PERMISSION TO MICROFILM — AUTORISATION DE MICROFILMER

Please print or type — Écrire en lettres majuscules ou dactylographier:

Full Name of Author — Nom complet de l'auteur

Leo Shane James Hesquault

Date-of Birth — Date de naissance

September 29, 1947

Country of Birth — Lieu de naissance

Canada

Permanent Address — Résidence fixe

Comp. 90, Site 6,
R.R. #1, Porters Lake,
Halifax County,
Nova Scotia, B3T 2S0

Title of Thesis — Titre de la thèse

Masters of Arts (Education)

University — Université

Saint Mary's University, Halifax, Nova Scotia

Degree for which thesis was presented — Grade pour lequel cette thèse fut présentée

Masters of Arts (Education)

Year this degree conferred — Année d'octroi du grade

1984

Name of Supervisor — Nom du directeur de thèse

Dr. Leonard Davies

Permission is hereby granted to the NATIONAL LIBRARY OF CANADA to microfilm this thesis and to lend or sell copies of the film.

L'autorisation est, par la présente, accordée à la BIBLIOTHÈQUE NATIONALE DU CANADA de microfilm cette thèse et de prêter ou de vendre des exemplaires du film.

The author reserves other publication rights, and neither the thesis nor extracts therefrom may be published or otherwise reproduced without the author's written permission.

L'auteur se réserve les autres droits de publication; ni la thèse ni de longs extraits de cette ne doivent être imprimés ou autrement reproduits sans l'autorisation écrite de l'auteur.

May 16, 1984

Signature

Registrar

National Library of Canada
Bibliothèque nationale du Canada
Canadian Theses Division
Division des thèses canadiennes
Ottawa, Canada
K1A 0N4

59.194
LET'S WRITE RIGHT!
A CURSIVE WRITING PROGRAM
DESIGNED FOR USE IN THE
DARTMOUTH PUBLIC SCHOOL SYSTEM
A THESIS
PRESENTED TO
THE FACULTY OF GRADUATE STUDIES
SAINT MARY'S UNIVERSITY
IN PARTIAL FULFILLMENT
OF THE REQUIREMENTS FOR THE DEGREE
MASTER OF ARTS (EDUCATION)
BY
LEO SHANE JAMES ARSENAULT
MARCH 31, 1984
MASTER OF ARTS IN EDUCATION PROGRAM
SAINT MARY'S UNIVERSITY

LET'S WRITE RIGHT!
A CURSIVE WRITING PROGRAM
DESIGNED FOR USE IN THE
DARTMOUTH PUBLIC SCHOOL SYSTEM

BY

LEO SHANE JAMES ARSENault

IN PARTIAL FULFILLMENT
OF THE REQUIREMENTS FOR THE DEGREE
MASTER OF ARTS (EDUCATION)

Approved: 
Faculty Advisor

Approved: 
Dean of Education

Date: Aug 3, 1984
I wish to express my personal gratitude to the following educators:

1. the Dartmouth Professional Development Grant Committee for their financial assistance,
2. the teachers who used this program as their daily cursive writing curriculum, and who supported me throughout its operation,
3. to Mrs. E. McLeod, typist and secretary of Prince Arthur Junior High School, who expressed a great deal of encouragement,
4. to my wife, who understood the importance of this work,
5. and to Professor B. Davies, who gave me the guidance to complete this thesis.
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Introduction</td>
<td>1</td>
</tr>
<tr>
<td>History Of The Project</td>
<td>4</td>
</tr>
<tr>
<td>Developing The Design</td>
<td>10</td>
</tr>
<tr>
<td>Bibliography</td>
<td>26</td>
</tr>
<tr>
<td><strong>The Design — Let’s Write Right!</strong></td>
<td></td>
</tr>
<tr>
<td>Unit One: The under curve letters: i, t, e, l, u, w, s, r</td>
<td>1</td>
</tr>
<tr>
<td>Unit Two: Loops above the line letters: b, h, k, I</td>
<td>66</td>
</tr>
<tr>
<td>Unit Three: Capital letters: T and F</td>
<td>90</td>
</tr>
<tr>
<td>Unit Four: Over curve letters: a, c, d, o, g, q</td>
<td>108</td>
</tr>
<tr>
<td>Unit Five: The capital letters: A, C, O, E</td>
<td>177</td>
</tr>
<tr>
<td>Unit Six: The over curve down letters: n, m, v, y, z</td>
<td>198</td>
</tr>
<tr>
<td>Unit Seven: The capital letters: P, B, R</td>
<td>231</td>
</tr>
<tr>
<td>Unit Eight: The capital letters: S, G</td>
<td>253</td>
</tr>
<tr>
<td>Unit Nine: The loop below the line letters: j, p</td>
<td>270</td>
</tr>
<tr>
<td>Unit Ten: The capital letters: D, L</td>
<td>283</td>
</tr>
<tr>
<td>Unit Twelve: The capital letter: J</td>
<td>352</td>
</tr>
</tbody>
</table>
ABSTRACT

The problem of handwriting legibility is discussed, including suggested criteria for categorizing such problems, and an examination of two current methods of instruction/remediation. Then the results of a questionnaire, which was devised to ascertain the present grade levels and methods of cursive writing instruction in the classrooms of Halifax, Dartmouth, and Halifax County schools, are examined. The ramification of the inconsistencies of these programs forms the last two segments of the thesis:

1. "The Design - Let's Write Right!" which involves an in-depth description of the steps taken in writing the cursive writing text (from discovering the need, to designing and writing the instructional/remediation book, and finally using it as pilot project curriculum material) and 2. the cursive writing text itself "Let's Write Right!".
INTRODUCTION

The problem of improving handwriting legibility has been around for many years. D. Johnson & H. Myklebust, and S. Kaminsky, and R. Powers, 1981 have suggested that perceptual motor and memory difficulties have been the cause of inadequate handwriting for most students who write poorly. M. N. Milone, & T. M. Wasylyk, 1981 have further suggested that inadequate handwriting arises as a result of a poor curriculum.

The first suggested cause is indeed applicable to some students, but for the majority of students who write poorly, it is the latter suggested cause which has contributed most to this educational problem.

Still at this present time, the Nova Scotia Department Of Education has not solved this curriculum problem. The Department has not shown favouritism to any one instructional method to be employed commonly by our educational system. This lack of a common curriculum has resulted in a great deal of confusion among educators - that is, how to teach cursive handwriting, what method is best for the student, and what method is best for the system.

The goal of this work is to help solve this problem: to provide a common cursive writing curriculum that can be used by the entire elementary teaching staff, who are involved in the teaching of cursive writing.

Indira Gajraj, 1981, was most influential in designing this work. He believes the criteria for handwriting legibility
should be based on letter formation, slant, spacing, and alignment. By using this criteria, this work is able to make no distinction between the causes which may contribute to poor handwriting competence.

To re-emphasize the fact that many students do have handwriting legibility problems, samples were taken of their work before and after the implementation of the design. V. Cuslicki, 1980, made clear step-by-step suggestions how best to collect these samples. (See Developing The Design). These samples were then evaluated for legibility that was suggested by Gajarj, (1982). These evaluations needed then to be categorized before any curriculum could be designed. The ten most common errors in handwriting catalogued by John Newland and summarized in D. Hammell, and B. Bartel, 1978, were used to determine what difficulties the students were having. These difficulties were found to be common among the students: difficulties with the closing of letters, with the completion of loops, with the marking of end-strokes, with letter size and with the crossing of t's.

Also clearly evident, was the hodge-podge of writing styles expressed by the students in these samples.

Having the opportunity to examine the writing materials that had been used by these students' past teachers, I discovered the letter sequence in each program was notably different as well as the techniques used to demonstrate the formation of each letter.
What was clearly needed was a sequence designed common curriculum. In my search to find if such a curriculum existed and could be used by our present academic system, two possible programs were discovered. E. Dubrow's, Learning To Write, Book II, 1968; and SRA Penskills II, 1962. (See Developing The Design).

However, they both did not satisfy my needs because:

a. their utilizing of the sequence approach was different.
   Dubrow suggests the letters o, p, and j for example should be taught together because they are swing-up letters. The SRA approach suggests the letters a, o, c, d, g, and p should be taught together because they belong to the counterclockwise downcase group.

b. the letter formation is emphasized differently. The Dubrow method stresses to begin each letter with either an undercurve or over-curve approach. For example

c. the alignment of the tall letters varies. For example th vs th and vs. Also, would it not be wiser to teach children a uniform height for all tall letters instead of shortening the letters t and d? Thus, the word the would be written thr and not thr.

d. presentation of new letters, combination of letters, and written words did not follow always the same pattern.

e. visual presentation. Both programs lack stimulating visual aides that could motivate students in grades two to six.

f. content - The material presented would not stimulate the interest of such a wide age span in the elementary system.
HISTORY OF THE PROJECT

As an experienced elementary and junior high school teacher I have observed that a few students in all grades write very well for their grade. The majority of students write fairly well for their grade while many students in all grades still write very poorly.

Early in the school year of December 1982, a questionnaire was sent by myself to twenty elementary school principals. These principals were randomly chosen from the cities of Dartmouth and Halifax, as well as from schools in Halifax County. Also randomly selected, were sixty-nine elementary school teachers, who were supposedly actively involved in the instruction of cursive writing, from the three given areas, according to the information from the above principals.

The questions sent to the principals were:

1. Of your teachers who have taught the same grade more than once, how many teachers are presently teaching cursive writing and in what grade?

2. Is one writing curriculum being employed throughout your school?

3. If there is more than one method being used, how many different methods are being used in each grade level?

The results of these answers are presented on Table One.
Table One

<table>
<thead>
<tr>
<th>GRADE LEVEL</th>
<th>TOTAL NUMBER OF TEACHERS PER GRADE</th>
<th>NUMBER OF TEACHERS TEACHING CURSIVE WRITING</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Raw Score</td>
<td>%</td>
</tr>
<tr>
<td>2</td>
<td>31</td>
<td>29</td>
</tr>
<tr>
<td>3</td>
<td>29</td>
<td>29</td>
</tr>
<tr>
<td>4</td>
<td>28</td>
<td>6</td>
</tr>
<tr>
<td>5</td>
<td>40</td>
<td>2</td>
</tr>
<tr>
<td>6</td>
<td>38</td>
<td>3</td>
</tr>
</tbody>
</table>

It appears from the above results that:

a. formal instruction seems to be concentrated in grades two and three, 94% plus 100% equalling 97%.

b. there appears to be little instruction in senior elementary (grades four, five, and six), 22% plus 5% plus 8% equals 37.2%

The following questions were sent to the randomly selected teachers who were presently teaching cursive writing.

1. What cursive writing method are you presently using?

2. Are you satisfied with your present program?

The results of these answers are presented in Table Two and Table Three.
TABLE TWO

<table>
<thead>
<tr>
<th>Grade Level</th>
<th>Teachers Teaching Cursive Writing</th>
<th>Two or More Methods</th>
<th>Single Method</th>
<th>No. Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>29</td>
<td>16</td>
<td>3</td>
<td>10</td>
</tr>
<tr>
<td>3</td>
<td>29</td>
<td>21</td>
<td>5</td>
<td>3</td>
</tr>
<tr>
<td>4</td>
<td>6</td>
<td>3</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>5</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>69</strong></td>
<td><strong>43</strong></td>
<td><strong>11</strong></td>
<td><strong>15</strong></td>
</tr>
</tbody>
</table>

From the results in Table Two, it appears that 13.3% of the teachers are using a single approach, 65.2% are using a combination of methods to teach cursive writing and 21.5%...
Table Three suggests that 70.3% of these teachers are not satisfied with their present program. 20.3% are satisfied and the remaining 9.4% are neutral of those who answered these questions.

The Nova Scotia Department of Education has issued a statement concerning the cursive writing curriculum in the province.

"There are several accepted letter formations for cursive writing. It is wise for a staff in a school to agree on the basic pattern to be developed."

From the above statement it is obvious that the Department of Education has not shown favoritism to any one instructional method. This lack of a common curriculum commitment has resulted in a great deal of confusion in the teaching profession - that is, how to teach and what to teach.

Having a combined teaching experience of twelve years in the elementary, junior high and special education branch of education, it has become evident to me that a common cursive writing curriculum is needed. The implications of various writing programs that our children are subjected to, have resulted in many of our children displaying inadequate handwriting competence.
Many causes of this inadequate handwriting can be broadly categorized into two groups:

1. those which be within the student, such as perceptual motor and memory difficulties (Johnson & Myklebust, 1967; Kamensky & Powers, 1981), and;

2. those which, arise as a result of poor instructional practice (Milone & Wasylyk, 1981).

