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EXERCISES FOR THE SUPER- VISED STUDY PERIOD

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The efficiency of the supervised study period is largely determined by (1) the kind of assignment made and (2) the ability of the students to study. This article will be limited to the second factor.

It can not be taken for granted that the pupils in the agriculture classes will receive training in methods of study in connection with their other school subjects. On the contrary, the teacher of agriculture is usually offered an opportunity to give his boys a training in methods of study which will function in the remaining subjects of the high school curriculum.

The following exercises may be conducted by teachers of agriculture. Almost any study lesson offers opportunity for one or more of these exercises. A mastery of them should give the student a foundation in methods of study.

Exercise 1. Increasing the efficiency of reading—

2. Summarizing a paragraph
3. Outlining a lesson
4. Generalizing.

Exercise 1—Increasing the Efficiency of Reading

Most persons can increase their reading efficiency by intelligent effort. A class of first-year high school boys should be able to improve from 25 to 100 per cent. The teacher may explain that a fast reader is fully as able as a slow reader to grasp meanings, as shown by experiments. Effective reading consists of a high rate of reading speed combined with accurate comprehension. Both can be developed by conscious effort. The teacher will find it worth while to examine such books as *Silent Reading*, by O'Brien, *The Reading Process*, by Smith, *Teaching Silent Reading to Beginners*, by Watkins, and *Diagnostic and Remedial Work in Reading*, by Gray.

Such suggestions may be made to the class as:

1. Attempt to read as fast as possible and still get the meaning.
2. Record your progress from day to day. Determine the number of lines you can read in a minute and keep trying to break your record.
3. Try to see as many words as possible at a glance.

Suggested steps in conducting the exercise

1. Select reading material. The first material selected should be easy and interesting.
2. Go over the material (1) to find difficult words and phrases and (2) select completion sentences at fairly regular intervals in the reading. (See sample exercise.)
3. Explain the importance of rapid silent reading.
4. Tell the class the ways to improve reading.
5. Interest the class in the subject of the selected reading.
6. Give the class the page and the position on the page where the reading starts. Pupils to insert fingers at this page without looking at reading matter.
7. Explain the difficult words.
8. Give class 2, 3, or 4 minutes after you say "go." At the word "stop" they are to mark the line where they stopped and count the number of lines.
9. Uncover the completion sentences on the blackboard. Have the students write at their desks the words which complete the sentences. Students should not be held for sentences beyond the point to which they were able to read.
10. Show distribution of lines and comprehension percentages or fractions. The following is an example of an exercise conducted in a Minnesota department:
Selection—Henry and Morrison, *Feeds and Feeding*, page 117.
Completion sentences—
Line 13—Corn is higher than all the other cereals in—

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Line 27—We must correct its deficiencies by supplementing it with feeds high in _____ and _____.

Line 30—For fattening cattle or sheep, corn and _____ lone make quite a satisfactory, well balanced ration.

Line 42—Trials have shown that when fed to _____ in properly balanced rations corn is a good substitute for _____.

Line 49—While corn should be ground for _____ such preparation does not pay for _____ or _____.

Results—

Name of pupil	No. of lines	Comprehension fraction	Reading score*	Rank
.....	56	4/5	44	2
.....	60	2.5/5	30	3
.....	44	2/4	22	5
.....	36	2/3	24	4
.....	36	2/3	24	4
.....	52	5/5	52	1
.....	59	1.2/5	13	7
.....	72	1.6/5	24	4
.....	57	1/5	11	8
.....	40	1.5/3	20	6
.....	37	2/3	24	4

*The reading score is obtained by multiplying together the number of lines and the comprehension fraction.

Although one should not draw conclusions from one reading score or one ranking, a series of such scores and rankings conducted with material of equal difficulty and under similar conditions should throw light on the reading progress of the class and of each pupil.

Exercise 2—Summarizing a Paragraph

One of the most valuable habits a student may form is to stop after reading a paragraph and get the main idea

from it. There are various ways of doing this. It may be done mentally; the topic sentence may be underlined, or a topic sentence may be constructed in a notebook.

