

A Project in Arizona History,

by

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CHAPTER I.

Introduction.

In our study of American History we are prone to forget that the first real conquerors of the New World were Spaniards. Spain was not only the first conqueror but also the first colonizer. The Spaniards built the first cities, founded the first schools, churches, and universities, wrote the first histories, geographies, and newspapers of America. These facts in themselves would justify a more intensive study of our antecedents in the Southwest.

Many of the Arizona children will never see Plymouth Rock or the home of Roger Williams at Providence, but they will be brought directly into contact with ancient cliff dwellings, time-worn hieroglyphics, and the scenic wonders of the Southwest. We should know of the suffering during the Starving Time in Virginia and the hardships of the first winter at Plymouth. We should also learn to appreciate the beauty of the Arizona streams and forests; the grandeur of our canyons and mountains; the story of the abandoned mine and the tragedy of the deserted homestead.

New England had its century of Indian warfare, while the Southwest had its three and a half centuries of Indian warfare. New England was a fertile, wooded, and well watered country while the Spaniards had to overcome

miles of parched, waterless desert. How much more does it mean to have conquered and civilized a country such as ours? We should, of course, know of the trials and experiences of our English forebears in New England, but after all, they are rather drab and commonplace compared with the experiences of the Spanish explorers, missionaries, and settlers of the Southwest. Our national citizenship will not be damaged in the least by a possible development of state citizenship through a comprehensive study of our history, natural resources, and industries.

At the present time there is very little if any precedent for carrying on the work in the Arizona public schools. Occasionally teachers have, through their own initiative, made use of local or state source material. On more rare occasions supervisors have included a brief Arizona History Outline in the local course of study. The field is a fertile one, and all efforts toward a logical and comprehensive collection of material should be carefully recorded and guarded with the goal in view of a definite addition to the state course of study.

It is also important that each teacher in conducting the work use the socialized recitation or a project method that the course be harmonized with the pupils' aims and aspirations. This will eliminate much subject matter and make many additions on the whole making the content much more mean-

ingful to the children.

Problem of the Thesis.

The object of this paper is to report an experiment in the teaching of Arizona History as a classroom project. The value of a course in Arizona History being recognized, the first difficulty lay in securing source material that would contain the necessary subject matter. Assuming that the average school would probably not have more than about one hundred dollars to invest in source materials, the cost of books was limited to that sum. As a guide to other teachers in obtaining their sources, a careful estimate should be made of all the books used. By showing in the outlines just where each source was used, there would be a further check on what books would be the most desirable.

One of the major problems would be the selection of topics that would be interesting from the children's viewpoint. This meant that the children themselves would be the primary factor in developing an outline that was both feasible and desirable. There is a mass of material available and a selective process must be used in determining just what had best be employed. Teaching history is not so much a matter of how many facts are taught as it is a matter of what facts are taught and whether there is a comprehensive relationship existing between them and the object

in view?

Another problem of the project and in some ways the most difficult was the mechanical procedure of teaching history to a class of forty-six children without individual text books.

Finally after the work had been done, was the question of how well it had been done. While it is rather difficult to measure accurately the mental achievements of pupils it was very essential that some fair check on the results be made.

## CHAPTER II.

### Method of Presentation.

It was the original plan to carry out the project in a seventh or eighth grade, but school conditions did not make it feasible. When the work was planned it was found that every seventh and eighth grade had all the work that it could do until the end of the term while there was a large sixth grade that had completed the work in United States History and whose teacher was wondering how to employ the period. Inasmuch as this was the best division of the sixth grade and in their seventh month of the sixth year, for all practical purposes it might be classed as a good average seventh grade class.

There were forty-six pupils enrolled in the class. The room was barely large enough for that many pupils. The recitation hour was from one-fifteen to one-forty-five. The work was started at the beginning of the seventh and ended with the closing of school for the summer. The last month was one of considerable warm weather, and this particular room was upstairs in the southwest corner of the building. Thus the class was fully as large as would be expected and did not have any advantage of physical equipment or location.

Since one of the difficulties was to keep a group of this size busy, the work had to be quite carefully planned from the beginning. The best way to explain how that

was done is to give the program for the first few days. Previously the author had spent one period in the room discussing Arizona History with the class, and they had expressed their desire to undertake the work. At that time the nature of the work was fairly well explained to them.

The first day was spent partially in a talk by the teacher on the Casa Grande Ruins and prehistoric irrigation projects in the Salt River Valley. The balance of the time was spent in demonstrating how to look up references from the index of a book. Children were asked to bring from home newspapers and magazines that had articles in them that might be of interest on the subject. Many of the pupils knew where they could get Arizona or Progressive Arizona magazines.

The second day an old table was moved into the room and all source material from the library was placed on the table. This included thirty volumes of books and nearly a hundred magazines. Each pupil was given a large manila envelope (12 by 14 inches), a small outline map of Arizona (9 x 12 inches), and several folders and booklets furnished to the class by the Phoenix Chamber of Commerce. While this material was being distributed by two of the pupils, the others started in to learn to spell and locate the counties of Arizona. After the material had been given out, the balance of the period was spent in printing the names of the counties on the outline maps. In order to be sure that they

would not make too many mistakes and spoil the outline maps, the teacher demonstrated on a large cloth outline map of Arizona. Later the children located the larger cities, mountains, etc., on their maps as they came to them in the history work.

The following day the proposition of making booklets on Arizona was presented to the class. The majority of the class was anxious to undertake this, too, although some were rather shy in offering their services. The booklets were to be prepared with the understanding that they were to be the property of the library for the use of the next class wishing to study Arizona History. The teacher then used the balance of the time in telling Indian legends.

The reference books were so limited on certain topics that some device was necessary to be sure that each pupil always had employment. Whenever the reference books were all in use, there would always be some special work that the pupil could do on his booklet. One boy felt so proud of his product as a writer that he informed us that he intended to write books for a living when he grew up.

The fourth day was mostly spent in preparing the letters to go out to the secretaries of the Chambers of Commerce. This matter is discussed elsewhere under source material.

The next step was to develop with the class an outline to follow. Some parts of this outline are as sug-

gested by the teacher while other parts were furnished by the pupils. Under the general topic of Spanish Pioneers the pupils naturally would name Coronado. Under the general topic of Arizona Indians the class selected the four tribes of Indians that occur in the outline.

After the outline had been all planned, parts of it would be placed on the board at a time and the source reference placed under each topic. In case members of the class found magazine articles referring to any of the topics, they had the liberty of placing them in with the other references.

As a further means of securing better recitations each pupil was at the end of the second week assigned a special topic to report on orally to the class. Some of these special reports furnished the basis of a whole half hour's recitation. After a special report had been given the class had the privilege of asking questions on the topic presented. The pupils took pride in being able to answer all reasonable questions. Under source material the matter of special reports has been explained more thoroughly.