The primary goal of this thesis is to present a method of instruction which will help teachers instruct children on how to write legibly. This thesis will make no distinction between the causes which may contribute to poor handwriting competence. However, it will be also of benefit to those children who are experiencing handwriting difficulties, such as, reversals, omissions, or poor spacing which are age appropriate. (Indira Gajraj, 1981).

The criteria for legibility which is emphasized in this method, deal with letter formation, slant, spacing, and alignment.

Understanding that some letters are more difficult to write than others, the sequence in which these letters are presented, the combination of these letters, the introduction of words and finally the writing of full sentences, is important. In 1968, Dubrow had developed a sequence based on the number of movements in the production of cursive letters. However, this letter formation design utilized a sequence based on the similarity of the initial stroke in the production of cursive
letters.

The author knowing the value of such a sequence curriculum believes that if such a curriculum can be adopted, better writing legibility will be executed by future students.
DEVELOPING THE DESIGN

When I first began to teach a split grade three-four class in 1982, I soon realized that the writing legibility of a few students in each grade was very good. The majority of the students wrote fairly well and the rest of them wrote very poorly. I not only used my teaching experience to determine their legibility level but Kaminsky and Powers (1981) in their work on handwriting remediation had written suggestions which teachers could use as a symptomatic measurement of possible handwriting difficulties. I found six out of their sixteen signs helpful in determining what students had handwriting problems.

1. Frequent referral to an alphabet chart.

2. Confusion in directional orientation such as mirror writing and reversals.

3. Poor use of space observed in sprawling or cramped writing, inadequate space between letters and words, inappropriate letter size relationships, and inability to stay within head and base lines.

4. Poor letter connections and illegible letters.

5. Inaccuracies, such as letter omissions, perseverations, lack of punctuation, and line skipping.

6. Hesitation and difficulty in generating letters in a non-copying writing task, particularly capital letters.

I then made an assessment of their handwriting
difficulties. Following the recommendations of Cieslicki (1980), I collected samples of the children's handwriting. These recommendations were followed explicitly:

1. A sample typical of classroom work;
2. A near-point copy-book or teacher-made copy (e.g. ditto sheets);
3. A far-point copy - that is, the student copies from a chalkboard at a distance;
4. Dictated paragraph - that is, the student writes from material dictated to him, and;
5. Self-generated paragraph - that is, the student writes a story on a topic of his own choice.

The samples of handwriting were collected and then evaluated for legibility. The criteria for legibility included the following from Gajraj, 1982:

1. Letter formation
   (a) Are letters too round, too thin, etc.?
   (b) Are beginning strokes, connecting strokes, loops properly made?
   (c) Are upper case and lower case letters properly made?
2. Slant
   (a) Do letters slant too much to the right; or to the left?
3. Spacing
   (a) Is there enough space within letters?
(b) Is there enough space between letters (words)?
(c) Are words and letters arranged properly on the page?

4. Alignment
(a) Are letters (words) off line?
(b) Are letters (words) properly placed on the writing space?

5. Line Quality
(a) Are the lines too heavy, too light or variable?

The specific kinds of difficulties which a particular child demonstrated had to be identified before any remediation strategies could be developed. This information was obtained by using the ten most common errors in handwriting catalogued by Newland and summarized in Hammill and Bartel (1978) as a guide. These errors include difficulties with the closing of letters, with the completion of loops, with the marking of end-strokes, with letter size and with the crossing of t's.

Upon examining their writing samples I quickly discovered a hodge-podge of writing styles; styles which later could be attributed to four different methods by previous teachers. What style would I adopt to further improve their cursive writing lessons? If I adopted one style what would happen to the students who had been taught differently? Was it too late to introduce another method
which perhaps could combine the best of many methods and
which have many similarities for improving legibility?
Or, as I became more involved in this assessment, could a
cursive writing program be designed so that children
throughout the Dartmouth School System could be taught
using this method?

As I soon discovered, their previous years' teachers
had used many methods ranging from the McLean's Writing
series to current educational material, supplied by a local
teacher's supply store. When I examined the contents I
found that often they had little in common. The sequence
that each letter was presented was notably different and the
techniques used to demonstrate each letter as well as the
practice of each letter, the combination of letters, writing
words and finally sentences were often not related. Not
only did these methods of instruction vary but I later found
that much of this material was not of educational value.

Of various reading materials that came to my attention
particularly interesting was E. Dubrow's, Learning To Write,
Book II. Dubrow (1968) had developed a sequence based on
the number of movements in the production of cursive writing:

1. The swing-up-letters: i, u, w, t, r, s;
2. The swing-up-and-over-letters: n, m, v, x;
3. The swing up-and-turn-back-letters: e, l, b, h, k, f;
4. The swing up-over-and-turn-back-letters: c, a, g, d, q;
5. Some more swing up letters: o, p, j;
6. Some more swing up-and-over letters: y, z;
7. The upper case letters followed.

The SRA Penskills II (SRA, 1962) utilizes also a sequence approach as follows:
1. curved up stroke i, u, w, t, j, p;
2. counter clockwise downcurve a, o, c, d, g, p;
3. loop e, i, b, h, k, f;
4. upstroke that forms a point r, s;
5. hump h, m, y, z, x, y;
6. the upper case letters followed.

I became so impressed with the above authors that I decided to instruct my students with a sequence approach. However, during my close examination of these methods I not only found their approaches different, but their handwriting alphabet which directed the students on how to make and how to check both lower and upper case letters for correct form, varied too.

Having had experience with children's handwriting I had always found it easier to correct words if the students used a "lead in" approach, that is "a" vs "a", or "c" vs "c". Therefore, I decided to abandon all the other approaches and formulate my own developmental style of letter formation. The alphabet-letter formation adopted was as follows:
Once the alphabet-letter formation was decided, it was necessary to determine what sequence approach would be used. Unlike many methods which began with the letter "a" and continued through to "z", I utilized a sequence based on the similarity to the initial stroke. These were as follows:

1. i, t, e, l, w, u, s, v
2. f, h, k, d
3. f, f
4. a, c, d, i, q, q
5. A, C, O, E
6. m, n, v, y, z
7. P, B, R
8. l, d
9. z, p
10. D, L
11. M, N, V, w, x, y, z, n, k, y
Each letter was presented in a series of nine progressive steps:

Step 1: The cursive letter was introduced on a double space beside the same printed letter.

For example,

Step 2: Specific directions were given on how to write the new letter by using arrows.

Step 3: The students practiced the letter by tracing the letter.

Step 4: The students were asked to complete the missing part of the letter.
Step 5: The students were given a writing example and were provided ample practice space.

Step 6: The letter was combined with any letters previously taught. Using the letter t, i, e, for example.
Step 7: Once two or more letters were known written words were introduced.

Step 8: As soon as enough words were introduced as well as the capital letter I, sentences were written by the students.

Step 9: The letters were reduced to one space at the end of each lesson so that children who were able to write with such fine motor skills could progress at their own rate.

Step 10: Suggested language arts activities relating to the letter in question culminated the lesson.

The above program was presented for one twenty minute session daily. The results as one might expect were in its favor. However, what was most outstanding was the legibility carryover into other academic subjects.

At the conclusion of that academic year, I was asked to teach grade three. Unlike grades four, five and six, cursive writing was expected to be taught as laid down by the Department of Education. However, as earlier stated
in the introduction, this Department had not shown favoritism to any one method.

What method would I use? As I examined the various methods employed by my school, I decided to use a revised version of my grade three-four program that I had developed.

I applied to the Dartmouth Curriculum Development Grant Committee requesting financial assistance to carry out a design that would incorporate my previous work, and yet be applicable to grades two to six. The financial assistance to purchase a vast amount of paper was awarded. Once the design was completed the paper was used to photocopy the original material. Booklets were then provided for each individual student.

In order to prevent "dating" the curriculum I chose as my unifying theme animals and their behavior. Each letter was used to represent a particular animal's characteristics or behavior.

The letter theme was introduced in a story fashion. This capitalized on having a cursive writing program which recognized and emphasized the reciprocal relationship between reading and writing.

I used these stories to increase my students' general knowledge, oral and reading vocabulary, and in addition to provide them with a model for story writing. After reading and discussing each presentation I concentrated on the
actual letter formation, utilizing steps one to nine previously described. To reinforce the factual bits of information, language arts activities were sometimes included, which in turn would reinforce the use of the specified letter.

The legibility results of this cursive writing curriculum have been most positive. At the end of each unit I collected a sample of my students' writing. The following conclusions are drawn from these samples.

1. The excessive number of erasures has decreased.
2. Confusions in directional orientation such as mirror writing and reversals are non-existent.
3. Sprawled or cramped words are nil.
4. Adequate space between letters and words is evident.
5. Appropriate letter size relationships are adhered to.
6. Line skipping has been terminated.
7. Letter omission is no longer practiced.
8. All beginning strokes, connecting strokes and loops have improved.
9. The letter slant has become very good.
10. The alignment of all letters has dramatically improved.

This curriculum introduced such techniques which not only served as an instructional tool for children but served as an aide to children with handwriting difficulties. The teacher will use it best in helping students to discover
a learning situation as an incentive for practice, and to promote the development of legibility on the part of the student so he will consider the reader of his written work.

Having had success with my program, I approached two teachers of grade two; two grade threes; one teacher for each grade, four, five, and six and one teacher of a learning disabled class, to use this design in their classrooms. One resource teacher, who was looking for such a program volunteered her student. The total participants were as follows.

<table>
<thead>
<tr>
<th>Grade</th>
<th>Students</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>21</td>
</tr>
<tr>
<td>3</td>
<td>19</td>
</tr>
<tr>
<td>4</td>
<td>21</td>
</tr>
<tr>
<td>5</td>
<td>23</td>
</tr>
<tr>
<td>6</td>
<td>24</td>
</tr>
<tr>
<td>L.D.</td>
<td>10</td>
</tr>
<tr>
<td>Resource</td>
<td>3</td>
</tr>
</tbody>
</table>

I followed the recommendations of Cieslicki (1980) as I had with my own class and collected samples of the children's
handwriting. The students' work was then evaluated for legibility following the same criteria for legibility that I had earlier used (Gajraj, 1982).

These results are found on Table Five.

<table>
<thead>
<tr>
<th>RESOURCE (3)</th>
<th>L.D. (10)</th>
<th>6 (24)</th>
<th>5 (23)</th>
<th>4 (21)</th>
<th>3 (40)</th>
<th>2 (43)</th>
<th>GRADE</th>
</tr>
</thead>
<tbody>
<tr>
<td>P = Poor</td>
<td>7</td>
<td>1</td>
<td>5</td>
<td>3</td>
<td>3</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>F = Fair</td>
<td>6</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>4</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>G = Good</td>
<td>7</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>3</td>
<td>2</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>LETTER FORMATION</th>
<th>SPACING</th>
<th>ALIGMENT</th>
<th>LINE QUALITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>P</td>
<td>F</td>
<td>G</td>
<td>P</td>
</tr>
<tr>
<td>16</td>
<td>15</td>
<td>10</td>
<td>7</td>
</tr>
<tr>
<td>15</td>
<td>15</td>
<td>10</td>
<td>7</td>
</tr>
<tr>
<td>15</td>
<td>15</td>
<td>10</td>
<td>7</td>
</tr>
<tr>
<td>15</td>
<td>15</td>
<td>10</td>
<td>7</td>
</tr>
<tr>
<td>15</td>
<td>15</td>
<td>10</td>
<td>7</td>
</tr>
<tr>
<td>15</td>
<td>15</td>
<td>10</td>
<td>7</td>
</tr>
<tr>
<td>15</td>
<td>15</td>
<td>10</td>
<td>7</td>
</tr>
<tr>
<td>15</td>
<td>15</td>
<td>10</td>
<td>7</td>
</tr>
</tbody>
</table>
The curriculum was given to each student in a booklet. This booklet had the first twenty lessons. At the conclusion of the twentieth lesson a sample of the students handwriting (Cieslicke, 1980) was collected. These results were evaluated for legibility. See Table Six.

