THE
TEACHING OF GEOGRAPHY.

A thesis submitted to the Faculty of the
Graduate School
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University of Minnesota, by
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THE CONTENTS

I N T R O D U C T O R Y

The purpose of this thesis is to call attention to the value of geography as a school subject; to point out some of the ways in which it proves of practical value in adult life; to outline a course of study for the grades; to suggest methods of study and recitation; and to indicate the minimum results to be expected and accepted.

The statements in this thesis are the outgrowth of many years of study and experience, including four years of service as a teacher and principal in rural, village, and city schools, eleven years of service as a special teacher and supervisor of geography in the Winona State Normal school, and five years of service as responsible editor of two geographic periodicals--a sort of "clearing house" for all geographic problems.

I. The Aim and Value of Geography.

The value of any subject in the school course depends upon the extent to which it develops the powers of the pupil and prepares him for adult life by giving a practical education, not only practical in the commercial sense of preparedness for the problems of industrial life, but also in the larger sense of the complete and harmonious development of the soul, mind, and body towards the realization of good character, right citizenship, and social worth.

Measured by this standard the educational value of geography is high. It makes for refinement, character, and a broad philanthropy by bringing the child into contact with the earth and the heavens and revealing to him the beauty and grandeur of the Creator's work and our dependence on his laws; by explaining how these laws determine various environments which in turn govern the

occupations, the methods of life, and the mental and physical conditions of peoples the world over; and by showing how the consequent difference in productions brings about an exchange of commodities, and results in the interrelations of peoples and individuals, the dependence of one person on another, and the inter-dependence of all. It gives culture by acquainting the pupil with the ideas, institutions, and the culture of other peoples; and, like travel, for which it is a substitute, it tends to produce breadth of mind and liberality of thought. It is a means for mental training, exercising and disciplining the observational power, the imagination, the memory, and the reason. It develops a spirit of investigation and gives impetus to seek the truth. It is a valuable aid to other subjects, especially language work and reading, nature study, and history. It gives the pupil a fund of information that will make his life more full and useful and will subsequently prove of daily value in conversation, reading, and business. It makes the pupil feel at home in the world he lives in; and helps him to see that true citizenship is partnership in

every good undertaking.

R E F E R E N C E S

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A. P. Brigham. Ginn & Co., 1903.

II. The Course of Study.

The course of study given in the following pages was prepared by the writer for his teachers in the Elementary Department of the Winona Normal School. This course was introduced with excellent results in 1904; and, with slight alterations, continues in use at the present time.

Third Grade.

Stories of children of other lands are contributions to the study of geography, and are the work for this grade. Let the work consist in reading, illustrating, and dramatizing the stories, thus arousing real interest in the earth as the home of man.

The teacher tells the story; the children reproduce it verbally and by means of sandtable, pictures, typical costumes, simple dramatization, etc.

Texts and Helps: Seven Little Sisters, Ten Boys, Each and All, ANDREWS; Around the World, Book I, CARROLL; Little Folks of Other Lands; Children of the Cold, SCHWATKA; Docas, SNEDDEN; Mowgli, KIPLING; Robinson Crusoe, DE FOE; Hiawatha, LONGFELLOW; Little People of Asia, OLIVE THORN MILLER; Picturesque Geographical Readers, Book I, C. F. KING.

Fourth Grade.

B Class. HOME GEOGRAPHY.

In this grade the pupil's greatest interest centers around his plays and his life at home. Let these be the basis of his geography work, introducing topics which influence the largest number of pupils in their out of school life. There is in Winona a splendid field for real home geography, with illustrations of rivers and their work, flood, plains, sand bars, deltas, islands, water partings, etc. Take the children to these places whenever possible. Note the changes made by rain, watch the building up and wearing away processes. Make the work as personal as possible, every child contributing his bit of experience. Emphasize the dependence of the home upon plant and animal life and upon the various occupations and products. Winona also offers excellent opportunity for the study of farming, manufacturing, and shipping. After the study of the regions full of personal interest the work naturally leads to the next larger division--the peoples of other lands.

A Class, North America.

North America is studied as a type, and forms the basis for the study of other continents in the next grade. No attempt should be made to teach the details of the continent as such. The purpose should be to give a general idea of the various continents as to location, highlands, lowlands, large rivers, leading cities, etc., to develop the idea of the world as a sphere, and to illustrate the interesting phases of life and of man's inter-dependence. Draw to scale plans of the school room, the campus, the city, showing boundaries, its principal streets, the Normal school, child's home, post-office, etc. Make pulp relief maps and colored maps in crayon.

The teacher rather than the text-book must lead the class. Let the teacher introduce and illustrate, then let the text-book be an aid in its proper place.

Texts: B Class; Brooks and Brook Basins, Frye; Home Geography, Tarr and McMurry, pp. 1-110. A Class; Book I, Tarr and McMurry, pp. 110-206; Child and Nature, Frye; Home Geography, Long. Supplementary: North America, Carpenter; Around the World Readers, Book I; The World and Its People; New School Atlas, Longman.

#13.

Fifth Grade.

B Class. South America and Europe.
A Class. Asia, Africa, and Australia.

The most lively interest can be awakened in the minds of children through stories of child life. Advantage should be taken of this in leading them from their own surroundings to those of life in other lands. The teacher must furnish much detail. Let the work take two forms: (1) reading or verbal description by the teacher supplemented by pictures, sand modeling, blackboard illustration, maps and globes, till the height of interest is reached and children are ready for more: then (2) sending children to texts and supplementary books. Constantly compare the continent studied with North America and the section with local geography. See that the child gets out of doors in his thinking, and does not stop at globe, map, or memorized words. Do much map drawing to scale, begin the method of topical recitation, and make constant use of typical products of countries studied, pictures of places, people, etc.

Text: Book I, Tarr and McMurry.
Supplementary: Geographical Readers, CARPENTER; The World and Its People series; Stories of Other Lands, JOHONNOT; Round the World, Book II, CARROLL; Child Life in Many Lands, BLAISDELL; Hans Brinker and Silver Skates, etc.

Sixth Grade.

North America; B Class to Central States.

In this grade the causal notion becomes prominent. Those physical controls which are fundamental in a causal study of any continent are taught separately, while the other physical features such as land form, ocean currents, etc., whose effects are better seen in detail than in general, are considered as need for them arises. In the study of the change of seasons, day and night, and whenever opportunity offers, have children make actual observations. Let the topical recitation be followed largely. In making an outline of the subject-matter to be taught, follow the natural divisions in the order of their dependence one upon the other.

One group of states or one country of North America should be studied intensively, then, with this as a type study, all other work should be based upon it.

Let maps be drawn showing (1) physical conditions, (2) products and industries, (3) commercial routes, etc. Let typical industries and products receive much attention. Bring into the class the "life" of the people studied.

For illustration use the shadow stick, thermometer, apparatus for showing earth and orbit, globe, maps, relief-maps, illustrated letters from countries studied, typical woods and products.

Text: Book II, Tarr and McMurry.
Supplementary: Picturesque Geographical Readers, KING; North America, CARPENTER; Reader in Physical Geography, DODGE; Nature and Man in America, SHALER; The Earth and Man, GUYOT; Some Queer Corners, LUMMIS; Land of Cave and Cliff Dwellers, SCHWATKA; Lessons on Mexico; Journal of Geography, Vol. 1; American Bureau of Geography, Vol. II; Little Journeys to Hawaii and the Philippines, MARIAN GEORGE; Hawaii and Its People, TWOMBLY; Alice's Visit to the Hawaiian Islands, KROUT; The Storied West Indies, OBER.

Seventh Grade.

During the first half of the year make a careful study of Europe and South America, and during the second half a like study of Asia, Africa, and Australia.

Before reaching the seventh grade pupils have learned the method of approaching geographical material. They have gained considerable knowledge as a basis for easily grasping new facts and relations, and for rational comparisons. Full and free discussion growing out of present commercial, social, scientific, and governmental questions will help the classes in this grade to avoid bookish treatment of geography and will reveal to them the breadth and interest which the subject possesses. A few countries made real in landscape, life, and institutions, and those the countries of greatest importance, should be the method in this grade. Teach Germany, for instance, so that pupils not only know Germany's location, physical conditions, and large cities, but so that they picture German landscapes, people, and life, and get a notion of what Germany's patience and thoroughness mean, and to what Germany owes her place in the modern world.

Text: Book III, Tarr and McMurry, pp. 96-485.