By the end of the third week the general topic of Arizona Indians had been covered quite thoroughly. Up to this time the instructor had been playing a rather too prominent part in the class discussions, but from then on the special reports and work on the booklets required all the time not spent in regular recitation.

The original plan was that the project would require about two months time. At the end of two months a great deal of the work had not been covered, and some of the subject matter had to be treated lightly in order to complete the course at the end of the third month.

### CHAPTER III - SOURCES

#### Introduction to Sources.

One of the major problems of the project, as has been previously stated, was to keep the cost of the source material within the bounds of the community library fund. Much of the most valuable source material was obtained without cost.

Progressive Arizona is a magazine of high type, and each issue was found of great value in the work. All old copies of the Arizona Magazine contain a great deal of valuable and interesting information. Numerous copies of these two magazines were brought to the classroom and often donated to the library. It would be well if every school library would make a practice of saving material of this nature. The school library has been making a collection of source material on Arizona for several years.

Some of the leading magazines and periodicals in the past have published very carefully prepared articles on different phases of Arizona. The Saturday Evening Post, Literary Digest, The Mentor, and the National Geographic magazine have all published articles on Arizona during recent years. Two of the best articles in the National Geographic magazine were furnished by Deans Cummings and Thornber of the University of Arizona. While it was not possible, in the time

allowed for this study, to make a survey of the magazines and periodicals, much valuable source material was obtained from them. The state newspapers often have articles of value and much source material was obtained from this source.

Books are the most expensive source material, and naturally the most valuable. Inasmuch as other teachers who undertake this same type of work might be limited financially, the author has made a brief evaluation of each volume. This should be of value in purchasing books that will cover the subject matter without too much duplication. In our purchase of books it was often found that the most expensive volumes contained very little Arizona material. In some cases we found many references for a topic while in others practically none. This situation was largely met through use of newspapers, periodicals, and magazines. Many good books, as "Campaigning with Cook", are out of print.

Book List.

<u>NAME</u>	<u>AUTHOR</u>	<u>PUBLISHER</u>
1. History of Arizona, 8 Vol.	Farish	The Filmer Bros.
2. Arizona, 3 Vol.	McClintock	Out of Publication.
3. Arizona, the Wonder- land	James	The Page Company.
4. Camp Fires on Desert and Lava	Hornaday	Scribner's & Sons.
5. Finding the Worth While in the Southwest	Saunders	McBride and Company.

Book List Continued.

<u>NAME</u>	<u>AUTHOR</u>	<u>PUBLISHER</u>
6. Indians of the Enchanted Desert	Leo Crane	Little, Brown, & Co.
7. Mesa Canon and Pueblo	Lummis	The Century Co.
8. Myths and Legends of California and the Old Southwest	Judson	A. C. McClury & Co.
9. New Trails in Mexico	Lumholtz	Scribner's & Sons.
10. Questers of the Desert	Schultz	Houghton, Mifflin Co.
11. Story of Arizona	Robinson	The Berryhill Co.
12. Stories from Mythology	N.A.Morris	Marshall Jones Co.
13. Southwest Sketches	Munk	Putnam's Sons
14. Seeing the Far West	Faris	Lippincott Co.
15. The Book of National Parks	Yard	Scribner's & Sons.
16. The Spanish Pioneers	Lummis	A. C. McClury & Co.
17. Tales from the X-Bar Horse Camp	Barnes	The Breeder's Gazette
18. The Grand Canyon of Arizona	James	Little, Brown & Co.
19. The Land of Journey's Ending	Mary Austin	The Century Co.
20. Westward Hoboes	Dixon	Scribner's Sons.
21. When the West Was Young	Bechdolt	The Century Co.

Evaluation of Source Material.

History of Arizona, Farish, eight volumes.

Arizona, McClintock, three volumes (one biographical).

McClintock and Farish in their histories of Arizona have collected a large amount of material and in many cases presented it in a very interesting manner, but on the whole, the books are not readable by the average person, unless they are particularly interested in the subject. The facts and materials must always be revised before being presented to the children. As source material these books are basic to a small collection as they cover almost the entire field and in themselves contain sufficient material for a good history course if properly arranged and presented.

Arizona the Wonderland, James.

James came into Arizona with the purpose of turning out a book on Arizona. The subject matter is treated in an inspirational style. The volume's chief value now lies in the parts that describe scenic attractions, as those parts of the book dealing with state industries are out of date.

Camp Fires on Desert and Lava, Hornaday.

While much of this volume deals with Mexico and Southern California, it is the same desert and lava country that is common to Arizona. The subject matter is carefully written and contributes much to a background for this state's history.

Finding the Worth While in the Southwest, Saunders.

This is merely a handbook for the purpose

of guiding tourists in the Southwest. It is not essential to a course of this type, but has some valuable information.

Indians of the Enchanted Desert, Crane.

Leo Crane, who was in charge of different Indian Reservations for years, gives us, in readable form, a very true and worth while picture of the Government's work with the Indians of this region. The author's trips and experiences into this country make one feel that this is probably as unbiased a presentation of the Indian problem as can be found. The book has a human interest running through it that makes it very easy to read and at the same time keeps the reader sympathetic with the situation. Some chapters may be read to the pupils as presented in the text.

Mesa Canon and Pueblo, Lummis.

Lummis gives a resume of some of the points of interest in Arizona and New Mexico, such as Pueblo Indians, Petrified Forest, and similar points of interest.

Myths and Legends of California and the Old Southwest, Judson.

The author of this book has made a tabulation of Southwest Legends that is in the main a very valuable contribution, but much of the interest is lost because of the brevity with which the legends are told.

New Trails in Mexico, Lumholtz.

This book is of particular interest to one

making a study of the Papago Indian as he lived, and still lives, in Arizona and Mexico. Much interesting history is brought out in that Lumholtz travels over the old salt trails to the Gulf of California, giving quite an extensive description of the desert foods made use of by the desert Indians. It is well worth one's time to take this trip with Lumholtz through the desert country. The volume also includes a carefully prepared map that adds interest to the content.

Questers of the Desert, Shultz.

In fiction form a trip is made into the Tonto country and over the Mogollon Rim. The spirit of adventure makes it quite readable to an upper-grade pupil.

Story of Arizona, Robinson.

According to the writer's opinion, this is the only History of Arizona that will fall within the reach and comprehension of an upper-grade or high-school pupil. Robinson had the ability to select from the History of Arizona some of the most interesting facts and present them in a most fascinating manner. It is probably the first book one should read on Arizona, as it serves so well as a good wholesome introduction to the subject.

Stories from Mythology, Morris.