<table>
<thead>
<tr>
<th>LETTER FORMATION</th>
<th>GRADE</th>
<th>P</th>
<th>F</th>
<th>G</th>
<th>P</th>
<th>F</th>
<th>G</th>
<th>P</th>
<th>F</th>
<th>G</th>
</tr>
</thead>
<tbody>
<tr>
<td>SLANT</td>
<td>2 (43)</td>
<td>23</td>
<td>20</td>
<td>20</td>
<td>6</td>
<td>15</td>
<td>19</td>
<td>6</td>
<td>6</td>
<td>28</td>
</tr>
<tr>
<td></td>
<td>3 (40)</td>
<td>5</td>
<td>10</td>
<td>25</td>
<td>2</td>
<td>4</td>
<td>16</td>
<td>2</td>
<td>3</td>
<td>16</td>
</tr>
<tr>
<td></td>
<td>4 (21)</td>
<td>2</td>
<td>5</td>
<td>15</td>
<td>3</td>
<td>3</td>
<td>17</td>
<td>3</td>
<td>1</td>
<td>17</td>
</tr>
<tr>
<td></td>
<td>5 (23)</td>
<td>2</td>
<td>6</td>
<td>15</td>
<td>1</td>
<td>5</td>
<td>17</td>
<td>4</td>
<td>4</td>
<td>16</td>
</tr>
<tr>
<td></td>
<td>6 (24)</td>
<td>2</td>
<td>3</td>
<td>19</td>
<td>5</td>
<td>1</td>
<td>18</td>
<td>2</td>
<td>3</td>
<td>5</td>
</tr>
</tbody>
</table>

| L. D. (10)       | 1  | 2 | 7 | 1  | 2 | 7 | 2  | 3 | 5 |

| RESOURCE (3)     | 2  | 1 |

<table>
<thead>
<tr>
<th>LINE ALIGNMENT</th>
<th>P</th>
<th>F</th>
<th>G</th>
</tr>
</thead>
<tbody>
<tr>
<td>QUALITY</td>
<td>2</td>
<td>3</td>
<td>16</td>
</tr>
</tbody>
</table>

See Table Six.
The teachers were then asked to complete an evaluation of the program. The results are found on Table Seven.

**TABLE SEVEN**

<table>
<thead>
<tr>
<th>LEGIBILITY</th>
<th>NO IMPROVEMENT</th>
<th>SLIGHTLY IMPROVED</th>
<th>GREATLY IMPROVED</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Erasures</td>
<td></td>
<td></td>
<td>9</td>
</tr>
<tr>
<td>2. Confusion in directional orientation</td>
<td></td>
<td></td>
<td>9</td>
</tr>
<tr>
<td>3. Cramped or sprawled words</td>
<td></td>
<td>9</td>
<td></td>
</tr>
<tr>
<td>4. Spacing</td>
<td></td>
<td></td>
<td>9</td>
</tr>
<tr>
<td>5. Appropriate letter size</td>
<td></td>
<td></td>
<td>9</td>
</tr>
<tr>
<td>6. Line skipping</td>
<td></td>
<td></td>
<td>9</td>
</tr>
<tr>
<td>7. Letter omission</td>
<td></td>
<td></td>
<td>9</td>
</tr>
<tr>
<td>8. Stroke formation</td>
<td></td>
<td></td>
<td>9</td>
</tr>
<tr>
<td>9. Slant</td>
<td></td>
<td></td>
<td>9</td>
</tr>
<tr>
<td>10. Letter Alignment</td>
<td>9</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Number of Teacher Responses</th>
<th>Number of Teacher Responses</th>
<th>Number of Teacher Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>.0</td>
<td>0</td>
<td>90</td>
</tr>
</tbody>
</table>
The following conclusions can be drawn from these samples.

1. The excessive number of erasures have decreased in these grades as well as special classes.
2. Confusions in directional orientation such as mirror writing and reversals have lessened greatly.
3. Sprawled or cramped words are almost non-existent.
4. Adequate space between letters and words is evident.
5. Appropriate letter size relationships are adhered to.
6. Line skipping has been almost terminated.
7. Letter omission is no longer practiced.
8. All beginning strokes, connecting strokes, and loops have been improved.
9. The letter slant is very good for most students.
10. The alignment for most letters has dramatically improved.
SELECTED BIBLIOGRAPHY


Gajraj, I. Remediation Of Handwriting Difficulties. Special Education In Canada, 1982, 56(11), 16-18.


THE UNDER CURVE FAMILY

UNIT ONE
LESSON 1.

When Is A Bug An Insect?

Did you know that all adult insects have six legs? There are three legs on each side of their body.

Each insect's body has three main parts: a head, a thorax, and an abdomen.

Most insects have one or two pairs of wings and one pair of feelers at the front of their head.

There are over 700,000 insects known.

Draw a circle around the insect below.

The word insect begins with the letter "i". This is how we write the letter "i".
Look closely at this letter. How many steps does it take to make this letter?

That's right! There are four steps. Pick up your pencil and trace this letter.

Can you complete the letter by using all of the steps?

Now, it is your turn.
3.

Don't let this insect "bug" you. Write this letter as neat as you can.
Smaller spaces will never bite!
I have four chunky legs and a short fleshy tail. My head is covered with scales. I have small beady eyes and my mouth has no teeth. My color is either brown, black, or olive green.

There are over 250 kinds of me found on land, in fresh water, or in the ocean.

I am a reptile. When there is danger, I can pull my legs, tail and head into a shell.

Yes, I am a turtle. Here is a space to draw me. I hope you make me look nice. I think all drawings of turtles should look nice.
Turtles are sometimes called by another name: It begins with the same letter as the word turtle. Perhaps you have read the famous story "The Tortoise And The Hare"? Do you think you know the letter? Of course you do! It is the letter "t".

The letter "t" is really something to sing about.

Here is the letter "i" again. Will you finish the letter so Mr. Turtle can sing a song?

You already know how to write the letter "i",
The letter "t" will be just as easy as pie.
Look again. You can write the letter "t" in four steps also.

Trace a few for fun. 1 - 2 - 3 - Go!

How well can you complete these letters?

Now, without help.
Double Your Fun!

Your First Word.

More Practice.
LESSON 3

The Heavy Dancer!

Gloria has been dancing for many years. Her 3 meter high body often twirls around the stage. Unlike most dancers, Gloria cannot jump. It is difficult for any elephant to jump because they weigh about 5 metric tons.

Meters of beautiful material make up her costume. This helps cover her tough, wrinkled, grey hide. Since elephants have little body hair she usually wears a tiny bow on her head. However, her 12 centimeter long eyelashes are really attractive.
Thelma likes to cook for relaxation. Her keen sense of smell helps her create delicious snacks. Her flexible trunk is able to pick up and carry 200 kilograms of food to her hungry mouth. Maybe, that is why she belongs to the largest land animals in the world.

You already know how to print the letter "e". The writing "e" is just as easy. It has three steps.
13.

You already have written "i" and "t", by tracing this letter, you will know three.

____________________________________

Complete these letters for Gloria.

____________________________________

Your turn to be on the spotlight.

____________________________________

Three letters are better than two.

____________________________________

You have learned to write three letters. Which ones are the vowels? If you said "i" and "e", ask your teacher for a peanut.
14.

Practice these letters separately.

Have you ever seen letters joined together like this?

Give it a try!

Write your best letter "e", "i", and "t" in the Balloons below.
15.

Take your pencil and finish the line for Thelma.
Some people say that an elephant never forgets. How is your memory? What do the letters "t-i-e" spell? That's right! The word is tie. Here is some practice space.

Don't forget to do your best!
So, You Think You Have A Problem?

Kingly, is a clever lion who gives advice. As a daily column writer for the Mane Attraction, he receives many roaring letters from unhappy lions. Sometimes he receives ten pawblems a day.

Today, Kingly is sick with jungle mouth. Will you take his place and discuss your purr-fect answers with your class?
Dear Kingly,

My mane is a mess! I have visited the best manedressers in the jungle. No matter what they try, I still have the frizzles. What can I do?

Brillo Head

Dear Brillo Head,

Kingly.

Dear Kingly,

I'm in love with a cute cat. Whenever she sees me, I'm just lioning around. I don't want her to think that I'm lazy. What is your advice?

Wild About Her

Dear Wild About Her,

Kingly,
I would be lion if I said, "The word lion does not begin with the letter "l". Do you remember how to print the letter "l"? Here is the printed letter "l" and the written letter "l".

Does the writing letter "l" look like a large "e"? Follow the lion's tail to the end to see for yourself.

As King of the Jungle, this command I give, "The writing letter "l" shall be made in three steps."
20.

Give a big roar when you have traced this letter.

Do you have enough courage to complete this letter all alone?

After you have practiced the letter "L" in the space below, write your best "L" on Kingly's sweater.
Kingly Really Impresses Louise!
Kingly Impresses Louise, Even More!
LESSON 5

It is

tie
tell
tilt
tile
tee
line line line
line line
line line
line
line line
line
line line
line
line line line
line line line line
Imagine yourself on a magical ride
Playing in clouds so high,
Imagine yourself taking a rest
Watching the stars shoot by.
Imagine your friend with his strong white horn
Flying for all to see,
Imagine the fun that could be had
Your friend, yourself, and me.
Like you, a unicorn has two eyes. The word unicorn begins with the letter "u". Did you know that the letter "u" is almost written like two "i"s joined together without their dots?

Here is the printed letter "u" and the written letter "u".

The letter "u" has four steps.

If you were a unicorn, you could dip your horn in some polka-dotted ink and trace these letters. Pretend your pencil is his horn and magically trace these letters.

A little completion would be nice!
LESSON 7

Time For Practice!
LESSON 8

MARY: Did you catch all those fish by yourself?

JOHN: Oh, no! I had some worms to help me.

HEADS OR TAILS!

Hold an earthworm in your hand. Which end is the head?

You cannot see the worm's eyes, nose or ears because it doesn't have any. The worm's mouth is difficult to see.
Here are two clues which can help solve this problem.
Place the earthworm on the ground. The head of the worm will be the part that goes first.

Here is another clue.
On the earthworm is a swelling called the clitellum.

The clitellum produces the material that forms cocoons for the earthworm's eggs. The clitellum is closer to the head than it is to the tail.

You may have had trouble finding the head or tail of the earthworm before you read the above. However, you can easily see the difference between the printed letter "u" and "w".

Here are both these written letters.

\[ U \quad W \]

\[ U \quad W \]
By adding two more steps to the letter "u", the letter "w" can be formed.

Try tracing these letters.

Complete these letters.

Practice makes perfect.
Practice makes perfect!

"We are"
Practice makes perfect!

_tut, tut, tut, tut, tut, tut.
LESSON 9

Keep With It!

WILL
LESSON 10

A MINIATURE DRAGON?

'Can you imagine a black, scaly dragon, one meter long? Once a day, it swims in the cool sea searching for rock-covered seaweed to eat instead of people. This creature does not use its webbed feet to help in swimming. Rather, it dives deep into the
water by paddling its tail. Because it is a cold blooded animal, it spends the rest of the day basking under the sun. It remains on the warm, black rocks until its body warms up from the chilly sea water.

You really don't have to imagine such a creature. It exists on the Galapagos Island. It is an iguana.

The iguana has a big brother who is the "fairy tale dragon". The letter "i" has a big brother too. It is the capital letter "I".

The letter "I" is written near the iguana's foot at the top of this page. Can you find it?

By adding a few tail strokes to the written letter "l", you can easily write the capital letter "I".
Although the iguana is not large like a dragon, it is not afraid of humans. In fact, if an iguana went to school, he would not be afraid of this letter. It would know that this letter can be smoothly written in five easy steps.

Show the iguana that you are not afraid to practice these letters.

Try completing your capital 'I's'.
Dive Into These Words!
Our Very First Sentences!

I will try it.

It will lie well.

I will tie it well.
I will tie it.

It will be well.

I will tell it well.
There is no doubt that some sharks can be highly dangerous. Sharks do occasionally attack a man, although such attacks are rare.

There are over 150 species of sharks found in all the seas of the world, but only four types might be considered a danger to human beings: the tiger shark, the blue shark, the hammerheaded shark and the white shark (sometimes called the man-eater).

The white shark, can reach a length of forty feet and a one hundred pound sea lion was once found in such a shark's stomach.

Sharks never run out of dagger-like teeth. The worn out ones are constantly being replaced by new ones, just behind the worn out ones. It is unlikely they will ever have need of false-teeth.
Do you think your dentist would volunteer to check a shark's teeth for cavities?

Here is a printed "s" and the written "s". This letter starts the word shark!

There is nothing "fishy" about the three steps it takes to make it.