Eighth Grade.

The work in geography for one-half the eighth grade is given to a comparative study of the world from the physical and commercial standpoint. North America is taken as the basis, offering an excellent opportunity for comparison with other continents as to commercial conditions, influenced by physical. Though the first object is a knowledge of North America, the final aim is a related and well ordered knowledge of the world as a whole.

Text: Book III, Tarr and McMurry, pp. 1-95, 487-542.
Supplementary: Webster's Commercial Geography.

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J. Russell Smith, Vol. I. pp. 420-430.

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4. The Use of Supplementary Reading,
Editorial, Vol. II. p. 109.

5. Geographical Text-books and Geographical Teaching,
Martha Krug Genthe, Vol. II. pp. 227-243; 360-369.

6. The Practice School Course in Geography in the Normal School, Charleston, Ill.
Vol. II. pp. 393-404; 469-481; 507-516.

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10. Primary Geography,
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11. Practical Work in School Geography,
R. H. Whitbeck, Vol. III. pp. 374-379.

12. The Rational Element as an Organizing Principle in Geography,
W. J. Sutherland, Vol. IV. pp. 97-106.

13. Geography in the Intermediate Grades,
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14. Organization in School Geography,
F. A. Manny, Vol. IV. pp. 312-313.

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3. Some Pedagogical Principles Underlying the Teaching of Geography,
Arthur Allin, Vol. I. pp. 301-309.

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5. The Present Status of the Teaching of Geography,
W. A. Mowry, Vol. II. pp. 1-6.

6. The Study of Commercial Geography in Common Schools,
J. N. Tilden, Vol. II. pp. 6-11.

7. The Social Phase of Geography,
C. C. Van Liew, Vol. II. pp. 11-18.

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   J. A. Merrill, Vol. I. pp. 322-328; 379-386.

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   L. W. Lyde, Vol. II. pp. 227-230.

3. Geography Course at New Haven, Conn.
   Vol. III. pp. 12-25; 65-73; 89-100.

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   I. O. Winslow, Report of Geog. Congress, 1904,
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III. What should the Child gain from his Geography Work in the Grades?

In the schools of Minnesota, the serious study of Geography begins in the Fifth and ends in the Seventh Grade. During these three years geography receives about one-fifteenth to one-tenth of the pupil's time and effort. This is not enough to justify us in expecting the child to gain a complete knowledge of the great world in which we live, with its nearly 200,000,000 square miles of varied land and water surface; its almost countless conditions of topography, climate, people, industries and products; and its nearly endless relations and interrelations. The grammar-school work in arithmetic cannot produce university mathematicians at the end of the seventh grade. Neither can the grade work in geography, in the same or in less time, produce geographers. It takes time to get acquainted with the earth and its inhabitants. If it is easy for the nature critic, perhaps a professional man schooled in certain phases of geography

by reason of his own life-work, to underestimate the results and value of our geography teaching in the grades, we must remind him again and again that the field of Geography is wide, its facts many, and its relations complex; that the child is young and the time is short-- usually less than one-twelfth of three years-- less than three school months of solid effort; and that our teachers and programs are over-crowded with varied demands.

"There is a difference between the ideal--or what we should like to have the boy know of geography-- and the attainable ideal-- or what we may reasonably expect him to know. There is, too, quite a margin between what a boy may be expected to know at the end of the grammar school course and the sum of all that he has known, at one time and another, during that course." Prof. R. H. Whitbeck of the state normal at Trenton, N. J., from whom I have just quoted, estimates that, even in schools where geography continues through the eighth grade, the average pupil at the time of his graduation from that grade, retains less than one-fifth of what he had previously learned in his daily geography lessons. What,

then, must be true of our Minnesota boys and girls who end their geography work in the seventh grade? What can we do for them and how much are we to expect of them?

Life is too short and school life ought to be too valuable to waste any of it on unessential details taught merely to be forgotten. It must surely be considered a very serious mistake to so teach geography that less than one-fifth is retained at the very time the course is completed. And while it is true that part of the value of all school work lies in the act of learning itself,--in the training of the mind faculties, in the broadening of interests, in the cultivation of the powers of observation and judgment,-- and while it is equally true that geography, even if forgotten, contributes its share to mental development--still it must be granted that the best teaching ought not only to bring to the pupil all of these disciplinary advantages, but also a vast quantity of useful geographic information closely related to his future life, his travel, reading, conversation, and business. And it is likewise evident that the

best results in this direction are most likely to be secured where a definite aim is clearly set forth and the ends to be attained are constantly before the teacher. This aim will differ somewhat with locality, and will depend partly on the ability and interests of the children and the training and purpose of the teacher; but the following brief summary is given as a minimum requirement of pupils finishing geography in the seventh grade in Minnesota.

I. HOME GEOGRAPHY:

Altho the child is given a course in home geography in the fourth grade, he is then too young to gain more than the most elementary conceptions. Upon these he must build, and to these he must add, little by little throughout the whole course. By the end of the seventh grade, he should have a fair knowledge of the physiography, industries and life conditions of his home region, and their relations to each other. He should know the chief lines of manufacturing in his own city or town, the natural

productions of the surrounding country, and the chief routes of transportation which take these products to distant countries and bring back supplies. He should understand the relations between the natural resources of his own vicinity, such as climate, topography, soil, mineral wealth and water power, and the development of his home city or town.

He should be able to name regions resembling his own in other parts of the world, and to give reasons for such resemblance.

II. THE EARTH AS A PLANET.

The pupil should understand the earth's shape, its causes and consequences, and should be able to answer clearly such questions as the following: Why the shortest route from Seattle to Canton, China takes the vessel north along the coast of Alaska, the Aleutian Islands and then south past Kamchatka and the Japanese Empire? Whether Spain is nearer Cuba or Newfoundland? Whether it would be nearer to send wheat from Manitoba to Liverpool via the St. Lawrence system or Hudson Bay route?

Whether the Panama Canal will shorten the water route from New York to Manila? What part of North America lies in the same latitude as Europe? What part of South America lies in the same longitude as Minneapolis? And what part of South America in the same longitude as Buffalo, New York.

III. HIS STATE AND HIS COUNTRY.

He should have a comprehensive knowledge of his state and country, its main physical features, its leading industries, and such relations between these as children can understand. On a subsequent page -- 67 -- will be found an outline for the study of a state or country.

The question is often asked, "To what extent map drawing should be insisted upon?" The answer is that the child should be required to know how to sketch from memory a map of his state, showing the location of his own and bordering counties, the leading physical features, and the important cities. The same is true of his country as a whole, which the child should be able to sketch rapidly from memory, indicating the boundaries

of all the states and the location of the leading cities, and their geographic features.

IV. THE REST OF THE WORLD.

The child should have the same knowledge regarding other countries and continents, their physical features, climate, leading industries, and the relations between these. He should know the characteristics and modes of life of the people, and be able to account for resemblances and differences. He should be able to draw an outline map of each of the continents, to sketch in the boundaries of the countries, and locate the leading cities, and the main seas, gulfs, peninsulas and islands. Of each of the leading cities, besides position, he should know the causes for its location and growth, its comparative size, its leading industries, and such other facts as the importance of the city may warrant.

His study of the world as a whole should have acquainted the child with the main facts regarding world climate, and its influences on people, products and industries; and he should be able to cite specifically illustrations of cases where this influence is clear and unmistakable.

V. INTERESTS AND HABITS.

If the child has mastered the above requirements, he has accomplished a satisfactory course in grade geography; but the teacher has not accomplished her full duty unless she has instilled a lasting interest in the subject, and an impetus to future study. She should have developed in the child the habit of inquiry, and the tendency to accept an explanation only after it is clear and convincing. Besides developing the pupil's memory, his powers of observation and reasoning, for which the geography work is so eminently adapted, the teacher should have increased the child's range of interest, powers of discrimination, and desire to seek the truth.

IV. METHODS OF STUDY AND RECITATION IN GEOGRAPHY WORK IN THE GRADES.

General Principles.

A teacher's success depends not so much on what he himself does as on what he gets his pupils to do. This is true with all pupils, in all subjects and in all schools; and it applies with special emphasis to geography work from the lowest grades to the most advanced university courses.

Another cardinal attribute of the successful teacher is thoroughness. And this too is particularly true of geography work where the apparent demands of a poorly organized and almost limitless mass of subject matter are likely to cause the teacher to attempt too much in too short a time. It is a wise teacher of geography who eliminates the unessentials and then so teaches what he does teach as if it were to be retained for all time.