Only a small part of this volume deals with Arizona Indians, but that part is very fascinating and

worth while. The subject matter is so presented that the children will either enjoy reading it or having it read to the class. Indians almost always relate mythology in story form, and any other style of relating Indian mythology seems out of place. Morris relates the stories much as the Indians would tell them.

Southwest Sketches, Munk.

Munk is one of the most reliable authorities of the Southwest, and this volume which deals almost exclusively with Arizona is probably one of the best volumes of such content published.

Seeing the Far West, Faris.

Only two chapters in this book deal with Arizona directly, and only here from the scenic or sight-seers standpoint. The volume is valuable in a school library from the standpoint of United States geography.

The Book of National Parks, Yard.

A part of this volume is on Southwest Scenery dealing particularly with the Grand Canyon of the Colorado. The use that could be made of the book in teaching United States geography would justify its purchase.

The Spanish Pioneers, Lummis.

Lummis has well expressed the debt the Southwest owes to the Spaniards, who were leaders in pioneer-

ing this country. This is a very helpful source in any study of Southwest History.

Tales from X-Bar Horse Camp, Barnes.

This is a very amusing and inexpensive little volume of cowboy stories and experiences. It is a very helpful and useful book in obtaining the atmosphere and conditions of cowboy camp life. The class would enjoy having these storics read to them.

The Grand Canyon of Arizona, James.

As the name implies, this is a detailed catalogue and description of different points of interest in the Grand Canyon, and tells how to see them. Such descriptions as James uses are on the whole much better than most efforts by other authors.

The Land of Journey's Ending, Austin.

To many readers this is the best written book on Southwest Indians that has been written. Mary Austin has in wonderful style interpreted Indian life and Indian ideals. It is not necessary always to agree with her interpretation to enjoy the book. Leo Crane's book on Indians of the Enchanted Desert should be read at the same time. This would give the reader a wholesome cross section between the inspirational and the practical.

Westward Hoboes, Dixon.

Two women make an automobile trip through Arizona and report their experiences. The book contains little of value either from the standpoint of scenic description or fiction to the average reader.

When the West Was Young, Bechdolt.

The stories in this volume are well written and pertain mostly to early Arizona History. It is a valuable source to establish in one's mind the background and atmosphere of early Arizona.

Introduction to Chambers of Commerce List.

Arizona is particularly fortunate from an advertising standpoint that all of our cities and even many towns have well organized, functioning chambers of commerce. Through Mr. H. B. Watkins, Secretary of the Phoenix Chamber of Commerce, a list of the chambers of commerce of the state was obtained. Each secretary was then written to and requested to send a copy of any advertising bulletins or folders that were descriptive of local industries or scenic attractions.

The most natural method would probably have been for the instructor to do the writing to the different cities, but the method employed in this case was to have this done by the pupils.

Many of the folders were rich in descriptive material and pictures of local scenic attractions, while others were of a more practical nature and dealt with the industries of that particular locality. Each pupil was allowed to write but one letter and that to the place assigned. Except for the larger cities of the state only one letter was sent to each Chamber of Commerce.

The Phoenix Chamber of Commerce furnished each pupil in the class with a complete assortment of booklets and folders that served as the basis of the study of the history of Phoenix and the industries of the Salt River Valley. It probably would be found that every community chamber of commerce would do all within its power to forward similar work in its local community.

#### Chambers of Commerce List.

##### Apache County:

St. Johns	Chamber of Commerce
Springerville	Round Valley Chamber of Commerce
Eager	Eager Civic & Commercial Club

##### Cochise County:

Bisbee	Chamber of Commerce
Douglas	Chamber of Commerce & Mines
Tombstone	Tombstone Commercial Club

##### Coconino County:

Flagstaff	Chamber of Commerce
Williams	Williams-Grand Canyon Chamber of Commerce

##### Gila County:

Globe	Globe Luncheon Club
Miami	Gila County Business Men's Association

Graham County: Safford	Graham County Chamber of Commerce
Greenlee County: Clifton	Clifton Commercial Club
Maricopa County: Chandler Mesa Peoria Phoenix  Tempe Gilbert  Gila Bent Wickenburg	Chandler Chamber of Commerce Mesa District Chamber of Commerce Peoria Chamber of Commerce Chamber of Commerce Merchants & Mfg. Association Tempe Civic Club Gilbert District Chamber of Commerce Gila Bend Commercial Club Junior Chamber of Commerce
Mohave County: Kingman	Chamber of Commerce
Navajo County: Holbrook Winslow Snowflake	Chamber of Commerce Commercial Club Chamber of Commerce
Pima County: Ajo Tucson	Chamber of Commerce Chamber of Commerce
Santa Cruz County: Nogales	Chamber of Commerce
Yavapai County: Prescott Jerome Mayer	Chamber of Commerce & Mines Verde District Commercial Club Community Club
Yuma County: Yuma Parker	Chamber of Commerce Northern Yuma County Chamber of Commerce

CHAPTER IV.

Outline of Arizona History.

A. History

1. Spanish Pioneers.

a. Vaca

Story of Arizona, Robinson, 33-37.  
The Spanish Pioneers, Lummis, 78, 101-118.  
The Land of Journey's Ending, Austin, 6-12.  
History of Arizona, Farish, Vol. I, 1-7.

b. Marcos and Others

The Spanish Pioneers, Lummis, 79-81.  
The Land of Journey's Ending, Austin, 12-15.  
Arizona the Wonderland, James, 32-40.

c. Coronado

Arizona, McClintock, 46, 50, 51.  
Story of Arizona, Robinson, 43-51.  
The Spanish Pioneers, Lummis, 81-83, 119-121.  
The Land of Journey's Ending, Austin, 15-25.  
History of Arizona, Farish, Vol. I, 14-26.

d. Onate and Zaldivar

The Spanish Pioneers, Lummis, 89, 126-140.  
Arizona, McClintock, 58.  
History of Arizona, Farish, Vol. I, 27-50.  
The Land of Journey's Ending, Austin, 349-372.