Wrap your fin around your pencil and trace this letter.
Don't forget to complete this exercise:

You don't need any help from any other fish to do these.
You might be afraid to swim with a shark but these letters are not.

\[ N \]
\[ W \]
\[ T \]
\[ L \]
\[ K \]
\[ N \]
You might be afraid to swim with a shark but these letters are not.
Let's Go Visit A School Of Fish!

The teeth of a great white shark have edges like a saw.

Copy each word in the space neatly.

sit  sell
set  setter
settle  still
sew  site
see suit
seat sue suit suits sweet swell
I will settle it.
I will sell suits.
Let's Go Visit A School Of Fish!

Copy each word in the space neatly.

worm, vitamins, food,
I sell ties.

It uses less ties.

It lets us sell ties.

It is fists.
There once was a time when the raccoon did not have a black band across its face. With the help of a magic belt, the Indian god, Glooscap, created the raccoon before all other animals.

The raccoon wanted the belt for himself and secretly planned to steal it.

One hot, summer's day, Glooscap left his belt on a white speckled rock as he swam and played in the mighty river. Quickly, the raccoon grasped the dark belt in his strong claws and ran into the deep dark forest.
While running at a great speed the belt suddenly flew from the raccoon's paws and with a loud 'smack', hit the animal across both his eyes. This caused the raccoon such pain, that he fainted beneath a tall pine tree.

The spirit of the tree whispered to the south wind all that had happened. Within a moment, the south wind, whispered to the west wind who blew the news gently into the ears of Glooscap.

Following the tracks of the raccoon, Glooscap's mighty strides soon brought him to the injured animal. When Glooscap saw the swollen dark eyes of the raccoon, he quickly lost his anger and became very sad.
"Because you wanted my magic belt, I will give you one", bellowed Glooscap's mighty voice.

"You, and all your children's children will wear a belt of a thief for all times - for you have robbed yourself of my friendship!"

When the raccoon awoke, he wore the mask of a robber. This would remind him for all times, how a raccoon stole Glooscap's magic belt.

This letter r is at the beginning of the word raccoon.

\[\text{r} \]

You don't have to wear Glooscap's magic belt to make this letter.

\[\text{r} \]

Here's some to trace.

\[\text{r} \]

Complete these letters.

\[\text{r} \]
Try Your Aim At These!
rest

red

master

result
niture

nexit

rise

rite

rut
It will rust.

It will rust.

It will rust.
LOOPS ABOVE THE LINE

UNIT II
BUZZING NEWS!

Did you know that a honey bee doesn't sting unless it has a reason? A bee can carry more than 300 times its own weight. A honey bee may visit more than 1,000 flowers on one food gathering trip. A bee must make about 4,200 trips to flowers in order to produce a tablespoon of honey.

"Bee" a honey and look carefully at the letter "h".
A honey bee never rests until his work is finished. 
These letters need to be traced. What are we waiting for?

While our wings are still warm from flapping, let's complete the letter.

Can you write some "bee-utiful" "b's" without help?

You will never "bee" stung writing a review.
John: What do you call a bee that is born in May?
Mary: I give up.
John: A "maybee".

John: If you cross a hamburger with a bee, what do you get?
Mary: A "humburger".
John: What do you call a bee that is born in May?
Mary: I give up.
John: A "maybee".

John: If you cross a hamburger with a bee, what do you get?
Mary: A "humburger".
Who says that bees are the only ones who "hum" while they work? Get "bee-sy" humming and write these words in alphabetical order. Don't forget to "bee" careful!

better  best  bee

but  bill  better

blue  blow
LESSON 14.

AN INVITATION.

Did you ever take a hippopotamus to dinner? Would you ever be in for a surprise! When the sun begins to set, it is time for the hippos to eat. They eat for most of the night.

They like to eat leaves, grass, and grains which they find in swamps and near rivers. An adult hippo may eat as much as 68 kg. of green grass in one night. That's a lot of food! Do you know that an adult hippo weighs about 3,200 kg. or about as heavy as a family size car?
The letter "h", takes the whole space.

This is how we make this letter.
Don’t be caught all wet trace these letters and do your best.

Let’s try something different. Complete these letters with the added letters "i" and "e".
Be a "big" winner and try some of these.
heel
hit
her
her
hub
hell
hull
hill
I hit the hut.

I will hit her heel.

I'll hit the hill.
A kangaroo's baby is called a Joey. He is so small when he is born that he can stand on your thumbnail.

What is the first letter in the word kangaroo? Shout "Leaping Kangaroo", if you guessed the letter "k".

It is fun to write the letter "k"! It keeps Joey very busy. Sometimes his mother cannot find him. She doesn't know that he is practicing his letters. This is how Joey
learned to write the letter "k".

Many times Joey needs help with his letters. Take your pencil and help Joey trace this letter.

Can you write the letter "k" without Joey's help?

Complete these letters for Joey.
tw

ew

ef

eb

el

le

ho

ho
kettle, -- kite, --

kill, -- kite, --
kilt, -- kith, --

kiss, -- keel, --
A long time ago there lived a huge frog who had two children named Away and Toward. Every day they were seen in the murky pond catching insects with their sticky tongues. When they had had their fill of delicious bugs, they would always return home. Poor Mother Frog! She always had to listen to her family talk about the enormous insect that had "got away".
One day, Father returned home to tell his wife a sad tale. A gory, ten-eyed, five meter-long bug had eaten their son, Toward.

"That's terrible", cried his wife, Gertie!

"Just Terrible".

"Oh, that's nothing" sobbed Father Frog! "You should have seen the one that got Away!"

Sit tight on your lily pad and look carefully.
Your bulging eyes are needed to see how this letter is made.

Wrap your sticky tongue around your pencil and trace these letters.

Hop off your pad and try these.
SOMEONE TO PRACTICE WITH!
LESSON 17

KISSING COUSINS

Toads and frogs are amphibians. They deposit their eggs in water, spend the early part of their lives as tadpoles, and when they are fully developed, they can live on land and in the water. During the winter, they sleep in the mud.

How do we know who's who? A frog is long and thin and usually has teeth. The toad is short and thick and has no teeth. If you touch a frog, his skin is dry and rough. If you touch the skin of a toad, it is wet and smooth.

By watching a toad and a frog jump, you will discover that a frog jumps higher, faster, and farther than a toad.
The longest frog jump on record is over five metres.

Who do you think would win on a jumping contest? Draw a crown on the winner's head.

Unlike frogs, common toads can be tamed. With time and patience, toads will take bits of food from people's fingers and will even let their backs be stroked.

With time and patience what an easy time you will have writing the capital letters T and F. Like the toad and the frog, these capital letters look alike.
Let's go down to the swamp and see how these letters are made.
GET HOPPING ON THESE LETTERS!

J J J J J J

J J J J J J

J J J J J J

J J J J J J

[Image of a frog]
Keep Your Eyes Glued To These Letters!
Keep Your Eyes Glued To These Letters!

J
J
J
J
J
J
J
Lots Of Words!

Fee --- Few

Fire --- First

Flat --- Flame
Feet
Flutter
Flow
Fuse
Frill
Fuse
Twist
Twirl
Tub
Truth
True
Title
Tissue
There.  
There.  
There.  

Tell.  
Test.  
Tie.  

Tile.  

Frogs.  

Frogs.  
Frogs.  
Frogs.
Lots And Lots Of Words!

kettle

kite

kitten

kiss

kilt

kill

kit
her

her

herself

hike

him

hurt

huff

hulk
Lots Of More Words!

ab

ek

meer

other

eldest

elit

masen

mire
First, I will tie it.

Then is the skeleton.

Flutter the little tissues.

Their turtle is terrible.
This is the true heir.

It will ease the thistle.

It is useless.

There is the first terrier.
This feeder is fresh.

Filler the turf.

It is fresh fruit.

There is the trellis.
OVER CURVES

UNIT 4
What would you look like if you had a lunch pail sticking up out of your back? Look up at our camel, Felix. His lunch pail is called a hump.

When Felix cannot find enough food to eat, its body uses the stored food in his hump. Do you think Felix stores water in his hump? Felix's hump is filled with stored fat. This gives Felix a reserved energy supply.

After this lunch, I'll race you home!
109.

Draw a hump for storing food on your back in the space below.

Me And My Hump!

The word camel begins with the letter "c".

C C
It looks like the printed letter "c", but something has been added. Can you guess what?

Why don't you try some?

How about completing these letters.

If you complete these correctly, you deserve a drink.
Sometimes a camel has two humps. Write another letter with the letter "c" in the space provided.

---

C

---

C

---

C

---

C

---

C

---

C
Here is a list of words that you are able to write. They all begin with the letter "c".

cell  

case  

cub  

crest  

check  

check  

cheerful  

sure  

culture  

diff  

doctor  

circle  

dub  

curch  

chief  

chill
chew

cut

cuddle

chewbuck

click

crust

chuck
Choose one of these words to complete the sentence.

1. Please __________ your answer.

2. The villain was locked in a __________.

3. His left __________ was red.

4. Always __________ your food.

5. The Indian __________ passed the pipe.

6. The young bear __________ was hungry.

7. He __________ a hole in the paper.

8. I need a __________ to solve the mystery.

9. I got a __________ from the rain.

10. The __________ is dangerous to climb.
How would you like to crack open an egg and find a complete baby alligator? This baby who looks exactly like his parents will grow to be about 6 metres long and may live to be at least, one hundred and fifty years old.

When these eggs are layed by the mother alligator, she does not sit on them like a bird sits on her eggs. Instead, she gathers rotting vegetation and covers her eggs, which may be as many as forty.

Under the hot sun, this swamp vegetation is like a hot house. This great warmth helps in the development of the alligator inside the egg. The eggs are kept covered for
about fourteen weeks. The mother watches over her eggs and leaves the nest only to eat or when she has to take a swim to cool-off from the hot sun. When the baby alligators hatch, they make a sort of croaking sound. The mother carefully uncovers the opened eggs and gently picks up three or four lively 25 centimetre baby alligators, in her mouth, and brings them to the water's edge.

For many weeks, the alligators can be seen swimming behind their mother or crawling all over their mother's body.

In the first five years, the alligator will grow about 30 centimetres each year. Then their growth slows down, until they only grow about two centimetres a year.
The letter "a" is the first letter of the alphabet and an important vowel. Alligator begins with this letter.

The letter "a" is not a problem for "a" lovers.

Trace these letters carefully before the mother alligator closes her jaws.

Finish these letters carefully, before the father alligator closes his jaws.
Write the letter "à" on the alligator's back.
Alligators do not like to play alone and neither does the letter "a". Here are some of their friends.

ao
at
ac
af
ah - ha
ai - ia
ok - ka
ol - la
or - ro
av - rav
ot - to
ow - wo
block
arrow
avial
affect
air
affair
One

Chair

Artic

Ark

Outfit
LESSON 20

Who's Afraid Of A Darning Needle?

How many times have we heard someone yell, "look out, there's a darning needle!" And how many times have we all run for cover?

Despite our fright, the darning needle or better known as the dragonfly, will not harm us. In fact, the dragonfly destroys one of our worst summer pests, the mosquito.

Dragonflies live around swamps and other places where the water doesn't move fast. Flying in the air, with the help of two pairs of wings on their long narrow bodies, they catch mosquitoes and other small insects, with their legs and jaws.

Although their powerful jaws can be seen chewing their prey, these insects do not bite nor can they sting. They are harmless to us.
The letter "d" is as easy to write as sewing on a button.

Doesn't this letter look easy? Show how easy it is by tracing these letters.

You don't need your teacher to finish these letters.
Like a pretty dragonfly, a good "d" is hard to forget.
It's definitely better to have two darning needles around than one. Here are some letters that like to be seen with them.

- dar
- dv
- dd
- dt
- d7
- dw
These words can be divided into syllables. Write your answer on the first space after the word. Check your answer in a dictionary. Write the whole word on the second space.

- divided
- dedicate
- difficult
- disect
- draft
dribble

duchess

dutiful

dwell

dwarf

daffodil

dasher

date
You're Flying Now!

Copy each sentence carefully.

133.

That dwarf ate the dahlia.

I detest this difficult diet.

This is a drab date.

There is the delicate deer.
TALL, TALLER, TALLEST!

The tallest animal living in the world today is the giraffe. A male giraffe is about five metres from the top of his head to the ground. He is about three times as tall as a 183 centimetre man.

All four thin legs of this gentle animal are of the same length although the front legs appear to be longer.

The writing letter "g" is very similar to the printed "g".