Again, good teaching is largely a result of satisfactory preparation. In this respect geography has to suffer much, for in most cases it is taught by those who have not touched the subject since they themselves

completed it in the seventh grade. After an absence of four years at the high school and possibly four years more at a university, these young men and women return to teach or to supervise the teaching of a subject of which they have never had a thorough understanding and of which they have by this time forgotten almost every trace. They are, therefore, likely to find geography difficult and its teaching distasteful; and the pupils are not likely to distance their teachers either in interest or proficiency. And since normal schools furnish but a small percentage of the elementary teachers in Minnesota, the unfortunate depreciation and dislike for geography reproduces itself automatically from generation to generation. How much more could be accomplished if the teachers came before their classes with a liberal margin of geography knowledge, with a strong appreciation of its practical value, and with lively interest and enthusiasm for the work!

Assignments of Lessons.

The daily assignment of the lesson is an important and essential part of every recitation, and is, therefore,

to be given thorough and thoughtful consideration by the teacher. Work should be so planned and assigned that each pupil knows exactly what is expected. Pupils will lose respect for careless assignments, especially when they are commonly found too long or too short. Furthermore, the teacher owes it to his pupils to respect his own assignment during the recitation period; what he has asked for in the assignment he should call for in the recitation. He should make the assignment both possible and reasonable; should bring the pupils in touch with the means and materials needed in its preparation; should hold them strictly responsible; and should aim to cultivate the spirit and ability of independent and self-directive effort in study so far as this is consistent with the highest possible efficiency and economy of effort.

Lesson Plans.

Thorough planning of daily class work tends to increase the confidence of teacher and pupils; to lessen conflicts and confusion; and to insure against loss of time and energy.

In the creation of a plan, the teacher should see that the kind, amount, and treatment of the subject matter correspond to the age, ability, and experience of his pupils; that his schemes for the stimulation and guidance of their learning activities are adapted to their interests and needs; and that all books and apparatus, as maps, charts, pictures, chalk and the like which are properly to be used are provided and made ready before the recitation period.

There are many ways of outlining lesson plans but the "Herbartian" and the "Dewey?" are among the best. Illustrations of former will be found in the Bulletin of the American Bureau of Geography, edited by E. M. Lehnerts, the most helpful ones being those in Volume I. pages 141-143, 144-151, 355-365, and in Volume II., pages 30-34, 35-44, 136-150, 324-329.

The Question and Answer Method.

The skillful teacher leads the pupil to find out for himself by asking the right kind of questions. Socrates so questioned as to incite and lead the investigator to

discover the truth. This way of teaching demands attention, awakens the interest, and guides the efforts of the class; and the learner has the pleasure of discovering truth for himself.

If the text book has questions printed in it, it is not wise to use them; but if these questions must be used, they should be given in changed form. This will help to prevent mechanical slavery, and will contribute in some small degree to thought stimulation.

The question should be definite, but not leading. Questions which suggest the answer, or which can be answered by yes or no are as deadening as teachers who permit the indefinite and rambling answers little more than guesses of unprepared students.

Questions calling for a general answer from the entire class must be used sparingly, for the lazy pupil knowing nothing of the lesson will be able to add his voice to the general sound, and so cover up his ignorance. He thus deceives himself unintentionally, for his unprepared condition may remain unknown to himself until he is called

upon to make a full statement individually.

The two qualities characteristic of good answering are thoughtfulness and distinctness and accuracy. A pupil often hints his answer in the hope that the teacher will supply what is wanted. Such answers should not be accepted, but the pupil should be required to make his thoughts clear and definite.

The Topical Recitation in Geography.

Years of experience have established the fact that the topical method is especially suited for geography work. The method is so well known and so often used that it need not be enlarged on here. Each individual lesson will usually require its own list of topics. For the study of a country or state, a general outline applicable to all can be employed. Such an outline is given on page "67" of this thesis.

It is advisable for both teacher and student to preserve a copy of the outline of topics from day to day, as this will be proof of systematic work and will also serve as a basis for review. The continued outline helps

the pupil to grasp the subject as a whole. It appeals to his understanding, because of the natural order of procedure. There is always a freshness which seems to stimulate and keep alive the interest. It exercises the memory and develops the power of expression perhaps more than any other method. It teaches the pupil to study and think for himself, to look for causes and effects, to make comparisons, and to associate ideas and facts.

Special Topics.

In the sixth and seventh grades, it is possible to vary the ordinary routine by the assignment of special topics to certain students, or to the class as a whole. It is surprising what enthusiasm this method will arouse in the work, especially if the pupils can be made to believe that they are contributing new knowledge to each other. Some of these topics may call for supplementary reading, others for outside geographical observation, and still others for conference with their parents and friends. Where the size and openness of the school grounds permits it, experimental work may be given as a special topic in geography, and such problems as irrigation and the construction of locks in canals may be worked

out successfully. Important problems in erosion can be illustrated, and in the winter months even an eskimo village can be planned and constructed by the older and younger children in complete detail, and in entire accord with the exact conditions occuring in the far North.

Imaginary Journeys, and
Letters and Compositions.

Among the many varied devices and methods which have been used to make the study of geography interesting in the grades, none is likely to excite more enthusiasm than the imaginary journeys. Prof. Henry McCormick of the State Normal University at Normal, Illinois, has been so successful with this method that he has issued a booklet for the guidance of teachers and pupils in this subject.

In my own classes I have found that this method yields the best results when sparingly used. It comes in best after the thorough study of a foreign country, region or city. The pupils can be provided with time-tables, maps and supplementary books, and they can be led to make their imaginary journey most realistic.

I have had pupils make their imaginary journeys with such faithfulness to actual conditions that schooled and traveled men have been deceived into believing them real.

Another method of taking imaginary journeys is by meanns of the stereoscope, and the stereopticon. Here the teacher must be the leader and must determine the usefulness and value of the exercise.

A third method is offered by imaginary letters or compositions. After the study of a continent, for example Europe, each pupil may be given a country and expected to make imaginary excursions and travels throughout its length and breadth, writing letters to his class-mates at home, and giving the geographic essentials of climate, industries, people, etc. The pupils may be encouraged by having a few of the best letters published in some childrens' paper, as for example the Journal Junior.

Geographic Lectures.

The geographic lectures by the teacher have already been suggested under the imaginary journeys above. Wherever possible, it will be well to supplement these elementary

efforts with the more comprehensive and interesting accounts of professional lecturers, especially those who have actually traveled in the lands they describe. Such lectures will create in the pupils a desire to know more of the distant lands, and will prove an incentive to better study and recitation.

Spelling-down Contests.

As a novel method for an occasional review, the spelling-down contest deserves to be mentioned. By this contest is not meant the actual spelling of geographic names, but rather the answering of geographic questions. In every other way the contest may be carried on as the old time spelling-down class. Leaders are chosen, who in turn chose sides, thus dividing the class into two opposing sections. The teacher has prepared in advance a complete set of certain questions on the subject to be reviewed. Any one failing to answer his question is spelled down, and retires from the line. The game is to see which side can stand the longest.

A modification of the game may be arranged by

permitting the opposite side to claim the opponent who has made a mistake. In this way the game partakes of the nature of prisoner's base, the end being to see which line is the longer at the close of the game.

Debates.

To relieve the monotony of the daily routine of school work, a geographical debate two or three times during the year may be found serviceable. Indeed, this method has been employed with so much success in the writer's classes that a more complete exposition of this device may be found on pages "56" to "66", the importance of the subject being considered sufficient to justify its introduction in this thesis on the teaching of geography.

Dramatization.

In teaching geography, the drama may be made use of to aid the pupil in realizing that geography concerns real life, real people and real things. It will enable them to understand the influence of surroundings and social conditions.

If the drama can be prepared by the pupils themselves, its value will be increased, and its success assured.

This device may take the form of an international congress of powers, at which each pupil appropriately dressed in the national costume of the country he represents may take his part in the drama as agreed upon. For example, it may be a peace conference, and then each representative will produce the geographic reasons of "his" country for keeping the peace. Or, the drama may take the form of a conference between the supposed head of a great business firm, for example, in New York, and his several agents, each returning from a distant state or foreign land, and reporting on its people their commercial needs, their products, and the like. The children, with a teacher's help, can write their own little dramas thus giving them training in composition work as well as drill in geography.

