists of words illustrate some of the various combinations of the vowel with the r in monosyllable words:

er as er--berg, berth, clerk

ir as ir--birch, bird, birth

or as or--born, cord, cork, corn, short

or as or--word, work, world

ur as ur--blur, blurb, burn, hurt (12:301-302).

Vowels modified or murmuring diphthongs. Consonants that give a slurring effect are called murmuring diphthongs; they are er, ir, ur, or, and ar (22:15).

III. ORGANIZATION OF THE REMAINDER OF THE THESIS

The remainder of the thesis is divided into four chapters. In Chapter II the writer will: (1) review the literature on Science Research Associates Reading Laboratory IIIa as it pertains to this study; (2) review the literature of reading, focusing attention on the most recent findings and opinions of noted authors in this area, that deal with these two main ideas: the rationale for establishing a high school reading program that will encourage each student to discover and develop applicable study skills for himself--"self-managed

learning," and a listing of the characteristics of a successful reading program that encompasses the relationship of effective reading and study skills in the content fields.

Chapter III will embody: (1) a general description of the student body of A. C. Davis Senior High School where this writer has been teaching reading courses; also, it will extrapolate statistics (of that portion of this student body that reside in the depressed area of Yakima School District Number 7) extracted for the purpose of this thesis from the 1960 Washington State Census statistics by the State Technical Assistance Office (funded by Office of Economic Opportunity) that classified Yakima eligible for the Project Head Start and the Follow Through Program; (2) a general description of the Science Research Associates Reading Laboratory IIIa and the Reading Laboratory's principles upon which it was built; (3) a comprehensive tabulation of (a) the various kinds of phonics and structural analysis skills, (b) the frequency of presentation of each phonics and structural analysis skill, (c) the consistent and inconsistent (if any) explanations preceding such presentation of the phonics and structural analysis skill exercise, (d) a direction accompanying the explanation only when the writer feels it may make the explanation more clear to a reader of this thesis who is not familiar with the Reading Laboratory's Power Builders.

Chapter IV will contain the analysis of the tabulation of the phonics and structural analysis in the SRA Reading Laboratory IIIa as they pertain to the retarded and disabled readers in the writer's reading courses. It will also contain the analysis of the research done in the attempt to ascertain the opinion of leading reading authorities on the specific use of the Reading Laboratory's IIIa phonics and structural analyses section.

The summary, conclusions and implications will comprise Chapter V.

CHAPTER II

REVIEW OF THE LITERATURE

INTRODUCTION

The teaching of reading at the secondary level has at last become a reality for many high schools throughout our nation. Each year more secondary schools are making a serious attempt to either upgrade their present reading program or incorporate a reading course into their curriculum.

The idea of including reading courses at A. C. Davis Senior High School is not a new innovation for that school. It was Miss Alma Pecar, former Davis High School teacher, chairman of both the English and foreign language departments, a counselor, and curriculum vice-principal who saw the need for a secondary reading program at Davis fifteen years ago. She also provided for reading courses when she brought to Yakima the idea of starting summer school programs for students in need of additional help to get through high school.

When the innovation of the individualized program began to appear in some of our high schools throughout the nation, Davis High School wanted to adopt this kind of a program in hopes it would help students, especially those students who were representative of the "depressed section" of the city. In the fall of 1963 Miss Pecar asked this writer to start the reading program at Davis. The school had been without a

reading teacher for three years because there was not a teacher available to fill that position during those years. Miss Pecar was interested in having this writer conduct her classes on an individual basis as much as possible to see what the results might bring. She also wanted the researcher to investigate individualized programs and materials for such a program. She also wanted this writer to do some research from time to time, for the writer's own benefit, on what leading authorities had to say about individualized programs.

I. LITERATURE RELATED TO SCIENCE RESEARCH ASSOCIATES
READING LABORATORY IIIa PHONICS AND STRUCTURAL
ANALYSIS SKILL EXERCISES

Individualized organization for teaching reading can be considered the complete absence of grouping or the ultimate in grouping. The recent resurgence of individualized approaches to teaching reading may be attributed to dissatisfaction with current reading outcomes--the failure of students to develop a permanent interest in reading. Modern individualized programs embody three dominant concepts--"seeking, self-selection, and pacing." The basic skills of reading are corrected, improved, and sometimes taught in a social setting which involves only the individual learner and teacher. Opinions on the value of individualized reading programs are conflicting. Possible advantages are those of paying individual attention

to learners, producing high motivation, removing the stigma of being in the low group, and improving individual learning rate. The possible disadvantages are those of basing reading upon present interests, having no goal for the reading but the pupil interest, and making demands for careful time scheduling, intimate knowledge of each student, and vast information concerning books--demands that may be greater than the average teacher can meet (40:912).

The Science Research Associates Reading Laboratory IIIa, developed by Parker in 1957, has become widely used in schools throughout our nation and in some of the English-speaking foreign nations. It has been advertised in many leading educational journals and magazines as an excellent type of individualized program for students in junior and senior high schools. The Science Research Associates' advertisement states:

These reading selections help the student develop skills of vocabulary, comprehension, and work-attack. Subject matter varies to include social science, biography, fiction, science, and philosophy in the higher grades. These durable 4-page booklets also include comprehension checks, and exercises for developing vocabulary and skill in phonetic and structural analysis of words. Answer keys are used by the student to check his responses (43:24).

During the past two years this researcher has been seeking critical evaluation from leading authorities in the field of reading concerning the Science Research Associates Reading Laboratory IIIa's presentation of word attack skills to shed some light on how effective it really is. To date, she has been unable to find any evaluation of this particular

section of the Reading Laboratory. The Reading Laboratory in its entirety has been merely mentioned in only a few of the research materials covered for this study as a good source of multi-level reading for vocabulary and comprehension building. Kottmeyer stated in his chapter on comprehension:

The Reading Laboratory is a compactly boxed collection of reading pamphlets at ten levels of difficulty. The material is designed for use in secondary schools, but the first level of difficulty is approximately fourth grade. Most of the material is directed toward fairly mature interests. There are fifteen pamphlets at each of the ten levels with comprehension exercises and fifteen for rate drill. A manual and answer keys are supplied (28:220).

Strang, McCullough and Traxler did not mention the SRA Reading Laboratory in their section on "Consolidation of Reading Gains in Junior High School" and the "Progression of Reading Experiences in Senior High School" (49:43-45). However, in their chapter on "Trends in the Improvement of Reading," they stated under the subheading Instructional Materials and Equipment:

The most unique and widely used materials developed during the last few years are the multi-level reading, spelling, and writing laboratories on all educational levels, developed by Don Parker, and the Science Research Associates staff (49:339-440).

Moe and Nania mentioned the SRA Reading Laboratory used as the warm-up material in preparation for training in efficiency and comprehension in chapter reading training (32:171).

Practice in word identification skills will be obtained through use of word-analysis lesson in the SRA Reading Laboratory IIIa (reading achievement levels 3.0-12.0) (19:426).

In order to reinforce the learning of comprehension skills through supplementary practice materials use will be made of materials such as . . . SRA Reading Laboratory IIIa (19:427).

In her article "A Successful High School Developmental Reading Program," Berkey said that there was a great variety of reading materials in each laboratory. Carefully selected for interest as well as instructional level, these materials ranged from Grade Two through Fourteen. Among the graded reading materials were the following: SRA Reading Labs; (5:443).

Using the SRA Reading Laboratory as a profitable additional device when working with secondary reading disabilities who have a poor vocabulary was listed in the chapter "Diagnosis and Treatment of Secondary Reading Disability" (27:71).

Strang and Lindquist referred to the SRA Reading Laboratory in the following manner:

Individualization may also be achieved through multi-level reading material. This consists of especially prepared selections and exercises on different levels of difficulty. The outstanding example of this kind of material is the SRA Reading Laboratories (Elementary, High School, and College Levels, Chicago, Science Research Associates, 1957, 1958, 1959) (48:16).

. . . Teachers in all subjects were asked to co-operate with the program by teaching vocabulary of their subjects, using word-study film strips, the SRA Reading Laboratory. . . . as a means of helping those students who needed special work as a result of the standardized test results administered in September (48:22).

Selecting, Initiating, and Evaluating a Suitable Reading Program, chapter 4, . . . When the groups include students have a wide range of reading achievement, individualized reading exercises such as the SRA Reading Laboratory, Science Research Associates, Chicago, Illinois, have been widely used successfully. The workbook approaches are more appropriate for students lacking in basic reading skills and motivated to improve their reading (48:33).

On the acknowledgment page of his Teacher's Handbook for SRA Reading Laboratory IIIa, Parker expressed special appreciation to Dr. Strang for her early and continued encouragement. He did not list any of the other leading reading authorities.

II. LITERATURE RELATED TO THE IMPROVEMENT OF READING

For years the leaders in the field of education and business have realized that a democracy demands of its education both quantity and quality, and they have admonished administrators and instructors to place a greater emphasis on reading throughout the child's schooling. In bygone days when printed matter was comparatively scarce, social conditions were also less complex and limited reading skills were not a crucial handicap.

Since 1925 adults have faced a series of challenging economic, political, and social problems that have called for wide reading, clear thinking, and drastic adjustments, say the authorities. To cope with the understandings needed to handle such vast problems, at the adult level, the demands on the high school students and adult readers have increased at an unprecedented rate.

Modern man realize that the ability to read comprehensively and critically is essential to his vocational, civic, and personal life. Because of the increased awareness of the importance of reading, this review of literature will report on some of the most recent research which relates to the need for establishing a functional reading program at the secondary level, the characteristics of successful reading programs, and the relationship of effective reading and study skills in the content fields.

III. NEED FOR A READING PROGRAM AT THE SECONDARY LEVEL

The relationship of reading ability to scholastic success at the secondary level has long been accepted by authorities and some educators in the field of education. In 1938, Bond:

Conducted an investigation "Reading and Ninth Grade Achievement" for the purpose of finding the relationships between the various reading abilities and the scholastic achievements in the different subject matter areas. Effect of difference in age and in intelligence was eliminated by statistical procedure. The data indicate that:

1. Reading ability is an important factor in scholastic success.
2. The reading abilities were significantly interrelated.
3. There were constant trends indicating that for each of the two fields (science and history) certain reading abilities were more closely related to reading in that field than were other reading abilities. But the reading abilities closely related to reading science materials were not necessarily

the same as those closely related to reading history. The studies show that while there is much in common among the different reading abilities, there is much that is different. The differences seem to be uniquely related to reading specific subject matter materials (6:7-8).

"Until comparatively recent years," wrote Bammon, the teaching of reading skills was considered the responsibility of primary teachers. That it is impossible to complete such instruction in the first three grades became evident as investigations were made into (1) the nature of the reading process and the developmental skills involved, (2) the skills lacking in the reading of middle-grade and junior high school pupils, (3) the course of child development. Taken together, the results of these studies showed that the primary child is too immature to acquire the most advanced types of skills and that certain skills must be introduced and mastered in the middle and upper grades at the earliest. Over the past few decades schools have come to the general practice of teaching reading and study skills systematically as an integral part of the curriculum in the grades above the primary. Unless such instruction is provided, older pupils cannot handle the more difficult material and increasingly complex ideas with which they are expected to deal (3:4-5).

Surveys show that many freshmen fail or drop out of college because they cannot read well. About ninety per cent of all their studies involves reading. In every subject-matter course they get reading assignments--reading a chapter in a textbook for class discussion; read outside references for oral or written reports; review a group of chapters and lecture notes in preparation for tests. Studies show that many of the high school students have not received any formal reading instruction since they left the elementary grades; hence they find it extremely difficult to cope with so much reading in college unless they are relatively proficient readers. Fortenbery, a Southern Louisiana College Reading Specialist stated

that the high school teachers must not close the door on formal reading instruction, study carefully their academic programs and alternate the curricula to include reading instruction (13:35-36).

In his preface Hafner stated that it is becoming increasingly apparent that the successful teacher in grades seven through twelve is the one who can help his students master the materials of his subjects by helping him do a better job of reading. More and more secondary teachers have begun to realize that reading materials present an increasingly difficult challenge to the reader. They have become cognizant that concepts are more difficult, the sentences and paragraphs more involved, more figurative language is used, the topics are broader in scope and the purpose for reading in the various subjects become more varied and demanding; hence the reading instruction begun by elementary teachers must be continued in secondary education wherever and whenever a student shows the need for it (18:viii).

Today's secondary teacher (29:41-43) assumes a tremendous responsibility to the community, the culture, and students in that he is charged with improving each student's skills, attitudes, and knowledge. To do this he must motivate, interest, and provide educational experiences that result in pupil learning. He is also expected to produce more scientists, more mathematicians, more technicians as well

as more capable thinkers, more creative students, and more efficient readers.

In the evidence that Marksheffel gathered he discovered that until recently, very few high school teachers were aware of the need to teach reading. Also, research has revealed that many students not achieving successfully in high school are inefficient primarily because they need help in reading. Research also reveals that ninety per cent of all dropouts have reading problems. Further research shows that a large majority of youth are receiving a commendable education in our secondary schools which means they are being shortchanged. Subject matter and reading cannot be divorced is a new discovery for secondary teachers (29:v).

The federal government has focused considerable national attention on the disabled high school readers through recent state and federal programs aimed at helping to solve the problems of unemployed and unemployable young people. The government has estimated that twenty-five per cent, or more, of our secondary students are handicapped by a lack of basic reading skills (8:65-66).

The findings of NSSE's 1960 research state that fifteen per cent of our adult population's functional reading ability was equivalent only to that of the fourth grade reading ability, and from twenty-five to thirty per cent were functioning at the sixth grade level of reading ability. These findings

imply that our country faces a vast problem of promoting functional literacy amongst many elements of our adult population (15:27).

Definite relationships between inability to read well and behavioral problems are also being discovered by educators when investigating the reading needs of high school students. Whether misbehavior is a cause or the result of reading difficulties is sometimes hard to determine by faculties, but they have found how prevalent the inability to read is characteristic of "dropouts"--those students who leave school prematurely. Bamman cites Ruth C. Penty who investigated "Reading Ability and High School Dropout" in 1956 in Battle Creek, and her findings corroborate what others have already reported. Her investigation proved that there always appears to be a multiplicity of reasons with marked interrelatedness among them. Low reading achievement was a factor operating in the high percentages of Battle Creek dropouts. The poor readers who completed high school had received adequate emotional and social adjustment through moral support at home, had deep interests of their own, had not experienced unfavorable school experiences, nor lack of financial difficulties from home (3:7-8).

Contributions of reading to the reader's personal development has also been brought to the forefront by such eminent reading authorities as Russell. He explains the four levels at which we read:

At the first level we are largely concerned with the association of printed words and with their sounds. In some school situations children are drilled in word-calling--"barking at words" without much attention to meaning. At the second level we read for literal meanings. We get the facts or we follow explicit directions. . . .

The other two levels of reading are more complete. At the third level we interpret what we read. That is, we go beyond the literal comprehension of the fact or the main idea to read between the lines. We draw some conclusion of our own from the passage--we envisage or predict or infer. . . . We evaluate or analyze critically. But we also read at a fourth level or depth. Sometimes the passage takes us beyond thoughtful analysis or critical review to a more stirring experience. We feel "the shock of recognition." We recognize a new or an important idea in the actions, characters, or values described. The impact of the material is such that we receive fresh insight into our own or others' lives. In our reading we are changed, a little, as persons (41:21).

Marksheffel reiterated in his article "Reading Readiness at the High School and College Levels," that only a few secondary and college teachers take advantage of the assignment period as the key to reading readiness to develop student interest in reading by introducing "new" vocabulary, broaden concepts, and set purposes for reading. He said that the inadequate use of the assignment period is not new for twenty-five years ago Yoakam criticized the secondary teacher lesson assignment. Also Betts, Gray, and other reading authorities give evidence that there was, and is, a lack of understanding of the value of the assignment period. Burton condemns the persistent secondary schools meager, vague, unanalyzed, wholly inadequate type of assignment. McKee calls such practices "hide-and-seek" education.

During the year of 1966, Marksheffel questioned over one thousand experienced secondary teachers from the western states, Alaska, and Canada on how they assigned lessons in their subject matter fields. The majority of them replied that they wrote the assignments on the board or told the students to "take the next chapter," or to read pages 317-399 for tomorrow and be ready to answer questions. A few teachers resorted to duplicating sheets of questions for the students to answer or had students answer the author's questions at the end of the chapter. A "mere handful" of teachers devised a method that could be termed sound and conducive to learning. This author remarked that this was an indication that (1) many teachers receive little or no guidance as to the importance of the assignment period; and (2) teachers need assistance in learning how to give constructive assignments; (3) only a few teachers are receiving such instructions (30:245-246).

Royce described what generally happens to the secondary reading program when the administrators, counselors, and teachers in the content fields do not understand the reading program nor the reading teacher's objectives:

Like many remedial reading programs that somehow begin on the secondary level without any concrete plan in mind, one was started seven years ago at South High School, Torrance, California. The existence of students who obviously needed help in reading seemed reason enough for establishing classes in corrective reading. We learned, however, that good intentions and providing a reading skills course for poor readers were not enough. Problems arose immediately. Guidance counselors were prone to

place anyone in the reading skills class who was reading below his grade level regardless of the cause. When a teacher complained that a student was failing a given course because he couldn't read, he was put into the reading class. A non-academic student without enough electives to fill his schedule was placed in reading because "there wasn't any other place to put him." Truants, potential dropouts, disciplinary cases, slow learners--all became potential reading candidates. There was no control of the number of students enrolled in a class, and the outcome was the reading classes were labeled a "dumping ground." Not surprisingly, teachers for these classes were difficult to find (2:395).

Marksheffel quoted some teacher statements on the general agreement that student reading is poor and needs to be shored up, but they disagree greatly on how to cope with the poor reader:

Comment of Teacher D is representative of a growing group of teachers. "In my classes . . . I have an SRA reading kit and some Smith Books, 'Be a Better Reader.' These materials are pretty good and help some students, but it doesn't do much for helping them in my subject. I know some of my students learn to read better but it's not because I helped them. I've been reading a couple of texts on reading and I might even take a summer-school course in reading. I have to do something for my students" (29:43-44).

If we accept the preceding evidence as reliable and valid, we cannot deny that there is a need for better reading instruction at the secondary level.

IV. CHARACTERISTICS OF SUCCESSFUL SECONDARY

SCHOOL READING PROGRAMS

The types of programs developed in any given secondary school depends upon the administrative organization and needs of the students. However, there are a number of basic

principles and procedures suggested by authors in the reading field which are usually followed if administrators and teachers are aware that since reading is a process rather than a subject, it is impossible to separate reading from content. The ten procedure-principles suggested by Robinson are:

1. Readiness. The problem reader needs special emphasis placed on readiness for a given content and for use of certain skills that he must be prepared to use in order to read and study that content. . . . Readiness might normally consist of (a) relating the past experiences of the students to the new reading assignment, (b) discussing technical vocabulary, (c) setting a purpose(s) for the reading. . . .

2. Study techniques. Readiness for reading and study is an important concept but may have limited usefulness, unless the student has developed study techniques which will enable him to organize, and hence, comprehend and retain the information and ideas he meets on the pages of print. . . . The teacher should direct orientation and follow-up lessons on approaches to . . . the students' needs in practice in overviewing or surveying or previewing the material they are to study before engaging in the study act. . . .

3. Multi-level materials. With the birth of paperbacks and other means of packaging printed materials, accompanied by important changes in school curriculums in the content areas, it is almost impossible for the teacher to avoid the use of multi-level materials even if he wanted to do so. . . . If the teacher expects students to do a great deal of independent work through textbook assignments, it is desirable that several reading levels be represented. . . . These books ought to be evaluated on the basis of strength in subject matter and ranked in 1-2-3 order. Then a readability formula ought to be applied to each text . . . so that the superior readers get the most difficult readers, the grade level book will be used by average readers, and the easiest edition will be used by poor readers.

4. Differentiated assignments. Another way of helping the learner with a reading problem is to be sure that his assignments are feasible. . . . Whether using one textbook or multi-level materials, the teacher may ask

different individuals to be responsible for different assignments. Such attention to individual abilities enhances discussions, and enables various individuals to contribute in depth or specific topics. The ability to listen becomes a significant asset because each "reporter" has carefully read only a part of the total chapter or selection in terms of his own purposes.

5. Questioning. . . . The teacher who carefully thinks through questions to ask during the readiness period can help the poor reader immeasurably. Questions which may be turned into purposes for reading have immediate value. . . . Poor readers are perfectly capable of coping with why?, if they have received prior help with skills of interpretation with materials at levels commensurate with their reading abilities.

6. Evaluation. . . . Self-evaluation of smaller units of work will permit the poor reader to accept failures which can be turned into successes in the near future rather than having to wait for the results of a big test. . . . Obviously, the evaluation of small units does not negate the evaluation of large units of work.

7. Classroom libraries. . . . One way of helping poor readers fill in on their limited background . . . experiences related to content area is to have a library classroom. . . . The math class, the science class, the physical education class, and the industrial arts class should all contain some type of classroom library that changes at least once a month. The materials in it should be related to the subject area . . . and should range in reading level represented in the class, and some of the books and magazines in non-fiction and fiction. . . . Each teacher . . . has the obligation of helping poor readers widen their backgrounds in his subject area, just as each has the obligation for helping with skill development.