The letter "g" is very easy to write because you already know the letter "a".
Sit nice and tall and trace these letters.

Complete these letters and then give your neck a big stretch.
138.

These letters are inseparable. Practice these well.

\[ \begin{align*}
& v \\
& w \\
& n \\
& t \\
& u \\
& w \\
& q
\end{align*} \]
This is great garlic bread.

It will get the gall.

There are grateful giraffes.

The glass is glued.
That is the gifted guest.

These guitars will glitter.

It will glide the quiddle.
Everyone likes tongue-twisters.
Here is one using the letter "g".
The great gaudy giraffe giggled garlic.
Here are some words that you can use to write your own tongue-twister.
Practice these words in each space before you write your tongue twister.

garble ------- gav

garlic ------- get

garret ------- gets

gifted ------- gav

giggle ------- gate
gather, giraffe, glitter, gleam, grand, gall, griddle, grind, gripe, grace, glare, gull, gust, grit
guitar.

glide.

gust.

Twister.
LESSON 22

GONE, BUT NOT FORGOTTEN!

The quagga is now extinct. Extinct means: no longer living or surviving. What was a quagga and why is it now extinct?

The quagga was a mammal who was related to both the zebra and the wild ass.

It was an attractive animal, with chocolate brown stripes on the neck and fore part of the body. These stripes faded to a plain reddish brown coloring on the hind quarters. Except for the black and white stripes of a zebra, it looked like a zebra with a bushier tail.
In South Africa there were many quaggas until the mid 1800's. Now there are none. They were killed for food and for their hides.

Do you know of any other animals that were once plentiful but are now extinct? In the space below, tell about this animal and draw a picture for your classmates to see.
The letter "q" is an odd letter.

It looks like the letter "a" with an added loop below the line.

Here are some letter "q's" that need tracing.

Even though the quagga does not have stripes completely over the body, complete these letters.
The letter "q" is not extinct. Try some of these on your own.

q
q
q
q
q
q
q
This letter likes company. Practice joining these letters.
Write the correct word in the space after its definition.

The cry of a duck. ______________________

A small game-bird. ______________________

To tremble or shake ______________________

A disagreement ______________________

An extinct zebra-like animal ______________________

To divide into fourths ______________________

Anything made up of four ______________________

A search ______________________

Rapid ______________________

Without sound ______________________

A bed-cover ______________________

quilt, quiet, quartet, quack, quake, quail, quagga, quarrel, quarter, quest.
quack
quail
qualified
quarrel
quart
queue
quick
quilt

154.
LESSON 23


Every octopus has eight snake-like tentacles or arms, which are held together by a web which surrounds its mouth. The octopus uses its eight arms to catch crabs, clams, lobsters, and other sea animals. These arms are used to break open its victim's shell and then quickly sweep the contents into its hungry mouth.

On the underside of each arm are round muscles. These muscles can hold onto anything the octopus catches because these muscles are like suction cups.
The over-curve makes the letter "o" fun to make.

Let's examine this over-curve closely.

If you had as many hands as our friend the octopus, practicing letters would be just as easy. Try your hand at tracing these.

With your same hand, finish these letters.
Write some letter "o's" on the lines of the octopus's body.
If two hands are better than one, then so are two letters.
K

160.

ou...ou...
ou...10...
lo...alo
lo...lo
10...10
The letter "o" is missing from each word. Trace the letter "o" and join it onto the next letter. Write the word in the space provided.

rack

shuttle

cow

odor

off
PRACTICE MAKES PERFECT

ab.

ak.

ar.

ad.

ao.

aw.

af.

ag.

ah.

at.

aw.
MORE PRACTICE

dv. 

dv. 

dv. 

dv. 

dv. 

dv. 

dv. 

dv. 

dv. 

YOU'RE GETTING BETTER

qg,  qt,
qg,  ha,
qg,  he,
qg,  he,
qg,  ho,
qg,  he,
qg,  he,
qg,  he,
Wow, I Can See The Difference!

<table>
<thead>
<tr>
<th>$kai$</th>
<th>$lor$</th>
</tr>
</thead>
<tbody>
<tr>
<td>$ku$</td>
<td>$ld$</td>
</tr>
<tr>
<td>$kU$</td>
<td>$lu$</td>
</tr>
<tr>
<td>$ko$</td>
<td>$li$</td>
</tr>
<tr>
<td>$kn$</td>
<td>$lt$</td>
</tr>
<tr>
<td>$ku$</td>
<td>$lu$</td>
</tr>
</tbody>
</table>
How Do You Feel About These Letters?

qo  no
qu  ru
qu  ru
qr  no
qt  nh
qt  nh
qu  ru
qt  no
And Last But Not Least!

__tor__ ___wo___

__tu__ ___wo___

__tu__ ___wh___

__to__ ___wu___

__tu__ ___wo___

__tu__ ___wu___

__tw__ ___urt___

__tt__ ___wk___
175.

Hey! You Forgot About Us!
THE DOWN-CURVED-CAPITAL LETTERS - A, C, O, E

UNIT 5
"M-m-m, this ant is delicious!" says the odd-looking anteater. This animal does not bother to chew his tasty lunch. Food cannot be chewed by an anteater because anteaters have no teeth.

Attracted by the smell, the anteater gets its food by tearing open rotten logs and large anthills with its heavy claws. Besides ants and termites, this animal also eats their dinner's soft larvae. This larvae is full of protein.

The mouth of this curious animal is a small hole in the end of its snout. Through this opening a 60 cm. tongue whips in and out. This active tongue is coated with a thick sticky saliva. As the tongue prods every crook and crevice of the nest, it picks up hundreds of insects glued to it. These insects remain stuck to the tongue until they are swallowed whole by our hungry anteater.
The capital letter A is a letter you will use often.

This letter is a very important letter.

It begins at the top of the line and makes a down-curve-stroke. It then travels straight up to touch the point where the letter began. It retraces this straight line and continues into an under-curve. Try some!

Complete this capital vowel letter.
Don't let yourself be like an ant and get stuck on this letter.

Two letters are better than one!

A
A

A
A

Ai
Aei

Az
Az

Ab
Ac
Write each name on the space next to the girl or boy's name.

<table>
<thead>
<tr>
<th>GIRL'S NAMES</th>
<th>BOY'S NAMES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ada</td>
<td>Ale</td>
</tr>
<tr>
<td>Adele</td>
<td>Albert</td>
</tr>
<tr>
<td>Agatha</td>
<td>Alec</td>
</tr>
<tr>
<td>Augusta</td>
<td>Arthur</td>
</tr>
<tr>
<td>Alice</td>
<td>Alfred</td>
</tr>
<tr>
<td>Osteria</td>
<td>Achilles</td>
</tr>
</tbody>
</table>
Write the letter and then write the name of the thing under it. Use the A capital letter to begin each word.

Adobe  Alligator  Altar
Aster  Arrow  Acrobat
SOMETHING TO CROW ABOUT!

What's black, flies, and goes Caw-Caw? The answer that most children would say is a crow.

What's black, flies, goes Caw-Caw and is a thief? This riddle might stump you. But the answer is again, a crow.

Although crows will eat grains and fruit, they love eggs! Crows will visit the nests of laying farm hens and spike the eggs with their beaks. They then will fly to a safe place with the egg and drink the egg's contents.

Although crows eat harmful insects, do you think farmers like crows? Write your answer in the space below.
Here is the capital letter C. It is not a vowel like the capital letter A. It is a consonant.

This letter C starts with a little loop at the beginning of the letter and the line continues to curve toward the left, down to the line and curve under up.

Trace these letters before the crow steals them.

Complete this letter.
Often a crow is seen in the company of other crows. They often fly in flocks, and they can be found roosting together at night. Let's roost the Capital C and small c together.

Flap your arms before you begin this exercise.
Here is a list of things a crow might eat or drink.  
Write each word in the space. Circle your best writing words.

Cabbage

Carcass

Chocolate

Cereal

Casserole

Cheese

Coffee
Unscramble these words and then write them in the space.

- won C
- Hanah
- Now
- Tearful
- Wid
- Wac
LESSON 27

EGGS, EGGS, AND MORE EGGS

Birds that build their nests on the ground nearly always produce _______ eggs. These eggs will blend in well with the area around the nest.

Birds that build their nests in trees or bushes will often lay eggs that are _______ or _______, so that the eggs are less visible. They will blend in with the leaves.

_______ eggs belong to birds that build their nests hidden away.

- spotted
- bluish or greenish
- white

Look up in your dictionary the word oologists? What would you do if you were an oologist? Write your answer on the lines below.
This capital letter E is really fancy to write. It has lots and lots of curves. It is a vowel, too.

'Get crackin' and watch how this letter is written.

Don't wait around for these eggs to hatch. Practice tracing the letter E.

How about jumping out of your nest and complete this letter.
Big eggs and little eggs!
Big letters and little letters!
Just like there are lots and lots of eggs, there are lots and lots of words that begin with the letter e.

Each.

Eagle.

Eat.

Easy.

Edge.

Echo.

Earth.

Eel.
From the information given about egg colors, draw some robin eggs and color them in the nest below.
LESSON 28

WHO-O! WHO-O! WHO-O!

Who looks like a wise old bird, with very large eyes
and has feathers that look like heavy eyebrows over its eyes?

Who is this only bird that blinks the way a human does by
lowering its upper eyelids?

Who is like all other birds, and closes its eyes by
raising the lower eyelid, when it is time to sleep?
Who is this bird whose eyes cannot rotate but must turn its head to look sideways?

Who are these birds? These birds are the same bird. It is an owl.

Draw the owl in the box below.
Although the owl looks smart, geese, crows, and ravens are all smarter than owls.
You are a lot smarter too! Look at these capital O's.

Trace this capital letter.
Shout a 'hoot' when you complete these letters!

Be a wise person and try some O capital letters yourself.

These letters and words could never be scary.

Oar — Oak

Of — Ob-stach

Oo — O'clock

Od — Odd
Rearrange these words. Write them in the correct alphabetical order in the space underneath.

<table>
<thead>
<tr>
<th>Words</th>
<th>Alphabetical Order</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Otter</td>
<td>1. Otter</td>
</tr>
<tr>
<td>2. Orbit</td>
<td>2. Orbit</td>
</tr>
<tr>
<td>3. Odd</td>
<td>3. Odd</td>
</tr>
<tr>
<td>4. O'clock</td>
<td>4. O'clock</td>
</tr>
<tr>
<td>5. Oar</td>
<td>5. Oar</td>
</tr>
<tr>
<td>6. Ourself</td>
<td>6. Ourself</td>
</tr>
<tr>
<td>7. Officer</td>
<td>7. Officer</td>
</tr>
<tr>
<td>8. Oboe</td>
<td>8. Oboe</td>
</tr>
</tbody>
</table>
Lesson 29

REVIEW

Find each word in the puzzle and draw a line around it.
Then write the word on the line by the number.


drill, cub, eagle, echo,

Chili, allow, alberta,

Carrot.

|x|y|z|c|f|i|k|m|o|s|u|m|l|n|x|
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
|t|a|x|a|g|o|t|c|a|r|r|o|t|m|p|
|v|o|w|h|e|a|g|l|e|v|i|t|o|a|
|p|r|b|s|i|m|i|n|b|c|h|i|l|i|z|
|a|c|d|o|j|p|i|w|e|h|x|i|v|r|c|
|e|s|f|d|e|g|o|z|r|c|e|n|x|t|n|
|b|r|i|e|r|w|a|t|w|g|p|z|v|e|
|m|t|m|f|n|s|v|c|a|l|i|r|a|x|f|

1. __________ 5. __________
2. __________ 6. __________
3. __________ 7. __________
4. __________ 8. __________
THE OVER-CURVE DOWN STROKE — n, m, v, x, y, z

UNIT 6
LESSON 30

THERE IS NO PLACE LIKE A NEST!

REPTILES

Mother reptiles usually lay their eggs in sand, soil, humus (decaying leaves or grasses) or rotting logs. These nests can be crudely made, or a scratch in the soil, or as carefully as a mounded nest. In the space below, draw a mother reptile and her eggs in the nest.

BIRDS

Of all nests built, birds build the most amazing ones. The smallest bird's nest belongs to the hummingbird. It looks like a tiny cup, about the size of a thimble, and made from moss, lichen (a small leafless plant growing flat on rocks).
and spider webs.

The largest bird's nest belongs to the scrub fowl of Australia. These nests are mounds, which can be larger than a man.

Draw your favourite bird and eggs in the nest, in the space below.