Exchange of letters between Children
in distant schools.

A courteous request to some teacher or principal in another section of the country, asking if letters can be exchanged between pupils of the same grades, will without doubt receive a favorable reply. The pupils of the one

school, with their teacher's help and suggestions, can then write letters to the pupils in the other school, asking for information regarding geography of that distant locality, and telling about the interesting features in their home town and sufrounding country. For example, a boy living in a little mining town such as Ely, Minnesota, or living out on the western prairies near Pipestone, Minnesota, can write a most helpful letter to a New England pupil, living for example at Worchester, Massachusetts; and in return, the Easterner can tell him all about the fishing industry--perhaps about some fishing trip in which he took part with his father-- and can send him a description of the tides and ocean, and of the life in a fishing town. Such correspondence will generally on account of language have to be carried on only between different sections in English-speaking countries. It will often prove more instructive than the printed page, and it will lead the children to become interested in the life of their fellow play-mates in far away land.

Illustrative Materials in Geography.

The experienced teacher will not be content with the descriptions and illustrations found in the text books,

however good these may be. He will have learned that many a dull recitation can be transformed into a lesson full of life and interest, and that many a hard topic can be made less difficult and more easily remembered by the mere introduction of suitable illustrative materials. These materials may include maps, globes, specimens, pictures, diagrams, experiments and excursions.

Maps, including wall maps and globes, have not only been greatly improved in recent years, but prices have also been greatly reduced. Thus an eighteen-inch globe, which ten years ago, sold to schools for $75 or more, can now be bought for $20 or less. The best globe for school use is the eighteen inch hanging globe, which can be obtained from all school supply houses for $15. In addition to the one large globe, there should be a small one of light construction, so that it can be easily carried by pupils in class demonstrations of day and night, and seasons, and so on.

Wall maps are a necessity. If the authorities cannot provide them, then the teacher and pupils must make suitable substitutes, as best they can. Once properly started,

seventh grade pupils will delight in the making, will gain valuable map knowledge, and will produce creditable results of permanent usefulness. The best American wall maps are manufactured by Rand, McNally & Co. of Chicago. Their Columbia series of political and physical maps can be recommended as convenient and economical. These maps come in so called Columbia cases, seven maps to the set, and cost about $30 per set, including one map of the world, one of each continent and one of the home state, and obtainable either as political or physical series.

Relief maps are a luxury rather than a necessity. Good models are too expensive for elementary schools. It is more advisable for pupils and teachers to construct their own models and relief maps. Directions for such work will be given on page " ".

The School Cabinet.

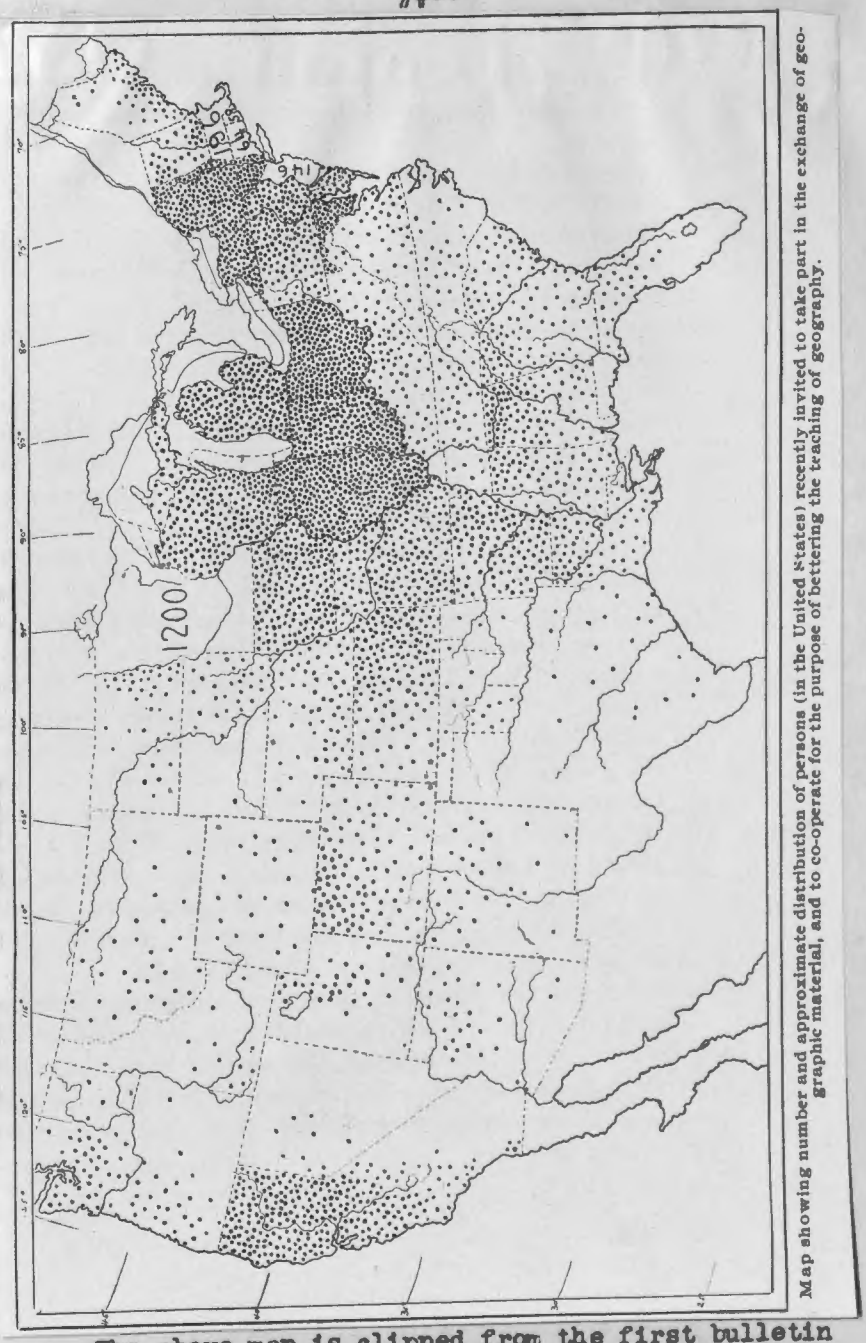
Not all schools have a museum at hand to which the teacher can turn for illustrative material, such as photographs and pictures of typical geographical features, and actual specimens of the world's important commercial products. This deficiency, however, can be remedied if the teacher and

pupils of a school will prepare collections and accompanying descriptions of type pictures and products from their home localities, and arrange these for exchanges with schools in other sections of the world. For the trifling expense of freight and postage, every school can obtain a considerable collection of valuable illustrative materials.

The descriptions accompanying each article, and written by the distant teacher or pupil; the making up of return collections and descriptions from the home locality; the attendant, tho perhaps incidental lessons on commerce and cmmercial high-ways; and the living interest which pupils will have in collections thus made, will all be of additional value.

Some years ago the writer undertook to organize a bureau of exchange amongst the geography teachers of the United States. The movement met with unexpected success, and resulted in a membership of about eighteen hundred in the course of two years. It is estimated that several thousand exchanges of photographs and products were made. To illustrate the character and scope ofthe work, a few clippings from the bureau's bulletin are given on the next few pages.

#3.



Map showing number and approximate distribution of persons (in the United States) recently invited to take part in the exchange of geographic material, and to co-operate for the purpose of bettering the teaching of geography.

The above map is clipped from the first bulletin of the American Bureau of Geography, successfully organized in 1900 by E. M. Lehnerts, then of the Winona Normal Schools.

#44.

EXCHANGE MATERIAL EXAMINED AND APPROVED

[Requests for information regarding the exchange of illustrative material should be sent to the Director of the Bureau, Winona, Minn.]

Model of Cape Cod.—Purchase price, $15.00. Prof. Vernon F. Marsters, Indiana University, Bloomington, Indiana.

The model includes Truro and Provincetown. Horizontal scale about 1.5 miles to the inch, vertical scale 600 feet to the inch. The model is of plaster, framed in oak, and is constructed by the contour method. The surface is colored, and the important features of drainage and the occupation of the land by man are indicated. Copies have been supplied to the geographical laboratories at Columbia and Cornell universities.

Forty Herbarium Specimens.—Purchase price, $2.00. Prof. J. A. Dresser, Richmond, P. Q , Canada.