2. Arizona Indians

a. Apaches

History of Arizona, Farish, 8 Vol. See index.  
Story of Arizona, Robinson, 133-151.  
Southwest Sketches, Munk, 217-245.  
Questers of the Desert, Shultz, Story based on  
Apaches.  
Myths and Legends of Southwest, Judson, 187-189.  
Arizona, McClintock, 26, 28, 172, 252.

b. Navajos

- Myths and Legends of Southwest, Judson, 134-140,  
144-151.  
Arizona, McClintock, 24, 22, 90, 27.  
Southwest Sketches, Munk, 30-45.  
Finding the Worth While in the Southwest, Saunders,  
102-115.  
Some Strange Corners of Our Country, Lummis,  
198-207.  
Stories from Mythology, Morris, 132-140.  
History of Arizona, Farish, Vols. 2, 3, 7, 8.  
See index.

c. Papagos

- New Trails in Mexico, Lumholtz, 25-40, 45-81,  
99-115, 344-365.  
Arizona, McClintock, 35, 172, 175.  
Myths and Legends of Southwest, Judson, 58-63,  
160-162, 182-185.  
The Land of Journey's Ending, Austin, 143-165.  
History of Arizona, Farish, Vols. 1, 2, 3, 4, 7.  
See index.

d. Hopis

- Stories from Mythology, Morris, 144-148, 154-156.  
Westward Hoboes, Dixon, 244-258.  
Finding the Worth While in the Southwest, Saunders,  
116-130.  
Myths and Legends of Southwest, Judson, 89-92.  
The Land of Journey's Ending, Austin, 269-283.  
Arizona, McClintock, 5, 17, 19, 73, 120.
1. Hopi Snake Dance  
Southwest Sketches, Munk, 82-101.  
Mesa Canon Pueblo, Lummis, 144-159.  
Indians of Enchanted Desert, Crane, 260-274.
  2. Hopis' Homes and Home Life  
Indians of Enchanted Desert, Crane, 44-239,  
336-360.  
Southwest Sketches, Munk, 58-82.  
Mesa Canon and Pueblo, Lummis, 307-330, 389-400.  
Some Strange Corners of Our Country, Lummis,  
43-58.
  3. Indian Schools  
Indians of Enchanted Desert, Crane.  
History of Arizona, Farish, Vol. 3, 144, 184.

3. Coming of the Americans
  - a. California Gold Strike and Santa Fe Trail.  
History of Arizona, Farish, Vol. I, 81-93.  
Arizona, McClintock, 60, 87.
  - b. Civil War Times in Arizona.  
Story of Arizona, Robinson, 139-151.  
History of Arizona, Farish, Vol. II, 79-142.  
Arizona, McClintock, 159, 173, 178, 181, 166,  
168, 174.
  - c. Indian Wars in Arizona.  
Story of Arizona, Robinson, 183-222.  
History of Arizona, Vols. 1 to 8; see index,  
"Indians".
    1. Mangus Colorados  
History of Arizona, Farish, Vols. I and II;  
see index.  
Arizona, McClintock, 109, 172, 173, 176, 177,  
178.
    2. Cochise  
Arizona, McClintock, 172, 182, 200, 202, 216,  
217.  
Story of Arizona, Robinson, 133-139.  
When the West Was Young, Bechdolt, 190-217.  
History of Arizona, Farish, Vol. II, see index,  
Vol. V, 286-288, Vol. VIII,  
27-30, 166-170.
  - d. Railroads.  
Arizona, McClintock, 288, 537.  
History of Arizona, Farish, Vol. III, 109, 138-139,  
Vol. IV, 162, 199-200, Vol. V, 35.
  - e. Mining Enterprises.  
History of Arizona, Farish, Vols. 1-6, see index.  
Story of Arizona, Robinson, 152-156.  
New Trails in Mexico, Lumholtz, 81-84.  
Arizona, McClintock, 101, 354, 366, 390, 396,  
407, 416.
4. Territorial Days after Civil War.  
Story of Arizona, Robinson, 157-182.  
Tales of X-Bar Horse Camp, Barnes, 86-93.
  - a. Kibbey.  
Arizona, McClintock, 267, 352, 378, 435, 440.

- b. Sloan.  
Arizona, McClintock, 347, 357, 369, 377, 440,  
472, 506, 544.
  - c. Arizona Bad Men.  
Story of Arizona, Robinson, 223-249.  
Arizona, McClintock, 465, 480.  
History of Arizona, Farish.  
When the West Was Young, Bechdolt, 151-190,  
277-309.  
Tales from X-Bar Horse Camp, Barnes, 206-217.
5. Rise of Great Industries.
- a. Cattle and Sheep Raising.  
Arizona Wonderland, James, 212-223, 278-292.  
Tales from X-Bar Horse Camp, Barnes, 1-22, 58-73,  
104-113, 123-139, 195-205.  
Arizona, McClintock, 447.
  - b. The Lumber Industry.  
Arizona, McClintock, 556.  
Arizona Wonderland, James, 121-132.  
Bulletins from U. S. Forestry Department on  
Arizona Forests.
  - c. Expansion of Mining Industry.  
Story of Arizona, Robinson, 250-286.  
Arizona Wonderland, James, 190-211.  
Arizona, McClintock, 427.
  - d. Dry Farming and Irrigation Projects.  
Secretary of Chambers of Commerce.  
Arizona, McClintock, 431, 435, 438.  
Story of Arizona, Robinson, 300-307.  
Arizona Wonderland, James, 311-318, 427-448.
6. Advent of Statehood.
- Story of Arizona, Robinson, 351-366.
  - a. Hunt and Arizona Constitution.  
Arizona, McClintock, 351, 361, 362, 365.
  - b. Campbell.  
Arizona, McClintock (Biographical Vol. III) 689.  
Arizona, McClintock, 379, 3801.
  - c. Hunt.  
Arizona, McClintock, 347, 358, 365, 369, 376.

CHAPTER V.

Introduction to Special Reports.

After deciding on an outline that would, in a general way, cover the historical field, it was found that much of the most interesting and valuable information regarding Arizona was not included. Recognizing this fact, each pupil prepared a list of topics for which he would either like to prepare a special oral report, or would like to hear an oral report from another member of the class. Counting duplication, a list of over five hundred topics was turned in. By a process of elimination and selection this list was reduced to a number of topics and subtopics commensurate with the number in the class and the time for preparation. Some of the topics selected were ones for which there was apparently no available source material. Again many of the topics appeared to have little, if any, connection with Arizona from a historical standpoint. How the pupils selected or obtained their material would be an interesting subject in itself. The State Game Warden, at the invitation of two girls, came to the school and gave a very interesting illustrated lecture on Arizona birds. Mr. Musgrove, who is in charge of predatory animal control in Arizona for the United States government, had previously given a series of talks on deer, bears, turkeys, and the cat family.

These talks were the basis of reports on these animals. One boy was acquainted with the district manager of one of the railroads. The local newspapers in the course of a year contain much valuable information, particularly if the anniversary state issue is saved. The secretaries of the various chambers of commerce throughout the state responded promptly and materially to all letters for information.

Inasmuch as some time would be necessary in preparing the reports, all topics that would fit into the first two parts of the history outline were omitted. As far as possible the special reports were then made to dovetail into the regular outline so that by the time the regular outline had been completed, the special reports had also been made, generally furnishing the basis of the recitation and class discussion.