8. Non-print materials. Tapes, records, filmstrips, films, TV, models, and realistic experiences are useful in they are selected, evaluated, and utilized as carefully as print materials. They can be potent aids (or useful time consumers) . . . to clarify a concept that the poor reader found very hazy when he was reading the assigned selection. . . .

9. Classroom organization. . . . The content teacher must plan at times to work with certain small groups or specific individuals while the other members of the class

work on other assignments. . . . Here is one suggestion. Start by using one period a week for homework assignments to be done in class. Make sure the assignments are differentiated so that no student will be done before the class period is over. Those who don't finish assignments may do so at home. . . . Give help to individuals as you walk around the room. . . . After spotting a common need among five or six of your students, work with one small group for twenty minutes or so. . . .

10. Team teaching. Cooperative planning and cooperative teaching appear to hold much promise for the poor reader in the secondary school classroom. Corrective instruction in reading the material of a particular content area could be planned into the teaching design and implemented rather easily when two or more teachers are on the scene. It would even be possible for the reading teacher or reading consultant . . . to act as a team teacher, if the activities were carefully and cooperatively planned (37:16-21).

The four basic principles of a successful reading program suggested by Wiltsie are:

1. The reading program in the modern school should facilitate continuous growth from the kindergarten through the twelfth grade.
2. There should be a systematic program for professional stimulation, study, and teacher growth.
3. A well-rounded school improvement program requires the provision of an abundance of reading materials.
4. School administration should attempt to speed up the acceptance and use of the findings of research in reading (51:36-41).

If the kindergarten through twelfth grade reading program is not a whole school effort, the principles can be adjusted to fit the framework of an improvement program at the secondary level. To avoid using the term remedial with secondary students, the classes could be described as follows:

Accelerated reading. Accelerated reading is a program geared to the college bound which emphasizes spelling improvement, reading for a purpose, reading for main ideas and detail, comprehension, critical and analytical reading, work recognition and structural analysis, flexibility and vocabulary development (13:36).

Reading improvement. A second type of program would be a reading improvement class designed for students of average or above-average intelligence who are one to two years retarded in reading. Such basic areas as building vocabulary, assimilating and remembering what is read, locating and organizing information, interpreting what is read, increasing reading speed, and reading for enjoyment are stressed. Achievement tests and physical examinations are given to the students (47:301-306).

English-reading skills. The third type would be a remedial type program called English-reading skills class which allows English credit towards graduation for those students who would normally be failing the reading and writing requirements of the regular English courses. . . . Candidates for the English-reading skills classes come from various sources, but mainly from English teachers, who are asked to submit the Reading Department names of students who might be having reading difficulties. The counseling office, the school psychologist, and the reading teachers share the task of testing these students (2:396).

In summation of the characteristics of the successful reading program, it is apparent that the teaching of reading at the secondary level is now a fast-moving, rapidly changing and significant aspect of education. It is also apparent that, in a successful secondary reading program, the reading teacher or specialist must generate warm contagious enthusiasm toward his administration and the other faculty members as well as to the student body.

CHAPTER III

COLLECTION OF DATA

It has been explained in preceding chapters that this study was conducted in an effort to find out how many kinds of phonics and structural analysis skills were presented in the SRA Reading Laboratory IIIa; the frequency of presentation of each of those skills; consistent and inconsistent explanations (if any). The study was also conducted for the purpose of finding out what the leading authorities in reading had to say about the use of the phonics and structural analysis skills for retarded disabled readers. Findings from the research on SRA Reading Laboratory IIIa's phonics and structural analysis exercises will be analyzed in Chapter IV.

Quoting from N. Lightall's "Procedures and Materials for the Culturally Disadvantaged Reading in Grades Nine through Fourteen," Robinson and Muskoff (39:86) reported that the teacher of disadvantaged high school students must select material with care making sure that it is fast-moving, adult in content but not unreasonably taxing to the reading skills of the class.

I. DESCRIPTION OF THE STUDENTS

In an effort to create greater understanding on the part of the reader, it would seem advisable at this time to describe

the students in the school where this writer has been teaching for the past five years.

General background of the student body. A. C. Davis Senior High School is one of the two senior high schools in Yakima Public School District 7, Yakima, Washington, serving a city of approximately 45,000 population, that follows the 6-3-3 pattern of organization. The District's graduating seniors have the opportunity to continue their educational goals through the Yakima Valley College which is located in the City of Yakima. This community college offers two-year programs for both the terminal and the transfer college student.

The A. C. Davis Senior High School accomodates approximately 1,450 students in its three-year program. These students are from families that are wealthy, middle-class, lower-middle-class, and those classified as culturally deprived. The families represent professionals, semiprofessionals, clerical, skilled and unskilled workers, and families on welfare for various reasons. The majority of these families are Caucasian. Next in number are the Negroes. Only a few families represent the other three races and mixed races. Approximately one per cent of these students are from homes in which the parents are engaged in professional and business managerial occupations. Forty per cent of the graduating seniors indicate an intention to enter either the local two-year community college or a four-year college.

The following statistical information, edited for the purpose of this thesis, will reveal the need for the A. C. Davis reading instructor to evaluate extensively and critically reading materials for her reading program because the teenagers from the families in the census report attend Davis High School. It was the statistics formulated from the 1960 Washington State census statistics by the State Technical Assistance Office (funded by Office of Economic Opportunity) that made Yakima eligible for starting the Head Start program in the summer of 1965. The statistics were tabulated by county, and Yakima, per total population, ranked number one as the county with the highest percentage of population with less than five years of education and the number of children receiving aid to dependent children; it ranked second highest for the per cent of persons unemployed, the number of dropouts from grades 9-12; it ranked third for the number of admissions to correctional institutions per 10,000; it ranked fourth in the number of persons with less than \$3,000 income, number of tuberculosis cases (1963-1964), number of housing units "unsound," and number of infant deaths (1963); and fifth (children age 12-17) admitted to training schools and number of male draft rejections (age 18-34). For further statistics from the 1960 census report-- Appendix C.

As of February 1968, Follow-Through has been extended to another forty schools in the nation. Yakima, one of the

forty new sites, has the distinction of being the only city chosen in the entire Northwest. Portland, Oregon, may be considered some time in the future as another Northwest site. Follow-Through is a new Office of Economic Opportunity program which carries the benefits the Head Start children receive into a special type of kindergarten geared to the needs of these disadvantaged children--including medical and dental examinations, immunizations, teacher aides, snacks, etc.,--and the projection of that program into the first grade of the public schools for these children.

II. GENERAL DESCRIPTION OF MATERIAL

In an effort to create greater understanding on the part of the reader, it would seem advisable at this time to describe the SRA Reading Laboratory IIIa and its principles upon which it was built. In the words of its author:

Description of materials. The SRA Reading Laboratory IIIa is designed to fit into the regular curriculum in whatever course may be chosen for it. It may be started initially at any grade level from grade 7 through 12. For all students in junior high and average students in senior high school, the SRA Reading Laboratory IIIa provides sufficient materials for 20-25 periods of work the second year and 15-20 periods the third year. This is for the purpose of: (1) refreshing and reinforcing skills previously learned, (2) learning the same skills at higher levels, and (3) introducing new skills, especially in the areas of critical reading-thinking (34:4-5).

The principles. These are the principles upon which the SRA Reading Laboratory IIIa was built:

1. Nearly every student can improve his present reading performance both in rate and comprehension.
2. Little improvement takes place when students are reading in materials that are either too hard or too easy for them.
3. In the typical classroom, reading abilities range across six, eight, or even ten grade levels.
4. Each student needs the opportunity to advance in reading skills as fast and as far as his learning rate and his learning capacity permit.
5. To be fully effective, a program in reading improvement must provide any class with a full range of reading materials covering many grade levels (32:1).

Power Builders. Each Power Builder is made of heavy duty card stock (approximately 16" x 15" folded in half). The contents of the booklets include a story; questions designed to test the reading comprehension; Learn About Words section--word study skills and word attack skills. The color of each Power Builder denotes the reading level and graduates according to difficulty. Each Power Builder has a key for student self-correction which is the same color and number as the Power Builder. The color equivalents are as follows:

Orange	Grade 3	Red	Grade 8
Olive	Grade 4	Tan	Grade 9
Blue	Grade 5	Gold	Grade 10
Brown	Grade 6	Aqua	Grade 11
Green	Grade 7	Purple	Grade 12

III. COMPREHENSIVE TABULATION OF PHONICS AND STRUCTURAL ANALYSIS SRA READING LABORATORY IIIa

Long and Short Vowels

Orange 1

māy bē hīgh grōw mūle
 The first vowel in each word has a long (-) sound.

Orange 1

hăd jět hĭm lŏt jŭmp
 The vowel in each word has a short () sound.

Orange 3

bĕd cŭp hĭt făt hŏt
 In the words above, each vowel has a short sound.

In the words below, the first vowel has a long sound.
 bē ūse hĭgh pāy gō

Orange 5

căn pĭn nŏt
 cāne pĭne nŏte

The words can, pin, and not end with a single consonant.
 The vowel before the consonant has a short sound. When the e is added to these words, new words result which have quite a different meaning. The vowel in the new words has a long sound. The final e is not sounded.

Orange 6

cāme mēal mĭle wŏke cŭte
 The first vowel in each word has a long sound.

Orange 8

tāke hēat lĭght knŏw ūse
 The first vowel in each word has the long sound.

The first vowel in each word below has a short sound.
 hăs gĕt hĭm gŏt mŭst

Orange 9

făst gĕt stĭll dŏg skŭnk
 The vowel in each word has a short sound. Every vowel has a short sound and a long sound.

Orange 10

The vowel in each word has a short sound.
 băt bĕst bĭg bŏss bŭt

Orange 11

căn - cāne pĭn - pīne

When words end in a consonant, the vowel just before it has a short sound. Add an e to the word making a new word, and the first vowel changes to a long sound. The final e is not sounded.

Orange 13

Each vowel has a short sound and a long sound. Study the vowels at the bottom of the page.

Note: The vowel sounds referred to in the above explanation are:

The vowels	a	e	i	o	u
Long vowels	sāy	bē	fĭnd	gō	ūse
Short vowels	săt	bĕd	fĭt	gôt	ŭp

Orange 14

bē hĭgh ūse knōw sāy

The first vowel in each word has a long sound. In the words below each vowel has a short sound.

bĕt hĭt ŭp stōp săt

Olive 2

măt māte pĭn pīne cŭt cŭte

Many short words end with a vowel and a consonant. In these words the vowel sound is the short one. But if an e is added at the end, making a new word, the vowel sound becomes long. The final e is not sounded.

Olive 8

Each vowel has a long sound, marked -, and a short sound marked ˇ. Study the table of vowel sounds at the bottom of this page.

Olive 10

Each vowel has a long sound, marked -, and a short sound marked ˇ.

Olive 12

Each vowel has a long sound and a short sound.

Blue 3

Study the table of vowel sounds at the bottom of this page.

Blue 8

căn - cāne hăt - hāte

Many words like căn and hăt end with a vowel and a consonant. In these words the vowel has a short sound. But if an e is added, making a new word, the vowel has a long sound, as in cāne and hāte. The final e is silent.

Blue 8

Many words end with a consonant and a final e. In most of them, the vowel before the consonant is long: plāte, cōplēte. But in some common words the vowel before the consonant is not long: cōme, give. Say these words to yourself. Write the words. Show whether the vowel before the consonant is short (˘) or long (-).

Blue 13

căn cāne pîn pīne măt māte

Many short words like căn end in a vowel and consonant. The vowel sound is always short. If an e is added, making a new word, the vowel sound is long, like cāne.

Blue 14

căn cāne pîn pīne măt māte

Many short words end with a vowel and a consonant. The vowel has a short sound: căn. But if an e is added, making a new word, the vowel has a long sound: cāne. The final e is not sounded.

Double Vowel CombinationOlive 2

In many words two vowels appear together. Often only one of them is sounded. The other is silent. Directions: Write these words. Say them to yourself. Draw a circle around the vowel that is not sounded. Exercise: eat, road, wait, pie, thief, tough, leaf, neither, dead, best.

Olive 6

pe@ce fr①end pa①d

In many words two vowels appear together. Usually, only one is sounded. The other is silent. Write these words. Directions: Say them to yourself. Draw a circle around each silent vowel.

Olive 6

Sometimes two vowels are joined to make a new sound:

ou sometimes sounds like ow, as in cloud.

au sometimes sounds like aw, as in cause.

ei sometimes sounds like ay, as in weigh.

Write these words. Say them to yourself. Draw a circle around the vowels if they are joined to make a new sound. Exercise: our, neighbor, haul, weight, round, auto.

Olive 7

Sometimes when o and u come together in a word, only one of them is sounded: enough, cough. In other words, the letters are joined to sound like ow: loud.

Olive 10

In many words two vowels come together. Often only one of these vowels is sounded. The other is silent.

rood fiield meean

Olive 11

pe@ce fr①end pa①d
Same wording as Olive 2.

Olive 13

o + u sometimes sounds like ow in how.

o + i sometimes sounds like oy in boy.

a + u sometimes sounds like aw in paw.

e + i sometimes sounds like a in say.

Directions: Say these words to yourself. Write the words. Draw a circle around ou, oi, au, or ei if they make the new sounds above. Exercise: house, oil, haul, weight, found, cause, freight, out.

Olive 13

boot tried

Sometimes when two vowels come together, only one of them is sounded. The other is silent.

Blue 2

o + u sometimes sound like ow, as in how.

o + i sometimes sound like oy, as in boy.

a + u sometimes sound like aw, as in paw.

e + i sometimes sound like ay, as in say.

Blue 2

In many words, when two vowels come together, only one is sounded. The other is silent.

road bait

Blue 7

head jail

In many words, two vowels come together. Usually, only one is sounded. The other is silent.

Blue 7

o + u sometimes sounds like ow, as in how.

o + i sometimes sounds like oy, as in boy.

a + u sometimes sounds like aw, as in paw.

Blue 11

rood weak

In many words two vowels come together. Often only one is sounded. The other is silent.

Blue 13

o + u sometimes sound like ow, as in how.

o + i sometimes sound like oy, as in boy.

a + u sometimes sound like aw, as in paw.

Blue 14

boot field

In many words two vowels come together. Often we sound only one of them. The other is silent.

Brown 3

field road earth
Same wording as Blue 2.

Brown 3

u/su/al In/di/an
out-owt oil-oyl

In some words when two vowels come together, both are pronounced. In other words, like out and oil, we combine the vowels to make a new sound. Directions: Say the words to yourself. Write the word. Look for the two vowels that come together. If each vowel is sounded, write "each." If the vowels make a new sound, draw a circle around them: out. Exercise: hour, fuel, outer, realize, mouth, fliers, etc.

Brown 5

weak rebuilt

In many words two vowels come together. Often only one of these vowels is sounded. The other is silent.

Brown 5

u/su/al pi/a/no

In some words when two vowels come together, each one is sounded. Directions: Say these words to yourself. Write the words. Note the vowels that come together. If each vowel is sounded, draw a line between them: vi/olin.

Brown 5

o + u sometimes sound like ow, as in how.
a + u sometimes sound like aw, as in paw.
o + i sometimes sound like oy, as in boy.

Brown 6

eating claim

In many words two vowels come together. Often we sound only one. The other is silent.

Brown 6

o + u sometimes sound like ow, as in how.
a + u sometimes sound like aw, as in paw.
e + i sometimes sound like a, as in say.

Brown 11

weak field
 Same wording as Blue 11.

Brown 11

u/su/al pi/a/no
 Same wording as Brown 5.

Single ConsonantsOrange 1

seat myself fast escape suit last safely miss
 The words above are alike in one way. Each word has an s and an s sound. The letter s is a consonant. The letters a, e, i, o, and u are vowels. All other letters are consonants.

Orange 2

water bottom after writer
 In the middle of each of the words above, you see the letter "t." Words that have the same consonant in the middle usually have the same sound in the middle. The letters a, e, i, o, and u are vowels. All other letters are consonants.

Orange 6

ship cheer noon glad cap hour men food
 Words that end with the same consonant usually have the same sound at the end. The letters a, e, i, o, and u are vowels. All the other letters are consonants.

Orange 8

long his committee laugh honcho communist
 Most words that begin with the same single consonant have the same sound at the beginning. The letters a, e, i, o, and u are vowels. All the other letters are consonants.

Orange 8

wall Seoul them him coat out
 Words that end with the same consonant usually have the same sound at the end.

Orange 9

back tell funny good but time five give
 Words that begin with the same single consonant usually have the same sound at the beginning. The letters a, e, i, o, and u are vowels. All other letters are consonants.

Orange 10

teacher tied test
 All three words begin with t. They all have the same sound at the beginning. The letters a, e, i, o, and u are vowels. All the other letters are consonants.

Orange 15

off fun look herself won walk
 The same wording as Orange 6.

Orange 15

uniform different after
 The consonant f comes near the middle of each word above. Words that have the same consonant in the middle usually have the same sound in the middle.

Olive 5

a, e, i, o, u and sometimes y are vowels. All the other letters are consonants. Directions: In each line, all the words but one end with the same consonant. Say the words to yourself. Write the word that ends with a different consonant. Exercise: wheel, tool, materials, drill, etc.

Olive 9

a, e, i, o, u, and sometimes y are vowels. All the other letters are consonants. Directions: In each line, all the words but one begin with the same consonant. Say the words to yourself. Write the one word that begins with a different consonant. Exercise: middle, mountain, nine, men, etc.

Olive 14

a, e, i, o, u, and sometimes y are vowels. All other letters are consonants. Same wording as Olive 9 in directions except the student is to write the word that does not end with the same consonant.

Blue 3

a, e, i, o, u and sometimes y, etc.
Same wording as Olive 9.

Blue 4

a, e, i, o, u and sometimes y, etc.
Same wording as Olive 5.

Blue 5

a, e, i, o, u and sometimes y are vowels. All the other letters are consonants. Directions: In each line, every word but one begins with the same consonant. Write the word that begins with a different consonant.

Blue 15

a, e, i, o, u and sometimes y are vowels. All the other letters are consonants. Write these words. Say them to yourself. Draw a circle around every consonant.

Consonant Blends, Digraphs, and TrigraphsOrange 1

glove glass globe wasp spell gasp army farm germ

The words in each line above have two consonants in heavy black type. The sound of the first letter runs into the second letter to make a consonant blend. Directions: Say the words in each line on the next page. Listen for the consonant blend that sounds the same in each word. Write the two consonant letters that make this blend.

Exercise: flower, flip, flop; window, wander, pounding, etc.

Orange 2

weather chip push wheel

Each word in the line above has two consonants that come together to make one sound. You can see them in heavy black type. Listen to them as you say the words.

Orange 3

brave broke

The words brave and broke begin with the same two consonants. Words that begin with the same consonants usually

have the same sound at the beginning. The letters a, e, i, o, and u are vowels. All other letters are consonants.

Orange 3

The words strong and ring end with the same two consonants. Words that end alike usually have the same sound at the end. Directions: Say these words to yourself. Write the words. Draw a circle around the consonants that are joined to make one sound.

Exercise: corn, burn, learn, heard, touch, rough, much, march, and, round, hang, find, hurt, short, hard, shirt, cent, hand, present, went.

Orange 6

bound end point strong tank end went long sink
Some words end with more than one consonant. We join these consonants to make one sound.

Orange 8

stop study spot speak show shop
Some words begin with two or more consonants. We usually join these consonants to make one sound.

Orange 9

friend from brought bread trying tree green great
Each pair of words begins with the same two consonant letters. The sound of the first letter runs into the second letter to make a consonant blend.

Orange 10

grip growl grill small smell smoke twig twice twinkle
The words in each line above have two consonants in heavy black type. The sound of the first letter runs into the second letter to make a consonant blend.

Orange 12

ground bend find
All three words above end with the same two consonants: nd. Words that end with the same consonants usually have the same sound at the end. Directions: Say these words to yourself. Write the words. Draw a circle around the consonants that are joined to make one sound.

Exercise: ground, bend, find, burn, bird, most, field, meant, cloth, kept.

Orange 15

apple please street first

Each of these words has two consonant letters in heavy black type. The sound of the first letter runs into the second letter to make a consonant blend.

Olive 4

The letters ch have a sound like that in chair and another like that in ache. Directions: Say each word to yourself. Decide which sound the ch has. Write "ch" if the sound is like that in "chair." Write "k" if the sound is like that in "ache."

Exercise: stomach, coach, reach, touch, Christmas, chose, chorus, which, school.

Olive 5

church shop when three

Each of these words has two consonants that come together to make one sound. You can see them in heavy black type. Directions: Say the words below. Write the two consonants that come together to make one sound.

Exercise: with, when, watch, other, bench, push, shop.

Olive 7

Same wording as Olive 4. [Note: no examples were given.]

Olive 9

grip slip flip clip

Each of these words begins with two consonants. The sound of the first letter runs into the second letter to make a consonant blend.

Olive 10

The letters ch have two sounds. Sometimes they sound like the ch in "chair." Sometimes they sound like the ch in "ache." Directions: Say the words to yourself. Decide which sound the ch has in each word. Write ch if it is the sound of "chair." Write "k" if it is the sound in "ache."

Exercise: chest, watch, school, Christmas, reach.

Olive 14

phone thin ship chip whip

Each of these words has two consonants that come together to make one sound. Ph usually sounds like f as in fan.