Forty well mounted and labeled specimens of spring-blooming Canadian flowering plants. A properly prepared sample has been filed with the chairman of exchange committee. Minerals and plants desired in exchange.

Flax.—Purchase price, $1.00. Mr. Philip Emerson, Principal of Cobbet School, Lynn, Massachusetts.

Scutched flax (Russian, Dutch, Flemish, American), and dressed flax; and specimens showing changes from flax to linen thread and yarn. Thousand-word type-written description of process of manufacture, and bibliography of publications on flax and linen.

NEW MEMBERS OFFERING MATERIAL FOR EXCHANGE

(The list also includes recent renewals)

In the following list, a marginal * indicates ability and willingness to exchange photographs of neighboring geographic features, and a marginal † indicates the same for characteristic products. Those who offer to exchange both geographical views and characteristic products of their vicinity, are indicated by a marginal *†. Write directly to those members who live in regions from which photographs or specimens are desired; enclose stamp for reply; and, when making the exchange, aim to give rather more than you receive. To have material mentioned in detail as above, it is necessary to submit samples for examination. If approved, the material offered will be duly listed in the Bulletin; and a purchase price, representing cost of preparation, will be added for the benefit of those who have no material to send in exchange. The two detailed statements at the foot of this list show what a wealth of interesting material can be secured by those who take advantage of the department of exchanges.

Clipping from the second volume of the Bulletin of the American Bureau of Geography, showing how materials for exchange were listed. The names and addresses of over 225 members are given on the next few pages.

#45.

CALIFORNIA

* H. W. Fairbanks, Geologist and Geographer, Berkeley.
† Alice A. Gates, San Rafael.
† F. W. Hooper, Principal of Etna Schools, Etna Mills.
* H. L. Lunt, Superintendent of City Schools, Riverside.
*† T. E. McCarty, County Superintendent of Schools, Placerville.
† Anne McLanahan, Supervisor of Grade Work, Bruceville.
* E. I. Miller, Teacher of Science, State Normal School, Chico.
† Mrs. Julia C. Sherwood, Spruce Grove District, Lower Lake.

CANADA

*† John Alexander Dresser, Principal of St. Francis College, Richmond, Province of Quebec.
† Arthur D. Fox, Tusket Wedge, Yarmouth Co., N. S.
*† O. E. LeRoy, Geology and Geography, McGill University, Montreal.
* H. J. Silver, 94 St. Urban street, Montreal.
*† William Ward, 131 Division street, Kingston, Ontario.

COLORADO

*† George Lyman Cannon, Instructor in Geology and Astronomy, East Denver High School, Denver.
*† Chas. V. Parker, Superintendent of City Schools, Trinidad.

FLORIDA

† C. L. Hayes, Principal of State Normal School, De Funiak Springs.

ILLINOIS

*† Mrs. Margaret S. Fitch, Principal of Prescott School, 1803 Barry Ave., Chicago.
*† F. W. Plapp, Jefferson High School, 2549 N. 42 avenue, Station 35, Chicago.
† Teachers Library, Board of Education Rooms, Joliet.

INDIANA

* W. J. Machwart, Professor of Science, Normal University, Muncie Normal City.

IOWA

* Arthur E. Bennett, Dean of Normal School of Upper Iowa University, Fayette.
*† Horace T. Bushnell, Principal of Grammar School No. 8, Davenport.
*†Howard E. Simpson, Superintendent of Schools, Columbus Junction.

KANSAS

* O. P. Barnes, Western Agent, Ginn & Co., Leavenworth.
* J. D. Orr, Principal of Schools, Fort Scott.

KENTUCKY

† M. E. Marsh, Principal of Academy of Berea, Berea.

MASSACHUSETTS

† Lyman R. Allen, Instructor in Geography, State Normal School, North Adams.
† Carrie M. Bassick, East Saugus.

The members offering material for exchange were secured from nearly every state and territory and province in North America.

#46.

* F. P. Gulliver, Professor in Natural Science, St. Mark's School, Southboro.
*† Arthur P. Irving, Superintendent of Schools, Ayer.
† Jessie B. Kemp, Principal, 106 Ridge Ave., Athol.
*† Winifred Miller, Teacher of 6th, 7th and 8th Grades, Amesbury.
† C. E. Stevens, Superintendent of Schools, Stoneham.
*† Alfred Turner, Superintendent of Schools, Turners Falls.

MICHIGAN

* E. T. Austin, Superintendent of City Schools, Owosso.
*† E. E. Ferguson, Superintendent of Schools, Sault Ste. Marie.
*† Lee Hornsby, Principal of Tenth Grade School, Williamsburg.
*† Eugene La Rowe, Principal of High School, Teacher of Latin and Physical Geography, Hancock.
† E. M. Ledyard, Superintendent of Sterling Public Schools, Sterling.
*† V. G. Mays, Superintendent of Schools, Newaygo.
† Alice A. Warner, 7th Grade Teacher, 2000 Broadway, Menominee.

MINNESOTA

*† Martin A. Beatty, Rochester.
† Geo. R. Borchardt, County Superintendent of Schools, Madison.
* Harry E. Canfield, Principal of Schools, Jasper.
*† K. C. Davis, Teacher of Biology, Normal School, St. Cloud.
* James T. Fuller, Mantorville.
*† L. S. Graves, Elba.
† May L. Hatfield, St. Charles.
*† Wm. Masteller, Wycoff.
*† E. E. McIntire, Principal, Glencoe.
*† C. A. Pachin, Superintendent of Schools, Zumbrota.
*† S. J. Race, Superintendent of County Schools, Redwood Falls.
*† Elizabeth C. Schmidt, Mazeppa.
*† F. E. Stratton, Principal of Academy and Teacher of Greek, Northfield.
† Mrs. D. A. Swann, Teacher in Geography, 327 Jackson street, Mankato.
*† Anna S. Swansen, Principal Training School for Girls, Red Wing.

MISSOURI

† U. Grant Dotson, Principal of Schools, Neck City.
† Joseph D. Elliff, Superintendent of Public Schools, Joplin.
† Merlin C. Findlay, Geology and Biology in Park College, Parkville.

MONTANA

*† M. J. Garrett, Principal of Public Schools, Helena.

NEW HAMPSHIRE

† Anne L. Goodrich, Grammar Grade, Nashua.
*† Wm. H. Huse, Principal of Hallsville School, Manchester.

NEW JERSEY

*† Wm. E. Reese, 12 Brainerd street, Phillipsburg.

NEW MEXICO

* Geo. B. Haggett, Teacher of Indian School, Thornton.
† C. M. Light, Silver City.

The bulletins were issued quarterly, and contain the addresses of over twelve hundred bone fida members interested in the exchange department.

#47.

NEW YORK

† Clifton C. Albright, Teacher in Geology and Geography, Rapids.
* Channing E. Beach, Principal, Grammar School, No. 23, 49 Days Park, Buffalo.
*† S. Lillian Blaisdell, 4 Cascadilla Place, Ithaca.
*† Bertha Fales, Westbury Station, Long Island.
† Anna C. Farnham, Teacher of Geog., West New Brighton, Staten Island.
* Jessie E. Hueston, Instructor in Nature Study Methods, 950 Marcy avenue, Brooklyn.
*† Charlotte E. Reeve, Teacher of Geography in Normal and Training Departments of State Normal School, New Paltz.
*† Estelle T. B. Storms, Teacher of Mineralogy, 301 West 112 St., New York.
* Lloyd S. Tenny, Biology and Advanced Geography, Hilton.

NORTH CAROLINA

*† O. A. Betts, School for the Deaf and Dumb, Morganton.

NORTH DAKOTA

* Willis E Johnson, Department of Geography, State Normal School, Mayville.
*†Lura L Perrine, Instructor in Natural Sciences, Valley City.

OHIO

† L. P. Clawson, Principal of Schools, Hamilton.
* Charles F. Dutton Jr., Teacher of Physical Geography, West High School, 629 Franklin avenue, Cleveland.
*† S. H. Layton, Superintendent of Schools, Barnesville.
† J. C. Seaman, Vermillion.
* Lewis J. Westgate, Professor of Geology, Wesleyan University, Delaware.
† T. Otto Williams, Greenfield.

OKLAHOMA

* Maude De Cou, Territorial Normal School, Alva.