MAMMALS

Many mammals, such as rabbits or foxes raise their young in burrows. (a hole in the ground). But some mammals build their nest above the ground. They pile plants into molds and inside each mold is their nest.
In the space below draw a burrow that a rabbit would want to live in.

Of course you know that the word nest begins with the letter "n".
This letter is as interesting to make as nests are.

As careful as a bird builds its nest, trace this letter "n".

Would a reptile like to have her young live in an incomplete nest? Complete this letter.

Can you write this letter without help.
These rabbits are not in a hurry to complete their burrow. Practice these combined letters and write the word in the space.

- mus, - mu, - mm,
- mwi, - mo, - mw,
- mw, - gn, - nw,
- nw, - mw, - nn,
- nw, - um

- mail, - made,
- might, - noise
- murr, - gnu
LESSON 37

LET'S MOVE ON!

Each year millions of animals make long journeys called migrations. Why do these migrating animals travel so far? They travel for food, to breed or to escape the cold winter.

LAND TRAVELLERS

When the cold winter comes, great herds of reindeer leave the Artic and find food and shelter in the forests in the south.

Go into your library and find a book on reindeer. What do reindeer eat? Write your answer in the space.

Reindeer Food
1. ___________________
2. ___________________
3. ___________________

AIR TRAVELLERS

At least 1000 million birds migrate in the fall, to southern locations. A bird like the warbler can fly more than 1000 kilometers without eating. It gets its source of food energy from the fat in its body.
When you are in the library look up the word migration. Draw a map of the flight of any migrating bird. Don't forget to label your drawing.

OCEAN TRAVELLERS

The salmon swim down from the mountain stream where they are born to the ocean. They live in the ocean for one to five years. They swim in the ocean from 25,000 to 250,000 kilometers away from their birthplace. Then the salmon swims back to the stream they were born, to spawn.
What information can you get from the library about the life-cycle of the salmon? Write your answer in the space below.

Here is the letter "m". It is very similar to the letter "n". Do you know what is different?
Trace this letter

Complete this letter

Try some
207.

Just look what a vowel can do!

Write each word.

man.

mit.

met.

Special Attention

onw.

come.
Using the letters that you already know, complete this paragraph.

The Cold!

It was going to be a cold winter. The migrating birds began to
There are almost two thousand kinds of bats in the world and most of them are harmless. These flying creatures feed on insects or fruit and some even sip the nectar of flowers.

The vampire bat is different from all other bats. It lives entirely on blood.

This vampire bat sleeps during the dark in dark places such as caves, the eaves of houses, or some other dark places.
When darkness comes, the vampire bat searches for its victims. When the bat discovers grazing cattle or a sleeping human, it flies to them where it quickly bites them after carefully selecting the spot for its bite. This painless bite causes the blood to flow.

Just like a cat lapping up milk, the vampire bat laps up the blood.

In the morning, this vampire bat is back in its dark resting place. The victim have been unharmed because the amount of blood taken by the vampire is very little.

The word vampire bat begins with the letter "v".
The letter v has the same beginning as the letters n, m and x.

Trace these letters.

vnnn

nnn

nnn
Here is an interesting thought. The letter y joins the five vowels a, e, i, o, and u. The five combinations are given below by themselves and in words.

<table>
<thead>
<tr>
<th>NO</th>
<th>NE</th>
</tr>
</thead>
<tbody>
<tr>
<td>NO</td>
<td>N</td>
</tr>
<tr>
<td>nU</td>
<td>n</td>
</tr>
<tr>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>N</td>
<td>N</td>
</tr>
<tr>
<td>N</td>
<td>N</td>
</tr>
</tbody>
</table>
WHAT'S WRONG

Can you find what is wrong with this picture? Write your answers on the spaces below.

1. 
6. 

2. 
7. 

3. 
8. 

4. 
9. 

5. 
10. 

LESSON 33

BEARDS FOR MAKE BELIEVE SANTAS

A long time ago in Great Britain, there were people who needed beards to play the part of Father Christmas. Father Christmas is the British name for Santa Claus. From the far away country of Tibet, a great amount of yaks' tails were sent to Great Britain. These tails were used to manufacture the beards for these British Santa Clauses.

Here is a picture of Father Christmas, without a beard. Will you add a beard to make him look like our North American Santa Claus?

The yak grunts when it speaks to other yaks. What word will you say to other students about this letter?
The yak usually lives in very cold climate. Don't you be left out in the cold not knowing how this letter is written.

The yak can walk in places where people would not dare to walk because of the danger of them falling. There certainly is no danger when you trace these letters.

Complete these letters.

Try these combinations if you like excitement.
A cave drawing found in Northern Spain

Divide these words into syllables.

- transparent
- symbol
- dynamite
- eyelid
- hygiene
- lying
mystery
oyster
eye
sealable
typical
eye
LESSON 34

Below is an incomplete story. Read it carefully. Close your eyes and see if you can imagine what will happen next. Write your idea in the space provided.

"Run for your lives," screamed the young boy as he ran down the busy street. "The x is coming this way."

People of all ages looked up in terror. Memories of what had happened the last time the x had visited their busy seaside town sent shivers down their backs.

Suddenly, the boy's warning was useless. There it was, looking at them with greedy .....
Although this strange creature is different, the letter x is not very different from the beginning of the letters n and m.

Here is how the letter x is written. Don't be scared to look at it.

Try tracing these.

Why not complete these letters before the x comes and visits your town.
220.

Draw a picture of your x in this space.

You'd better practice these letters before something eerie happens.

Don't wait any longer to write these.
An x-ray is a photograph that shows the internal parts of a human body.

Draw an x-ray of your creature's head in this space.
Let's be like an x-ray and copy these words exactly like they are written.

Oxygen

Excellent

Papa

x-ray

Mother

Telephone

Explain

Whole
LESSON 35

THE HORSE WITH THE TIGER'S STRIPES

One of the best known of African animals is the zebra. Almost all circuses and zoos have at least one of these animals.

The home of the zebra is on the grassy plains of Africa. It is a grazing animal and feeds on the grass.

There are many kinds of zebras, which are chiefly different in the arrangements of their stripes.

Here is a picture of a zebra without its stripes. The belly and inside parts of the thighs are without these bands. Draw the stripes on the zebra below. Remember not to put stripes on its belly and inside thighs.
The lion is the zebra's worst enemy. The lion has to be very careful because a zebra can give the lion a few well-aimed kicks and that is the end of the lion. Let's look at the z which begins this word zebra.

Although there are usually some zebras in a circus, they have a bad temper and are not liked by the trainers.
To work in a circus you have to practice your act very well.

Practice tracing these letters.

More practice is needed.
Mirror, mirror, on the wall which is the best of all?
Can you write a word that begins with these letter combinations? Use your dictionary to help you.

__________________________

__________________________

__________________________

__________________________

__________________________

__________________________

__________________________

__________________________
Compound words are two words that are put together to form a new word. Write each compound on the lines.

mail+man

mean+while

middle+man

moon+light
mud+guard

name+sake

neck+lace

night+gown

no+body

nut+cracker
THE CAPITAL LETTERS P, B, R,

UNIT SEVEN
LESSON 36

PEEK-A-BOO! I SEE YOU!

Penguins are usually black with a black head and a white belly. These two colours help protect the penguins from their enemies.

When a penguin is swimming, their backs are facing upward.

To an enemy looking down on the water, the penguins would be difficult to see. The penguins' black back blends in with the dark water.

The white feathered bellies of a penguin also make them difficult to spot from underneath the water. If a shark or a leopard seal swims underneath a penguin, the penguin will often go unnoticed. The penguin's white belly blends in with the bright light from the sky.

If they are attacked in the water, they can leap ashore like corks fired from a pop gun.
You don't have to live around the South Pole to know that penguin begins with the letter "p". You already know how to write the small letter p. This is the capital "P".

When a penguin looks at something, it stretches its neck and examines the object carefully. Don't strain your neck as you examine this letter.
Trace this letter, neatly.

Penguins usually spend all their waking hours in the water. Since you're swimming in any water now, complete these letters.

It's funny to watch penguins walk. It can be fun to write capital P's without help, too.
Penguins have the same mate. They take turns looking after the baby penguin. Here are combinations of letters that work together that can be used to write some words:

- Pa - - - - Pacific
- Pe - - - - Penguin
- Ph - - - - Photo
- Pi - - - - Picnic
Write the following sentences with correct beginnings and endings.

1. It took Patrick to the zoo to see some penguins.

2. Patrick said he really thought they were strange.

3. He fed the penguins lunch.

Although the rhinoceros is protected by law, the body of the rhinoceros is so valuable to poachers (people who hunt or fish, without permission) that poachers hunt the animal even though they will be punished if they are caught by the police.

The reason the rhinoceros is so valuable is because of superstitions.

Many people who live in Eastern countries believe that the rhinoceros' horn has magic powers. They believe that it can cure people who are sick and that the horn will bring good luck to anyone who holds it.

Some people believe that the animal's blood is a very good medicine. The blood is collected in tiny bottles at the time of the kill and these bottles are sold for a lot of money.
You don't need magic to write the capital "R".

This is how it is made.

The horn of a rhinoceros is made up of hair that has been glued together. It could never have magic powers.

Trace these letters.

Complete these letters before a poacher tries to steam them.
Take a stand against all poachers and write this letter yourself.

These are interesting letter combinations.

- - - - -

R - - - - -

R - - - - -

R - - - - -

R - - - - -

R - - - - -

R - - - - -
Begin a complete sentence with each of the above words, in the spaces below.
LESSON 38

INSIDE THE BEAVER'S DEN.

Beavers are the smartest builders in the animal world. They live in underwater dens which protect them from their enemies.

The entrance to the den is a tunnel which is about one hundred and fifty centimetres below the surface of the water. At the mouth of the tunnel, there is usually a heap of poplar and birch branches. This is the stored winter food.

The tunnel rises gradually, into the bank, leading to a kind of terrace and finally to the den. The den is above the water level.

This den or lodge is a low, wide room, and its floor is covered with wood chips.

The clever beavers also have a second tunnel which the beavers use if the first tunnel is destroyed by the spring floods.
247.

A beaver's lodge is built of sticks and mud in the middle of a pool. Look and see how the capital letter "B" is made.

Get busy as a beaver and trace these letters.

If you were a beaver you could sink your teeth into completing this letter.
The beaver colony is very organized. How organized are you, when you write this letter all by yourself?

The capital letter B cannot work alone to build a word. It needs other letters.

The beavers work in squads when they are building a dam.
Balloon
Bear
Bison
Bloodhound
Bright
Buffalo
Beaver
Describe how you would build a dam, in the space below.
The Penguin, Beaver and Rhinoceros are busy preparing for a New Year's Eve party. They have invited many guests and they must go shopping for food. Copy each word twice, so they can each have a list.

Bacon  Bacon

Bisque  Peas
Pancakes, Rice, 
Burrus, Punch, 
Parsley, Bread, 
Radish, Barley, 
Raw, Biscuits, 
Potatoes, Beets, 
Relish, Bass, 
Pickle, Buns.
Broccoli  Pike
Broiler  Porch
Peanuts  Beef
Beans  Bananas
Bicarbonate
Pomegranate
Baking soda
Pimientos
Rabbits

Brownies

Beverages

Porridge

Bandages

Brothons

Bacon

Blue-berrins
LESSON 40

BEFORE YOU TAKE YOUR NEXT STEP!

one

two

three

four

five

six

seven

eight
ninth

tenth
THE CAPITAL LETTERS: S and G

UNIT EIGHT
Spiders do not go to restaurants for lunch. Their food comes to them. When a fly walks on the thin threads of the web, the sticky web holds on to the fly. The fly is unable to get away.

When the spider sees the fly, it rushes over to it and throws many silken threads around the struggling insect. The spider does not stick to the web as it goes round and round the fly. The fly is soon completely covered with the web. It
The spider does not eat the fly, because it can't. The spider's mouth is too small and it cannot bite its food off in chunks nor can it crush its food. The spider's food must be in liquid form. The spider sucks all the liquids from the fly's body and then gets rid of the fly by cutting the fly's body from the web.

To make a web would be difficult for anyone but a spider. However, it would be difficult for a spider to make the capital letter S.

This is how the capital S is written.

The web is not as easy to trace as the letter S.
The spider always completes its web. You should always complete your letters, too.

Don't you get caught in this sticky web. Write the capital S on these lines, yourself.

Did you know when many spiders are placed together, they eat each other?
But when the capital letter S combine with other letters, only good things happen.