Blue 3

In many words, two consonants come together. Sometimes we do not sound each consonant. We join them together to make a new sound.

dr pl sp sk sl st th

Blue 4

In many words, two or three consonants come together. Often we do not sound each consonant. We join them to make a new sound.

ch gr pl sh th tr

Directions: Say these words to yourself. Write the words. Draw a circle around the consonants that are joined to make one sound.

Exercise: show, mother, coach, play, great, train, shot, tried.

Blue 5

In many words two consonants come together. Sometimes we do not sound each consonant. We join them to make one sound.

fl gl gr pl pr sp

Blue 10

In many words two consonants come together. Often we do not sound each consonant. We join them to make one sound.

Blue 15

In many words, two or three consonants come together. Sometimes we do not sound each consonant alone. We join them to make one sound.

br cl pl th wh

Brown 1

In many words two or three consonants come together. We do not always sound each one. Often we join them to make one sound.

br cl cr fl pl sl sp tr th

Brown 2

Often when two consonants come together in the middle of a word, we do not sound each one. They are joined to form a new sound, called a blend.

ch cl cr th st

Directions: Say these words to yourself. Write the words. Draw a circle around the consonants that are blended.

Exercise: machine, across, other, instance, without, declare.

Brown 12

In many words two consonants come together. Often we do not sound each consonant separately. We join them to make one sound, called a blend.

cl dr th tr sh

Brown 13

Often when two consonants come together, we do not sound each one. We join them to make a new sound, called a blend.

ch cr sm st th

Red 2

In many words, when two consonants come together, we do not sound each one. We join them to make a new sound.

ch gr rn st th tw

Red 9

In many words, when two consonants come together, we do not sound each one separately. We join them to make one sound.

ch st tr

Tan 7

In many words, two or three consonants coming together

are joined to make one sound.

ch ft sh str th

Directions: Say these words to yourself. Write the words. Draw a circle around the consonants that are joined to make one sound.

Exercise: wafted, weather, stream, lash, touch.

Tan 11

In many words two or three consonants coming together are joined to make one sound.

sp sm st tch th tr

Directions: Say these words to yourself. Write the words. Draw a circle around the letters that are joined to make one sound.

Exercise: another, station, inspire, smoke, watcher, retrace.

Silent Consonants

Orange 4

The letters a, e, i, o, and u are vowels. All the other letters are consonants. In some words we do not sound all the consonants:

n i (g) (h) t (k) n o (w)

Directions: Copy the words below. Say them to yourself. Draw a circle around each consonant that you do not sound.

Exercise: could, knee, wrong, talk, known, write, high, would.

Orange 12

(k) n o (w) h i (g) (h)

In some words we do not sound all the consonants. In know, the k and w are not sounded. The letters a, e, i, o, and u are vowels. All the other letters are consonants. Directions: Say these words to yourself. Write the words. Draw a circle around the consonants that are not sounded.

Exercise: sight, could, walk, grow, hour, flight, wrong, write.

Olive 4

n i (g) (h) t (k) n o (w) b a (c) k

In many words we do not sound all the consonants.

Olive 5

n i (g h) t (k) n o (w)
 Same wording as Olive 4. Exercise: sight, lock, high, own, could, knee.

Olive 9

n i (g h) t (k) n o (w)
 In some words we do not sound all the consonants.

Olive 15

n i (g h) t (k) n o (w)
 In many words, we do not sound all the consonants.
 [Note: The wording is the same as in Olive 4. A comma has been inserted in Olive 15 after the prepositional phrase "In many words."]

Exercise: high, knee, walk, wrist, whole, write.

Blue 5

n i (g h) t (k) n o (w)
 Same wording as Olive 9.

Blue 15

n i (g h) t (w) r o n g
 Some words have consonants that we do not sound.

Modified VowelsOrange 15

<u>ar</u> sounds like "r"	} sounds like "ur" as in "fur"
<u>or</u> sounds like "or"	
<u>er</u>	
<u>ir</u>	
<u>ur</u>	
and sometimes <u>or</u>	

Directions: In each word below, you will find one of these three sounds--"r," "or," "ur." Use three lines in your Record Book. On the first line write all the words that have the "r" sound. On the second, write all the words with the "or" sound as in the word "or." Use the the third line for words with the "ur" sound.

far form word barn girl horse her fork star

The Letter "C"Orange 4

The letter c has two sounds. The first sound is like the c in car and club. The second sound is like the c in cent. Directions: In each line the c has the same sound in all the words. Say the words to yourself. Write "car" if the c sounds as it does in car. Write "cent" if the c sounds as it does in cent.

Exercise: city, ceiling, center; carry, cook, card; cereal, civil, cigar; call, come, cup.

Orange 4

become decide

When c comes in the middle of a word, it may have the sound that it has in car. Or it may have the sound that it has in cent.

The Letter "G"Orange 5

The letter g has two sounds. In big the g sounds just the same as it does in go. Directions: Write the words below. Draw a circle around the g. Say the words and listen to the sound of the g.

Exercise: pig, bag, dog, leg, rug; go, get, give, game, gun.

Orange 5

large page

In the words above, the g has a different sound. Directions: Write the words below. Draw a circle around the g and the letter that follows it: large. Say the words and listen to the sound of the g.

Exercise: damage, sage, cage, stage; gem, general, gentle, germ.

Orange 5

through light laugh cough

When the letters g and h come together, they are sometimes not sounded at all, as in through and light. In

some other words, the gh sounds like f, as in laugh and cough.

Orange 7

The letter g has two different sounds. In begin the g sounds the same as it does in go. In engine the g sounds the same as it does in gem. When a g comes in the middle of a word, it may have either sound.

Orange 7

When the letters dg come together in a word, they usually sound like j as in gadgets.

Olive 3

The letters c and g have both a hard sound and a soft sound.

<u>Hard</u>	<u>Soft</u>
cry	cent
go	engine

Olive 7

Same wording as Olive 3.

Base or Root Words

Orange 7

put--puts, putting

The word put is a base word. The endings s, and ing are added to it to make new words. Other endings may also be added to make new words. Directions: Say the words in each line. Write the base word from which all the other words in the line are made.

Exercise: topping, topped, tops; rubber, rubbing, rubbed; painting, painter, paints; zipped, zipping, zipper; stopper, stopping, stopped; grabbed, grabbing, grabs; picker, picking, picked; fanning, fanned, fans; clipped, clipper, clipping; running, runs, runner.

Orange 9

walk--walks, walked, walker, walking.

The word walk is a base word. The endings -s, -ed, -ing, -er are added to make new words.

Orange 13

hunt--hunts, hunter, hunting

The word hunt is a base word. The letter -s, -er, and -ing are added to it to make other words.

Orange 14

run--runner, running, runs

The word run is a base word. The words runner, runs, and running are built up from run. You will find many words that are built on short words you know well.

Orange 15

beat--beating, beaten, beats

The word beat is a base word. The endings -ing, -en, and -s have been added to make new words. In each line all the words come from the same base word.

Olive 4

sun--sunny, sunshine, sunrise

Many words are built on short base words that you know.

Olive 12

live--lively, livelihood

Same wording as Olive 4.

Olive 13

run--runner, runaway boat--boatman, boathouse

Many words are built on short base words that are known to you.

Olive 14

press--presser, pressure, depress

Many words are built on short base words that you know well.

Olive 15

run--runner, running

Same wording as Olive 4.

Blue 2

run--runner, runaway, runway
 Many words are built up on short base words that you know.

Blue 3

run--runner, runaway, runway
 Same wording as Olive 4.

Blue 5

run--runner, runaway, runway
 Same wording as Olive 4.

Blue 7

run--runner, runaway, runway
 Same wording as Olive 4.

Blue 8

sign--signature, signal, signer
 Same wording as Olive 4.

Blue 15

place--placement, replace, placing
 Same wording as Olive 4.

Brown 2

stop--stopper, stopped, stopping; foot--footnote, football, footage. Many words are built up from short base-words that are familiar to you. [Note: This is the only explanation in which a hyphen has been used between the words "base" and "words."]

Brown 4

care + less = careless; careless + ness = carelessness;
 continue + al = continual; continual + ly = continually
 Many words are built up by adding two or more endings to a base word.

Brown 7

run--runner, runaway, runoff
 Same wording as Olive 4.

Brown 10

appear--appearance, disappear
 Many words are built on short base words that you
 already know well.

Brown 13

stop--stopper, stopping; place--placement, replace,
 misplace
 Same wording as Brown 2.

Brown 14

run--runner, runaway, running
 Same wording as Olive 4.

Green 4

perform--performer, performance
 Many words are built up on base words that you already
 know.

Green 6

separate + able = separable; intend + ion = intention;
 in + separable = inseparable; intention + al = intentional
 Many long words are built up by adding parts to a base
 word. When these parts are added, the spelling of the base
 word is often changed.

Green 6

Many English words are built up on Latin base words that
 came into the language hundreds of years ago. One of these
 Latin base words is scribere, which means "to write." This
 Latin word also had a form in which b was changed to p:
scriptus. Each English word containing scrib or script has
 the meaning of write in it. Decide which of these words is
 based on the Latin words meaning "to write." Write "yes"
 or "no."

Exercise: inscription, scribble, scrap, etc.

Green 8

stop--stopper, stoppage
 Same wording as Olive 4.

Green 12

eject; object
 Many English words are built on a Latin word, jectus, meaning "to throw."

Green 12

stiff--stiffly, stiffness
 Many words are built up from short base words you already know.

Green 13

disturb; turbulent
 Many English words are built on a Latin word turbo meaning "a top." There is also a Latin word turba meaning "turmoil." In English words, the root turb has the general meaning of "whirling."

Green 14

wild--wildness, wilderness
 Same wording as Olive 4.

Red 4

rail--railing, railroad
 The word rail is a base word. Many words are built on short base words that you already know.

Red 6

The root port comes from the Latin word porto, meaning "carry." It appears in many English words. Directions: In which of these words does the root port appear with the meaning "carry?" Write "root" or "no root."

Red 7

fire--fireman, firehouse
 The word fire is a base word. Many words are built on short base words that you know.

Red 10

run--runner, runaway
 The word run is a base word. Many words are built on base words you already know.

Red 10

There are two Latin words that look alike and have similar meanings. They are spectare, meaning "to behold" and specere, "to see." Many English words have been built around these Latin words, and each word has in it the meaning of "see" or "behold."

Red 15

run--runner, runway

The word run is a base word. Many words are built on base words whose meanings you know.

Tan 2

true--truly, untrue

The word true is a base word from which other words are built. Many long words are built on base words that are familiar to you.

Tan 3

run--runner, runaway

The word run is a base word upon which other words are built. Many long words are built on short base words that you know.

Tan 8

The Latin word credere is the root of many English words. Credere means "to believe or trust." It carries this meaning into the English words of which it is a part. Directions: The following words are based on credere. From this list choose the word that best fits each sentence that follows. You will use each word only once.

Tan 13

The Latin verb vertere, meaning "to turn," is the root of many English words. In some of these words the root is vert; in some it is vers. (No examples given.)

Tan 15

run--runner, runaway

The word run is a base word. Many words are built on base words that you already know.

Gold 1

The Latin word sequens means "following." It appears as a root in many English words. (No examples given.)

Gold 4

There is a Latin word ferre meaning "carry." It appears as the root fer in many English words, to which it gives the meaning of "carry." Here is a list of prefixes used with the Latin root fer to form English words. Each prefix has several meanings, but only one is given here.

Gold 5

appear--appearance, disappear
The word appear is a base word from which other words are built. Many long, unfamiliar words are built from short base words that you know.

Gold 7

power--powerless, powerful
Same wording as Gold 5.

Gold 8

There is a Latin word dicere, which means "to say, to speak, or tell." It appears as a root in many English words with the spelling dict. This root almost always carries the old Latin meaning of "say, speak, or tell."

Gold 9

press--impress, depress, suppress
The word press is a base word from which other words have been formed. Many long words are built up on short words that you know.

Gold 12

There is a Latin word decidere, which means "to cut off." It was formed from the prefix de- and the verb caedere, which means "to cut." The Latin root from these words appears in English words as cis. Directions: One meaning of the prefix re- is "back." One meaning of the prefix pre- is "beforehand." One meaning of the prefix de- is "off." The following four words are built on the Latin root cis: decision, precision, incision, recision.

Gold 14

Many words in English are built on the Latin word vol-vere, which means "to roll or turn." The root as it appears in English words is volv. Directions: The prefix de-means "down from." The prefix circum-means "around." The prefix e-means "out of." The prefix re-means "back" or "again." The prefix in-means "in" or "into." Write the meaning of each word below using the meanings given for the root and prefixes.

Gold 15

agree--disagree, agreeable

The word agree is a base word from which other words are made. Many long, unfamiliar words are built on short words that you know.

Aqua 1

The root gress appears in many English words. It comes from a Latin word meaning "to go." To every English word in which it appears, it gives the meaning of "to go." Directions: Column II lists words based upon the root gress. Column I lists their meanings. Write the word from Column II that matches each meaning in Column I.

Aqua 2

observe--observance, unobserved

The word observe is a base word upon which other words are built. Many long, unfamiliar words are built upon base words that you know. Directions: In each line all the words are built upon the same base word.

Aqua 2

The Latin verb simulare, meaning "to feign or pretend," is the root of many English words. To all of these words it gives the meaning of "pretending." Sometimes it appears as simul and sometimes as sembl.

Aqua 2

Closely related to simulare is the Latin word similis, meaning "like." It also appears in English words as a root, spelled simil or sembl. To these words it gives the meaning of "like." Directions: Decide whether the words below have the root meaning of "like or pretend." For each word write "like," or "pretend."

Aqua 3

reason--unreasonable, reasonably

The word reason is a base word from which other words are built. Many long, unfamiliar words are built on short words that you know well.

Aqua 3

Many English words are built on the Latin word trahere, meaning "to draw." In these English words the Latin root usually appears as tract, and it always gives the meaning of "to draw."

Aqua 4

The Latin word specere means "to look at." It appears as the root of many English words with the spelling spect. To all these words it gives the meaning of "look at."

Aqua 4

run--runner, runaway

The word run is a base word upon which other words are built. Many long, unfamiliar words are built upon short words that you know.

Aqua 10

The Latin word pellere, meaning "to thrust or drive," is the root of many English words. It appears both as pel and as pul. To all of the words in which it appears, it gives the meaning of "thrust or drive."

Aqua 11

power--powerful, powerless

The word power is a base word upon which other words are built. Many long, unfamiliar words are built upon short base words that you know.

Aqua 11

The Latin word stare, meaning "to stand," appears as a root in many English words. In most of them it has the meaning of "to stand." It appears in the forms stand, stance, and stunt.

Aqua 12

office--officer, official
Same wording as Aqua 4.

Aqua 13

The Greek word pathos, meaning "feeling," appears as a root in many English words. The Romans had a similar word pati, meaning "to suffer." The Latin form pati sometimes appears as pass. The three root forms path, pass, and pati give to English words the closely related meanings of "feeling" and "suffering."

Aqua 13

light--unlighted, lightness
Same wording as Aqua 2.

Aqua 14

The word dissenter is built on the Latin word sentire, which means "to think." This Latin word appears as a root in many English words, always with the meaning of "to think."

Purple 1

define--indefinite, definition
The word define is a base word upon which other words are built. Many long, unfamiliar words are based upon short base words that you know.

Purple 3

The Latin verb videre, meaning "to see," is the root of many English words. In most of these words it appears as vis.

Purple 4

reason--unreasonable, reasonably
The word reason is a base word upon which other words are built. Many long, unfamiliar words are built upon short words that you know well.

Purple 7

The Latin word vertere, meaning "to turn," is the root of many English words. It appears either as vert or as vers, but always with the meaning of "turn."

Purple 8

The Latin word claudere, meaning "to close," is the root of many English words. It appears both as clud and clus.

Purple 10

The Latin verb specere, meaning "to look at or see" is the root of many English words. It appears as spec or spic and usually gives the meaning of "look at" or "see" to the English words in which it appears.

Purple 11

The Latin verb jacere, meaning "to throw," is the root of many English words. It appears either as jac or ject.

Purple 12

light--unlighted, lightness
Same wording as Aqua 2.

Purple 12

light--unlighted, lightness
The word light is a base word upon which other words are built. Many long, unfamiliar words are built upon base words that you know.

Purple 13

observe--observance, unobserved
Same wording as Aqua 2.

Purple 13

The Latin word sistere, meaning "to stand or cause to stand," is the root of many English words. To all of these words it gives the meaning of "stand or remain."

Purple 15

run--runner, runaway
The word run is a base word upon which other words are built. Many long, unfamiliar words are built upon short words that you know.

Prefixes and SuffixesOrange 5

replace remake retain

Sometimes the prefix re- is just at the beginning of a word to make a new word. Directions: Say the word to yourself. If the re- has been added to make a new word, write the new word. If the re- has not been added to make a new word, write "no prefix."

Orange 8

undress untie unable

Sometimes the prefix un- is added at the beginning of a word to make a new word.

Orange 14

rub + ing = rubbing hit + er = hitter

The words hit and rub are one-syllable words. Each ends in one vowel and one consonant. When we add -er, -est, -ed or -ing to words like these, we double the final consonant: hitter.

Olive 11

success + ful = successful hope + ful = hopeful

When letters like -ful are added at the end of a word, they are called a suffix. The suffix -ful means "full of."

Blue 6

out + ward = outward

The suffix -ward means "in the direction of."

Blue 8

cane + ing = canning give + en = given

When we add -er, -es, -ed, -est, or -ing to a word ending in e, the e is dropped.

Blue 9

faith + less = without faith hope + ful = full of hope

The suffix -less means "without." The suffix -ful means "full of."

Blue 9

state + ment = statement; kind + ness = kindness;
found + ation = foundation

Blue 9

come + ing = coming; compare + able = comparable;
wake + en = waken; line + ed = lined

Sometimes we add -en, -er, -est or -ing to words. If the word ends in e, the e is dropped when these endings are added. Directions: Add the endings given. Write the new words.

Exercise: like + able; take + ing; etc.

Blue 10

The prefix un- has two main meanings. It means "not," as in unknown. It means "do the opposite" as in untie.

Blue 10

The suffixes -ment, -ance, -ence, -ness, -ion and -ation are added to words to change them into nouns.

Blue 12

re + fuel = refuel; re + pay = repay

When the letters re- are added at the start of a word, they are called a prefix. The prefix re- has several meanings. It may mean "again" as in refuel. It may mean "back" as in repay, "to pay back."

Blue 13

can + ing = canning; scar + ed = scarred

Often we add -ing, -ed, -est or -er to short words that end with a vowel and consonant. To keep the short vowel sound, we double the consonant.

Blue 14

stop + ing = stopping; rob + ed = robbed

Same wording as Blue 13.

Blue 14

date + ing = dating; like + able = likable

Sometimes we add a suffix like -ing, -able, -er, or -est to

a word ending in e. When we do, the e is usually dropped.

Blue 15

biology + ist = biologist piano + ist = pianist

The suffix -ist usually means "one who does" or "one who is skilled in doing." Often a letter is dropped, as in pianist when the suffix is added. Try adding -ist to these words. If you make a real word, write it. If you do not make a real word, write "no word."

Example: drug + ist; journal + ist; advertise + ist; etc.

Brown 1

navigate + or = navigator create + or = creator

The suffix -or means a person or thing that does something.

Example: A navigator is a person who navigates. Note that in adding -or to a word ending in e, you drop the e.

Brown 2

stop + er = stopper cut + er = cutter

When a one syllable word ends with a consonant, the vowel just before is often short. To keep the short sound, the consonant is doubled when we add -er, -ed, -en, -ing, -est, or -ist.

Brown 3

dangerous means "full of danger"; courageous means "full of courage"

The suffix -ous usually means "full of." Directions: If the word ends in the suffix -ous, write the meaning. Write "full of." Be careful! In two of the words -ous is not a suffix. For these two words write "no."

Brown 4

The prefix de- has several meanings. One of these meanings is "to undo or reverse the action of something" as in decamp which means to "break up camp."

Brown 7

puzzle + ing = puzzling like + able = likable

Words ending in e drop the e when an ending that begins with a vowel is added. Add the endings given.

Example: use + able; suppose + ing; create + or; etc.

Brown 8

flame + ing = flaming; move + able = movable

When -ing or -able is added to a word ending in e, the e is usually dropped.

Brown 9

un + usual = unusual un + tie = untie

Sometimes the prefix un- means "not," as in unusual.
Sometimes it means "do the opposite," as in untie.

Brown 9

under + shirt = undershirt; under + cook = undercook

The prefix under- may mean "beneath," as in undershirt.
It may mean "not up to standard" or "not enough" as in undercook.

Brown 9

The suffixes -ment, -ence, -ion, (-tion), -ance, and -ness are added to verbs and adjectives to make nouns out of them. Directions: Drop the suffix from each word. Write the word that is left. Caution: When -ion or -ation is added to a word ending in e, the e is dropped. You must put it back.

Exercise: realization, government, refreshment, neatness, etc.

Brown 10

vote + ing = voting lie + able = likable

Words ending in e usually drop the e when -ing, -able, -ion and other endings that start with a vowel are added.

Brown 11

The prefix un- means "not," as in unseen. It may mean "do the opposite," as in untie.

Brown 12

ship + ed = shipped set + ing = setting

Many one-syllable words, like ship and set end with a vowel and a consonant. The vowel has a short sound. To keep the short sound, we double the final consonant, when we add a suffix beginning with a vowel: -ing, -ed, -en, -able.

