IV

September 23—William H. McGuffey
November 11—Armistice Day
December 28—Woodrow Wilson
January 24—Matthew F. Maury
April 28—James Monroe
June 5—J. L. M. Curry

It would add a fine touch to the occasion of the McGuffey celebration if one or two of the older members of the community, who as pupils in school years ago used McGuffey’s readers or spellers, could be enlisted to take part in the program. It might be possible here and there to find enough of the old McGuffey books in the neighborhood to supply all the materials necessary for the celebration.

October 19—Yorktown Day
November—Thanksgiving Day
January 19—Edgar Allan Poe (Also, Robert E. Lee)
March 29—John Tyler
April 30—First Inauguration of Washington.
May 29—Patrick Henry

For materials, the reference reading lists in the textbook (Wayland’s History of Virginia for Boys and Girls) may be found of service. In addition, every school library should contain that excellent set of books, Library of Southern Literature, edited by President Alderman and others and published by the Martin-Hoyt Company, Atlanta, Ga. In the attractive volumes of this monumental work will be found valuable materials regarding every Virginia author of recognized standing. That is to say, almost or quite every person named in the above programs is given generous space and treatment in The Library of Southern Literature.

In a large school it might be found practicable to assign all of the above programs for use at the same time (for the same year), each one being given to a particular department or grade.

IV

MODERN ARITHMETIC

“The mathematical ignorance of the average educated person has always been complete and shameless, and recently I have become so impressed with the unedifying character of the arithmetical teaching to which ordinary children are liable to be exposed that I have ceased to wonder at the wide spread ignorance.”

The above quotation from the preface of a little book written some fifteen years ago by an able Englishman, in which he referred to the arithmetical teaching to which English children were liable to be exposed, seems to be just as applicable to American children of today. Although the Perry Movement started a wave that has to a large extent wiped out the old textbook of “rules and cases” with little rational explanation and with its hordes of puzzle problems, it went too far and substituted rational explanations which were not rational to a child of arithmetic age and which therefore must be committed to memory in order to be recited by the child. It produced a set of arithmetic texts which made no careful distinction between the fundamental rules, the operation of which must become mechanical, and the rational processes to which these fundamental operations should be applied, and left in the texts and in the courses for which these texts were used as a basis numerous comparatively useless topics. Take for an example a course of study outlined for one of the states not so very long ago:

Grade 1, ages 6-7 years. Number space to 100, Addition tables, Process of carrying, Subtraction.

Grade 2, ages 7-8 years. Multiplication to 9x9, Carrying in multiplication.

Grade 3, ages 8-9 years. Multiplication to 12x12, Multiplication of more than one figure, Long division, Measures.

Grade 4, ages 9-10 years. Fractions—all operations, Measures—all tables.

Grade 5, ages 10-11 years. Decimal fractions, Denominate numbers.

Grade 6, ages 11-12 years. Review of frac-
tions, Percentage, Profit and loss, Com-
mission, Simple interest.

Grade 7, ages 12-13 years. Percentage com-
pleted, Simple and compound interest, 
Simple banking business, Ratio and pro-
portion, Square root.

Grade 8, ages 13-14 years. Review of 
measures, Application to measurement of 
common surfaces and solids, Rapid calcu-
lations, Stocks and bonds, Insurance, Tax-
ation, Algebraic notation sufficient for the 
use of formulas.

Let us examine this outline from a practi-
cal point of view. When the four funda-
mental operations — addition, subtraction, 
multiplication and division—of integers, 
fractions and decimal fractions have been 
carefully taught in such a way that they be-
come purely mechanical operations, the pupil 
has learned absolutely all the pure arithmetic 
for which there will be any demand in later 
life, and unless he is going to specialize (in 
which case special rules and forms will be 
given him at the proper time), only the sim-
pler fractions need be introduced. When it 
comes to denominate numbers, how many 
people besides teachers know or care what a 
dram avoirdupois weight is? What is a 
cwt.? How many pints in a bushel? To 
quote again from Lodge: “The cumbrous 
system of weights and measures still sur-
viving in this country should not be made use 
of to furnish cheap arithmetical exercises of 
proposterous intricacy and uselessness.”