Sir. - - - - - - - - -

So. - - - - - - - - -

Se. - - - - - - - - -

Seal.

Sheep.

Silk.

Skunk.

Skipper.
Im — smell
Im — snow
So — sole
Sq — square
St — stag
Su — sugar
Sw — swan
Sq — spool
Make these words plural by writing the correct ending for the following words:

Snake
Spider
Scorpion
Shark
Scorpion
Squid
Skunk
Skate
Sickle
Shrew
Shrimp
True or False

1. The gorilla belongs to the same family as human beings. (True, False)

2. The gorilla is the biggest species in the family of the great apes. (True, False)

3. Usually, a gorilla walks on all fours. (True, False)

4. Wild gorillas feed on berries, and leaves. (True, False)
5. The gorilla is not as clever as a chimpanzee. (True, False)
6. A gorilla is very shy. (True, False)

The gorilla belongs to the ape family. The family of apes, in turn, belongs to the hominoid group, which also includes human beings.

The gorilla is the biggest of all the apes. An adult gorilla is as tall as a 180 cm. policeman and weighs about 270 kg.

Usually, the gorilla walks on all fours, the knuckles of his hands touching the ground. He can walk erect for a few paces at a time.

A gorilla in the wild state does not eat meat. Instead it feeds on berries, leaves and other kinds of vegetable matter.

The gorilla is very shy and will avoid humans if it can.

The gorilla is less intelligent than chimpanzees. You are more intelligent than a gorilla or a chimpanzee. Look at the capital letter "G".
This is how we write it.

If a gorilla has a memory very similar to a chimpanzee, do you think you can trace the letter better than these animals?

Complete this letter.

This capital letter G is a great letter, just like the gorilla is a great ape. Write some capital letter "G's", to
This capital letter G is a great letter just like the gorilla is a great ape. Write some capital G's to show how great you are.
Gorillas like to be with other gorillas, so does the letter G.

- Gnu
- Gazelle
- Gee
- Ghost
- Giraffe
- Glow
Go, Goat.

Ewe, Ewe, Ewe.

Ewe, Full.

Ewe, Ewe.

Ewe, Sheep.
Make each word singular by writing the correct ending for the following words:

Gardenias

Gems

Follies

Glaciers
Gnomes

Gioldes

Graims

Guards

Gymns

Guitars
Sometimes a male spider may offer a female a fly wrapped in his thread.
Horrible! Fine my troops led by huge silverlocks. Their leaders sometimes drum on their chests to warn off enemies.
THE LOOP BELOW THE LINE

UNIT NINE
Who would ever think that a creature called a jelly-fish would be dangerous? Jelly-fish are found in all oceans of the world and they come in all sizes. The common jelly-fish found in North America is about 19 cm. wide. The jelly-fish found in the Arctic measures about 240 cm. across its umbrella-like main portion.
A jelly-fish drifts along harmlessly, until a fish brushes by its tentacles. An average size jelly-fish has tentacles that trail out or down in the water for 1500 cm. These tentacles are ready to cause injury or death to anything careless enough to come close to it because these tentacles are made up of poison threads, which when touched paralyse (inability to move) the fish.

This letter j won't harm anybody.

You must be careful to see how it is made.

Give these tracings a go.
Complete these. Don't forget to put a dot over the letter j.

Writing this letter is as easy as making jelly.

You are in no danger from the jellyfish, if you try your best.

jam

jeep
Joy

Jingle

Jump

Jazz

Jive

Joy

Juliet
Suffix:

A syllable that is added to the end of a word to make a new word is called a suffix. Here is a list of words that begin with the letter. Next to the word is a suffix. Write the new word in the space.

- jest + ing
- join + er
- jog + ful
- jump + ed
- just + ice
Porcupines have long quills, for use as a weapon, against their enemies. Normally, the porcupine is a peace-loving rodent but in an emergency, they can defend themselves easily.

To scare off an attacker, the porcupine turns its back and raises its quills. If this does not work, the porcupine will rattle the quills.

If both these ideas do not scare off the enemy, the porcupine will run backwards and stab the enemy with its quills.

There is no truth that a porcupine can shoot its quills at its enemy.

The word porcupine begins with the letter p. Just like a quill, the letter p will always stick with you, if you remember how to write it.
Stand back and take a closer look.

Often the North American Indians used the quills of a porcupine to decorate their clothing. Let's decorate the letter p by tracing it.

That was easy, wasn't it? Try finishing these letters.
The Indians took many quills and formed different patterns.

Here are some letter combinations which will later form patterns called words.

\[ \text{po, } \text{op} \]
\[ \text{pl, } \text{ep} \]
\[ \text{pi, } \text{ip} \]
\[ \text{po, } \text{op} \]
Prefix

A syllable that is put at the beginning of a word to make a new word is called a prefix. The word prefix means a part placed before, or at the beginning of a word, which changes the meaning of the word. Here is a list of words that do not begin with the letter p. Add the prefix pre to each word. Write the new word next to the old.

pre+occupy

pre+suppose

pre+test

pre+sent
prev + five
prev + historic
prev + mature
prev + pay
prev + sage
prev + sent
LESSON 46

PLANTS AND SHRUBS.

Below is a list of some plants and shrubs that begin with the letter j or p. Practice writing each name and then write the correct name under each picture.

- Jasmine
- Juniper
- Pansy
- Peony
- Peppermint
patricia

pilow

pineapple

poinsettia

poppy

primrose

dparsnip
<p>| | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image1" alt="Flower" /></td>
<td><img src="image2" alt="Branch" /></td>
<td><img src="image3" alt="Plant" /></td>
</tr>
<tr>
<td><img src="image4" alt="Flower" /></td>
<td><img src="image5" alt="Vegetable" /></td>
<td><img src="image6" alt="Pineapple" /></td>
</tr>
<tr>
<td><img src="image7" alt="Flower" /></td>
<td><img src="image8" alt="Flower" /></td>
<td><img src="image9" alt="Plant" /></td>
</tr>
<tr>
<td><img src="image10" alt="Flower" /></td>
<td><img src="image11" alt="Flower" /></td>
<td><img src="image12" alt="Plant" /></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
THE CAPITAL LETTERS D and L

UNIT TEN
WHERE, OH WHERE, HAVE THE DODOS GONE?

In the year 1598, Portuguese sailors crossing the Indian Ocean landed on the island of Mauritius. These sailors soon discovered strange birds living on this island who were larger than a turkey but their tiny wings were useless. These birds could not fly.

These birds were easily caught, and killed by these sailors. The name doudo, which means simpleton, was given to these strange birds. The English soon called these birds—dodo.

The killing of these birds continued at such a speed that by 1698, one hundred years later, there was not one dodo alive. Indeed, there is not even a stuffed dodo today. The birds are totally extinct.

The capital letter D is not extinct. It is used all the time in writing words.
The Portuguese sailors said that these "doudo" birds had small wings. The capital letter D has nothing small about it. Look how it is written.

The wings of a dodo bird could never support the weight of this bird. These wings appear to have been a mistake. They should belong to a smaller size bird.

Tracing this letter is no mistake.

This capital letter is easy to complete.
You would never be called a dodo, if you tried these letters.

Did you know that dogs and rats, that came with the settlers to the island also helped kill the dodo bird? Let's never let the capital letter D become extinct.
Due — Duv

Do — Dome

Dr. — Drum

Dr. — Dual

Dr. — Dwarf

Dry — Dry
Synonyms are words that mean the same or almost the same. Here are two lists of D. Can you match these words with their correct synonym? Write your answer in the space provided, using the capital letter D for each word.

Destroy  Dense  Difficult
Divide  Dark  Lamp
Thick  Cool
Rain  Black
Hard  Separate
Most leeches live in fresh-water lakes and slow moving streams. If a leech happens to attach itself to a swimmer, screaming won't help. Instead, the swimmer should sprinkle the leech with salt, vinegar, pop or alcohol. When the leech feels any of this, it will plop off quickly.

Leeches don't need to drink blood often. When they do, they can eat up to ten times their own weight. When it drinks that much, it doesn't have to eat for another six months or more.
The capital letter L could never drink blood, at any-
time, although it begins the word leech.

In fact, all the capital letter
L does is begin words.

Trace this letter without letting
a leech know that you are around.

I wonder how much blood a leech
could drink while you are completing
this letter?
Show the leech who is boss. Write the capital letter L all by yourself.

As you may know, sometimes more than one leech can be on a swimmer at one time.
This letter must be with other letters to form a word.

La --------- Large
Le --------- Lead
Ly --------- Library
Lo --------- Lose
Lu --------- Luck
Ly --------- Lyne
An antonym is a word whose meaning is opposite to that of another word. By adding the prefix, dis to the beginning of the word, the meaning of the word is changed to the opposite meaning.

Dis+ able

Dis+ agree

Dis+ locate

Dis+ cover
Homonyms are words that sound alike but are spelled differently and have different meanings.

Practice writing each homonym, first with the small letter and second with the capital letter.

- **dew** - **Dew**
- **draw** - **Dear**
- **dew** - **Dew**
- **do** - **Do**
- **dye** - **Dye**
dry, Do
led, Lead
lead, Led
leak, Leak
loan, Lone
lone, Loan

[Image of a dodo bird]
Something is wrong with these sentences. Write these sentences again, correctly in the space provided.

The baker used the doe for the pie.
It was early morning and the do was on the ground.

Alice pointed to her sweater. open.

Can you take these links from my bracelet?

I need a bank loan.
THE CAPITAL LETTERS, H, K, M, N, Q, U, V, W, X, Y, Z

UNIT ELEVEN
The hummingbird is not only the smallest and tiniest of all birds but it is also the best flyer, too.

The hummingbird has beautiful, bright feathers and its wings can move nearly 50 times per second. In fact, the name hummingbird comes from the sound made by their flapping wings.

The hummingbird can fly straight up or straight down. It can fly backwards, forward, or sideways, just like a helicopter.
Hummingbirds build the smallest nests of any bird. There is nothing small about the capital letter H which begins the word Hummingbird.

The hummingbird's nest is made from lichen (a flowerless, leafless plant that grows on rocks), moss and spiders' webs. The capital letter H is made from different curves and strokes, also.

The hummingbirds are expert nest builders. Trace and complete these letters. They will help you to become an expert letter maker. Practice makes perfect!
To be a good flyer like the hummingbird, it takes a lot of skill. Show your handwriting skill by writing the capital letter H in the space.

The hummingbird needs lichen, moss and spiders' webs to build the nest. Here are some letters that the letter H needs to build words: a, e, i, o, u, y.
Practice writing the letter combinations in the spaces.

Write a word that begins with these two letters at the end of each line.

1. No
2. He
3. Hi
4. Ho
5. Huz
6. Hay

---

[Three small bird illustrations]
Here are some interesting facts about the hummingbird. Rewrite these statements in an interesting paragraph. Don't forget to give the paragraph an interesting title.

1. The hummingbird is an expert flyer.
2. When it finds a honeysuckle flower, it "stands still" in the air.
3. Then the bird's long bill touches the outside of the flower's center.
4. The hummingbird moves forward slowly until the bill is completely inside the flower.
5. The hummingbird drinks the nectar.
6. The hummingbird flies backwards to remove its bill from the flower and flies to another flower.

Hummingbirds
The kiwi is a very unusual bird. It lives in New Zealand. In fact, it is the national bird of New Zealand.

Unlike other birds, who depend on their sight to find food, the kiwi depends on its nose. They have very sensitive nostrils which sniff out worms, grubs and insects in the soft ground.

The capital letter K is not an unusual letter. It is made similar to the printed capital K.
The Kiwi bird is very shy and stays in the forests of New Zealand. I hope you aren't shy as you look carefully at this letter.

The time needed to hatch an egg, called the incubation period, usually takes about 11 days. The incubation period for the Kiwi is about 80 days. It certainly won't take 80 days for you to do the next three exercises.
Even though the Kiwi is no larger than a chicken, the Kiwi lays an egg which is larger for its size than any other bird. Laying an egg doesn't take any practice but writing neat letters and words certainly does. Look in your dictionary for help to write in a word if you can't remember any word that begins with these letters.
Complete this story and draw a picture in the box.

One bright summer's day, Kangaroo who lived far away in Australia, decided that he would hop on a plane and visit his pen-pal, Kiwi. Now, Kiwi lived in a neighbouring country and he also decided that he would hop on a plane and visit his pen-pal, Kangaroo. As both planes passed one another in the pale blue sky.
LESSON 51

THE SHAPE CHANGERS

Most creatures always have the same shape. But some change their shape and way of life as they grow.