Brown 14

con + center + ate = concentrate

The prefix con- means "together." The suffix -ate is used to make a verb out of a noun or an adjective. You know what center means.

Brown 14

sane + ity = sanity explore + ation = exploration

When we add a suffix beginning with a vowel to a word ending in e, the e is usually dropped.

Brown 15

The suffix -ful usually means "full of."

Brown 15

Same wording as Brown 9 (suffixes: -ness, -ment, -ance, -ence and -ation).

Green 1

re/port; in/side; real/ly; sick/ness

Most prefixes like re-, in-, un-, con-, and pre- are separate syllables. All suffixes that begin with a consonant are separate syllables: -ness, -ment, -tion, -ly, -less.

Green 2

The suffix -ful means "full of." It is never written -full. No English word ends in -full.

Green 3

stop + er = stopper cut + ing = cutting

Same wording as Orange 14 (doubling the final consonant).

Green 3

weak + er = weaker back + ing = backing

If a word ends with two vowels and a consonant (weak), the final consonant is not doubled. If a word ends with a vowel and two consonants (back), the consonant is not doubled.

Green 4

stride + ing = striding; able + y = ably

When an ending that starts with a vowel or y is added to a word ending in e, the e is dropped.

Green 4

run + ing = running; mean + ing = meaning; stop + er = stopper; pass + age = passage

Words of one syllable that end with one vowel and one consonant (run) double the final consonant when adding a suffix that begins with a vowel: -able, -er, -est, for example. If there are two vowels (mean) or two consonants (pass), the consonant is not doubled.

Green 5

un + happy = unhappy un + forgivable = unforgivable

The prefix un- means "not," as in unhappy, or "do the opposite" as in untie.

Green 5

win + er = winner stop + ing = stopping

Same wording as Orange 14.

Green 6

The ending -ship may mean "rank," as in governorship, or "skill" as in leadership, or "quality," as in friendship. Decide which meaning -ship has in each word.

Examples: sportsmanship, lordship, penmanship, etc.

Green 7

The prefix inter- means "between or among." The prefix intra- means "within." Decide which prefix should be used to give the meaning listed. Write inter- or intra-.

Examples: _____ + state = within the state; _____ + national = among nations; _____ + mural = within the limits of a school or city.

Green 7

drop + ed = dropped; work + ed = worked; get + ing = getting; mean + ing = meaning

The words drop and get are one-syllable words that end with one consonant and one vowel. When we add endings to words like these, we usually double the final consonant. Work ends in two consonants. Mean has two vowels before the consonant. Words like work and mean do not double the consonant when an ending is added.

Green 7

arrive + al = arrival amaze + ing = amazing

Words that end in e usually drop the e before adding an ending that begins with a vowel.

Green 8

sip + ed = sipped; look + ed = looked; stop + ed = stopped; back + ed = backed

Many one-syllable words like sip and stop end with a vowel and a consonant. When -ed, -er, -est, or -ing is added to these words, the final consonant is doubled: stopped. If there are two vowels before the final consonant, the consonant is not doubled: looked. If the word ends with two consonants, the last consonant is not doubled: backed.

Green 8

ice + y = icy freeze + ing = freezing

Usually when a suffix beginning with a vowel is added to a word ending in e, the e is dropped.

Green 9

im/port un/heard sound/ly kind/ness

Most prefixes like im, in, con, and pre are separate syllables. All suffixes that begin with a consonant and separate syllables: -ness, -ment, -tion, -ly, and -ness.

Green 10

im/port; friend/ly; un/fair; kind/ness

Same wording as Green 9.

Green 11

come + ing = coming move + able = movable

Both come and move end with a vowel. Both -ing and -able begin with a vowel. When we add a suffix that begins with a vowel, we drop the final e: -able, -ing, -ous, -ion.

move + ment = movement like + ly = likely

We do not drop the final e when we add a suffix that begins with a consonant: -ment, -ness, -ly, ty. (Note: There was no hyphen preceding the last suffix -ty.)

Green 11

The prefix un- usually means "not." Sometimes it means "the opposite of." To untie is the opposite of tie.

Green 13

engulf; envelope

The prefix en- usually means "to put into or on." Directions: Column II lists words with the prefix en-. Column I lists meanings for these words. Write the word that fits each meaning in Column I.

Green 13

inhale; inconceivable

To inhale is "to breathe in." The word inconceivable means "something that can not be imagined." The prefix in- may mean "in or within," or it may mean "not."

Green 13

displease; dismiss

The prefix dis- may mean "the opposite of" as in displease, or it may mean "away from" as in dismiss: "to send away."

Green 15

im + possible = impossible; im + perfect = imperfect

The prefix im- is a form of in- and has the same meanings: sometimes "not" and sometimes "in or within."

Green 15

spot + er = spotter; pick + ed = picked; weak + er = weaker

Spot is a one-syllable word ending with one vowel and one consonant. When endings that begin with a vowel are added to words like spot, double the consonant: spotting. The consonant is not doubled in words like pick, which end with two consonants. Nor is it doubled in words like weak, which have two vowels.

Red 3

believe + ing = believing; invite + ation = invitation;
ice + y = icy
Same wording as Brown 14.

Red 3

express + ion = expression; favorite + ism = favoritism;
resent + ment = resentment
The suffixes -ion, -ment, and -ism are used to make nouns
out of verbs and adjectives. Usually only one of these
endings is used in a particular word. The others do not fit.

Red 4

re/duce, pro/pel, state/ment, driv/ing
Prefixes like re-, pro-, and in- are syllables by them-
selves. Suffixes like -ing, -ment, -en, -ed, and -ly are
usually syllables by themselves if they are sounded.

Red 8

come + ing = coming size + able = sizable
Same wording as Brown 14.

Red 11

receive + ing = receiving atmosphere + ic = atmospheric
When a suffix beginning with a vowel is added to a word
ending in e the e is usually dropped.

Red 12

geology + ist = geologist violin + ist = violinist
The suffix -ist usually means "a person who works with
or believes in." A geologist is a person who works in
geology; revolutionist is a person who believes in revolu-
tion.

Red 12

stop + er = stopper; weak + er = weaker; walk + er =
walker
The word stop is a one-syllable word ending with one
vowel and one consonant. When a suffix is added to words
like this, the final consonant is usually doubled: stopped.
When a one-syllable word has two vowels before the conso-
nant, the consonant is not doubled: weaker. Nor is it
doubled when the word ends with two consonants: walker.

Red 12

The suffixes -er and -or are also used to mean "a person who." Thus teach + er = teacher and conduct + or = conductor.

Red 13

nonuniform = not uniform; unwary = not wary; indecent = not decent

There are several ways of saying not by adding a prefix to a word. The prefixes non-, un-, and in- may all mean "not." But with most words only one of these prefixes can be used.

Red 14

There are a number of word parts that are used to make a great many English words. Here are some of the most useful of them: tele means "at a distance," phono means "sound," photo means "produced by light," graph means "something that writes or is written," bio means "life," auto means "self." Directions: Use the meanings given above. Write the meaning of these words.

Red 14

stop + er = stopper; walk + er = walker; weak + er = weaker

The word stop is a one-syllable word ending with one vowel and one consonant. When a suffix beginning with a vowel is added to words like this, the final consonant is doubled: stopped. When a word has two vowels before the consonant, the consonant is not doubled: weaker. Nor is it doubled when the word ends with two consonants: walker.

Red 15

un + spoken = unspoken; im + possible = impossible;
in + capable = incapable

There are many ways to say "not in English. The prefixes un-, im-, and in- are among them. However, these prefixes cannot be added to just any word. Usually, only one of these prefixes can be added to any particular word.

Tan 1

The suffix -ist means "one who does something." The suffix -ian is also used to mean "one who does something."

But for a specific word, usually either -ian or -ist is used. There are a few words to which both endings can be added. Directions: Decide which suffix goes with each word below. Add -ian or -ist and write the new word. You will change some letters and drop others.

Tan 2

compete + ition = competition; chase + ing = chasing
When a suffix beginning with a vowel is added to a word that ends with e, the e is dropped.

Tan 2

slip + ed = slipped; hot + er = hotter; weak + er = weaker; walk + er = walker
The words slip and hot are one-syllable words ending with one vowel and one consonant. When a suffix beginning with a vowel is added to words like these, the final consonant is usually doubled: slipped. When a one-syllable word has two vowels before the final consonant, the consonant is not doubled: weaker. When the word ends in two consonants, the final consonant is not doubled: walker.

Tan 3

ship + er = shipper; weak + en = weaken; stop + ed = stopped; bark + ing = barking
The words ship and stop are one-syllable words. They end with one vowel and one consonant. When a suffix beginning with a vowel is added to these words, the final consonant is doubled. Words ending with two vowels and a consonant do not double the consonant: weaker. Nor do words ending with two consonants double the last consonant: barking.

Tan 6

antecede = to go before; prearrange = to arrange before; project = to plan before
The three prefixes ante-, pre-, and pro- all have the meanings of "before" or "forward" or "ahead." But in a specific word, usually only one of the three is used.

Tan 8

come + ing = coming; ice + y = icy
When a suffix beginning with a vowel is added to a word ending in e, the e is usually dropped. Note that when -y is added to a word, it is a vowel.

Tan 9

im + patient = not patient; un + leashed = not leashed
 Both the prefix im- and the prefix un- are used to mean "not." But for a specific word, it is usually one or the other. There are very few words with which both prefixes can be used.

Tan 9

occasion + al = occasional; occasional + ly = occasionally; usual + ly = usually; happy + ly = happily
 In adding -ly to a word that ends in l, be sure to see that the l is doubled. In adding -ly to a word ending in y, change the y to i.

Tan 10

please + ant = pleasant; ice + y = icy; cleanse + ing = cleansing
 When a suffix beginning with a vowel is added to a word ending in e, the e is usually dropped. When y is added as a suffix, it becomes a vowel.

Tan 10

odor + ous = odorous; offense + ive = offensive; influence + al = influential
 The suffixes -al, -ive, -ous, and others are used to make adjectives out of nouns and verbs. These suffixes all have the general meaning of "concerning or pertaining to." For a particular noun or verb, however, usually only one of these endings is used. Directions: Decide which suffix -al, -ive, or -ous should be added to each word below.

Tan 12

In the word monoplane, the prefix mono- means "one" or "single." A monoplane has only one wing surface. The prefix mono- appears in many English words. Its opposite in meaning is the prefix poly-, which means "many."

Tan 14

There are a number of word parts that are combined to make many English words. Here are a few of them: graph means "something that writes or is written"; photo means "light"; micro means "small"; tele means "at a distance"; meter means "a device for measuring"; scope means "an

instrument for seeing"; phono means "sound." Directions:
The forms listed above are combined into words below.
Which of these are real words:

Tan 15

pace + ing = pacing; tube + ular = tubular
Same wording as Brown 14. (Examples: dropping final
"e.")

Gold 1

The suffixes -ness, -ment, -ity and -ence are used to
make nouns out of verbs and adjectives. Usually only one
of these endings can be added to a specific word.

Gold 1

leav + ing = leaving; calculate + ion = calculation
When a suffix beginning with a vowel is added to a word
ending in e, the e is dropped.

Gold 2

explore + ing = exploring; like + able = likable
Same wording as Tan 2.

Gold 5

The prefixes dis-, un-, and de- are all used to mean
"opposite of." Thus disorderly means "the opposite of
orderly." With most words only one of these prefixes can
be used. We cannot say "unorderly" or "deorderly" for
example.

Gold 5

spot + ed = spotted; weak + en = weaken; ship + er =
shipper; hold + ing = holding
The words spot and ship are one-syllable words ending
with one vowel and one consonant. When a suffix beginning
with a vowel is added to words like these, the final con-
sonant is doubled: spotted. When the word has two vowels
before the consonant, or when it ends in two consonants,
the final consonant is not doubled: weaken, holding.

Gold 6

The suffixes -ist, -or, and -er are all used to mean
"a person or thing that does anything." Thus, a collector

is "a person who collects." A classicist is "a person interested in classics." Usually only one of these three suffixes can be used with a specific word.

Gold 7

The suffix -cide means "killer or the act of killing." Directions: Write the word that will correctly complete each sentence.

Gold 7

drama + tic = dramatic; hope + ful = hopeful; rest + ive = restive

The suffixes -tic, -ful, and -ive all have the meaning of "characterized by, full of, or pertaining to." Usually only one of these suffixes can be added to a specific word.

Gold 8

There are many suffixes that can be used to make an adjective out of a noun. Among them are -ish, -y, -ic, -ous (-ious). Usually only one of these suffixes is used with a specific word.

Gold 8

slip + ery = slippery; weak + en = weaken; stop + ed = stopped; lock + ing = locking

The words slip and stop are one-syllable words ending with one vowel and one consonant. When a prefix beginning with a vowel is added, the final consonant is doubled: slippery. When there are two vowels before the consonant, the consonant is not doubled: weaken. If the word ends with two consonants, the final consonant is not doubled: locking. [Note: The word prefix has been used in the second sentence in the explanation of this exercise.]

Gold 10

puzzle + ing = puzzling; educate + tion = education
Same wording as Tan 8.

Gold 11

When we want to make an adjective out of a verb, the usual procedure is to add -ing; retreat - retreating. Sometimes, however, the ending -ive, or -ative is used: attract--attractive. And sometimes -ent or -ant is used.

Gold 12

notice + ing = noticing; operate + ion = operation
Same wording as Tan 8.

Gold 12

stop + ed = stopped; lead + er = leader; rot + en = rotten; part + ing = parting

The words stop and rot are one-syllable words ending with a vowel and a consonant. When suffixes beginning with a vowel are added to words like stop and rot, the final consonant is doubled: stopped. When a word has two vowels before the final consonant, this consonant is not doubled: leader. Nor is the final consonant doubled when the word ends with two consonants: parting.

Gold 13

iththy + ology + ist = ichthyologist; bio + ology + ist = biologist

The suffix -ology means "science" or "study." The suffix -ist means "a person or thing who." Directions: Using the words and word parts below, make up a word meaning "one who studies." Write the new word.

Gold 13

hero + ic = heroic; awe + ful = awful; mystery + ous = mysterious

The suffixes -ic, -ous, and -ful all have the meaning of "pertaining to, characterized by, or full of." Usually only one of the three suffixes is used for a specific word.

Gold 13

usual + ly = usually; actual + ly = actually

When the suffix -ly is added to a word ending in l, both l's are retained.

Aqua 1

rub + ed = rubbed; weak + en = weaken; pin + ing = pinning; burn + ing = burning

The words rub and pin are one-syllable words that end with one vowel and one consonant. When a suffix beginning with a vowel is added to these words, the final consonant is doubled: pinning. When there are two vowels before the consonant, the final consonant is not doubled: weaken. When there are two consonants together, the final consonant is not doubled: burning. Write the new words.

Aqua 5

attract + ive = attractive; observe + ant = observant;
return + ing = returning

The endings -ive, -ant, and -ing are added to verbs to make adjectives out of them. Usually only one of these endings can be added to a specific word. Directions: Decide which ending -ive, -ant, or -ing will make an adjective out of each verb below. Add the ending. Write the new word.

Aqua 6

spontaneous--spontaneity; precise--precision; earnest--earnestness

The suffixes -ity, -ion (or -ation, -tion), and -ness are among the several that may be added to adjectives in order to make nouns of them. Usually, only one of these endings is used with a specific adjective. Directions: Decide which noun ending fits each of the adjectives below. Write the noun.

Aqua 6

gamble + ing = gambling; machine + ist = machinist;
change + able = changeable; notice + able = noticeable

When a suffix beginning with a vowel is added to a word ending in e, the e is dropped. Exceptions: If the word ends in -age or -ce, the e is not dropped if the suffix begins with a or o.

Aqua 7

stiff + ness = stiffness; formal + ity = formality

The endings -ness and -ity are added to adjectives in order to make nouns of them. Usually, only one of these endings can be added to a specific adjective.

Aqua 7

realize--realist; realism--realistic

Verbs ending in -ize or -yze form nouns by adding -ist, to show "one who," and -ism. They form adjectives by adding -ic or -ical. The -ize verbs, however, do not follow the form given for realize with complete consistency. The "one who" noun form of criticize is critic, for example. Directions: For each -ize verb below, write two noun forms and an adjective form. Be careful!

Aqua 7

intone + ing = intoning; ignore + ant = ignorant

When a suffix beginning with a vowel is added to a word ending in e, the e is usually dropped.

Aqua 8

mis + spell = misspell; mal + formed = malformed

The prefixes mal- and mis- are both used to mean "wrong" or "bad." Usually either one or the other is used with a specific word.

Aqua 9

stop + ed = stopped; rip + er = ripper; weak + en = weaken; walk + ing = walking

The words stop and rip are one-syllable words that end with one vowel and one consonant. When a suffix beginning with a vowel is added to words of this kind, the final consonant is doubled: ripper. If a one-syllable word has two vowels before the final consonant, this consonant is not doubled: weaken. If the word ends with two consonants, the final consonant is not doubled.

Aqua 9

write + ing = writing; excite + able = excitable; courage + ous = courageous

When a suffix beginning with a vowel is added to a word ending in e, the e is dropped. Exception: When a suffix beginning with a or o is added to a word ending in -ce or -ge, the e is not dropped.

Aqua 11

dis + appear = disappear; un + tie = untie

The prefixes un- and dis- have several meanings. One meaning that they have in common is "the opposite of." Thus disappear is the opposite of appear, and untie is the opposite of tie. Both un- and dis- also mean "not." Thus dishonest means "not honest," and unable means "not able." Usually, only one of these prefixes fits a specific word.

Aqua 11

noncombatant = not combatant; unprosperous = not prosperous; indispensable = not dispensable

The prefixes non-, in-, and un- are all used to mean "not." Usually, however, only one of them can be used with a specific word.

Aqua 13

slip + ed = slipped; peer + ing = peering; get + ing = getting; halt + ed = halted

The words slip and get are one-syllable words that end with one vowel and one consonant. When a suffix beginning with a vowel is added to words of this kind, the final consonant is doubled: getting. When the one-syllable word has two vowels before the consonant or when it ends with two consonants, the final consonant is not doubled: peer-ing, halted.

Aqua 14

un + able = unable; in + dependent = not dependent; non + profit = not for profit; ir + revocable = not revocable

There are many ways of saying "no" or "not" in English. The prefixes un-, in-, and non- are three of them. Usually only one of these prefixes can be used with a specific word. The prefix in- changes to il- before l, as in illiterate, to ir- before r, as in irrevocable, and to im- before m, p and b.

Aqua 15

Nouns are formed from verbs by adding a variety of endings: -ion, -tion, -ation, -ment, -ance, -ence, for example. Usually only one of these endings is added to a particular verb to make a noun. Directions: Write the verb from which each noun below has been built.

Purple 2

stop + ed = stopped; weak + en = weaken; rip + er = ripper; walk + ing = walking
Same wording as Aqua 9.

Purple 2

write + ing = writing; courage + ous = courageous; excite + able = excitable
Same wording as Aqua 9.

Purple 4

There are many ways to make adjectives out of English nouns. The endings -al, -ous, -ly, and -ful are all used for this purpose. However, usually only one of these endings is used with a specific word. Directions: Decide which of the endings -al, -ous, -ly, -ful to add to the nouns in order to turn them into adjectives. Add the ending. Write the new word.

Purple 5

Nouns are formed from verbs by adding a variety of endings: -ion, -tion, -ation, -ment, -ance, -ence, for example. Usually only one of these endings is added to a specific verb to make a noun.

Purple 6

attract + ive = attractive; observe + ant = observant;
return + ing = returning
The endings -ive, -ant, and -ing are added to verbs to make adjectives out of them. Usually, however, only one of these endings can be added to a specific word.

Purple 7

un + able = not able; in + dependent = not dependent;
non + profit = not for profit; ir + revocable = not revocable
There are many ways of saying "no" or "not" in English. The prefixes un-, in-, and non- are three of them. Usually only one of these prefixes can be used with a specific word. The prefix in- changes to il before l, as in illiterate, to ir, before r, as in irrevocable, and to im- before m, b, and p.

Purple 8

rub + ed = rubbed; weak + en = weaken; pin + ing = pinning; burn + ing = burning
The words rub and pin are one-syllable words ending with one vowel and one consonant. When a suffix beginning with a vowel is added to these words, the final consonant is doubled: pinning. If there are two vowels before the consonant, it is not doubled: weaken. If there are two consonants together, the final consonant is not doubled: burning.

Purple 9

intone + ing = intoning; ignore + ant = ignorant
Same wording as Aqua 7.

Purple 10

noncombatant = not combatant; indispensable = not
dispensable; unprosperous = not prosperous
Same wording as Aqua 11.

Purple 11

dis + appear = disappear; un + tie = untie
Same wording as Aqua 11.

Purple 14

ship + er = shipper; get + ing = getting; peer + ing
= peering; halt + ed = halted

The words ship and get are one-syllable words ending
with one vowel and one consonant. When a suffix beginning
with a vowel is added to words of this kind, the final
consonant is doubled. If a one-syllable word has two
vowels before the final consonant, this consonant, the
final consonant is not doubled: halted.