The writer dropped into a modern school 
some time ago and was asked by the principal 
what classes he should like to observe. In-
dicating a preference for mathematics, he was 
shown into an arithmetic class; and this is 
What he saw. The class was working in 
denominate numbers, and after two weeks, 
the teacher said, had reached square meas-
ure. The pupils at the board were strug-
gling to reduce a given number of square 
inches or square feet to acres (as if such a 
reduction should ever be necessary). The 
numbers 9, 44, 30 ¼ apparently had no mean-
ing for them except as part of a ‘table’. One 
pupil was having a hard time dividing by 
ine by long division, another was struggling 
to know how to get the proper remainder 
after dividing by 30 ¼. He apparently 
know that he must multiply by 4 and divide 
by 121, but he could not get the proper re-
mainder. The mechanical work was slow 
and inaccurate. In a moment’s conversation, 
as the writer was leaving the room, the teache-
er imparted the information that he was hav-
ing a hard time ‘teaching them to divide by 
30¼’. Upon being asked why, if this must 
be done, it was not done in the form 30.25, 
he replied that he would teach both ways 
before he got through with it, and added that 
he ‘hoped to get as far as compound addition 
in eight weeks more.’ Ten weeks on that 
sort of thing! and they could not multiply 
and divide correctly.

Simple interest is not simple, nor practi-
cal either, in the usual form of: Find the in-
terest on $342.97 for three years, seven 
months, and nineteen days at five percent. 
Ask yourself, gentle reader, if you ever bor-
rowed any money (if you are a teacher I 
presume you have) and failed to pay the in-
terest the very day the year was up, what 
was the attitude of the lender? Then there 
is the inverse case of commission, usually 
given in a form in which it is not used; and 
compound interest worked by the long 
method, and used chiefly by bankers and 
actuaries, and by them done entirely by 
previously prepared tables.

Stocks and Bonds, Insurance, Taxes! If 
you or I want to invest in stocks and bonds 
we go to a reputable broker and get him to 
do our buying and selling for us and pay him 
without question the brokerage he asks. We 
pay our taxes by the amount that is on the 
tax ticket, and not by our calculations as to 
what should be there; and, as for insurance, 
we have to pay the premiums that the agent 
reads to us out of a little book that he car-
ries in his pocket, the method of obtaining 
which even he does not know.

I might speak of the calculations for 
carpeting, papering, plastering, brick-laying, 
painting, roofing, etc., but I will not. If 
we might only take some of the time devoted 
to these things, so useless and monotonous 
to the pupil, we might be able to teach pupils 
who would appreciate the fact that after 
all is said, in any problem the important 
thing is the correct answer in the shortest 
time possible. If our pupils could be train-
ed in speed and accuracy in the fundamental 
operations they would not be hampered when
the time came for them to make rational applications of these operations.

Let us consider the minimum essentials of a course in arithmetic. Perhaps they may be summarized as follows:

THE WHOLE OF PURE ARITHMETIC

Addition, subtraction, multiplication, and division of integers.

Common fractions introduced both as parts of a unit and as indicated division. (It will be noted that the latter gives an easy rational explanation of such processes as changing an improper fraction to a mixed quantity, changing a whole or mixed quantity to an improper fraction, and reducing fractions to higher or lower terms). The four fundamental operations applied to fractions.

Decimal fractions, including the changing of decimal fractions to common fractions and the reverse, and the four fundamental operations applied to decimal fractions.

Let these operations be thoroughly drilled into the pupils during the first five grades until they become entirely mechanical, the drill work being varied by simple exercises which bring out the arithmetic facts and their uses in the daily life of the child, care being taken that the numbers used are not such as to tire the child in the accomplishment of any single exercise and that the reasoning is not so difficult as to take the child's mind too much off the mechanical operation that he is using. When this has been done let arithmetic stop.

At the beginning of the sixth grade perhaps we might introduce a new course called 'Computation', written a little less formally than the usual texts on arithmetic. The opening chapter might begin somewhat like this:

"We have all studied arithmetic. We have learned to add, subtract, multiply, and divide numbers. This knowledge will enable us, if rightly used, to make most of the calculations needed in practical life. The subject, the study of which we are now entering upon, computation, may be said to be the application of the principles of arithmetic to the solution of problems which arise in the daily lives of some of us, and this study is a guide to the proper application of these principles."

Presupposing the knowledge of the four fundamental operations, succeeding chapters might be as follows:

Chapter 1. Cost of Supplies. Problems relating to the cost of food, clothing, live stock, toys, etc., could be introduced and with them the common measures of length, capacity, and area.