The advantages of such a habit are: (1) the reader can not read without getting the meaning; he must concentrate; (2) if he has underlined or constructed topic sentences he can go back and get what he has read in a nutshell. *Examples*—Henry and Morrison, Feeds and Feeding, Abridged, Chap. 19. Feeds for Horses. Page 236, paragraph 4, beginning Substitutes for oats.

Topic sentence—Substitutes for oats. Other single grains or mixtures of concentrates may be substituted economically and with no detrimental effects.

Montgomery, Productive Farm Crops, Chapter 36, Care of Grass. Page 339, paragraph 1, Form of fertilizer.

Topic sentence—Form of fertilizer. Fertilizer on timothy meadow must be soluble because applied as top dressing.

Some paragraphs have two topic sentences. Many introductory paragraphs have none worth recording. The tendency of the beginner will be to get away from the sentence form or to make the topic sentence too long.

Directions—

- Explain value of summarizing.
- The class should all have the same text. Go through a paragraph with the class and show them your topic sentence.
- Have class go through another paragraph and select the topic sentence. When all have finished, call on students for topic sentence. Select best one.
- Repeat until most of the class can get a good topic sentence.
- Do individual work with backward students.

Exercise 3—Outlining

This exercise should follow the one on summarizing a paragraph, as a good outline consists of topic sentences.

In addition, the student must be able to see the relation of different paragraphs, and must indicate these relations.

A book or an article can be reduced to outline form. Many of them were in outline form before they were written. Making an outline is, therefore,

in many cases bringing books or articles back to their original form.

There are several devices for indicating relationships. These are illustrated in the portion of the outline of Chapter 10, Feeds for Horses, in Henry and Morrison's Feeds and Feeding, Abridged:

Feeds for Horses

Carbonaceous Concentrates

Introduction

- a. Despite common opinion, a large variety of feeds are used for horses.
- b. We should carefully select combinations to maintain them in good condition at minimum expense.

Oats. Is standard, keenly relished and safe because of bulk.

Substitutes for oats. Other single grains or mixtures of concentrates may be substituted economically and with no detrimental effects. Etc.

Underlining.—Lines may indicate the relations of paragraphs. In the above outline, the title of the chapter is triple underlined. The chapter is divided into sections, each section being a discussion of a class of foods. The heading of each section, e.g., carbonaceous concentrates, is double underlined. Each subhead under a section heading is single underlined.

Indenting.—This device indicates subheadings. The heading "Introduction" is subordinate to the heading "carbonaceous concentrates," which in turn is subordinate to the chapter title "Feeds for Horses."

Use of numbers and letters.—Numbers and letters are used if there are groups of subheadings having the same relation to a heading. For example:

Field Crops

I. Corn

1. Dent
 - A. Yellow
 - B. White
 - C. Red
 - D. Other colors
2. Flint
 - A. Yellow
 - B. White
 - C. Red
 - D. Other colors

II. Potatoes. Etc.

Headings.—Certain reading matter is well supplied with headings and

even paragraph headings. These headings should be a part of the outline, as they were in our first example. Such headings constitute a sort of skeleton around which the outline can be built.

The introductory paragraph.—The introductory paragraph is sometimes of little importance, like the baseball pitcher's wind-up. In these cases the topic sentences may be omitted from the outline without loss.

Directions—

1. Explain to the class the desirability of making an outline.
2. Illustrate by placing part of an outline on the blackboard.
3. Have class proceed to make outline, having selected suitable reading material.
4. Criticize and discuss outlines at next class period.

Exercise 4—Teaching Students to Generalize

Agriculture is a difficult field to generalize in. Many factors are involved in making rules for farming. The boy must therefore be trained (1) to examine data critically and (2) to draw sound conclusions.

The most frequent forms in which he will find data are tables and such graphic presentations of tables as diagrams and curves and maps. The average student will scarcely examine these, but will take the writer's conclusions. Many of our high school students can not draw accurate or the most important conclusions from a table.