PENNSYLVANIA

*† F. V. Emerson, Teacher of Science in High School, Steelton.
* Susan S. Forsyth, 140 N. 16th St., Philadelphia.
* Ralph L. Johnson, Supervising Principal of Schools, West Conshohocken.
* J. C. Reed Johnston, Principal of Schools, Bennett.
* Herman T. Lukens, Head Training Teacher, State Normal School, California.
† A. L. Pepperman, Principal, Grammar School, 332 Academy St., Williamsport.
* Wm. W. Rupert, Superintendent of Public Schools, 545 N. Charlotte street, Pottstown.
† H. H. Spayd, Principal of Schools and Teacher in High School, Minersville.
* Edwin Stanley Thompson, Wissinoming Hall, Mt. Airy, Philadelphia.

TEXAS

† J. R. King, Principal of Public Schools, Rancho.
† R. M. Schiel, String Prairie.

VERMONT

† Eunice A. Foster, Teacher of Fourth Grade, Bellows Falls.
* Gilbert H. Trafton, Teacher of Science in St. Normal School, Randolph Center.

By the end of the second year, the total membership exceeded eighteen hundred. The annual fee was $1, and this entitled the member to the free use of the exchange department, as well as to the receipt of the bulletin and special publications.

#48.

VIRGINIA

*† J. P. Matthews, Editor, Rocky Mount.

UTAH

*† W. S. Webster, Principal of Lincoln School, Salt Lake City.

WASHINGTON

† M. A. Mitchell, Teacher of 5th and 6th Grades, Black Diamond.

WISCONSIN

† Mary W. Goetz, Cadott.
*† Geo. P. Hambrecht, Superintendent of City Schools, Grand Rapids.
*† M. C. Palmer, Principal Fifth Ward School, Sheboygan.
† John S. Roeseler, Principal of High School, 1404 N. Fifth street, Sheboygan.

WYOMING

* Frank H. H. Roberts, Principal of Normal Department, Laramie.

[The great variety of the material offered for exchange is partially shown by the following statements taken at random from scores of similar letters. Many of the members in the above list have even larger collections for exchange.]

Director, Bureau of Geography, Winona, Minn.,

DEAR SIR:—I can exchange the following material: 1. Sand from the dunes or coast; 2. Small bottles of sea water; 3. Tufts of moss two or three feet long; 4. "Pine Cones;" 5. Specimens of the "fat pine" rich in turpentine and rosin; 6. Oyster shells; 7. Other shells; 8. Fiddler crabs in preserving fluid; 9. Hermit crabs in preserving fluid; 10. Barnacles; 11. Sponges as nearly like they are when taken as I can get them and keep them; 12. Alligators stuffed and natural in appearance; 13. Alligator eggs blown out; 14. Coral of common varieties; 15. Live oak leaves pressed, and small pieces of the wood, and acorns; 16. Coquina, the building material of St. Augustine, such as is found in old Ft. Marion and the old city gates.

I would furnish everything in good condition and plainly labelled with explanations. Yours respectfully,

C. L. HAYES.

State Normal School, DeFuniak Springs, Fla.

Director, Amer. Bureau of Geography, Winona, Minn.,

DEAR SIR:—Here is a list of specimens I can exchange: 1. Gypsum (satin spar, white granulated, gray foliated); 2. Actinolite; 3. Calcite (large cube crystals, small massive crystals, common limestone); 4. Quartz (rose, flint arrow heads, etc.); 5. Orthoclase; 6. Spodumene; 7. Garnet; 8. Amphibole (black, bladed); 9. Agate; 10. Zircon; 11. Bauxite; 12. Kaolinite; 13. Siderite; 14. Turgite; 15. Pyrite; 16. Cassiterite; 17. Petrified moss.

I also have about 600 specimens of plants that grow in this locality. Among them is the rare orchid, Epipactis viridiflora. I would gladly exchange these also. Respectfully yours,

C. C. ALBRIGHT.

Rapids, N. Y.

The writer still has hundreds of letters on file commending the work of the bureau, and thanking its director for the opportunities and privileges which it opened.

Map Drawing and Modeling.

Map drawing and modeling are practical and useful exercises, and they should form a part of every course in grade geography. Such work compels close observation, teaches neatness and accuracy of expression, and stimulates and aids the memory.

Map drawing may begin with tracing or copying, but must not stop there. The finished map of show and painstaking construction may look well and may have its place and its value; but abundant practise in rapid sketching from memory should also be provided. A few tests will show that the pupil who has spent days in copying and coloring his map will know and remember but little unless he has also been given considerable practise in drawing from memory. Progressive maps made part by part as the lessons proceed are worth while. The new matter is added by the pupils themselves day by day during the recitation periods. Each pupil may keep his own map under way all the time, either on paper at his seat or on the black-board if there is room. Map modeling appeals to all children of all grades, and while such relief work may lead to certain misconceptions, actual experience

has proved its value in leading to a better understanding of physiographic features, particularly the great continental slppes, and their bearing on drainage, climate, products, industries, commerce and the life of the people.

Pupils should first be taught to model a surface with which they are acquainted, for instance, their school yard, or their school districts, with its various forms of land and water surface. Having learned local relief, and its appearance in a model, they are better able to make reliefs of larger areas and countries.

Relief maps may be made of various material, such as paper pulp, flour and salt, starch and salt, modeling wax, soap, putty, sand and clay. Card board, book board, slates, shallow wooden trays and glass plates such as photographers discard are among the best surfaces on which to build the maps. The discarded photographic plates, about 8 x 10 inches are especially serviceable, since an outline map can be kept in sight beneath the map, while the model is being made. Such glasses, however, should be framed with wood or cloth to lessen the danger of injury from the sharp edges.

Flour and salt maps are constructed out of the following material: two cups of flour and one and one-half cups of salt are placed in a basin and mixed while dry. The mixture is then moistened with cold water, and stirred into a paste of the right consistency for modeling.

The starch and salt map, when completed, is whiter and of better appearance. It is made in the following way: one cup of starch, one cup of salt and a quart of boiling water are mixed in a basin until the starch and salt are dissolved. Then cook the mixture until it thickens.

Library, Labratory and Field Work.

Next to knowing a thing is to know where information regarding it may be found, and, since the field of geography is so wide that even a life time of travel and study would not enable us to visit all of the places mentioned in our text books, nor permit us to investigate more than a very small fraction of the varied relations of the earth and man, it is well for students to learn early how to use the library to advantage. Good habits of reading beget good habits of thinking. The book of travel and the geographical novel are better

for the child than the dime novel literature. Henty's stories and Stoddard's lectures instruct while they entertain, and the atlases and reference books lead to broader and deeper and more accurate concepts. In order that the child may select and read wisely, it is essential that the teacher prepare lists of the best available books and articles accessable to his pupils.

Labratory Work.

Under the heading of labratory work may be grouped such exercises as map drawing, map modeling, the preparation of diagrams and charts, the construction of product maps, the building of artificial canals, irrigation ditches, geysers, volcanoes, and the like.

Some of these topics have already been discussed; others will be easily interpreted without comment. Thus it will be easy for any pupil or teacher to modify and adapt the suggestions for map modeling so as to suit the conditions in his school. If the school yard is a large one, and there are no local objections to the plan, the boys and girls in the sixth and seventh grades will delight in constructing and building the map of North America or some other continent, in

largest relief, while the children in the lower grades may take delight in constructing relief maps on their sand trays and sand tables, The children of the upper grades will take even greater pleasure in making a model of a continent on a large scale. If there is room, make the map a hundred feet or even a hundred yards long and let the mountains be actual elevations over which the children can climb. Again in the construction of such a piece of apparatus as an artificial geyser, the teacher or an older boy can easily obtain good results with a piece of ordinary water pipe of about six feet in length. One end of the pipe is plugged and a round tin pan can be soldered around the other end. Water is then poured into the pan until the pipe is filled. If heat be now applied to the lower end of the pipe, all the phenomena of the ordinary geyser will be witnessed. A column of water will be thrown some six or ten inches into the air every thirty seconds. This little experiment with the artificial geyser will clear up the phenomena more completely and in less time than any amount of written explanation.

Field Work.

Lack of time and persistent prejudice make it difficult for the grade teacher to carry on work of this kind.

Excursions have remained unpopular, both in the cities and in the rural communities; and even in localities where parents and principals have learned to understand the value of field work, many teachers hesitate because of the difficulties of conducting large classes in the open. Wherever the plan is tried, it is advisable for the teacher to go over the ground in advance and to have all of the essentials outlined in detail. Before starting he may tell the pupils the different things to be looked for, tho it is often better to wait for the children to discover these things for themselves. In the case of younger children whose safety must be looked after, the teacher should divide his class into groups of four or five each, placing each group under an older and responsible pupil. Where this cannot be done, he should limit his class to a number which he can easily control. Some teachers can handle twenty and more, but a beginner had better content himself with eight or ten.