SyllablesOlive 1

be/gin sum/mer

A syllable is a group of letters that are sounded
together. Each syllable has one vowel sound. There are
as many syllables in a word as there are sounded vowels.
Directions: Say these words to yourself. Count the
number of vowels that are sounded. Write one, two, or
three.

Exercise: opening, cave, higher, explore, decided, never.

Olive 1

but/ter wes/tern

When there are two consonants in the middle of a word,
the first usually goes with the syllable before it. The
second goes with the syllable that follows.

Olive 1

bē/side; ē/ven; ěv/er; prēs/ent

Many words have one consonant in the middle with a vowel before it and a vowel after it. If the first vowel has a long sound, the consonant usually goes with the following syllable: ē/ven. If the first vowel is short, the consonant usually goes with it to make a syllable: prēs/ent. Directions: Say these words to yourself. Decide by the sound whether the consonant in the middle goes with the first or second vowel. Write the words. Draw a line between the syllables: syl/la/bles.

Olive 1

go/ing; start/ed; wak/en

When endings like -er, -es, -ed, -ing, and -est are added to a word, they are separate syllables if they are sounded.

Olive 2

go/ing; tri/al

In some words, when two vowels appear together, both are sounded. Each vowel makes a syllable. Directions: Write these words. Say them to yourself. Look for the two vowels that come together. Draw a line between the two vowels if both are sounded.

Olive 6

go/ing; tri/al

In some words, when two vowels come together, each vowel is sounded. Directions: Write these words. Say them to yourself. Look for the two vowels that come together.

Olive 8

sum/mer; wes/tern

When two consonants come together in the middle of a word, usually the first consonant goes with the first syllable. The second goes with the following syllable. Directions: Write these words. Say them to yourself. Draw a line between the syllables.

Olive 8

trāv/el; fā/mous

Many words have one consonant in the middle with a

vowel on each side. If the first vowel is long, the consonant usually starts the next syllable. If the first vowel is short, the consonant usually goes with it in the same syllable.

Olive 11

old/er; room/ful; right/ly

We make new words by adding endings: harm--harmful, harmfully. If these endings are sounded, they are separate syllables. Some suffixes are: -ed, -ing, -er, -ly, -ment, -est.

Blue 1

sum/mer; mid/dle

A syllable is a group of letters that are sounded together. When two consonants come together in the middle of a word, the first consonant usually goes with the first syllable. The second goes with the following syllable.

Blue 1

turn/ing; sound/ed; train/er

To many words, we add -ing, -ed, -er, or other suffixes. These endings are separate syllables if they are sounded.

Blue 1

ta/ble; un/cle; tur/tle

Many words end in -ble, -cle, -dle, -gle, or -tle. These endings are separate syllables.

Blue 6

a/go; e/ven; i/ron

A vowel can be a syllable by itself. Directions: Say these words to yourself. Write the words. Draw a line between the syllables: syl/la/ble.

Blue 6

un/cle; cur/dle; tur/tle

Many words end in -ble, -cle, -dle, -ple, -tle. These groups of letters have a vowel sound. They are separate syllables.

Blue 6

[Note: No examples were given for this exercise.]
 Say these words to yourself. Write the words. Draw a line between the syllables.

Blue 7

go/ing; tri/al
 In some words, when two vowels come together, both are sounded.

Blue 9

When a suffix is added to a word, it is a syllable by itself if it is sounded. [Note: No examples were given.]

Blue 10

When two consonants come together, the first usually goes with the first syllable. The second goes with the following syllable. But we never divide between two consonants that are joined to make one sound: wheth/er, teach/er.

Blue 12

A syllable is a group of letters sounded together. In each syllable there is only one vowel sound. [Note: No example was given.]

Blue 12

a/go; e/ven
 Same wording as Blue 6.

Blue 12

un/cle; ta/ble; tur/tle
 Many words end in -ble, -cle, -dle, -ple, -tle.
 There is a vowel sound in these endings. Each one is a syllable.

Blue 12

sum/mer; suc/cess
 Often there are two consonants together in the middle of a word. Usually, the first consonant goes with the first syllable. The second consonant goes with the following syllable.

Brown 1

en/gine; weath/er; din/ner

When there are two consonants together in a word, between two vowels, the first consonant usually goes with the first syllable. The second syllable goes with the following syllable. But we never split two consonants that are joined to make one sound: weath/er.

Brown 2

sum/mer; doc/tor; fa/ther

When two consonants appear in the middle of a word, the first consonant usually goes with the first syllable, the second consonant goes with the second syllable. But consonant blends are never split: fa/ther.

Brown 3

o/pen; a/bout; a/go

In many words a single vowel can be a syllable by itself.

Brown 5

u/su/al; pi/a/no

In some words when two vowels come together, each one is sounded.

Brown 6

usu/al; vi/olin

Same wording as Olive 6.

[Note: The word usual has been syllabicated differently for exercises Brown 5 and Brown 6.]

Brown 7

puz/zle; cir/cle

Many words end in -ble, -cle, -dle, -gle, -tle, or -zle. These endings have a vowel sound. Each is a syllable.

Brown 11

u/su/al; pi/a/no

Same wording as Olive 6 (each vowel is sounded).

Brown 12

sum/mer; sil/ver; weath/er

When two consonants come together in the middle of a word, the first goes with the first syllable. The second consonant goes with the second syllable. But two consonants that are joined to make one sound are never split: weath/er.

Brown 13

Prefixes (re-, pro-, in-) and suffixes (-ly, -ing, -ment) are usually separate syllables: state/ment, play/ing, re/state, in/ci/dent.

Brown 13

sum/mer; fa/ther; doc/tor

When two consonants come together in the middle of a word, the first syllable takes one and the second syllable takes the other. But consonant blends, like th, however, are never split.

Brown 15

wig/gle; sum/mer; shan/ty

When two consonants come together in the middle of a word, the first consonant usually goes with the first syllable. The second consonant goes with the following syllable.

Brown 15

dif/fer/ence; suf/fer/ing

Many words have suffixes like -er, -ed, -est, -ing, -ment, -ness, and -ence. If these endings are sounded, they are syllables by themselves.

Green 1

be/fore; si/lent; lo/cal

Many words have a middle consonant with a vowel on either side. If the first vowel has a long sound, the consonant usually goes with the following vowel.

Green 9

be/fore; si/lent; lo/cal

Same wording as Green 1

Green 9

im/port; un/heard; sound/ly; kind/ness

Most prefixes like im-, con-, and pre- are separate syllables. All suffixes that begin with a consonant are separate syllables: -ness, -ment, -tion, -ly, and -ness.

Green 9

i/ron; e/ven; us/u/al; cir/cle; dou/ble

A vowel may be a syllable by itself. The endings -ble, -cle, -dle, -fle, and -tle are syllables by themselves. [Note: Notice how the word usual has been syllabicated in the explanation example for this exercise.]

Green 9

sum/mer; weath/er; lis/ten

When two consonants come together in the middle of a word, the first goes with the first syllable. The second goes with the following syllable. But we never split two consonants that are blended to make one sound: pl, st, th.

Green 10

be/fore; se/lect; lo/cal

Many words have a middle consonant with a vowel on either side. If the first vowel has a long sound, the consonant usually goes with the second vowel.

Green 10

i/ron; e/ven; u/su/al; cir/cle; dou/ble

Same wording as Green 9. [Note: The word usual has been syllabicated the same way as in Brown 5.]

Green 10

sum/mer; weath/er; lis/ten

Same wording as Green 9. (Examples: pl, sp, th.)

Green 14

sum/mer; weath/er; out/post

When two consonants come together in the middle of a word, the first consonant usually goes with the first syllable. The second goes with the following syllable. But we never split consonants that are blended to make one sound: weath/er.

Green 14

e/lect; i/de/a; con/flict; ap/p lied

A vowel can be a syllable by itself: e/lect. When three consonants come together in the middle of a word, two or more are usually blended together in one sound: ap/plied. Consonants that are sounded together are never split in making syllables: st, th, tr.

Red 2

men/tal; broth/er; ad/ven/ture

When two consonants come together in the middle of a word, the first consonant usually goes with the first syllable. The second goes with the following syllable: men/tal. But we never split two consonants that are joined to make one sound: broth/er.

Red 2

cloth/ing; beat/en; in/sane; ex/clude

Prefixes like in-, ex-, re-, pre-, and others are syllables by themselves. Suffixes like -ing, -en, -ed, and others are syllables if they are sounded.

Red 2

pur/purple; trou/ble; cir/cle; tur/tle

The endings -ble, -cle, -dle, -gle, and others like them usually are syllables by themselves.

Red 9

sum/mer; rac/coon; weath/er; con/front

When two consonants come together in the middle of a word, usually the first consonant goes with the first syllable. The second consonant goes with the following syllable. But we never split two consonants that are joined to make one sound: weath/er.

Red 9

a/go; e/ven; cir/cle; dou/ble

The words above show two rules for dividing a word into syllables. First, a vowel may be a syllable by itself. Second, endings like -ble, -cle, and -tle and others like them are usually separate syllables.

Tan 7

sum/mer; pic/ture; mar/shal; de/stroy

Usually when two consonants come together in the middle

of a word, the first consonant goes with the first syllable. The second consonant goes with the following syllable. But two or three consonants joined to make one sound are never split: mar/shal, de/stroy.

Tan 7

clear/ing; waft/ed; stealth/y; re/tract
Prefixes like re-, con-, and in- are usually syllables by themselves if they are sounded.

Tan 7

circ/le; hur/dle; pur/ple
Many words end in -le plus some other consonant: -ble, -cle, -dle, for example. The ending thus formed is a syllable in itself.

Tan 11

sum/mer; pic/ture; mar/shal; de/stroy
Usually when two consonants come together in the middle of a word, the first consonant goes with the first syllable. The second goes with the following syllable. But two or three consonants joined to make one sound are never split: mar/shall.

Tan 15

i/ron; u/su/al; dust/y
Same wording as Blue 6 (A vowel can be a syllable by itself.)

Gold 3

com/mand; com/mand/ing; im/prove/ment
When two consonants come together in the middle of a word, the first consonant usually goes with the syllables before. Suffixes beginning with a consonant are always separate syllables: -ment, -ly, -ness, for example. Suffixes beginning with a vowel are syllables if they are pronounced: com/mand/ing. Prefixes are also separate syllables.

Gold 3

ta/ble; cir/cle
Many words end in -le with a consonant before it: -ble, -cle, -dle, -gle, for example. The three letters are always a separate syllable.

Gold 9

com/mand; im/prove/ment; com/mand/ing

When two consonants come together in the middle of a word, the first consonant usually goes with the syllable before. The second consonant goes with the following syllable. Suffixes beginning with a consonant are always separate syllables: im/prove/ment. Suffixes beginning with a vowel are syllables if they are pronounced: com/mand/ing. Prefixes are also separate syllables.

Gold 10

sum/mer; ex/cite; baf/fle; ex/cite/ment

When two consonants appear in the middle of a word, usually the first consonant goes with the syllable before. The second consonant goes with the following syllable. All prefixes are separate syllables. Suffixes that begin with a consonant are separate syllables. Suffixes that begin with a vowel are separate syllables if they are pronounced.

Changing "y" to "i"Orange 10

friendly + er = friendlier

When we add -er or -est to words ending in -y, we usually change the y to i. Directions: Add the endings given to each word below. Write the word with these endings.

Example: healthy--healthier, healthiest.

Olive 3

happy + er = happier; baby + es = babies

Some words end in y with a consonant just before it. When we add -er, -est, -es, or -ed to these words, we change the y to i.

Olive 4

happy + ness = happiness; cry + ed = cried

Many words end in y with a consonant just before it. When we add endings to these words we usually change the y to i.

Olive 13

carry + ed = carried; easy + er = easier

Many words end in y with a consonant just before it. Sometimes we add -ed, -er, or -est to these words. Then we change the y to i.

Brown 4

carry + ed = carried; try + es = tries; merry + est = merriest

Many words like carry and try, end in y with a consonant just before it. When we add -er, -es, or -est, to these words, we change y to i.

Brown 7

carry + er = carrier; property + es = properties

Many words end in y with a consonant just before it. When we add -es, or -est to these words, we change the y to i.

Brown 8

carry + es = carries; early + er = earlier; buy + er = buyer

We often add -ed, -es, or -est to a word that ends in y. When this happens, we change the y to i, unless there is a vowel before the y: buyer.

Brown 9

lively + ness = liveliness; happy + ly = happily

When we add a suffix to a word ending in y with a consonant just before it we change the y to i. If a vowel appears before the y, the y is not changed: employer.

Brown 14

carry + ed = carried; easy + ly = easily

The words carry and easy end in y with a consonant just before it. When we add suffixes to words like these, we usually change the y to i.

Green 2

beauty + ful = beautiful; easy + er = easier

We often add a suffix to a word that ends in y with a consonant before it. When we do this, we change the y to i. Exception: When we add -ing, we do not change the y: carrying.

Green 11

story + es = stories; heavy + est = heaviest

Both story and heavy end in y. If a word ends in y and has a consonant before it, change the y to i before adding -es, -ed, -er, or -est.

Red 5

try + es = tries; employ + er = employer; try + ing = trying

The word try ends in y with a consonant just before it. When we add an ending to words like this, the y is changed to i: tries. Exceptions: We do not change the y when adding -ing: trying. Usually in a word that has a vowel before the y, the y does not change: employer.

Red 6

colony + es = colonies; marry + age = marriage

The words colony and marry end in y, and just before the y there is a consonant. When we add a suffix to these words, the y is changed to i.

Red 8

party + es = parties; lazy + est = laziest; carry + er = carrier; marry + age = marriage

With words that end in y with a consonant before it, we change the y to i when adding endings. Exceptions: The y does not change when -ing is added.

Tan 1

carry + ed = carried; hurry + ing = hurrying; worry + er = worrier

The words carry and worry end in y with a consonant just before it. When a suffix is added to words like these, the y is changed to i. Exception: Do not change the y when adding -ing. When there is a vowel before the y, the y usually does not change: employer.

Tan 3

early + er = earlier; carry + ing = carrying; agency + es = agencies; employ + er = employer

The words early and agency end in y with a consonant just before it. When a suffix is added to words like these, the y is usually changed to i: earlier. Exceptions: Do

not change the y when adding -ing: carrying. If there is a vowel before the y, the y is usually not changed: employer.

Tan 4

gully + es = gullies; highway + s = highways; dreary + ly = drearily; hurry + ing = hurrying

When a word ends in y with a consonant before it, we change the y to i when a suffix is added. Exception: Do not change the y when adding -ing: hurrying. Do not change the y, usually, if a vowel precedes it: highways.

Tan 12

body + es = bodies; enjoy + ed = enjoyed; easy + ly = easily; carry + ing = carrying

The words body and easy end in y with a consonant just before it. When a suffix is added to words like these, the y is changed to i. Exception: Do not change the y when adding -ing: carrying. When a vowel precedes the y, usually the y does not change: enjoyed.

Gold 6

happy + ly = happily; usual + ly = usually

When -ly is added to a word ending in y with a consonant before it, the y is changed to i: happily. When -ly is added to a word ending in l, the l is not dropped: usually.

Gold 6

city + es = cities; happy + ness = happiness; hurry + ing = hurrying; employ + er = employer

When a suffix is added to a word ending in y preceded by a consonant, the y is changed to i: happiness. The y is not changed when -ing or -ist is added: hurrying. The y is not changed when a vowel precedes it: employer.

Gold 13

study + ed = studied; enjoy + ed = enjoyed; sixty + eth = sixtieth; carry + ing = carrying

The words study and sixty end in y with a consonant just before it. When suffixes are added to words like this, the y is changed to i. Exception: The y is not changed before -ing: carrying. When a vowel precedes the y, the y is not changed: enjoyed.

Aqua 13

theory + es = theories; try + ed = tried; enjoy + ed = enjoyed; cry + ing = crying

The words theory and try end in y with a consonant just before it. When a suffix beginning with a vowel is added to words of this kind, the y is changed to i. Exception: When a vowel precedes the final y, the y is not changed: enjoyed. When -ing is added to a word ending in y, the y is not changed.

Aqua 15

reality + es = realities; employ + er = employer; country + es = countries

The words reality and country end in y with a consonant just before it. When a suffix is added to these words, the y is changed to i. Exception: When -ing is added, the y does not change to i. In words ending in y with a vowel just before it, the y does not change when a suffix is added: employer.

Purple 1

angry + ly = angrily; enjoy + ment = enjoyment; carry + ed = carried; worry + ing = worrying

When a suffix is added to a word ending in y with a consonant just before it (angry), the y is changed to i: angrily. If a vowel precedes the y, the y is not usually changed to i: enjoyment. Exception: When -ing is added to a word ending in y, the y is not changed: worrying.

Purple 5

reality + es = realities; country + es = countries; employ + er = employer; worry + ing = worrying

The words reality and country end in y with a consonant just before it. When a suffix is added to these words, the y is changed to i. Exception: When -ing is added, the y does not change to i. In words ending in y with a vowel just before it, the y does not change: employer.

Purple 12

theory + es = theories; enjoy + ed = enjoyed; try + ed = tried; cry + ing = crying

The words theory and try end in y with a consonant just before it. When a suffix is added to words of this kind, the y is changed to i. If a vowel precedes the y, the y is not changed: enjoyed. When -ing is added to a word ending in y, the y is not changed: crying.

HomonymsBlue 11

won--one; sea--sea

Homonyms are words that sound alike but are spelled differently. Directions: Decide whether the pairs of words below are homonyms. If they are homonyms, write "homonym." If they are not, write "not homonyms."

Exercise: maid--made; save--safe; write--right; light--late, etc.

Plurals

hill--hills; order--orders; stay--stays

The word hill means "one hill." By adding an s we make the word hills, which means "more than one hill." We also add an s to verbs like stay when we use it with he or she: I stay--he stays. Directions: Each word below ends in s. If the s makes the word mean "more than one," write more. If the s does not make the word mean "more than one," write verb.

AccentingRed 1

fa'/tal; lim'/it; con/trol'; per/mit'

All four words above are alike in ending with one vowel and one consonant. They differ in the way they are accented. An accented syllable is one that is spoken louder and more forcefully than the other syllables in a word.

Red 1

lim'/it/ing; low'er/ing; per/mit'/ting; re/fer'/ring

The words permit and refer are two-syllable words ending with one vowel and one consonant. Words like these double the final consonant in adding a suffix when the accent falls on the second syllable: referring. When the accent falls on the first syllable, the final consonant is not doubled: lowering.

Red 7

fa'/tal; con/trol'; lim'/it; per/mit'
Same wording as Red 1.

Red 7

lim'/it/ing; per/mit'/ting; low'/er/ing; re/fer'/ring
Same wording as Red 1.

Red 13

fa'/tal; con/trol'; lim'/it; per/mit'
Same wording as Red 1.

Tan 5

quar'/rel; pan'/ic; o/mit'; con/trol'

The four words above are alike in having two syllables and in ending with one vowel and one consonant. Two of them are accented on the first syllable, and two on the second. An accented syllable is one that is spoken louder and more forcefully than the other syllables in a word.

Tan 5

limit + ing = lim'/it/ing; refer + ing = re/fer'/ring;
permit + ing = per/mit'/ting; refer + ence = ref'/er/ence

The words limit, permit, and refer are two-syllable words ending in one vowel and one consonant. New words are made by adding suffixes to them. When the accent in the new word falls on the second syllable, the final consonant is doubled: re/fer'/ring. When the accent in the new word falls on the first syllable, the consonant is not doubled: lim'/it/ing.

Tan 9

control + ed = control'/led; refer + ence = ref'/er/ence;
refer + ing = re/fer'/ring.

Many words of two or three syllables end with a vowel and a consonant and are accented on the last syllable. We often add endings like -ed, -er, -est, -ing to these words. When the new word made with these endings is accented on the second syllable, the consonant is doubled: refer'ring. When it is accented on the first syllable, the consonant is not doubled: ref'/er/ence.

Tan 13

quar'/rel; o/mit'; pan'/ic; con/trol
Same wording as Tan 5.

Tan 13

limit + ing = lim'/it/ing; refer + ing = ref/er'/ring;
 permit + ing = per/mit'/ting; refer + ence = reference
 The words limit, permit, and refer are two-syllable words that end in one vowel and one consonant. New words are made by adding suffixes to them. When the accent in the new word falls on the second syllable, the final consonant of the base word is doubled: re/fer'/ring. When the accent in the new word falls on the first syllable, the final consonant is not doubled: lim'/it/ing.

Tan 14

pi'/lot; pan'/ic; o/mit'; con/trol'
 Same wording as Tan 5.

Tan 14

limit + ing = lim'/it/ing; refer + ing = re/fer'/ring;
 permit + ing = per/mit'ting; refer + ence = ref'/er/ence
 Same wording as Tan 5.

Gold 11

omit + ing = o/mit'/ting; limit + ing = lim'/it/ing;
 repel + ing = re/pel'/ling
 The words omit and repel are two-syllable words ending in one vowel and one consonant. When suffixes beginning with a vowel are added to words of this kind the accent falls on the second syllable. The final consonant is doubled: omit--omitted. When a suffix beginning with a vowel is added to words like limit, the accent falls on the first syllable. The final consonant is not doubled: limiting.

Gold 14

omit + ing = o/mit'/ting; limit + ing = lim'/it/ing;
 repel + ing = re/pel'/ing
 The words omit and repel are two-syllable words ending in one vowel and one consonant. When suffixes beginning with a vowel are added, the accent falls on the second syllable. With words of this kind, the final consonant is doubled: omit--omitted. When a suffix is added to limit, the accent falls on the first syllable. With words of this kind, the final consonant is not doubled: limiting.