The only real difficulty in this part of the work was in the division of the topics, as a particularly large group were interested more in mountain lions and rattlesnakes than in cliff dwellings and natural bridges. The special reports accomplished three things. First, they brought out subject matter that otherwise might not have been obtained. Second, they developed good habits of study in the pupils. Third, they materially enriched the outline topics.

In a school, not as fortunately located, it might be much better to select the topics for reports

more from the standpoint of the source material. By checking through the test papers, it was found that the pupils never missed a question that concerned the topic on which they had made a special study.

Outline.

B. Special Reports.

1. Arizona National Forests. (6 reports, one child on each large forest).  
Arizona Wonderland, James, 121-132.  
Tales from X-Bar Horse Camp, 114-122.  
Bulletins from U.S. Forestry Dept. on Arizona Forests.  
Round Valley Chamber of Commerce, Springerville, (write)  
Eager Civic and Commercial Club, Eager (write)  
Chamber of Commerce, Flagstaff (write)  
Williams and Grand Canyon C. of C., Williams (write)  
Chamber of Commerce and Mines, Prescott (write)
2. Arizona Railroads.  
Arizona, McClintock, 288, 537.
  - a. Southern Pacific. (one report).  
History of Arizona, Farish, Vols. 1-6, see index.  
Arizona, McClintock, 293, 294, 297.  
Phoenix Dist. Supt. of S. P. furnished bulletins.
  - b. Santa Fe (one report)  
History of Arizona, Farish, Vols. 1-6, see index.  
Arizona, McClintock, 291, 293.  
Phoenix Dist. Supt. Santa Fe furnished bulletins.
3. Sheep and Cattle Grazing. (two reports)  
Arizona Wonderland, James, 212-223, 278-292.  
Arizona, McClintock, 447.  
Scattered information from Chambers of Commerce.
4. Roosevelt Dam and Salt River Valley. (two reports).  
Story of Arizona, Robinson, 152-156.  
Arizona, McClintock, 431, 435, 438.  
Chamber of Commerce, Phoenix (write).  
Chandler Chamber of Commerce, Chandler (write)  
Mesa District Chamber of Commerce, Mesa (write)

5. San Carlos Dam. (one report)  
Arizona, McClintock, 431, 435, 438.
6. Beardsley Project (one report)  
Information secured from engineer constructing dam.
7. Colorado River and Canyon. (6 reports on different phases)  
Arizona, McClintock, 56, 65, 94, 183, 303, 306.  
Seeing the Far West, Faris, 105-110.  
Some Strange Corners of Our Country, Lummis, 1-20.  
Arizona Wonderland, James, 98-104.  
Story of Arizona, Robinson, 367-372.  
The Grand Canyon of Arizona, James.  
Mesa Canon and Pueblo, Lummis, 20-34.  
Finding the Worth While in the Southwest, Saunders, 150-162.  
Westward Hoboes, Dixon, 220-234.  
The Book of National Parks, Yard, 328-351.  
The Land of Journey's Ending, Austin, 397-433.
8. Arizona Trout Streams.
  - a. Oak Creek (one report)  
Chamber of Commerce, Flagstaff. (write)  
Articles in Arizona Republican, Phoenix.
  - b. White Mountain Streams. (two reports)  
Arizona Wonderland, James, 134-143.  
Articles in Arizona Gazette, Phoenix.  
Round Valley Chamber of Commerce, Springerville.
9. Arizona Lakes.
  - a. Mormon Flat Lake. (one report)  
Articles in Arizona Gazette, Phoenix.  
Articles in Arizona Republican, Phoenix.  
Chamber of Commerce, Phoenix (write).
  - b. Roosevelt Lake. (one report).  
Articles in Arizona Republican, Phoenix.  
Articles in Arizona Gazette, Phoenix.  
Chamber of Commerce, Phoenix, (write).
  - c. Mormon Lake and Lake Mary (one report).  
Chamber of Commerce, Flagstaff, (write).  
Arizona Republican, Phoenix.  
Arizona Gazette, Phoenix.

10. Arizona Mountains.

- a. White Mountains, (one report)  
Arizona Republican, Phoenix.  
Arizona Gazette, Phoenix.  
Round Valley Chamber of Commerce, Springerville (write)
- b. Bradshaw Mountains, (one report).  
Arizona Republican, Phoenix.  
Arizona Gazette, Phoenix.
- c. San Francisco Mountains, (one report)  
Southwest Sketches, Munk, 113-115.  
Chamber of Commerce, Flagstaff, (write).  
Arizona Republican, Phoenix.  
Arizona Gazette, Phoenix.

11. Arizona Animals.

- a. Deer, (one report)  
Articles on Kaibab Deer Drive.  
Natural Histories.
- b. Bear, (one report).  
Natural Histories.  
Written article by Mr. Musgrove, U.S. Predatory  
Animals for Arizona.
- c. Turkey, (one report)  
Natural Histories.
- d. Cats, (two reports).  
Natural Histories.  
American Game Trails, Roosevelt.

12. Bird Life in Arizona, (one report).

Camp Fires on Desert and Lava, Hornaday, 316-329.  
Story of Arizona, Robinson, 441-450.  
Arizona Wonderland, James, 151-167.  
Illustrated Lecture by State Game Warden.

13. Desert Plants and Animals, (two reports)

The Book of National Parks, Yard, 399-401.  
Seeing the Far West, Paris, 150-157.  
The Land of Journey's Ending, Austin, 119-140.  
Finding the Worth While in the Southwest, Saunders, 188-203  
Camp Fires on Desert and Lava, Hornaday, 14-23, 25-70,  
210-228, 302-315.  
Story of Arizona, Robinson, 416-441.

Arizona Wonderland, James, 168-189.  
Some Strange Corners of Our Country, Lummis, 28-43.

14. Eldon Pueblo and Dr. Fewkes, (one report).

Smithsonian Institute bulletin, (write).

15. Arizona Cliff Dwellings, Walnut Canyon, (one report).

Arizona Wonderland, James, 57-58.

16. Arizona Natural Bridge, (one report).

Mesa Canon and Pueblo, Lummis, 132-141.

Some Strange Corners of Our Country, Lummis, 142-160.

17. The Petrified Forest, (two reports).

Some Strange Corners of Our Country, Lummis, 20-28.

Tales from X-Bar Horse Camp, 163-173.

Southwest Sketches, Munk, 133-156.

Arizona Wonderland, James, 104-120.

Mesa Canon and Pueblo, Lummis, 107-122.

Finding the Worth While in the Southwest, Saunders, 130-136

18. Special Reports on City History.

a. Phoenix, (one report)

History of Arizona, Farish, Vol. 1-8, see indexes.

Story of Arizona, Robinson, 386-394.

Arizona Wonderland, James, 427-441.