Some of the principal topics which may be studied by meand of excursions may be grouped under the following seven heads: (1) food products and occupations connected

with them; (2) building materials and related trades; (3) clothing materials and manufactures;(4) local commerce, roads, bridges, railroads, etc.; (5) local surface features, streams, hills, valleys, etc.; (6) local products of the field and the forest and the mine; (7) climate and seasons, sun, winds, storms, etc.

These seven topics cover a broad and varied field, usually included under home geography. Where no excursions enter into the school course, most children are able to pick up this information from parents and older pupils without the teacher's aid. This is particularly true in rural communities. Nevertheless, the intelligent teacher will be able to train his children in better habits of observation and reflection, and will be better able to stimulate their love for Nature than the uninterested and untrained parents of the average child.

V. GEOGRAPHICAL DEBATES.

Value of Debates.

Among the deviced which the writer has found of service in strong seventh and eighth grade classes, and with mature pupils in rural schools, is the geographical debate. This exercise will yield the best results when it is introduced but once or twice a year and is given considerable prominence. It will incite the pupils to original thought, wider reading, and more thoro study; will train them to acquaint themselves with reference books, periodicals, and the use of the index; will teach them how to select and organize the facts which are of most value; and will help them to learn how to distinguish the true from the false. Furthermore, this practice in public speaking will help the children to overcome self-consciousness, and will have a tendency to impress the facts so thoroly on the memory that they will not be easily forgotten. Indeed, knowledge obtained in this way is easily remembered because it is for a practical purpose which the pupils recognize.

Some Questions for Debate.

The subject of Geography is so fertile in questions which permit or even invite debate that the intelligent teacher will find no difficulty in leading his pupils to discover some for themselves. The following are some of the questions which have been debated by classes under the writer's supervision:

1. Resolved, That Minnesota is a more desirable state to live in than California.

2. Resolved, That the acquisition of the Philippine Islands will ultimately prove of more value to the United States than the purchase of Alaska.

3. Resolved, That National Expositions do not benefit the countries in which they are held.

4. Resolved, That the earth is spheroidal in shape and that we live on the outside of it.

5. Resolved, That Arctic explorations should be continued.

6. Resolved, That the United States Weather Bureau is of sufficient value to justify its continuance.

7. Resolved, That Canada should be annexed to the United States.

8. Resolved, That in the future, the Amazon will be of more commercial importance than the Mississippi.

9. Resolved, That on account of location, Duluth is bound to become as great a city as Chicago.

10. Resolved, That the natural resources of Wisconsin are as great as those of Minnesota.

11. Resolved, That there are as many places of interest in Chicago as there are in New York City.

12. Resolved, That it is better to see and know your own country before traveling abroad.

13. Resolved, That navigation on the upper Mississippi is of sufficient importance to justify the national government in opening and maintaining a six-foot channel to St. Paul and Minneapolis.

14. Resolved, That the Panama canal will be of sufficient value to justify the government in building it.

15. Resolved, That the victory of Japan over Russia advanced the interests of civilization.

16. Resolved, That the United States government should spend less money in improving rivers, and more in irrigating the arid lands of this country.

Philippine Islands versus Alaska.

Resolved, That the acquisition of the Philippine Islands will ultimately prove of more value to the United States than the Purchase of Alaska.

References for the Affirmative:

Century Magazine, volume 34, page 155; National Geographic Magazine, volume 12, page 114; Outlook, volume 78, page 1026; Scientific American, volume 89, page 24481; Atlantic Monthly, volume 94, page 577; Overland, volume 43, page 239; The Nation, volume 87, page 161; Review of Reviews, volume 28, page 694.

Arguments for the Affirmative:

I. The Philippine Islands occupy a favored location because (1) they are the "pickets of the Pacific", standing guard at the entrances to trade with China, Korea, French Indo China and the Malay Peninsula. Australasia may even be regarded as in the line of trade with the Philippines. (2) More than half of the people of the earth live in the countries which may be easily reached from these islands. (3) They furnish our navy with valuable coaling stations. (4) Next to Great Britain we have the largest commerce with the oriental countries and these islands are the key to that trade. (5) Altho situated in the torrid zone the climate in most parts is healthful.

II. The varied resources of the islands, as yet virtually undeveloped, are of vast importance. (1) As an agricultural country it ranks among the best in the world. The sugar industry, when properly handled, will surpass that of any other country, both in quality and quantity. As it is, these islands stand next to Cuba.

They have an advantage over Cuba, however, in having many people available for work in the sugar cane fields. Thousands of tons of hemp of unequalled quality are raised annually. The islands are rich in gutta percha which is at present a scarce and valuable commodity. Tobacco is another valuable product. Manila tobacco and cigars have long held the reputation in the east that the Havana product holds in the west. Its cultivation, thru improved American methods, is sure to add greatly to the agricultural wealth of the islands. The exportation of copra and cocoanuts is steadily increasing and promises to become of great commercial importance. Besides these, rice, coffee, fruits and spices are grown extensively. According to figures appearing in the monthly bulletin of the insular bureau of the War Department, the value of the exports for 1903 amounted to $32,000,000. Of this, $3,000,000 was the value of sugar; $22,000,000, hemp; $4,000,000, copra; $2,000,000, tobacco. These figures are exclusive of coin and government supplies. (2) Several thousand acres of the land

are covered with valuable forest trees of which more than 60 useful varieties are known to exist. (3) In minerals the islands contain valuable deposits of iron, coal, copper, lead, sulphur, and gold. As the mining industry here is yet in its infancy, the possibilities from this source of wealth are immense.

III. The Philippines are of value to us politically because (1) our possession of them prevents their falling into the hands of England or some other foreign power. (2) In case of war with any of the oriental countries it will be advantageous to own them, not only because they furnish our navy with coaling stations and dry-docking facilities, but they will also furnish us with a base of operations as well as a base of supplies.

IV. The islands are of value in a moral sense because we are given an opportunity to establish an intelligent and humane government and a good system of education and to do even more than Spain towards improving the character and condition of the people.

References for the Negative:

Scientific American, volume 59, page 24638; Harper's Magazine, volume 44, page 252; Century Magazine, volume 34, pages 155 and 562; National Geographic Magazine, volume 9, page 139.

Arguments for the Negative:

I. Commercially, the possession of Alaska is of marked benefit to us on account of the material prosperity of that territory. Much of the land is capable of agriculture. Wheat, barley and vegetables are grown extensively in the southern part, and there are thousands of acres upon which grows grass which will feed tens of thousands of cattle and horses. Fish of superior quality are found in enormous quantities. Good lumber is abundant; Alaskan cedar is the only timber in the world which will defy rot and shipworm. The gold mines are very valuable; and extensive coal fields are awaiting further development. According to the government report the following is the showing in the year 1903 when Alaska was just beginning to be developed. The income has grown since then and promises to increase in the years to come.

Alaska purchased in 1867 for - - - -	$7,200,000
Value of seal skins taken since purchase - - - - - - - - - - - - - - - -	58,000,000
Value of other furs taken since purchase - - - - - - - - - - - - - - - -	10,000,000
Value of salmon taken since purchase	50,000,000
Value of other fish taken since purchase - - - - - - - - - - - - - - - -	10,000,000
Value of gold since discovery - - - -	50,000,000
Revenues, Seal Islands, taxes on seal skins, customs and public lands	10,000,000
Total production in 38 years - - - -	182,000,000
Excess over purchase price - - - - -	174,800,000

The possession of Alaska brings business to our Pacific coast of much importance in the way of merchandising. The government report of the exports and imports in 1903 gives the value of the shipment of merchandise from Alaska to the United States $10,000,000 and from the United States to Alaska $9,500,000. The ice trade is also very profitable.

The fact that Alaska is mostly in the temperate zone, on our home continent, and over 3,000 miles nearer to us than the Philippines is an additional reason for its being of greater value.

II. Politically, the territory is of value to us, (1) because it extends our power and domain on our

home continent, and (2) because our possession of it helps to prevent foreign nations from getting a foothold in that portion of America.

Polar Explorations: General References.

Resolved, that Arctic explorations should be continued.