Gold 15

omit + ing = o/mit'/ting; limit + ing = lim'it/ing;

repel + ing = re/pel'/ling

The words omit and repel are two-syllable words ending in one vowel and one consonant. When suffixes beginning with a vowel are added to these words, the accent falls on the second syllable. The final consonant is doubled: omit--omitted. When a suffix is added to words like limit, the accent falls on the first syllable. The final consonant is not doubled: limiting.

Aqua 4

refer + ing = refer'/ing; limit + ing = lim'/it/ing;
omit + ing = o/mit'/ting

The words refer and omit are two-syllable words that end with one vowel and one consonant. When -ing is added to them, the accent falls on the second syllable. Words of this sort double the final consonant when adding a suffix that begins with a vowel. But they do this only if the accent falls on the second syllable after the ending has been added. When the accent falls on the first syllable, the final consonant is not doubled: ref'/er/ence; lim'/it/ing.

Aqua 8

refer + ing = re/fer'/ring; omit + ing = o/mit'/ting;
limit + ing = lim'/it/ing

The words refer and omit are two-syllable words that end with one vowel and one consonant. When -ing is added to them, the accent falls on the second syllable. Words of this sort double the final consonant when adding a suffix that begins with a vowel. But they do this only when the accent falls on the second syllable after the ending has been added. When the accent falls on the first syllable, the final consonant is not doubled: ref'/er/ence, lim'/it/ing.

Aqua 11

refer + ing = re/fer'/ring; omit + ing = o/mit'/ting;
limit + ing = lim'/it/ing
Same wording as Aqua 8.

Aqua 13

refer + ing = re/fer'/ring; omit + ing = o/mit'/ting;
limit + ing = lim'/it/ing
Same wording as Aqua 8.

Purple 3

refer + ing = re/fer'/ring; omit + ing = o/mit'/ting;
 limit + ing = lim'/it/ing

The words refer and omit are two-syllable words ending with one vowel and one consonant. When -ing is added to them, the accent falls on the second syllable. Words of this sort double the final consonant when adding a suffix that begins with a vowel. But they do this only if the accent falls on the second syllable after the ending has been added. If the accent falls on the first syllable, the final consonant is not doubled: ref'/er/ence, lim'/it/ing.

Purple 10

refer + ing = re/fer'/ring; omit + ing = o/mit'/ting;
 limit + ing = lim'/it/ing

The words refer and omit are two-syllable words ending with one vowel and one consonant. Words of this sort double the final consonant when adding a suffix that begins with a vowel. But they do this only when the accent falls on the second syllable after the ending has been added. When the accent falls on the first syllable, the final consonant is not doubled: ref'/er/ence, lim'/it/ing.

Purple 12

refer + ing = re/fer'/ring; omit + ing = o/mit'/ting;
 limit + ing = lim'/it/ing

The words refer and omit are two-syllable words ending with one vowel and one consonant. When -ing is added to them, the accent falls on the second syllable. Words of this sort double the final consonant when adding a suffix beginning with a vowel if the accent still falls on the second syllable after the ending has been added. If the accent falls on the first syllable, the final consonant is not doubled: ref'/er/ence, lim'/it/ing.

Purple 15

refer + ing = re/fer'/ring; omit + ing = o/mit'/ting;
 limit + ing = lim'/it/ing
 Same wording as Purple 3.

ContractionsBlue 4

Sometimes we put two words together to make a new word and drop out some letters. The new word is called a contraction. We show where the letters are left out by putting in this mark '. Directions: Write the two words from which each of these contractions is made.

Exercise: I'll, I've, it's, don't, couldn't, didn't, you're, we'll.

Blue 5

Sometimes we make one word out of two, leaving out some letters. The apostrophe ' shows where the letters were dropped. The new word is called a contraction.

Blue 6

don't = do not; I've = I have

Often we put two words together, leaving out some of the letters. The new word made in this way is a contraction. The apostrophe ' shows where letters have been left out.

Brown 4

you'll = you will; I've = I have

Sometimes we join two words into one and drop out some of the letters. The apostrophe (') is used to show where letters have been dropped. The new word is called a contraction.

Brown 5

we + are = we're; it + is = it's

Often two words are combined into one word with some letters left out. To show where the letters are missing, we use the apostrophe (').

Brown 10

Similar to wording in Brown 4.

IV. SURVEYING POWER BUILDERS

Surveying every Power Builder from grade levels three through twelve, the writer has found exercises on the following phonics and structural analysis skills.

1. Long and short vowels
2. Vowel digraphs
3. Single consonants
4. Consonant blends
5. Silent consonants
6. The controlled vowels
7. The letter "c"
8. The letter "g"
9. Base or root words
10. Prefixes and suffixes
11. Syllables
12. Changing "y" to "i" (suffixes)
13. Homonyms
14. Plurals
15. Accenting
16. Contractions

V. COLLECTION AND PROCESSING OF DATA

There was no attempt to make a comparison between the phonics and structural skills exercises in SRA Reading Laboratory IIIa and other sources of word recognition skills.

A comprehensive picture of what phonics and structural analysis skills are presented in SRA Reading Laboratory IIIa has been made.

VI. SUMMARY OF CHAPTER

It was the purpose of this chapter to give a general background of the student body that represents the secondary

school where this writer has been teaching reading. Special emphasis on the section of the student body that resides in the depressed area of the city was given so that the reader will have a better understanding of why this teacher needs to evaluate carefully materials for her courses.

A general description of the SRA Reading Laboratory IIIa and the principles upon which it was built was quoted in the words of its author, Parker.

A comprehensive tabulation was made of all the phonics and structural analysis skills exercises and a few of the directions accompanying them were also listed.

CHAPTER IV

ANALYSIS OF DATA

This study of the SRA Reading Laboratory IIIa was conducted for the purpose of ascertaining the various kinds of phonics and structural analysis skills, the frequency of their use, and the consistency of the wording of rules and generalizations for those skills. Also, this study was conducted to find out what the leading authorities had to say about this popular multi-level programmed material. Having selected this program for use in the reading course, it was hoped that the two analyses would encompass the essential skills in large enough quantities to make this an excellent source for reviewing these skills with high school students in need of them.

A tabulation of the phonics and structural analysis (34) is found in Chapter III. Appendix E shows a composite picture of the skills used, number of times introduced, and the color selections in which they occur. All exercises cited in this chapter are from SRA Reading Laboratory IIIa (34).

Method of presenting phonics and structural analysis skills. SRA Reading Laboratory IIIa's method of presenting phonics and structural analysis illustrated a "synthetic" approach rather than the "analytic" approach which has been widely accepted by many elementary teachers in teaching these word attack skills. Critics of the "synthetic" methods, said

Harris in his book "How to Increase Reading Ability," feel that it tends to produce slow, labored reading (21:69).

The SRA Reading Laboratory IIIa is concerned with developing the phonics and structural analysis skills along with other word recognition skills for junior and senior high school students. However, the program is sequential in only some of the phonics and structural analysis skills listed. In checking through the various phonics and structural analysis skills exercises, it became apparent to this writer that there were almost twice as many exercises offered for prefixes and suffixes as there were for the base or root word exercises and syllabication. There were only one-fourth as many exercises presented for long and short vowels, vowel digraphs, consonant blends, digraphs and trigraphs, changing "y" to "i," and accenting. Only thirteen exercises were offered on the single consonants, eight for silent consonants, six for contractions, four for the soft and hard sound of the letter "g." Then there was only one exercise offered for each of the following word attack skills on the modified vowels, the soft and hard sounds of the letter "c," plurals, and homonyms. (See Appendix D for the table that shows at what grade level these word attack skills were being offered.)

In the opinion of this writer, the retarded reader will make very little progress in handling the word attack skills when only thirty or less exercises, scattered throughout the programmed materials, is offered as has been done in this SRA

Reading Laboratory. Bond and Tinker (7:220) stress the need for the disabled reader to have his growth demonstrated to him. The student who has a great deal of difficulty with a word attack skill certainly cannot be given the opportunity to demonstrate his growth in using this skill if given only one or a few exercises in which to demonstrate his growth. In fact, it may very well leave him more discouraged than before he began the work in any given program if his needs are not adequately met.

Formation of rules and generalizations. The SRA generally utilized the "discovery method" for introducing the phonics and structural analysis skills. Also, the nature of the construction of the explanations, for these two types of word attack skills, frequently made them a "rule" rather than a "generalization."

The Reading Laboratory did very little about assisting the learner in how to use auditory discrimination (matching sounds) as a means of pronouncing words. The Laboratory usually moved from the abstract letter symbol or sound to the pronunciation of the words in the exercises. The Laboratory's manner of presentation of the explanations was confusing to the students, especially those who came into the reading program functioning at the intermediate or lower grade levels. Programs that rely completely on the pupil's discovery of letter-sound relationships, Chall stated (11:347) were

classified as "low," for in these types of programs the teacher makes no effort to help the pupils deduce the relationships, but expects the children to acquire an awareness of them through practice. For children who have failed to show improvement in the phonics and structural analysis skills in other types of word attack techniques, Wilson has this to say:

For children who have had this instruction in their normal classroom situations and have failed to respond to it, we would suggest the use of Botel's Discovery Technique which includes the following four steps:

1. The teacher provides accurate sensory experiences.
2. The students examine the structural pattern with the teacher's guidance.
3. Students collect words that fit the pattern.
4. Students generalize the pattern.

The effectiveness of this technique depends primarily upon the teacher's preparation of patterns from which to work and his understanding of the generalizations to be made, including their exceptions. . . . (50:143).

It would be difficult for a secondary teacher to use the Botel Discovery Technique in conjunction with the SRA Reading Laboratory IIIa program because the Reading Laboratory does not have a manual or guide sufficient for carrying out such a program. The Handbook for SRA Reading Laboratory IIIa is void of instructions or techniques for step-by-step procedures for the teacher to follow should she wish to review in preparation for assisting a student who needs additional reinforcement in a certain skill. Neither does it contain a list of references for guidance for the instructor. According to the Literature Related to the Improvement of Reading at the secondary level,

in Chapter II, many of the secondary teachers do not have the necessary preparation for teaching word attack skills in their fields. This further proves, in the writer's opinion, that the SRA Reading Laboratory IIIa cannot be used as satisfactorily in the various content fields, as suggested by Parker, unless the teacher(s) using it have the background necessary for helping a student who is not making satisfactory progress with a certain phonics or structural analysis skill technique.

Explanation of diacritical markings. The SRA Reading Laboratory IIIa did not at any time define the macron and breve (diacritical markings used above the long and short vowels respectively). It assumed that the learner knew their function and began the exercises using these diacritical markings in the very first Power Builder, Orange 1, in this manner:

may be high grow mule
The first vowel in each word has a long (-) sound.

The student had to wait until he came to Power Builder, Olive 8, before the following information was given him:

Each vowel has a long sound, marked (-), and a short sound marked (˘). Study the table of vowel sounds at the bottom of this page. Write these words. Say the words to yourself. Place this mark (-) over the long vowels and this mark (˘) over the short vowels.

In her chapter 9, "How to Pronounce and Understand Unfamiliar Words," Smith reviews word attack techniques for high school students which include the explanation of the

use of the macron and breve and gives examples on how they are used (46:60-61). She also mentions the need for immediate recognition of these diacritical markings when using a dictionary, etc.

This writer, in her five years of experience working with high school students, found it necessary to explain, to many of them, the meaning and use of the macron and breve when they first began working in the SRA Reading Laboratory IIIa.

Recognition of the vowels. In Chapter II, under Definitions of Terms Used, Gray lists the vowel letters as a, e, i, o, u (and y and w when they serve the function of i and u respectively). (Gray is an acknowledged leader of, and spokesman for reading experts for four decades, major summarizer and interpreter of reading research (16:96).) The SRA Reading Laboratory IIIa lists the vowels in Orange 1, under the single consonant exercise, in the following manner:

seat, myself, fast, escape, suit, last, safely, miss
 The words above are alike in one way. Each word has an s and an s sound. The letter s is a consonant. The letters a, e, i, o, u are vowels. All other letters are consonants.

The SRA Reading Laboratory waits until the student works in Olive 5, in the Power Builders, before listing y as sometimes functioning as a vowel. The Laboratory is not consistent about explaining that y can also function as a vowel in the remaining exercises.

At no time could this researcher locate any exercises

that recognized the letter w as also functioning as a vowel. It handled the w in this manner in Orange 4 and several other exercises under silent consonants:

The letters a, e, i, o, u are vowels. All the other letters are consonants.

n i (g h) t (k) n o (w)

Directions: Copy the words below. Say them to yourself. Draw a circle around each consonant that you do not sound.

Exercise: could, knee, wrong, talk, known, write, high, would

It was a disturbing element to those students, using the Laboratory, who were cognizant that w is included in vowel lists in all other sources--including dictionaries--they had used.

Double vowel combinations--vowel digraph and diphthong.

The exercises for these vowel recognition skills were far from consistent. In one of the explanations in Olive 6 the explanation read as follows:

Sometimes two vowels are joined to make a new sound.
ou sometimes sounds like ow, as in cloud
au sometimes sounds like aw, as in cause
ei sometimes sounds like ay, as in weigh

Directions: Write these words. Say them to yourself. Draw a circle around the vowels if they are joined to make a new sound.

Exercise: our, neighbor, haul, weight, round, auto.

In the opinion of the researcher, the examples (ou and ei) are diphthongs and (au) is a vowel digraph (12:3).

Modified vowels. It was stated earlier in this chapter that the Reading Laboratory offered only one exercise for this word attack skill. The explanation assumed that the learner knew the function of the "r" when following a single vowel. Many high school students are not aware that the "r" has such a function; hence it is listed by Dechant as one of the phonics skills to be learned for syllabication, accenting, and dictionary skills (12:241, 273, 300-302).

Consonant blends, consonant digraphs, consonant trigraphs.

In this section it was difficult for the researcher to know what the Laboratory was attempting to teach. Listed below are some examples of exercises taken from that section:

Orange 8. stop, study, spot, speak, show, shop
Some words begin with two or more consonants. We usually join these to make one sound.

The guide words showed examples of two consonants that are joined to make one sound (show and shop). The other examples (stop, study, and spot) are consonant blends (12:274).

Olive 5. church, shop, when, three
Each of these words has two consonants that come together to make one sound. You can see them in heavy black type. Directions: Say the words below. Write the two consonants that come together to make one sound.

Exercise: with, when, watch, other, bench, push, shop.

The guide words showed two consonants that come together to make one sound--consonant digraph or also referred to as the speech consonants (12:274). In the exercise a trigraph (watch) was included. According to the Reading Laboratory's color

section, Olive indicates the high school student is reading at a fourth grade level. This type of exercise proved confusing to those students working in this section.

Tan 7. In many words, two or three consonants coming together are joined to make one sound.

ch ft sh str th

Directions: Say these words to yourself. Write the words. Draw a circle around the consonants that are joined to make one sound.

Exercise: wafted, weather, stream, lash, touch.

This is the first time that the Reading Laboratory's guide words showed the three-consonant blend (str). According to the Reading Laboratory's explanation those three consonants should be a consonant trigraph. This was the first exercise in which the researcher could locate in the explanation "two or three consonants" and a word having three consonants (stream) in the exercise.

The researcher has not been able to locate an authority who recognizes the two consonants "ft" as being either a consonant blend or consonant digraph (wafted).

Orange 3. The words strong and ring end with the same two consonants. Words that end alike usually have the same sound at the end. Directions: Say these words to yourself. Write the words. Draw a circle around the consonants that are joined to make one sound.

Exercise: corn, burn, learn, heard, touch, rough, much, march, and, round, hang, find, hurt, short, hard, shirt, cent, hand, present, went.

Orange 12. ground bend find
All three words above end with the same two consonants: nd.

Words that end with the same consonants usually have the same sound at the end. Directions: Say these words to yourself. Write the words. Draw a circle around the consonants that are joined to make one sound.

Exercise: ground, bend, find, burn, bird, most, field, meant, cloth, kept.

Orange 15. apple please street first
Each of these words has two consonant letters in heavy black type. The sound of the first letter runs into the second letter to make a consonant blend.

In Orange 3 and 12 the following words corn, burn, hurt, short, hard, shirt, and bird actually contain the "r controlled vowels" (12:300-301). SRA Reading Laboratory IIIa uses them as rn, rd, nd, rt blend example. This refutes their own exercise on the modified vowels. The researcher has been unable to locate any authority who lists those combinations as a phonics skill to be learned as good word attack techniques. In fact, they have not been listed in any of the materials this writer covered for this study.

The letters "c" and "g." This writer noted earlier in this chapter the lack of exercises the Reading Laboratory provided for the students for these skills. Many high school students in a reading program need to work many exercises in order to become skillful in knowing when to give the "soft" and "hard" pronunciations for these letters in unfamiliar words. They are included in the list of phonics skills (12: 241, 298-299).

Changing "y" to "i." The researcher noticed the exchanging of a "rule" with "generalization" in this section. Cited below are the following examples:

Olive 4. happy + ness = happiness, cry + ed = cried
Many words end in y with a consonant just before it. When we add endings to these words we usually change the y to i.

Brown 4. carry + ed = carried, easy + er = easier
Many words like carry and try, end in y with a consonant just before it. When we add -er, -es, or -est, to these words, we change y to i.

There was no introduction for the student as he began the exercises with the structural analysis skills such as "changing the y to i." The Reading Laboratory assumed that he understood the reasoning behind this skill.

Plurals. The SRA Reading Laboratory gave only one exercise for forming plural words--adding s to the root word. This is an area in which many of the students in a reading course are weak when they enroll for the course.

Dechant (12:250-251, 331) feels that students need to be introduced to structural analysis skills all along the way of their schooling and given many opportunities to develop this skill. Also see Appendix G.

Homonyms. As stated earlier in this chapter, SRA Reading Laboratory provided only one exercise for this word attack skill. This writer is in agreement with Dechant that homonyms frequently lead to recognition and meaning difficulties. To illustrate their difference the teacher needs to have the students

use them in meaningful context (12:33). This is the way the Reading Laboratory presented the exercise for the homonyms:

Blue 11. won-one, sea-see
Homonyms are words that sound alike but are spelled differently. Directions: Decide whether the pairs of words below are homonyms. If they are homonyms, write "homonyms." If they are not, write "not homonyms."

Exercise: maid-made, save-safe, write-right, light-late, etc.

Errors and inconsistencies. For the purpose of clarification, errors refer to labeling sounds in a conflicting or confusing manner. Inconsistencies refer to the methods presenting sound elements that are not in agreement with the sound that should be produced. It also refers to the inconsistent manner in which the SRA Reading Laboratory IIIa uses rules and generalizations interchangeably.

Blue 8. Many words end with a consonant and a final e. In most of them, the vowel before the consonant is long: plate, complete. But in some common words the vowel before the consonant is not long: come, give. Directions: Say these words to yourself. Write the words. Show whether the vowel before the consonant is short (˘) or long (-).

Exercise: note, shape, have, game, side, gone, case.

Because the letter "o" in come does not adhere to either the long or short sound of "o," the authorities list come as an exception and it should be learned as a sight word (21:207, 12:270). SRA Reading Laboratory IIIa has used it as an example of the short "o."

Blue 14. can pin mat
cane pine mate

Many short words end with a vowel and a consonant. The vowel has a short sound: can. But if an e is added, making a new word, the vowel has a long sound: cane. The final e is not sounded.

For the high school student, Smith states in identifying vowel sounds:

When a one-syllable word contains two vowels, one of which is the final e, the first vowel is usually long and the final e is silent (46:60).

It was stated earlier in the chapter that only six exercises were offered for this skill. In varying the explanations, the Laboratory wrote the following for Blue 4:

Sometimes we put two words together to make a new word and drop out some letters. The new word is called a contraction. We show where the letters are left out by putting in this mark '. Directions: Write the two words from which each of the contractions is made.

Exercise: I'll, I've, it's, don't, couldn't didn't, you're, we'll.

Had the Laboratory used the word omit in place of drop out some letters the explanation would have been more meaningful to the learner. Nonstandard usage of words (4:1319) in the explanations has been noted elsewhere in the Laboratory.

Heilman states that contractions result from major structural changes in words and should be taught as sight words. He further states:

Contractions are single words formed by combining two words but omitting a letter or letters. An apostrophe (') is always inserted where a letter or letters have been omitted (22:42).

Errors and inconsistencies in phonics and structural analysis exercises have already been mentioned in this chapter. There are more examples in Chapter III.

In checking through Chapter III, it will be noted that rarely was a rule or generalization stated in exactly the same way (e.g. Same wording as Orange 7). This factor was very confusing to the students, especially those who had a great deal of difficulty with reading when they registered in the class.

Presentation of statistical data. A general description of SRA Reading Laboratory IIIa was presented in Chapter III. Also, the grade levels were listed by color. Before the learner began working in the Laboratory, the teacher administered two three-minute tests in the same period to determine the level for him to begin his work in the Power Builders (Appendix F).

No statistical data was available which explains how the author determined this numerical level other than quote:

The Starting Level Guide is a two-part test that has been roughly standardized. Scores on the Starting Level Guide will not necessarily correspond to scores on standardized reading tests. These latter usually have less of the speed-pressure element embodied in the Starting Level Guide. However, when the student has taken this test, it will be possible to place him at one in the proper level in the SRA Laboratory.