Arizona, McClintock, 337, 458, 568.

b. Tucson, (one report).

New Trails in Mexico, Lumholtz, 1-13.

Arizona Wonderland, James, 293-310.

Story of Arizona, Robinson, 378-386.

Camp Fires on Desert and Lava, Hornaday, 14-23.

Westward Hoboes, Dixon, 74-81.

Arizona, McClintock, 66, 105, 172.

c. Bisbee, (one report).

Arizona Wonderland, James, 410-418.

Story of Arizona, Robinson, 396-398.

Arizona, McClintock, 424, 584.

d. Douglas, (one report).

Story of Arizona, Robinson, 398-399.

Arizona Wonderland, James, 403-409.

Arizona, McClintock, 508, 585.

CHAPTER VI.  
SUMMARY.

Testing.

It is the school custom in the intermediate grades to count test grades only about one-third in obtaining each month's grades. Seventy five percent is a passing grade. This custom was violated in this particular case as two examinations were given, one of the essay type and one of the completion type. The final grade given each child was the average of these two grades without consideration of class work. The two tests given should give a fair example of the pupils' knowledge of the subject matter.

The two tests are included with a summary of the results and a comparison of the pupils' scholarship for the year. This scholarship is obtained by obtaining the sum of the year's averages in each subject divided by the number of subjects. The high rate of scholarship may be accounted for from the fact that this room was the best of three divisions of the sixth grade. One of the chief reasons for using this particular section of the sixth grade was that the pupils needed extra work to keep them profitably employed until the end of the term. The subjects used in securing the scholarship grades included reading, spelling, arithmetic, writing, English, music, art, and domestic science, or manual arts.

MEASUREMENT OF WORK.

Test Results.

Number of pupils enrolled in grade	46
Number of pupils' scholarship left out	<u>8</u>
Number of pupils' scholarship taken	38
Average scholarship of thirty-eight	84.16%
Number of pupils taking the course	46
Number of pupils not taking both tests	<u>8</u>
Number of pupils taking both tests	38
Median test grade, essay type test	81.46%
Median test grade, completion test	84.39%
Average grade of two tests	82.93%
Difference between scholarship grade and the average test grade, $84.16 - 82.93 = 1.23\%$ .	

Inasmuch as the average sixth grade pupil does better in class work than on examination, it would be a reasonable conclusion to assume that the subject matter had been mastered as thoroughly as other subject matter given to the same class.

CONCLUSIONS FROM TESTS.

Even the casual reader of Arizona sources finds almost immediately that we have a field that is particularly rich in subject matter. Not only is the field rich in subject matter, but it is rich in a type of subject matter that readily appeals to children. Man as yet has made such insignificant scratches on the surface of the state that

nearly everything is just as nature left it. Much that has been changed is not so far removed from the present as to be beyond the easy comprehension of the present generation.

Through the University of Arizona Museum and many other agencies a great deal of care is being taken to collect, restore, and preserve objects and documents vital to the study of past generations.

It has been the purpose of the author to point out in this paper not only the wealth of material and the type of material available, but also to show the desirability of employing these sources in our curriculum. Such a course would be a definite addition to our state course of study. Even this single experiment with the subject points out how the subject matter can very readily be arranged into a good social science course for the training of loyal, intelligent citizens.

To a small extent the sources of Arizona History have been studied and a brief analysis made that may be of practical benefit to one attempting the source type of work. By combining the writer's estimate of the source with a study of the use of each source in the outline, a fairly true estimate of the value of each source can be made.

These sources have been employed in a practical presentation of the subject. The method of presentation may seem rather cumbersome to the reader. Usage

should teach many things even to a teacher. Better methods will without doubt be employed in the future. It was no part of the writer's purpose to present the subject as a model type of teaching, but merely to illustrate what could be done under average conditions.

As the proof of the pudding lies in the eating, so the test of a project of this type lies in the testing. Assuming that the children had been graded with reasonable accuracy to determine their scholarship grades, and that the tests given on the Arizona subject matter constituted a fair sampling, the conclusion can readily be drawn that the plan worked from the standpoint of content. As to whether this social science course taught social service, there is no way of checking. (The positive factual values of a course we can estimate fairly accurately but the real social values must always be more or less a matter of supposition.) After all, the boy who knows where the cactus wren lives and how she feeds her young is not likely to destroy her thoughtlessly. In order that the human mind may have appreciation, a certain amount of understanding and sympathy is necessary. If we can develop appreciation of our past, present, and future, is it not safe to assume that we are developing toward a capable, unselfish citizenship?

APPENDIX.

Tests Used.

1. Essay Type.

1. How did Vaca make his way from the Mississippi River to the Spanish settlements in Mexico?
2. Tell of Coronado's discovery and exploration of the Grand Canyon.
3. What was the early Spaniards' ideas of Cibola or the Seven Cities?
4. Whom do you consider the greatest Apache Chief? Why?
5. What parts of Arizona were occupied by the Navajo?
6. What were the chief articles of food of the Papagos?
7. Why were the Hopi Indians considered more civilized than the other Arizona Indians?
8. What is the purpose of the Hopi Snake Dance?
9. Locate the Santa Fe Trail.
10. What two main line railroads cross Arizona?
11. Why was Tombstone first settled?
12. Name two of our territorial governors.
13. Mention some of the factors that made cattle or sheep raising such a hazardous occupation in early days.
14. Name and locate one national forest in Arizona.
15. How is the United States government trying to conserve the forests of Arizona?
16. Name and locate one large Arizona copper mine.

17. Tell how the water that irrigates the Osborn School grounds is delivered.
18. What day do we celebrate as the State's birthday?
19. Who was president of the Arizona Constitutional Convention?
20. What two men have occupied the Governor's chair since statehood?
21. Who first settled Phoenix?
22. Where is the Arizona Natural Bridge?
23. Name five of our most common desert plants.
24. Name five birds found in Arizona.

•

This test was given in two parts as the author thought it too long for the pupils to attempt at one period. Twelve questions were given each day, the pupil having an option of selecting ten of the twelve questions to answer. In grading the papers each question counted five per cent.