Quest of the North Pole, Review of Reviews, volume 17, page 171; Race for the North Pole, Munsey, volume 21, page 384; Why Should it be continued? Review of Reviews, volume 17, page 170; Perils of polar explorations, Cosmopolitan, volume 27, page 35; Arctic Regions, Balloon Voyage in, Andree, Century, volume 33, page 81; Arctic Regions, Around World, volume 1, page 5; Arctic Temperature and Exploration, Popular Science Monthly, volume 45, page 653; Arctic Exploration, Scope and Value of, National Geographic Magazine, volume 7, page 32; Polar Probabilities, North American Review, volume 157, page 287; North Pole up to Date, Eng. Illustrated Magazine, volume 10, page 735, Polar Research, Is it Remunerative? Cosmopolitan, volume 19, page 105. Polar Explorations, Popular Science Monthly, volume 49, page 321. Arctic Exploration, Munsey, volume 21, page 384. Magnetic and Tidal Work of Greely's Arctic Expedition, Science, volume 9, pages 214-246. Arctic Explorations, Dangers of pack ice, Cosmopolitan, volume 4, page 276. Arctic Exploration towards the North Pole, Popular Science Monthly, volume 62, page 55. Last Year of Arctic Work, McClure's, volume 20, page 411. References of special value for the affirmative are Review of Reviews, volume 17, page 171. Arctic Explorations, Popular Science Monthly, volume 62, page 55.

I. Scientific reasons. (1) Ten pendulum observations at or near the poles are worth a hundred observations elsewhere. (2) Observations on magnetism near the magnet pole will benefit ocean vessels which depend on the compass for safety. (3) Character and behavior of plants and animals will give more thoro mastery to the student of organic life.

II. Geographic reasons. (1) Study of barometric pressure in the far north will give a better understanding of the northern parts of Europe, Asia and North America. (2) Without correct data of the ellipticity of the earth, exact lines cannot be run, maps will be uncertain, shoals and dangers cannot be plotted with accuracy and consequently navigation has another risk which often results in the loss of many lives. (3) It is thought that an explanation of glaciation will be found in the study of the polar regions.

III. Commercial reasons. (1) Alaska may not be the only gold producing region in the far north. (2) Whaling has contributed over $80,000,000 and explorations will probably reveal new whaling grounds.

IV. Enlightenment. (1) The Polar areas are the only regions in the world about which we know nothing; and the want of all knowledge ought to operate as a spur in this enlightened age. (2) The energy and enthusiasm of those who have preceded us have acquired for us knowledge of vast territories which were then as much of a sealed book as the North Pole is today. (3) Decadence of race has begun when man ceases to wish to know and conquer every foot of the earth.

For the Negative.

References of special value for the negative are the Cosmopolitan, volume 37, page 35, and the Review of Reviews, July, 1905. Points of value will also be found in the general references given above.

I. During the past century 4,000 human lives and 200 ships have been lost in Arctic regions. II. $100,000,000 have been spent in efforts to reach the pole, and these efforts have failed altho the expeditions have been well fitted out. III. Nothing is certain about the Arctic regions, and no one can say with assurance that the pole can ever be reached. IV. The results of polar explorations, however successful, will not be of sufficient practical value to pay for the loss in ships and funds. V. Human lives should not be sacrificed.

OUTLINE FOR THE STUDY OF A STATE, COUNTRY OR CONTINENT.

I. LOCATION: 1. Boundaries, 2. Comparative latitude and longitude, 3. Advantages and disadvantages: a. Climatic, b. Industrial, and c. Commercial.

II. AREA AND EXTENT: (comparative) Use as bases for comparison, the area and extent (distances across) of the U. S. and of the home state.

III. POLITICAL DIVISIONS: 1. The states or countries, their relative locations, and comparative sizes. 2. If the area studied is the home state, the name and location of the home county and its bordering counties.

IV. PHYSIOGRAPHY: 1. Plains, 2. Plateaus, 3. Mountains, 4. Rivers and Lakes.

V. CLIMATE: 1. Temperature, 2. Rainfall, 3. Healthfulness, 4. Compared with other lands already studied, 5. Full explanation of causes.

VI. PRODUCTS: 1. Of the forests, 2. Of the waters, 3. Of the mines, 4. Of the farm and ranch, 5. Of the factories. The influence of location, physiography, and climate, and of human needs and markets on the industries and products.

VII. COMMERCE: 1. Facilities for commerce, 2. Domestic, 3. Foreign, (a) Exports, and (b) Imports, 4. Trade routes. Study the causes influencing the commerce of the region.

VIII. PEOPLE: 1. Race and origin, 2. Distribution and reasons therefor, 3. Progress and present condition, and reasons.

IX. CITIES: (Including causes governing location and growth).

X. FOREIGN POSSESSIONS: 1. Location, 2. How acquired, 3. Value.

XI. Three sketch maps from memory:
1. Outline, boundaries, political divisions, and cities;
2. Physiography and climate; and
3. Products and commercial routes.

OUTLINE FOR THE COMPARATIVE STUDY OF EUROPE AND NORTH AMERICA.

I. LOCATION: 1. Compare their latitude and longitude; 2. their respective advantages and disadvantages for a. industrial, b. commercial, and c. climatic donditions.

II. AREA AND EXTENT: 1. Compare the width and length of the continents; 2. their areas; 3. superpose a map of Europe on a map of North America, drawing both maps on the same scale.

III. POLITICAL DIVISIONS: 1. Relative number of independent countries in the two continents; 2. their comparative sizes and governments; 3. Compare the nature of the boundaries, noting character, probable origin, and effect.

IV. PHYSIOGRAPHY: 1. Compare a. plains, b. plateaus, c. mountains, d. rivers and lakes. (Make this comparison complete, indicating number, size, direction, influence on the people, etc.)

V. CLIMATE: 1. Compare in detail a. temperature, b. rainfall, c. healthfulness, stating resemblances and differences and giving full explanation of causes.

VI. PRODUCTS: 1. Compare the products of the two continents, going into complete and accurate detail, and noting the influence of location, physiography and climate.

VII. COMMERCE: 1. Compare the facilities for commerce, both foreign and domestic, and show how the causes influencing commerce in the two continents differ and resemble each other.

VIII. PEOPLE: 1. Comparison of races; 2. distribution and reasons therefor; 3. progress and present condition with reasons.

IX. CITIES: 1. A comparison of causes governing location and growth. Make the comparison concrete thru the construction of graphs.

X. FOREIGN POSSESSIONS: 1. Comparison of location; 2. acquisition; 3. present conditions; 4. value.

REVIEWS AND TESTS.

Reviews and tests have their place in geography work. Their value consists partly in that they give the teacher a knowledge of the pupil's ability, and indicate to both the instructor and the child, wherein to emphasize and strengthen their work. Children need the incentive, which the oral and written quiz provides, and teachers can profit by the mistakes which the pupils make. Geographical misconceptions are especially easy in the lower grades. These misconceptions unless discovered continue thru the high school, and sometimes thru life.

An investigation of the misconceptions of sixty high school graduates showed that they could be divided into several classes, first, those due to wrong methods of teaching in the grades; second, those which the child received at home, either thru reading erroneous statements or misunderstanding what he read and heard. Many times the parents are not well informed, and thus give the children wrong geographical ideas. A third group of geographical misconceptions seems to be instinctive, inasmuch as these have not been

acquired either at home or at school. The investigation referred to resulted in the charting of several hundred individual errors in information and in judgment. All of these, or at least most of them, would have been discovered and corrected if the teachers in the grades had conducted satisfactory tests and reviews.

Frequent reviews must be made in elementary school geography work. Many suggestions for successful reviewing will be found in the preceding pages. Rudyard Kipling in his "Tribal Lays", tells us that

> "There are nine-and-sixty ways
> Of constructing tribal lays,
> And every single one of them is right."

and the same may be said of reviews in geography, provided the teacher understands his pupils, has sufficient knowledge and training in the subject, and is endowed with a reasonable amount of good judgment.

In a recent examination for entrance to a well-known highschool in Minnesota, the candidates were given an outline of the United States, and told to write the names of the several states. Of the twelve candidates, only four passed in correct maps. In the other cases the errors varied

from four to thirtyfour, and the average number of errors for the twelve children concerned was eighteen. This would seem to show that the simplest and very easiest tests had been neglected in the schools from which these children came. It is a striking example of the unfortunate results due to a neglect of reasonable standards, searching tests and thoro reviews.