Grade levels by color: Insofar as possible, the level of difficulty of the Power Builders selections and the Rate Builders has been determined by use of the Lorge Readability Formula and the Dale-Chall Formula. These mechanical evaluations have been further refined by actual classroom testing of the materials (34:8).

The SRA Reading Laboratory method grew out of six years of preliminary work by the author in Florida, North Carolina, and Westchester County, New York. During this time several thousand students were trained with multi-level materials. In a carefully controlled experiment involving 456 seventh-grade students in Charlotte, North Carolina, the group using multi-level materials showed a 112 per cent greater gain than a matched group using one-level materials.

The preliminary experimental work, supported by research findings across the nation, disclosed the following conditions as most conducive to the success of a reading development program: . . . (34:1).

Instructor's guide. As stated earlier in this chapter, the Handbook for SRA Reading Laboratory IIIa is void of instructions or techniques for step-by-step procedures to follow in case the teacher should wish to review in preparation to assisting a student needing extra help or reinforcement in a certain skill. Neither does it contain a list of references for guidance for the instructor as many other sources do.

Summary of chapter. It was the purpose of this chapter to give an analysis of the data collected. Topics included the presentation of phonics and structural principles in the SRA Reading Laboratory IIIa. Mention was made of the errors and inconsistencies present in the Reading Laboratory by showing some of the exercises containing these irregularities. Scarcity of essential phonics and structural analysis skills as well as exercises was mentioned. Presentation of statistical data was given. The lack of a manual as a guide for the teacher's review of word recognition skills presented in the Reading

Laboratory was noted.

This writer is in complete agreement with the following authorities quotes about individualized programs. What they have said is a summation of what this writer has listed in Chapter IV of this study.

Systematic, sequential instruction is ignored or deemphasized. Although research in reading and the psychology of learning has shown that learning proceeds from the known to the unknown, from the concrete to the abstract, and upon the meaning of the situation, individualized reading instruction apparently departs from sequence and system and relies upon incidental, accidental, or a "felt needs" basis. Such a "gunshot" approach may bring down some game, but a directed shot at a definite objective has been demonstrated to produce better teaching results (29:189).

In his book on Recent Developments in Reading, Robinson summarized the weakness of individualized instruction that this writer feels is applicable to the SRA Reading Laboratory IIIa use in the classroom for phonics and structural analysis skill techniques:

An inherent weakness in individualized reading, deriving from the seemingly logical belief of proponents that "children should learn skills when they need them to unlock a communication which they wish to receive," is the lack of a systematic skills program (Rodney Johnson's "A Three-Year Longitudinal Study Comparing Individualized and Basal Reading Programs at the Primary Level). The danger lies in the fact that students may not know when they are not obtaining maximum understanding from a selection or why; that is they do not have the experience to know what additional skills they could be utilizing. The teacher who has only a few minutes in which to discuss several hours of reading will hardly have time to explore the student's understanding in enough depth to determine which interpretive and evaluative skills he needed but did not have (36:82).

CHAPTER V

SUMMARY, CONCLUSIONS AND IMPLICATIONS

I. SUMMARY

The study was made in an effort to tabulate all of the phonics and structural analysis skills presented in the SRA Reading Laboratory IIIa as to the various kinds offered; frequency of use; methods of presentation. Also, extensive research was attempted to ascertain leading reading authorities' opinions on the use of these analyses for secondary students. The purpose of the study was to determine whether the SRA Reading Laboratory IIIa would be the best material to use for the retarded and disabled readers at the secondary level.

II. CONCLUSIONS

The researcher concludes that the techniques SRA Reading Laboratory IIIa uses differ in various instances from those techniques for use with the secondary learner in other sources. The "synthetic" rather than the "analytic approach" is used throughout the Laboratory. Harris reports that:

At the present time it is recognized that comprehension is the major goal in reading instruction, but that good comprehension cannot be achieved by one who has failed to develop skill in word recognition (21:315).

The "synthetic" approach has been found to be unsatisfactory for the following reasons:

. . . Observant educators, starting with Horace Mann over a century ago, noted that the formal, artificial methods often produced word-callers, not readers. The pupil could learn all the separate sounds composing words and yet not be able to use this skill in interpreting word meanings in reading. If the parts are learned in isolation, the knowledge may not transfer to unfamiliar words in the reading text.

Sounding starting with isolated sounds tends to become a separate skill, taught and studied for its own sake. Sounding parts and blending may form habits that later have to be broken. Isolated letters do not convey any meaning in themselves. Meaning may be entirely left out if the words are not recognized by the pupil after they are pronounced. A child could pronounce all the words in a modest-sized dictionary and even the words in a sentence in his reader and still not be able to read nor even be prepared to read.

If parts are taught and learned before words, these parts claim the pupil's attention when he tries to identify words. A teacher said, "We drilled on the b sound, then on the all, but the children couldn't seem to get ball out of it."

Drill tends to become formal. Every item must receive an equal share of attention, and the pupils' time is wasted. The methods are found to be unnecessarily complex and time-consuming for beginners. Moreover, words used for drill in the synthetic method tend to be nonsense words, or words meaningless to pupils, for example, dud, thud; lug, slug; mut, slut. Along with the synthetic method goes a text artificially constructed to give sounding practice for reading, as in "Jud fell in the mud." Vocalizing may persist when the child reads to himself, slowing down reading rate and interfering with grasp of meaning. The development of good eye span may be delayed or even prevented (24:438-439).

It is the conclusion of this writer that the leading authorities in the field of reading have not recognized SRA Reading Laboratory IIIa's phonics and structural analysis section as being a complete source for strengthening those skills for disabled and retarded secondary students.

The writer further concludes that the SRA Reading Laboratory cannot be used wisely in any secondary classroom for the purpose of strengthening students' phonics and structural analysis skills without teacher help. The inconsistencies noted could be confusing to some students.

It is also the writer's conclusion that any secondary teacher who has not had the proper background for assisting students with the basic word attack skills cannot rely on the SRA Reading Laboratory as a guide because the Laboratory does not furnish one.

This writer concludes that the SRA Reading Laboratory IIIa's utilization of the "discovery method" for introducing phonics and structural analysis skills can be confusing rather than aiding the student needing help in those areas.

With the exception of the number of exercises offered for the base or root words and the prefixes and suffixes, it is the researcher's opinion that the other exercises are far from adequate for helping even the disabled reader become proficient in the use of the phonics and structural analysis skills.

The researcher concludes that the retarded reader does not make enough progress (through using the phonics and structural analysis skills section of the Reading Laboratory) to help him further his independent and instructional level of reading.

All the phonics and structural analysis skills presented in the SRA Reading Laboratory IIIa were listed. Extensive research was done in the attempt to make the writer more knowledgeable about the leading reading authorities' opinions about these skills. It was also the researcher's attempt to ascertain if there was any basis for the students' responses given in the two surveys mentioned in Chapter I.

This current research is in agreement with the authorities' findings that the SRA Reading Laboratory IIIa is valuable for helping a disabled reader increase his vocabulary, improve his comprehension skills, and increase his rate of reading. But in the terms of its phonics and structural analysis section, it appears to be weak and inconsistent.

III. IMPLICATIONS

The sources covered for this study failed to show that the phonics and structural analysis skills, in the SRA Reading Laboratory IIIa, have been evaluated by leading authorities through experimentations in the field of reading. Only one source mentioned the Laboratory having those skills. It would be desirable to locate the authorities' opinions or experimentations on that section of the Laboratory to discover how they can be better utilized by the learner who has to use this material exclusively or as supplementary material.

The study comparing a group using the SRA Reading

Laboratory IIIa's Power Builders word attack skills with a group using a basal text word attack approach would provide valuable information.

Development of individualized multi-level material by SRA Reading Laboratory IIIa, which presented the analytic approach to all the phonics and structural analysis skills, would be a beneficial supplement to a textbook for secondary reading programs; for the writer is in complete agreement with author Dechant's statement:

Research and experience have shown that for genuine independence in reading children need both analytic and synthetic approaches. Children need to observe the whole word and they need to look and listen for those characteristics that individualize a word (12:182).

A suggested phonics and structural analysis skills program for a secondary multi-level reading program has been listed in Appendix G.

The need for further study concerning the utility of the phonics and structural analysis skills has been suggested by this study.

BIBLIOGRAPHY

BIBLIOGRAPHY

1. Abraham, Willard. The Slow Learner. New York: The Center for Applied Research in Education, Inc., 1964.
2. Adams, W. Royce. "Turning a Dumping Ground into an Effective Reading Program," Journal of Reading, VIII (May, 1965).
3. Bamman, Henry A., Hogan and Greene. Reading Instruction in the Secondary Schools. New York: Longmans, Green and Company, 1961.
4. Barnhart, Clarence L. (ed.). World Book Encyclopedia Dictionary. Chicago: Field Enterprises Educational Corporation, 1966, Vol. 2, p. 2082-2083.
5. Berkey, Sally C. "A Successful High School Development Reading Program," Journal of Reading, Vol. X (April, 1967).
6. Bond, Guy L., and Eva Bond. Development Reading in High School. New York: The Macmillan Company, 1946.
7. Bond, Guy L., and Miles A. Tinker. Reading Difficulties-- Their Diagnosis and Correction. New York: Appleton-Century-Crofts, 1957.
8. Brown, Don A. "Testing Poor Readers in High School," Reading Improvement Journal, Vol. II, No. 3 (Spring, 1965).
9. Bullock, Harrison. Helping the Non-Reading Pupil in the Secondary School. New York: Teachers College, Columbia University, 1956.
10. Burnett, Richard W. "Reading in the Secondary School: Issues and Innovations," Journal of Reading, IX (April, 1966).
11. Chall, Jeanne S. Learning to Read: The Great Debate. New York: McGraw-Hill, 1967.
12. Dechant, Emerald. Improving the Teaching of Reading. Englewood Cliffs, New Jersey: Prentice-Hall, 1964.
13. Fortenberry, Warren A. "Reading Needs in High School and College," Reading Improvement Journal, II, No. 2 (Winter, 1965).

14. Good, Carter V. Dictionary of Education. Second Edition. New York: McGraw-Hill Book Company, Inc., 1959.
15. Gray, William S. Improving Reading in all Curriculum Areas. Chicago: Chicago University Press, 1952.
16. Gray, William S. On Their Own in Reading. Revised, Chicago: Scott, Foresman & Company, 1960.
17. Grissom, Loren W. "Reading Improvement Programs in the Secondary Schools of Illinois," Illinois English Bulletin, XLIX, No. 5 (February, 1962).
18. Hafner, Lawrence E. Improving Reading in Secondary Schools, Selected Readings. New York: The Macmillan Company, 1967.
19. _____. "The Roles of Reading in Modern Life," Improving Reading in Secondary Schools, Selected Readings. Lawrence E. Hafner (ed), New York: The Macmillan Company, 1967.
20. _____, and Robert Karlin. "A Suggested Curriculum for Teaching Reading Skills to Youths who are Reluctant Readers," Improving Reading in Secondary Schools, Selected Readings, Lawrence E. Hafner (ed). New York: The Macmillan Company, 1967.
21. Harris, Albert J. How to Increase Reading Ability. New York: David McKay Company, Inc., Fourth Edition (April, 1961).
22. Heilman, Arthur W. Phonics in Proper Perspective. Columbus, Ohio: Charles E. Merrill Books, Inc., December, 1966.
23. Herr, Selma E. Phonics Handbook for Teachers. Los Angeles Instructional Materials and Equipment, 1964.
24. Hildreth, Gertrude. "New Methods for Old in Teaching Phonics," Elementary School Journal, May, 1957.
25. Johnson, G. Orville. Education for the Slow Learners. Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1963.
26. Johnson, Kenneth R. Teaching Culturally Disadvantaged Pupils, Unit Two. Chicago: Science Research Associates (November, 1966).

27. Kolson, Clifford J., and George Kaluger. Clinical Aspects of Remedial Reading. Springfield, Illinois: Charles C. Thomas, 1963.
28. Kottmeyer, William. Teacher's Guide for Remedial Reading. New York: Webster Division, McGraw-Hill Book Company, 1959.
29. Marksheffel, Ned D. Better Reading in the Secondary School. New York: Ronald Press Company, 1966.
30. _____. "Reading Readiness at the High School and College Levels," Improving Reading in Secondary Schools, Selected Readings, Lawrence E. Hafner (ed). New York: The Macmillan Company, 1967.
31. Mazurkiewicz, Albert J. New Perspectives in Reading Instruction. New York: Pitman Publishing Corp., 1964.
32. Moe, Iver L., and Frank Nania. "Reading Deficiencies Among Able Pupils," Improving Reading in Secondary Schools, Selected Readings, Lawrence E. Hafner (ed). New York: The Macmillan Company, 1967.
33. Office of Economic Opportunity Community Action Program, Project Head Start. Washington, D. C. (March, 1965).
34. Parker, Don H. Teacher's Handbook, SRA Reading Laboratory IIIa. Chicago: Science Research Associates, Inc., 1957.
35. _____. SRA Reading Laboratory IIIa. Chicago: Science Research Associates, Inc., 1957.
36. Project Head Start Newsletter. Office of Economic Opportunity, Washington, D. C., Vol. 2, No. 7 (July, 1967).
37. Robinson, H. Alan. "Some Principles and Procedures," Corrective Reading in the High School Classroom, International Reading Association, No. 6 (May, 1966).
38. Robinson, H. Alan. Recent Developments in Reading. Chicago: University Chicago Press (December, 1965).
39. _____, and Allan Muskoff. "High School Reading," Journal of Reading, IX (November, 1965).

40. Roswell, Florence G., and Gladys Natchez. Reading Disability--Diagnosis and Treatment, New York: Basic Books, Inc., 1964.
41. Russell, David H. "Contributions of Reading to Personal Development," Reading in the Secondary Schools. M. Jerry Weiss (ed). New York: Odyssey Press, Inc., 1961.
42. Russell, David H., and Henry R. Fea. "Research on Teaching Reading," Handbook of Research on Teaching. N. L. Gage (ed). Chicago: Rand McNally & Company, 1963.
43. Science Research Associates, Inc. General Catalog. Chicago: 1966-67.
44. Smith, Henry P., and Emerald V. Dechant. Psychology in Teaching Reading. Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1961.
45. Smith, Nila Banton. "Questions Administrators Ask About Reading in Secondary Schools," Corrective Reading in the High School Classroom. International Reading Association, No. 6 (May, 1966).
46. _____. Be a Better Reader. Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1963.
47. Stanchfield, J. M. "The Reading Specialist in the Junior High School," Journal of Reading, VIII, No. 5 (April, 1965).
48. Strang, Ruth, and Donald M. Lindquist. The Administrator and the Improvement of Reading. New York: Appleton-Century-Crofts, Inc., 1960.
49. _____, Constance M. McCullough and Arthur E. Traxler. The Improvement of Reading. Third Edition. New York: McGraw-Hill Book Company, Inc., 1961.
50. Wilson, Robert. Diagnostic and Remedial Reading for Classroom and Clinic. Columbus, Ohio: Charles E. Merrill Company, 1967.
51. Wiltsie, Earle W. "Improving the Quality of Reading Instruction Throughout a School System," Reading in the Secondary Schools, M. Jerry Weiss (ed). New York: Odyssey Press, 1961.
52. Zintz, Miles. Corrective Reading. Dubuque, Iowa: Wm. C. Brown, 1966.

APPENDICES

APPENDIX A

APPENDIX A

ANALYZING WORDS

Learning to analyze words is an asset to good reading. Place a check () in front of the following ways to analyze words that you learned to use by working in the SRA Reading Laboratory IIIa this semester. Place an (o) in front of those that you are not familiar with now.

- _____ 1. The long vowels and how to recognize them in a word.
- _____ 2. The short vowels and how to recognize them in a word.
- _____ 3. The diacritical markings for the long and short vowels.
- _____ 4. The 6 generalizations for dividing words into syllables.
 - _____ a. Dividing compound words.
 - _____ b. Dividing words between double consonants.
 - _____ c. Dividing words when two consonants appear between two vowels.
 - _____ d. Dividing when one consonant appears between two vowels.
 - _____ e. Never divide a consonant blend or a diphthong in a word.
 - _____ f. Prefixes and suffixes are always separate syllables.
- _____ 5. Recognize the letters that are silent in words.
- _____ 6. Recognize when the letter c is to be pronounced with the soft sound or with the hard sound.
- _____ 7. Recognize when the letter "g" is to be pronounced with the soft sound or with the hard sound.
- _____ 8. Recognize readily the base or root words containing prefixes and suffixes.
- _____ 9. Reading words in content using initial sounds or syllables and fitting them in logical meanings.
- _____ 10. Recognition of the difference in meaning of many homonyms (words that sound alike but are different in meaning and usually spelling). Example: canvas, canvass; grown, groan.
- _____ 11. Recognition of heteronyms (words with the same spelling as another but with a different meaning and pronunciation. Examples: com'press, compress'; pro'duce, produce'

APPENDIX B

APPENDIX B

SRA READING LABORATORY SURVEY

- A. Underline the grade(s) in which you used the Laboratory prior to enrolling in this reading course:
1. Grade 3, 4, 5, 6, 7, 8, 9, 10, 11, 12.
 2. Never used it before taking this course.
- B. How did the use of this material help you improve your reading? List the useful ways:
- C. How did the use of the SRA Reading Laboratory IIIa help you improve your reading in this course? List the useful ways:
- D. How did you feel about using the Laboratory this semester? Why?

APPENDIX C

STATISTICS FROM 1960 CENSUS
(Unless otherwise indicated)

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Yakima County

		<u>Rank of County</u>
Total Population	145,112	5
% of Urban Population	51.2	16
Total Number of Families	36,009	
Number with less than \$3,000 Income	8,819	4
% with less than \$3,000 Income	24.5	5
Total Civilian Labor Force	54,577	
No. of Persons Unemployed	5,563	4
% of Persons Unemployed	10.2	2
Total Enrollment (9-12)	10,289	
Number of Dropouts (1963-1964)	611	3
% of Dropouts	5.94	2
Total Population 25 and over	76,655	
Population 25 - with less than 5 years education	5,857	3
% of Pop. 25 - with less than 5 years education	7.6	1
Tuberculosis, No. of Cases (1963-1964)	38	4
Rate of Cases per 10,000	2.6	6
Total Live Births	3,189	
No. of Infant Deaths (1963)	84	4.5
Rate of Infant Deaths per 1000 Births	26.34	10
Total No. of Housing Units	50,443	
No. Housing Units "Unsound"	17,106	4
% of Housing Units "Unsound"	33.9	11
Total Children 12-17	19,972	
No. Admissions to Training Schools	44 (1964)	5
Rate of Admissions to Training Schools per 1000 Children	2.2	29
No. Admissions to Correctional Institutions	139 (1962-1963)	3
Rate of Admissions to Correctional Institutions per 10,000	9.53	3
Total Males 18-34	12,932	
No. Draft Rejections	177 (1964-1965)	5
Rate of Draft Rejections per 1000	13.68	18
Total Children Under 18	57,235	
No. Children Receiving ADC	7,329 (Feb. 1965)	2
% Children Receiving ADC	12.28	1

APPENDIX D

SCORING THE STARTING LEVEL GUIDE

The purpose of the STARTING LEVEL GUIDE is to provide a rough measure of the student's ability to read the *kind of materials* found in THE SRA READING LABORATORY.

The first step is for the teacher to correct the student responses to Selections A and B. The key for the comprehension checks follows:

Selection A

1. B 2. A 3. B 4. D 5. D 6. C 7. C

Selection B

1. C 2. A 3. D 4. C 5. C 6. D 7. B 8. C 9. D 10. C

This key is also printed along the edges of the back inside cover of this HANDBOOK. The spacing corresponds to the spacing of the response spaces on the STARTING LEVEL GUIDE for ease in correction.

Using the Scores to Place the Student in THE SRA READING LABORATORY

If the student is in grade	and scores this number of total rights (A plus B score, Starting Level Guide) start him in the color indicated*									
	3 or less	4	5	6	7	8	9	10	11	12 or more
6†	Orange	Orange	Orange	Olive	Olive	Blue	Blue	Brown	Brown	Green
7	Orange	Orange	Olive	Olive	Blue	Blue	Brown	Brown	Green	Green
8	Orange	Orange	Olive	Olive	Blue	Blue	Brown	Brown	Green	Green
9	Orange	Olive	Blue	Blue	Brown	Brown	Green	Green	Green	Red
10	Olive	Olive	Blue	Blue	Brown	Brown	Green	Green	Red	Red
11	Olive	Blue	Brown	Brown	Green	Green	Red	Red	Tan	Tan
12	Olive	Blue	Brown	Brown	Green	Green	Red	Red	Tan	Tan

* This applies to both Power Builders and Rate Builders.

† In some schools the Laboratory has been used successfully with above-average sixth grade groups.