2. Completion Type

1. Vaca made his way into Mexico from the Mississippi River by serving the Indians as a \_\_\_\_\_ man.
2. The hotel at Chandler was named after \_\_\_\_\_.
3. \_\_\_\_\_ first discovered the Grand Canyon.
4. The fiercest Arizona Indians were the \_\_\_\_\_.
5. The Indians making the best blankets are the \_\_\_\_\_.
6. The most peaceful Indians living near the site of Phoenix were the \_\_\_\_\_.
7. The most civilized Indians in Arizona were the \_\_\_\_\_.
8. The \_\_\_\_\_ Indians were found and still live in houses far above their fields.
9. The Hopi Snake Dance is a prayer to their gods for \_\_\_\_\_.
10. \_\_\_\_\_ is superintendent of the Phoenix Indian School.
11. Many of the Arizona Indians now live on land reserved for them called \_\_\_\_\_.
12. The California Gold Strike caused thousands of people to cross northern Arizona by the \_\_\_\_\_.
13. Arizona was secured from Mexico by the \_\_\_\_\_ Purchase.
- 14, 15, and 16.  
\_\_\_\_\_, \_\_\_\_\_, and \_\_\_\_\_ were three of the greatest Indian chiefs who fought against the Americans.
17. The Indian chief, \_\_\_\_\_, at one time escaped from the Americans by cutting his way out of a tent.

18. The reason the first railroad crossed Arizona was so they could get to \_\_\_\_\_.

19, 20.

The two mainline railroads crossing Arizona are the \_\_\_\_\_ and the \_\_\_\_\_.

21. Phoenix is now on the mainline of the \_\_\_\_\_.

22. One of the largest copper mines at Globe is \_\_\_\_\_.

23. One of the largest copper mines at Miami is \_\_\_\_\_.

24. The \_\_\_\_\_ copper mine is located at Jerome.

25. Congress Junction is named after the old \_\_\_\_\_ mine.

26. Improvement in the mining business makes it possible for the mines to use a \_\_\_\_\_ grade of ore than formerly.

27, 28.

\_\_\_\_\_ and \_\_\_\_\_ were two of the first territorial governors of Arizona.

29. Tombstone is famous for its \_\_\_\_\_ men, in early territorial days.

30. Arizona cattlemen usually raise \_\_\_\_\_ cattle, as they are the best grazing cattle known.

31. Cattle and sheep cannot live on the same range because the sheep eat the grass \_\_\_\_\_ than the cattle can.

32. The \_\_\_\_\_ National forest is near Flagstaff.

33. Much of the White Mountain Country is in the \_\_\_\_\_ national forest.

34, 35.

The \_\_\_\_\_ national forest north of the Grand Can-

yon is the home of the \_\_\_\_\_ deer.

36. The United States forest service is attempting to conserve our forests by educating us to be careful with our \_\_\_\_\_.

37. To locate and report \_\_\_\_\_ to the forest service the department has established lookout stations.

38. Lumber companies operating in national forests can only cut such trees as the \_\_\_\_\_ gives them permission to cut.

39, 40, and 41.

As an aid in \_\_\_\_\_ the ground the brush is \_\_\_\_\_, and a certain number of \_\_\_\_\_ trees are left.

42. Potatoes are raised near Flagstaff by \_\_\_\_\_ farming.

43. The \_\_\_\_\_ Dam will be built to irrigate the Casa Grande Valley.

44. The Salt River Valley Water Users Association is now completing a power dam at \_\_\_\_\_.

45. Water from the Salt River is taken into the canals at \_\_\_\_\_ diversion dam.

50. \_\_\_\_\_ was president of the Arizona Constitutional Convention.

51, 52, and 53.

The first Governor of Arizona was \_\_\_\_\_; the second governor was \_\_\_\_\_; after that \_\_\_\_\_ became governor.

54. \_\_\_\_\_ was elected governor by the democratic party.

55. \_\_\_\_\_ was elected governor by the republican party.

56. The Petrified Forest is located near \_\_\_\_\_, Arizona.

57, 58.

Two good trout streams in Arizona are \_\_\_\_\_ Creek and \_\_\_\_\_ River.

59. Mormon Flat Lake is so long and narrow that it is often called \_\_\_\_\_ Lake.

60. Roosevelt Lake is a favorite place for fishermen who are fond of \_\_\_\_\_.

61, 62.

Many Phoenix people spend their vacations up beyond Flagstaff at \_\_\_\_\_ Lake and Lake \_\_\_\_\_.

63. The \_\_\_\_\_ Peaks are near Flagstaff.

64, 65.

The United States is helping the cattle and sheep men and protecting our wild turkeys by hiring hunters to kill the \_\_\_\_\_ and \_\_\_\_\_.

66. The Cactus \_\_\_\_\_ makes its home in the Giant Cactus.

67. The water ousel is seldom found except near \_\_\_\_\_ water.

68. The land adjacent to Roosevelt Lake has been made a Government \_\_\_\_\_ Preserve.

69, 70.

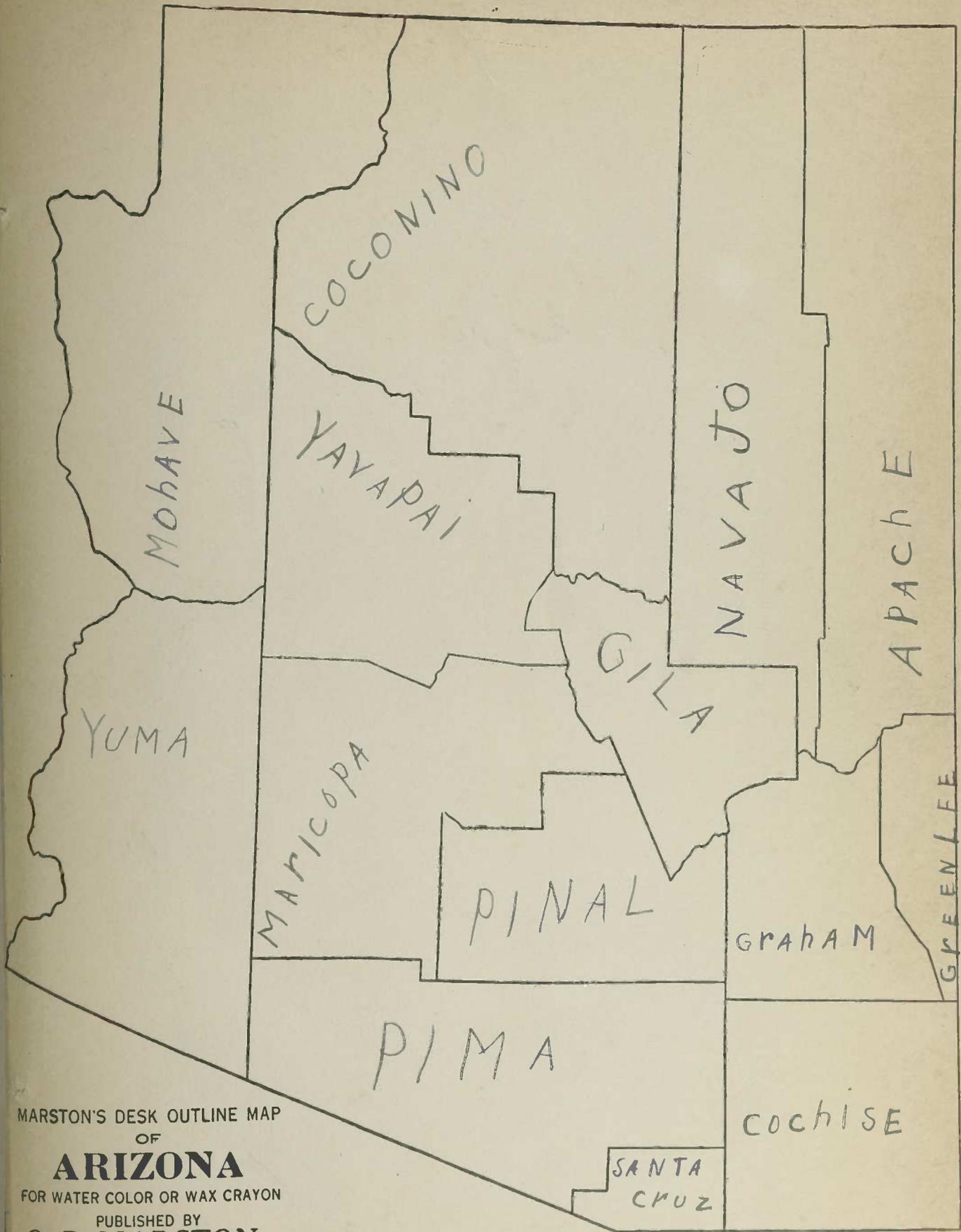
Dr. \_\_\_\_\_ of \_\_\_\_\_ institute excavated and restored part of Eldon Pueblo.