Chapter 2. Bills and Accounts. In this chapter the pupil not only gets practice in the same sort of computations that were introduced in the previous chapter, but also learns the proper form of making out a bill, receiving it, and making change when a bill of larger denomination is presented in payment of an account.

Chapter 3. Personal Account at a Bank. In this chapter the pupil learns what a bank is, the guardian of one's money, and how to open an account and draw a cheque in payment of a bill, how to indorse a cheque and deposit it in the bank, the value of a cancelled cheque as a receipt. And he gets further practice in actual computation and in elementary book keeping by means of the problems.

Chapter 4. Areas, chiefly floor space and city lots calculated in square feet or fractions thereof, and land calculated in acres and fractions of an acre, or perhaps in square rods, introducing such portions of the tables as needed.

Chapter 5. Extension of Arithmetic. Percentage as developed from decimal fractions. The three problems of percentages developed in a logical way as applications of fractions.

Chapter 6. Rent. Rent as money paid for the use of property. Rent determined as a certain percent of the capital invested in the property after certain yearly fixed charges for repairs, insurance, and taxes have been deducted. Problems bringing out these principles.

Chapter 7. Interest. Interest as money paid for the use of money. Rent payable monthly, interest payable yearly (or at the banks at shorter intervals). The lending function of a bank. Discount at a bank. Notes and other evidences of indebtedness. Compound interest explained and illustrated and exercises to be solved by means of interest tables. Savings banks.

Chapter 8. Arithmetic Applied to the Household. Budget: division of income for shelter, upkeep, food, clothing, higher life and savings.

To these chapters might be added an
appendix containing chapters on commission, insurance, both fire and life, stocks and bonds, taxes and other business activities, giving a theoretical exposition of the methods used and showing illustrative exercises, but confining the problems to the results of investments made when definite data are given as to the cost of these investments by the commission merchant, the insurance agent, the stock broker, or the assessor.

These latter chapters might be very well omitted, or only given at the discretion of the instructor.

It is the opinion of the writer that such a method of procedure may perhaps be the answer to the ever-present search for a course in arithmetic suitable to the needs of the junior high school, and also that such a treatment of the subject might perhaps eliminate some of the arithmetical weariness and dislike of the pupil who has been dragged through a course of, to him at least, apparent uselessness. Is it not possible that a course planned in some such way as this might be finished in the seventh grade, leaving the mathematics of the eighth to be given either as algebra to the pupil who expects to continue through the high school or as bookkeeping for those who will not continue?

The writer is deeply interested in this subject and invites discussion as to its plausibility.

HENRY A. CONVERSE

V

HEALTH THE RECONSTRUCTION CENTER OF HOME ECONOMICS TEACHING

The home economics conference of the N. E. A. centered its attention about four of the most vital problems confronting the teacher of home economics in the high school and in the grades. The problems were put as follows:

1. Does home economics teaching function as it should for the girl of high school age?

2. Methods of contributing to vitality of teaching in the grades.

3. How can the school child be given an interest in right food habits through regular school channels?

4. Factors involved in training girls as consumers.

The keynote of the convention was that of the reconstruction of teaching home economics, and placing future emphasis upon "health" and "economics of buying." Much stress was placed upon the fact that the teacher of home economics has a greater responsibility than merely that of teaching the fundamental principles of "cooking" and "sewing." She must consider each child as a future citizen of the nation, who must be prepared to render the most efficient service of which she is capable; and in order that she may be mentally efficient, she must have that degree of health which makes for "initiative, endurance, and success." All work, therefore, bearing upon foods and clothing must necessarily have for its objective the maintenance of health. Millions of dollars are spent annually for food, clothing, and upon household operations by the women of America. Is it not imperative that every girl and woman should understand the economics of buying, that she should be taught to look upon food, clothing, and furniture as merchandise?

In this reconstruction program the teacher of home economics finds herself not only laden with a responsibility for her students, but with a very definite responsibility to the community in which she lives. Miss Agnes Craig, of Springfield, Mass., stressed the necessity of the correlation of all high school subjects; that each subject should be taught with a view to contributing to better home making and better community life. She deplored the fact that the American women were not concentrating their interests upon one phase of social betterment and actually performing a service to their communities, but that each woman who felt the desire of leadership set herself about organizing a social service club, regardless of the community's need or the number of existing organizations which were carrying on paralleled work. She felt that women had proved their ability to cope with men, and now that it was time to plow down in their expression of self-determination, and use the power