APPENDIX E

COMPREHENSIVE PICTURE OF THE PHONICS AND STRUCTURAL ANALYSIS IN THE
SRA READING LABORATORY IIIa

Type	Number of Times Presented	Color Section in Which They Appeared									
		Or.	Ol.	Bl.	Br.	Gr.	Red	Tan	Go.	Aq.	Pu.
1. Long and short vowels	20	x	x	x							
2. Double vowel combinations	24	x	x	x	x						
3. Single consonant	16	x	x	x							
4. Con. blends, digraphs, trig.	30	x	x	x	x	x	x	x			
5. Silent consonants	8	x	x	x							
6. The controlled vowels	1	x									
7. Letter "c"	2	x									
8. Letter "g"	7	x	x								
9. Base or root word	77	x	x	x	x	x	x	x	x	x	x
10. Prefixes and suffixes	123	x	x	x	x	x	x	x	x	x	x
11. Syllables	58		x	x	x	x	x	x	x		
12. Changing "y" to "i"	26	x	x	x	x	x	x	x	x	x	x
13. Homonyms	1			x							
14. Plurals	1			x							
15. Accenting	23							x	x	x	x
16. Contractions	6			x	x						
Total	423										

APPENDIX F

Roger Bacon lived in England 700 years ago. He was a great man to ask questions. He was not willing just to talk. He wanted to do things. So he put some of this powder and some of that powder into a pile. Then he set fire to the black stuff. Flash! Boom! He had invented gunpowder. But he did not know what it was or how to use it.

About 100 years later a man in Germany found out how to use Bacon's black mixture. He put some of it into a tall iron tube. Then he dropped in a stone. The tube was closed at the bottom except for a tiny hole. Through this hole he set the powder on fire. When the powder exploded, the stone flew out of the tube. The German had invented a gun. The invention of gunpowder and guns made great changes in the world.

1. Gunpowder was invented by
 - a) a man in Germany
 - b) Roger Bacon
 - c) an unknown man
 - d) a flash and a boom

2. Gunpowder was invented.
 - a) 700 years ago in England
 - b) 700 years ago in Germany
 - c) when Roger Bacon was a little boy
 - d) not many years ago

3. When the powder was lit in the tube, the stone came out
 - a) in pieces
 - b) fast
 - c) slowly
 - d) through the tiny holes

4. The man in Germany could not have invented the gun without.
 - a) Roger Bacon's invention
 - b) a tube
 - c) getting hurt
 - d) both a and b

5. The writer says that.
 - a) inventors changed the way gunpowder was made
 - b) guns are more important than gunpowder
 - c) guns and gunpowder are great inventions
 - d) guns and gunpowder made great changes in the world

6. The invention of these two men made the world more dangerous. . . .
 - a) True
 - b) False
 - c) Not stated
 - d) both a and b

7. Implied, but not stated:
 - a) The powder exploded.
 - b) If guns had not been invented there would have been no big wars.
 - c) If the man in Germany had lived 100 years earlier, he might have shown Roger Bacon a use for his black mixture.
 - d) Roger Bacon never should have invented gunpowder.

Stop Here.

Total Right Selection A . . . _____

Total Right Selection B . . . _____

SLG Score Total Right both Selections _____

Name _____
 Last First Middle Initial

The sun was man's first clock. He watched it rise in the east, move across the sky and set in the west. Then he found that the shadow of a tree or a pole changed in length as the sun moved across the sky. He might say to his friend, "Come to my house when the shadow of the pole is six feet long." But on cloudy days, people could not tell time by shadows, so they began making other kinds of time pieces.

First, they made fire clocks of burning knotted rope. As each hour passed, the fire burned through another knot. Next, water clocks marked the hour as water trickled from one bowl to the other. Then came the hour glass in which a fine stream of sand ran from the upper bulb to the lower one in the course of an hour. The first real mechanical clock was made more than 900 years ago. It was powered by weights and had no face or hands. Bells rang to tell the hour. Today's clocks are run by springs or electricity. Some are small enough to be worn as a ring on a person's finger. Probably the largest clock in the world is one in Jersey City, New Jersey. It has a face fifty feet across.

In 1947, a new way of measuring time was suggested from the way atoms take in and give off energy in regular beats of rhythm. By using these regular beats, we could make an "atomic clock" that would be far more accurate than any ever devised before. This same principle is being used to help us "look backward" as far as 20,000 years ago to study man's very early attempts to live as a civilized being--as he failed and as he succeeded. Could an "atomic clock" also enable us to "look ahead"?

But we have been speaking mainly of clock-time, or that connected with the ordered movement of the universe. There is also psychological time. While it operates in many ways, one familiar to all of us is neatly summed up by Plautus:

When I was young, no time-piece Rome supplied,
But every fellow had his own--inside;
A trusty horologe, that--rain or shine--
Ne'er failed to warn him of the hour--to dine.

1. Man's first clock was
 - a) a pole b) a tree c) the sun d) both a and b
2. As the sun moved, the shadow of the pole changed
 - a) in length b) in width c) in color d) in brightness
3. Sun clocks were often unsatisfactory because they
 - a) ran down b) needed winding too often c) were not accurate d) were no good on cloudy days
4. New time pieces were developed in the following order:
 - a) fire clocks, hour glasses, water clocks, mechanical clocks b) hour glasses, water clocks, fire clocks, mechanical clocks c) fire clocks, water clocks, hour glasses, mechanical clocks d) water clocks, fire clocks, mechanical clocks
5. The first mechanical clock was made around the year
 - a) 1900 b) 1200 c) 1050 d) 1550
6. The first mechanical clock had.
 - a) no face b) springs c) weights d) both a and c
7. Atomic clocks are made possible because
 - a) atoms are powerful b) atoms release their power rhythmically c) atoms are cheaper d) atoms can "look backward"
8. Implied, but not stated:
 - a) We could make an "atomic clock" that would be far more accurate than any ever devised before. b) We can build an "atomic clock" to "look ahead." c) Looking backward 20,000 years may help us understand ourselves better. d) Atomic clocks may now be purchased at reasonable prices.
9. Clock-time is related to
 - a) electricity b) weights c) well-ordered human beings d) the ordered movement of the universe
10. Platus' explanation of one kind of psychological time is best expressed in the word.
 - a) Rome b) horologe c) hunger d) dine

APPENDIX G

APPENDIX G

SUGGESTED PRINCIPLES TO APPLY IN TEACHING PHONICS FOR SECONDARY READING PROGRAMS

. . . Principles do not spell out precise practices to be followed, but rather provide a set of guidelines by which to measure classroom instructional practices. The following principles for teaching phonic analysis are advanced for teachers' consideration. . . .

1. For any child to profit from systematic instruction in phonics, he must have the ability to discriminate between similar speech sounds. To attempt to teach numerous phonic generalizations in the absence of auditory discrimination equal to the learning task is not only inadvisable from the standpoint of learning, but is often detrimental to the learner.

2. Auditory and visual training should be blended and taught simultaneously. Phonics (as it relates to reading) is teaching speech-sound equivalents for printed letters and letter combinations. Thus, a child must be able to recognize instantly and discriminate visually between printed letter symbols before instruction in phonics can have any relation to reading printed symbols. For example, a child who can differentiate between the sounds of bee and dee, but cannot visually discriminate between the printed symbols b and d cannot apply phonics in a reading situation which involves words containing these symbols.

3. Any instructional practice which produces a learning set, which in itself inhibits the development of reading for meaning, merits reappraisal. If reading is "getting meaning," children should not be conditioned in beginning reading instruction to equate reading with "sounding" or "word analysis." Practices followed in beginning reading instruction DO inculcate a "set" in the learner. In the golden age of phonics, many children DID develop the set that pronouncing words was reading. Sounding out words is a needed skill, but the facile reader will apply it only when necessary; and the less analysis that is needed in a given reading situation, the more efficient and meaningful will be the reading. A third-grade child who CAN

sound every word on a page and DOES sound every word on the page is an impaired reader. Since we do not wish to produce this type of reader, we should assiduously avoid practices which lead to this type of development.

4. All phonic facts and generalizations necessary for a child to become an independent reader should be taught.

5. For a child to learn to read, it is not necessary for him to learn phonic generalizations which have extremely limited application. A teacher accepting this principle would still have to arrive at a conclusion as to what rules actually fit under this classification. Individual teachers may resolve this problem by answering questions such as the following in regard to each phonic generalization they propose to teach:

- a. What contribution will this generalization make in the "learn-to-read process?"
- b. Does this generalization apply to enough words which the child will meet in his current reading program to justify my teaching it NOW?

6. Instructional practice which leads to overreliance on one method of word attack is indefensible. In any reading situation, words appear in context; many words have prefabricated sound-sight units such as prefixes, suffixes, inflectional endings, and roots combined in compounds. To teach reliance on context clues alone would be inadequate, and to rely on "sounding" while ignoring all other clues would be equally indefensible. It is wasteful not to attack an unknown word simultaneously on every possible front.

7. All elementary teachers should be familiar with the entire phonics program. All teachers of reading, regardless of grade level, will probably find it necessary to teach, review, or reteach certain phonic skills to some children in their classrooms. Thus, familiarity with all steps in phonics instruction is essential.

8. A thorough and on-going diagnosis of each child's needs and present knowledge is a prerequisite for following sound principles of teaching phonic skills. It is not desirable to teach more phonics than a given child needs, or to omit teaching needed skills not yet mastered. Diagnosis is the key to achieving this proper balance.

9. Knowledge of phonic generalizations (rules) does not assure ability to apply these generalizations in reading situations. Both in teaching and learning, the process of "sounding

out words" must be differentiated from learning rules. Some children can recite a given rule and yet have no ability to apply or practice what it tells them to do. On the other hand, knowledge of phonic generalization is useful to children. In general, material should be presented in such a way that the application of a given generalization evolves out of actual word study. At best, phonic generalizations are a crutch which may have utility at certain points on the learning continuum. A reader who is continually groping for a rule to apply when he meets a word not known as a sight word is not a facile reader.

SUGGESTED STEPS IN TEACHING PHONICS

1. Auditory-visual discrimination
2. Teaching consonant sounds
 - a. Initial consonants
 - b. Consonant digraphs (sh, wh, th, ch)
 - c. Consonant blends (br, cl, str, etc.)
 - d. Substituting initial consonant sounds
 - e. Sounding consonants at end of words
 - f. Consonant digraphs (nk, ng, ck, qu)
 - g. Consonant irregularities
 - h. Silent consonants
 - i. Sight-word list--non-phonetic spellings
 - j. Contractions
3. Teaching vowel sounds
 - a. Short vowel sounds
 - b. Long vowel sounds
 - c. Teaching long and short sounds together
 - d. Exceptions to vowel rules taught
 - e. Diphthongs
 - f. Sounds of \bar{o} and \check{o}
4. Syllabication
 - a. Rules
 - b. Prefixes and suffixes
 - c. Compound words
 - d. Doubling final consonants
 - e. Accent

These steps in phonic analysis represent a series of instructional tasks which merit inclusion in reading instruction.

It is suggested that these steps be taught in the order in which they are presented. This is believed to be a logical sequence, but it is not implied that this is the only defensible sequence.

It will be noted that the steps listed are only a bare outline of major facets of instruction. For instance, teaching consonant sounds is one step, but it involves at least two-dozen separate teachings (since some consonants have more than one sound). Teaching consonant digraphs and blends would include another thirty separate tasks. All steps must be reviewed and retaught as needed. Diagnosis of individual pupil's progress will determine when, and how much, review is necessary (22:17-20).

A SUGGESTED STRUCTURAL ANALYSIS SKILLS PROGRAM
FOR SECONDARY READING PROGRAMS

Structural analysis is possible with three kinds of words. A word may have an inflectional ending such as s, es, ed, or ing; it may be a derived word, being constructed from a root, a suffix and/or a prefix; or it may be a compound word.

In the initial stage the child commonly is introduced to two kinds of words which may be analyzed structurally. The child learns that the s can change the word in two ways: (1) It changes the verb into third person singular; and (2) it makes a noun plural in form. The teaching of the s plural is easier when it is accompanied by another word in the sentence that suggests the plural. The sentence, Tom has ten pet pups, is an example of this.

As the pupil's skill in structural analysis develops, he may identify two simple words in one larger word. He may see tea and pot in teapot; some and thing in something; or bat and boy in batboy.

. . . He gradually learns to break the word into its syllables and to handle words composed of roots, prefixes, suffixes, and inflectional endings.

Syllabication must receive attention at all levels of reading instruction. . . . (12:250-251).

Structural Analysis:

1. Definition: Structural analysis is the means by which the parts of a word which form meanings units or pronunciation units within the word are identified.
2. Structural analysis includes the following:
 - a. The root word as a meaning unit;
 - b. Compound words;
 - c. Prefixes and suffixes;
 - d. Syllabication (what constitutes a syllable)(50:342);
 - e. Inflectional endings (12:250) and inflected forms (16: Appendix seven, p. 100).
3. Do not teach children to search for little words in big words.

- a. It is all right to find grand and mother in grandmother.
- b. It will confuse children if they have learned to look for up in upon and then try to find up in pupil.
- c. If the small word does not retain its same sound in the larger word, it should not be identified.

Inflected form (word variant or variant form): a word which has an inflectional ending (variant ending). Some inflected forms are made by internal changes instead of adding endings (Examples: man, men; goose, geese; swim, swam).

Inflectional ending: a letter or letters affixed to a word to show changes in case, comparison, gender, mood, number, tense, or voice. Nouns, pronouns, adjectives, adverbs, and verbs may be changed grammatically by placing endings on them. Common endings are s, es, er, est, ed, d, t, and ing. (Inflectional endings are also called variant endings.)

SYLLABICATION

Syllable: a word or part of a word pronounced with a single uninterrupted utterance of the voice or one or more letters written together to indicate a place where a writer might divide the word. Spoken syllables do not always correspond to written syllables. Examples: ser pent (ser'pnt) and se rum (ser' m).

Syllabication: a means of dividing a word into syllables as an aid to pronunciation or spelling (16: Appendix seven, p. 102).

Principles of Syllabication:

1. Every syllable contains a sounded vowel. At times, a vowel itself constitutes a syllable: a-corn, I, vi-o-let, lin-e-ar, lin-e-al, cer-e-al, o-pen, i-de-a.
2. A syllable may contain more than one vowel. In this instance, the two vowels are usually pronounced as one, the first one being long (usually) and the second one, usually silent (boat, great, bread, cream, grain).

3. There are two kinds of syllables: closed syllables and open syllables.
 - a. A closed syllable is one that ends with a consonant; thus cat, basis, basis, and magnetic. The vowel in a closed syllable is usually a short vowel. There are some common exceptions.
 - b. An open syllable is one that ends in a vowel: thus cry, by. The vowel in an open syllable is usually a long vowel. The most common exception to this rule may be the short y sound in the ending ly as in nobly.
4. The short y sound is very common in two-syllable words. It occurs in words like abyss, lyric, hymnal, symbol, symptom, synod, and system. It occurs most frequently in the ending ly. . . . Note also that words ending in ey and ie frequently have a short i sound.
5. Although the y is a short sound, many persons pronounce it as a long e sound (12:306-307).

Rules of Syllabication:

1. Since there are two words in a compound word, there must necessarily be two pronunciation units. Of course, each of these words may again contain two or more syllables, but at least a starting point in breaking compound words into syllables is to divide between the two words as a whole. (Examples: cut/worm, crafts/man, head/quar/ters).
2. Dividing words between double consonants. Another guide is that words with double consonants are usually divided between the double consonants in writing. This distinction is important for you to remember in your written work. (Examples: rac/coon; dis/solve; her/ring).
3. Dividing when two consonants appear between two vowels: When two separately sounded consonants appear together between two sounded vowels, words are usually divided between the consonants in both pronunciation and writing. (Examples: in compare there are two consonants m and p between the two sounded vowels o and a, so we divide between m and p. There are some exceptions to this rule but usually it holds.

4. Dividing words when one consonant appears between two vowels: Usually when one consonant appears between two sounded vowels, the word is divided just before the consonant as: human--hu man, vi/per, cre/dence.
5. A blend or speech sound represents just one total sound, even though it is made up of two or more letters. So when two or more consonants come together in a blend or speech sound we do not divide between the letters; we consider the entire group as if it were one letter, for example: in the word central we consider tr as if it were one letter because it represents one blended sound. We then divide between n and tr as if we were dividing between two single consonants thus: cen tral.

For review purposes some of the most common blends and speech sounds are listed here: bl, cl, dl, fl, gl, pl, sl, br, cr, dr, fr, gr, pr, tr, sc, sk, sm, sn, sp, st, sw, tw, scr, spr, str, shr, spl, sch, thr, sh, wh, ch, th, ph, qu, ck.

Whenever you see one of these groups in a word as a blend, consider it as one letter and apply the principle accordingly.

6. Considering prefixes and suffixes: A prefix is placed before a word or root to change its meaning, and a suffix is placed at the end to change its meaning. In attempting to pronounce an unrecognized prefixed or suffixed word, you will find it helpful to divide between the base word and the prefix or suffix. For example: percent is divided as per cent, and countless is divided as count less. This guide is very useful in breaking down long words into small, familiar units. For instance, you may divide inexhaustible (with two prefixes and a suffix) as in ex haust i ble, and nationalistic (with four suffixes) as na tion al is tic. After you have done this, you may find that some of the resulting combinations of letters are hard to pronounce in sequence--for instance, the nat ion above. Because na tion is so much easier to say, we use this form when syllabifying for both pronunciation and writing (44:64-66).

Exceptions and observations:

1. Not all words follow the rule. For example, planet, solid, robin, travel, study, record*, river, primer, present,*cabin, tropic, power, timid, habit, pity, body, quiver, copy, lily, and profit join the consonant to the first vowel. This makes the first vowel short and the accent is on the first syllable.
2. The suffix ed is a syllable only when it follows the sound d or t. (Examples: aid--aided, bat--batted, blast--blasted, blend--blended).
3. Whenever three or more consonants appear between two letters, the pupil must learn to look for consonant blends or speech consonants. These are never divided: thus, gam-bler, mi-grate.
4. Whenever le ends a word and is preceded by a consonant, the last syllable consists of the consonant and the le. We divide thus: ta-ble, mid-dle, peo-ple. The e in ble, tle, ple, and dle is silent. Some authors, however, suggest that le says el with the e being shorter than usual and called schwa.

Observe that in tle the t sometimes is silent and at times may be pronounced. Thus in battle, bottle, brittle, mantle, cattle, little, rattle, and tattle the t is pronounced: in castle, hustle, jostle and rustle (words in which tle follows the letter s), it is silent.

5. Sometimes it is necessary to divide between two vowels: create.

Common words in which this occurs are the following:

ai--archaic, laity, mosaic
 ea--cereal, create, delineate, fealty, ideal,
 laureate, lineate, linear, permeate
 ei--being, deity, reinforce, reinstate, spontaneity
 eu--museum, nucleus
 ie--client, diet, dietary, expedient, orient,
 piety, propriety, quiet, science
 oa--coadjutor, coagulate, oasis

*These may be divided according to both rules, dependent upon their meaning in the sentence.

oe--coefficient, coerce, coexist, poem
 oi--egoist, going
 oo--cooperate, coordinate, zoology
 ue--cruel, duel, fluent, fuel, gruel, influence,
 minuet
 ui--altruism, ambiguity, annuity, fluid, fruition

6. In a compound word the division comes between the two words making up the compound: post-man.
7. Prefixes and suffixes are usually set apart from the rest of the word: in-sist, hot-~~test~~.

Accentuation:

1. A word of two or more syllables generally is pronounced with more stress on one syllable. This is termed accent. In dictionaries the accent mark (') is placed just after the syllable that receives major stress. In words of three or more syllables there may be a secondary accent such as in lo'co-mo'tive.
2. Generally, words of two syllables in which two consonants follow the first vowel accent the first syllable: thus, after, kitten, puppet, and butter.
3. When a two syllable word contains two vowels in the second syllable but only one is pronounced, the second syllable generally is accented: abide, abode, above, about, aboard, delay and proceed. Usually the last syllable is long.
4. In three-syllable words in which the suffix is preceded by a single consonant, as in adviser, exciting, translated, and refusal or in piloted, traveled, and shivered, the accent may be on the first or second syllable. It is on the first syllable except when the root word (advise, excite, translate, and refuse) ends in e and the last syllable is accented.
5. In general, the accent is placed on alternate syllables (dis'-ap-point'-ment). Frequently, the accented syllable is followed by two unaccented syllables (san'-i-ty). At times the accent is on alternate syllables and the last two syllables are unaccented (op'-por-tun'-i-ty).*

6. Root words when preceded by prefixes or followed by suffixes usually are accented (amuse, amusement).
7. Words ending in ion, ity, ic, ical, ian, ial, or ious have the accent immediately before these suffixes (consternation, athletic, immersion, industrial, harmonious, humidity, psychological, historian).
8. Words of three or more syllables ending in a silent e usually accent the third last syllable (graduate, accommodate, anticipate) (12:308-310).

Betts has outlined the steps in applying phonics skills to the syllables of words:

1. The pupil must first learn to hear the number of syllables in spoken words.
2. He must learn to identify syllables in printed words. . . . the pupil needs to learn that some words ending in ed have only one syllable (cooked); others have two syllables (landed).
3. He must learn to accent the proper syllable. Accentuation should be taught only after the pupil has mastered steps one and two and after having learned something about prefixes and suffixes. These latter rarely are accented (intend, fishing).
4. He must learn to apply phonic skills to the separate vowels in words;
 - a. He applies the short-vowel rule to the stressed syllable (rabbit).
 - b. He identifies such vowel-phonograms (also known as modified vowels or murmuring diphthongs) as ar, er, ir, or, ur.
5. He must check if the word makes sense in the sentence.