How to get the meaning of a table like those found in technical agricultural books and bulletins is a very profitable exercise for the supervised study period in view of the large amount of data of this kind, especially in experiment station bulletins.

Example.—The following are figures from a Minnesota corn cultivation experiment:

Method of cultivation	Yield per acre, bushels
(a) When all weeds were allowed to grow	0.4
(b) When weeds were cut with a hoe without stirring soil	45.8
(c) When cultivated six times (three times each way)	50.6

This table is, of course, very simple; one like this would be very suitable to start with. At first glance the boy will decide that cultivating six times is desirable; a little study indicates that cutting weeds gives almost the same

yield and that the six cultivations do not give enough increased yield as compared with cutting weeds.

Directions—

1. Explain desirability of drawing sound conclusions.
2. Show class data as map, table, diagram, and the like. Have class express on paper the important conclusions.
3. Have class criticize conclusions as read.

F. W. L.

PROFESSIONAL IMPROVEMENT BY TEACHERS OF AGRICULTURE

At a recent meeting of teacher trainers and state supervisors the following statement was made and remained unchallenged, "The teachers of agriculture as a group do not read professional literature." We are not so sure but that the same statement holds true for all teachers as a group. This, however, can in no way serve as an excuse for the teachers of Agriculture who do not take time for professional reading. It is inconceivable for any teacher to think that he can keep informed on the modern tendencies in education unless he keeps in touch with the modern literature, both in the field of general education and also in his own special field of agricultural education.

In order to make it possible for every teacher of agriculture to have an opportunity to do as much professional reading as his time will allow, an arrangement has been made with the Library Division of the State Department of Education, whereby some of the most helpful books on the problems of teaching can be borrowed for a month at a time with no expense but postage.

The following selected books are available and we suggest that each teacher of agriculture plan to read at least one of these books each month. Kindly send your request for books to the Library Division, Department of Education, Historical Building, St. Paul.

- Dewey—How We Think. 1910.
 Betts—The Recitation. 1911.
 Bobbitt—Curriculum, 1918.
 Borass—Teaching To Think, 1922.
 Colvin—Introduction to High School Teaching, 1918.
 Eaton—Vocational Education in Farming Occupations, 1922.
 Ferriss—Rural High School (Rural school survey of New York State) 1922.
 Germane & Germane—Silent Reading, 1922.
 Haggerty—Educational Achievement. (Rural school survey of New York State) 1922.
 Storm & Davis—"How to Teach Agriculture," 1921.
 McMurray—Teaching by Projects, 1920.
 Merriam—Child life and the Curriculum, 1920.
 Miller—Directing Study, 1922.
 Nutt—Principles of Teaching High School Pupils, 1922.
 Parker—Methods of Teaching in High Schools, 1915.
 Rape—Consolidated Rural School, 1920.
 Robbins—Socialized Recitation, 1920.
 Rugg—Statistical Methods Applied to Education, 1922.
 Sears—Classroom Organization and Control, 1918.
 Snedden—Vocational Education, 1920.
 Staich—Educational Psychology, 1920.
 Stevenson—Project Method of Teaching, 1920.
 Stone—Silent and Oral Reading, 1922.
 Strayer—Classroom Teacher, 1920.
 Thomas—Effective Supervised Study, 1922.
 Thorndike—Education, 1920.
 Wilson & Wilson—Motivation of School Work, 1916.

In addition to the literature found in these books valuable articles appear in the various educational magazines each month. An arrangement is being made with the library division to enable us to select valuable articles that can be clipped and distributed to the men in the state. In co-operation with Mr. Calrow, State Supervisor for Agricultural Education, we are making up circuits of agricultural teachers to whom articles will be sent, with the understanding that each teacher will read the article and send it on to the next man.

There is, however, one magazine to which all teachers of agriculture should subscribe and that is the Vocational Education Magazine, published by the J. B. Lippincott Company, Philadelphia, for the National Society of Vocational Education. The subscription price is three dollars.

A. M. F.