Butterflies are insects which changes their shape as they grow. This shape changing is called metamorphosis.

When a butterfly egg hatches, a caterpillar which is a furry worm like insect, comes out. This caterpillar eats, and eats, and eats. It grows very big and then it attaches itself to a twig, and grows a hard skin. The caterpillar is now called a chrysalis (kris-uh-lis).

For many weeks this chrysalis looks very still. However, many changes are happening on the inside, very slowly. When spring arrives, this hard covering splits open and a new looking insect steps out. This insect has four wings, six legs, feelers, and new eyes. The new insect is called a butterfly.
The butterfly must dry its wings before it flies away. When the capital letter M is written, it gives the impression it too, may fly away.

Complete the change of this letter.
The metamorphosis stages take time. Take your time when you write these letters.

Butterfly

Moth

Ma - Mast
Me - Met
Mz - Milk
Ho - How
Mz - Mutt
My - My
How many words can you write that begin with the prefix mis? Can you write at least ten without any help?
LESSON 52

MUSIC LESSONS.

The male voice of the nightingale is famous for the variety of notes which is sung with great power. The female nightingale doesn't sing.

To teach nightingales to sing, breeders separate the young ones from the parents. These male nightingales are isolated from each other in cages. The young nightingales are then only allowed to listen to an adult male sing. This adult male sings perfectly.
The young birds who only listen to this perfect singing, soon copy the songs and become perfect singers, too.

If you want to be a great handwriter, you must be like the nightingales. You must copy.

The capital letter N is much easier to write than the capital letter M.

The letter N is faster to write because it only has one hump. Practice tracing this letter quickly but carefully.
312.

Don't lock yourself in your classroom when you complete these letters.

Even though young nightingales are only allowed to listen to an adult sing, you certainly are allowed to write the capital letter N.
Nap, New, Nice, Nod, Nut.
Do you remember that a syllable that is added to the end of a word to make a new word is called a suffix?

Add the suffix ly to each of the following words; then complete the sentence by writing the new word in the space.

- Natural + ly
- Nervous + ly
- Night + ly
- Neighbor + ly
- Normal + ly
1. I didn't go to the movies.

2. The boy entered the dark room.

3. The young boy played the piano.

4. Friends came to help the sick farmer.

5. I never listen to horror stories.
LESSON 53

PARDON ME, BUT MAY I USE YOUR QUILL?

For hundreds of years, men used a quill, to write with ink. The tip of the quill was sharpened to a fine point. The sharper the point, the thinner the lines. The wider the quill, the wider the lines.

When a quill was dipped into the ink, a little ink stayed in the hollowed-out undersurface of the point.

When the quill touched the paper, the ink flowed from this storage space, through the narrow slit, to the tip and onto the paper.

This type of pen didn't hold much ink and had to be dipped frequently.
Do you know that all words that begin with the letter q all have the letter u as the second letter? It's true!

The capital letter q is very similar to the number two. It is very easy to write. Take your quill, and dip it into your ink after you see how this letter is written.

Is your quill ready? Start tracing this letter.

I hope u will not forget to complete this letter!
Now pluck another feather from a passing bird, sharpen the end, dip it into the ink, and start writing:
319.

How many words can use the word quart as the root word?
Write your list on the lines below.
Here is an alphabet verse that you may enjoy writing.
Quincy Quail quickly quacked for a quaint quarter.
LESSON 54

WHY THE BEAR 'WADDLES'?

Many years ago, before the black bear was called Ursus-americanus, by the scientific white man, the Indians told a story about the bear.

Now it seemed that the bear was very fond of fishing. It fished continuously for days at a time, until he ate his full. After a few days, he would return again to fish.

One day, while fishing under the hot sun, he decided to tie his fishing line around the nearest tree and take a nap.

It just so happened that he tied the line near a busy hornet's nest. The black bear unaware of the nest, took off his shoes, stretched his arms high over head, and rested in the tall cool grass.

When he had stretched, his strong paws clumsily hit the well hidden hornet's nest. This angered the hornets.
As they left the nest, the sight of a line attached to their favourite tree annoyed them even more.

They dove angerly at the massive sleeping bear. "Ouch-ouch-ouch", cried the bear as he jumped to his feet. Within a wink of an eye, he grabbed his shoes.

However, in his haste, he put his moccasins on the wrong feet and waddled quickly away.

From that day onward, the black bear has always been seen waddling through the forest.
The black bear comes in many colors - cinnamon, black, dark brown and black with a patch of white. The capital U only comes in one style similar to the printed letter U.

If you travel to some of America's national parks, these black bears can often be seen begging for handouts. This Ursus americanus can also be seen stealing food from tourists. Here is this letter. The black bear doesn't know it is not edible.
These friendly bears also have a quick temper. You must be very careful when these bears are around. Keep busy and trace this letter.

In areas where the black bear does not see human beings very often, the black bear is quite shy.

The black bear has a keen sense of hearing and smell but he has very poor eyesight.
Humans have generally, very good eyesight. Use your eyesight to help you in this exercise.

 Ud. -- - Udder.
 Ug. -- - Ugly.
 Uke. -- - User.
 Ultra. -- - Ultra.
 Umbr. -- - Umbel.
 Un. -- - Unit.
 Up. -- - Upon.
Consonant letters have been left out of the answers in the clues at the bottom of the page. Write the letters in the blanks; then write the words in the correct spaces in the puzzle.

ACROSS
1. something a bear likes to eat __ o __ e y.
2. you are light but the bear is __ e a __ y.
3. what bear did to the line __ i e __.
4. sometimes he waddles to the beaver's __ a __.
5. a large star in the sky __ u __.

DOWN
1. insects that stung the bear __ o __ e __ e __.
2. where your eyes are __ e a __.
3. a place where hornets live __ e __ e __.
4. a bear does not sleep on one __ e __.
5. short for evening __ v __.
LESSON 55

LOOKS ARE DECEIVING!

The Venus's flytrap is one plant that insects can do without.

When an unsuspecting insect walks on the surface, the leaf will suddenly snap shut.

A Venus's flytrap cannot be fooled. If small twigs or pebbles fall on the leaf, nothing happens.

The leaf has three sensitive hairs on each leaf half. The leaf will not close unless two hairs are touched one after another or the same hair twice.

Once shut, the trap gradually pinches tighter and tighter, squeezing its prey against the digestive glands on the leaf's surface.
The Venus's flytrap does not look harmful to crawling insects. Ants especially show no fear of the plant, until it is too late. Unlike the Venus's flytrap, the capital letter V is harmless, in every way.

This capital letter is one of the easiest letters to write.

The Venus's flytrap plant is a very complicated plant to understand. How does it know not to close its leaves on a pebble or twig?
Don't get taught not knowing how to complete this letter.

The total insect is usually absorbed in a week by the Venus's flytrap. After this time the leaf reopens, ready for other insect victims. While the plant is absorbing an insect that you don't particularly like, write some capital letter V's for practice.

Take your time as you practice these letters. If you hurry, the Venus's flytrap may hurry too and get indigestion.
Divide these V words into syllables.

Here are two rules to remember:

1. When one consonant stands between two vowels in a word, the consonant usually begins the next syllable.

2. When two consonants come together in a
332.

word, the word is usually divided between the two consonants:

<table>
<thead>
<tr>
<th>Word</th>
<th>Syllables</th>
<th>Word again</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vacation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Velvet</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Valuable</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Volcano</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Villain</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Volunteer</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vegetable</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vaccine</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
MAYDAY, MAYDAY!

Animals, fish, birds, and insects send signals to each other for many reasons. Rabbits thump their feet to warn other rabbits of danger. Robins sing certain notes to warn other birds to stay away from their territory. Migrating birds call to each other at night to warn each other of danger or to keep the flock together.

The word WARNING is very important. It begins with the capital letter W.
There are many times that we see this word written on signs, bottles and cans. It is important to know how to write this letter.

The word Warning should be written on all containers, which have things inside that could be harmful to animals and humans. Trace this letter.
There are some chemicals in containers that could burn if it comes in contact with human or animal skin.

Write the capital letter in this space. It is important to write this letter carefully so that adults and children can read this letter.

Some containers which have warning written on them have saved countless lives.
Practice writing the word Warning in the spaces below.

warning

Look through your parent's kitchen cupboards at home.
Make a list of all the cans and bottles that have Warning written on them.

danger caution thin ice stop
Look in the medicine cabinet at home. How many things can you find that have a Warning on them? Write your list on the spaces below.
Road signs like those below are used as signals to warn a driver. They tell when and how to do things that will help him drive better.

\[ \text{YIELD} \quad \text{yield} \]

\[ \text{STOP} \quad \text{stop} \]
LESSON 57

BLAST OFF TO THE MYSTERIOUS PLANET X

You have just landed on the planet X. Strange creatures are approaching your space craft. They are in the shape of the capital letter X.

1. What do these creatures look like? Describe them.

2. How did they talk to you? How did they talk to each other?

3. Did they do anything strange that you noticed?

The capital letter X is an odd looking letter, but it can be fun to write.
Trace this strange looking letter.

On this mysterious planet the capital X is written everywhere. Some of these creatures are busy writing these letters on signs. Help complete these letters for your new friends.

The letter X is a letter that is not used very much. But that's O.K. It's exciting to write this letter, anyway.
A - B
C - D
E - F
G - H - I
K - L - M
N - O - P
Q - R - S
T - U - V - W
Try these.

Ka

Ku

Km

Kn

Kv

Kl


Draw a picture of your alien friend. Use the capital letter X in your drawing as much as you can.
Yaks eat grasses and herbs. They also nibble on the leaves of small shrubs. Like cows they do not chew their food thoroughly before swallowing. After eating, they bring up wads of partly digested food, called cuds. These animals chew the cuds further, then swallow and digest them.

If you were a Yak, would you enjoy eating grass, herbs and leaves? Of course you would! If you were a Yak and you were attending school, you would enjoy writing the letter Y, because your name begins with this letter.
The capital letter Y is made almost like the small letter y, only larger.

Bring back your memory of the small letter y. "Chew" on this idea for awhile.

Now that you have sunk your teeth into this letter, try tracing these.

Complete your new meal by completing this letter.
What kind of vegetables do you eat with your meals? The Yak doesn't have much variety, does it? Add some letters to the letter ¥ for variety.

Up, —— Yankw.
Up, —— Yesterday.
Up, —— Yield.
Up, —— Young.
Up, —— Yukon.
Write four sentences that begin with the letter Y, and are about a Yak. You will have to find some information about a Yak in a reference book. Write your sentences clearly. Read them to the class.
Do you have any idea what this name means? By looking at the picture for a clue you can guess that this is the scientific name for the seal.

If you have ever seen seals perform you will know that seals can obey human's verbal commands. They can march like soldiers, play short musical tunes on musical instruments, balance colorful beach balls on their noses, and even play catch.

These performers, who love to show off their talents are one of the most intelligent and trainable mammals.
The letter Z is as tricky to write as seals are clever.

There is no trick to tracing.

Complete this letter.
Here are some proper nouns that begin with the capital letter Z.

<table>
<thead>
<tr>
<th>jade</th>
<th>jade</th>
</tr>
</thead>
<tbody>
<tr>
<td>jain</td>
<td>jain</td>
</tr>
<tr>
<td>jay</td>
<td>jay</td>
</tr>
<tr>
<td>jem</td>
<td>jem</td>
</tr>
<tr>
<td>jemarna</td>
<td>jemarna</td>
</tr>
</tbody>
</table>
CAPITAL LETTER J

UNIT TWELVE
A shark is able to attach and eat with little problem. The word shark comes from the Latin word meaning sharp teeth.

In most types of sharks the mouth is beneath the snout, well back in the head. Sharks usually attack from below, angling the snout upward and over its dinner.

Unlike the teeth of humans, who have their teeth held to their jaws by roots, the shark's teeth are embedded in the gums, forming four to six rows of razor-sharp teeth.
The front row has the largest teeth. They fall out after they are used and are replaced by the next tooth behind it.

In a lifetime, a shark may lose over 10,000 teeth.

Although a shark rarely uses its jaws to attack a person, it will attack much larger sea animals. The word 'jaw' begins with the letter J. This is how we write the capital J.

The sharks never run out of teeth. Don't let yourself run out of the letter J. Trace these letters.

Complete this letter.
The great white shark was once found with a 45 kilogram sea lion in its stomach. Find some words that begin with this letter.