71. Walnut Canyon is famous for its ancient \_\_\_\_\_.
72. There is an \_\_\_\_\_ field over the Arizona Natural Bridge.
73. Phoenix was first settled by \_\_\_\_\_.
74. One of the finest of the old missions is located near \_\_\_\_\_.
75. The Arizona city built in a gulch is \_\_\_\_\_.

One hour was allowed for the completion of this test. Each blank, unless a name in two parts, properly filled in counted as four-thirds percent. In case the pupils did not fill the correct name in the blank, their score was not lowered; the grade being obtained by multiplying the number of correct answers by four-thirds.

# ARIZONA





MARSTON'S DESK OUTLINE MAP  
OF

# ARIZONA

FOR WATER COLOR OR WAX CRAYON

PUBLISHED BY

**O. B. MARSTON**

PHOENIX, ARIZONA

# The Story of Creation <sup>George</sup> Judson Jr.

Long long ago  
the beetles, the white  
beetles, the yellow  
beetles, the locusts,  
the white locusts, the  
yellow locusts the brown  
locusts and the brown  
beetles led an evil  
life in the first  
world. They kept on  
sinning so one day  
the people saw a  
great sheet of water  
coming towards them.  
they looked at the  
ground and saw  
they were floating in  
the air. They went  
up till they came  
to hole, went through  
and came to the  
second world. At the  
second world there  
was a great river.

and on the banks of  
the river lived the  
swallows. For 23 days  
they lived in peace  
but on the 24<sup>th</sup> they  
quarrelled. The swallows  
said they would not  
have strangers so  
they flew away.

On the 3<sup>rd</sup> world  
they met the grasshopper  
and they did the  
same as they did  
with the swallows. So  
they flew away to  
the fourth world.

In the fourth  
world man and  
woman were made  
from two ears of corn  
~~and~~ the wind blowing  
on them.

One day man  
and woman quarrelled  
so man took all the  
men and left the  
women alone. After a

while woman felt  
sorry for what she  
had done and came  
across the river with  
the men but forgot  
two maidens. The maidens  
tried to swim across  
the river but water  
ox got them and  
then gods and coyote  
came down and  
took them back. But  
coyote slipped two of  
water ox's children  
in his cloak.

One day all the  
people saw a lot of  
water coming towards  
them so they had  
a youth build a  
tall reed clear up  
to the fifth world.  
All the people  
got in and went

to the top of the  
sky. Grasshopper dug  
and dug and finally  
he went through and  
stayed on an island

Here he saw 2ques  
and they said that  
if he could stick  
a dart through his  
heart they would give  
him half of the world

He did this and  
they flew away.

The grasshopper went  
back to the people  
and badger dug  
through so the people  
came to the fifth  
world. Here the four  
gods through four  
clouds and made  
four rivers and the  
people lived happily  
ever after.

## The Legend of The Snake and Antelope clans

Once there was an Indian Chief who had two sons. One was happy and the other was melancholy. The chief did not know what to do with his melancholy son so he sent him down the river in a cotton-wood log. When the log stopped he got out and was going to walk down the river when he heard old mother spider calling him. He went in her cave and when he had found out about the under world two beautiful maidens took him home. He married one of these maidens and his brother married the

other.

This is the first  
of the snake and  
Pintadope clans

# The Legend of the Grand Canyon.

Long Long ago two gods were fighting. The god of the sea flooded the land took his great stone knife, cut a great hole in the earth and let the water flow out.

This is the Hopi legend of the Grand Canyon.

## Vaca

One hundred years before the pilgrims came to America, Vaca, a Spanish soldier sailed to Mexico with six hundred. When he got to Mexico he found the one hundred fifty of his soldiers had deserted. They went around the coast in search of gold but famine and disease killed one hundred fifty five more soldiers.

The remaining men after much toil built ships and sailed down the Mississippi River.

Vaca got a fever and they left him and three other soldiers to their fate.

The Indians got them and made medicine men out of them but Vaca

started trading shells for glass ornament and this made the Indians like him.

Finally Vaca left the Indians and walked through New Mexico, the corner of Arizona and down through California. All the way the only sign of white man he saw was an Indian wearing around his neck a sword buckle and a horse shoe nail.

When Vaca got back to sevalization the vicaroy made him governor of New Genia.

Marcos and  
Cornodo

After Vaca got back to Mexico the emperor sent a priest, Marcos to explore the country.

He and Estavan a negro went to New Mexico. He told Estavan to go on and if he made a large discovery to send large cross and if he made a small discovery to send a small cross. He received a large cross and started on to find Estavan.

Estavan started on with 300 Indians. because they thought he was a god. He got to an Indian village and tried to make the chief think he was a god but the chief did not like him so he killed Estavan.

When Marcos heard this he hurried to the village and planted a cross in the name of Spain in front of the village.

When he got back to Mexico he told the viceroys and the viceroys sent Coronado with soldiers to get the gold.

Coronado and his men marched hard till they came to the Grand Canyon. For years they marched all over Arizona, California, and New Mexico looking for gold but they never found it.

When they got back to Mexico they were in a sorry plight, for they were wearing skins and had not found any gold.

# Lumber

Arizona is noted for lumbering in the northern part of the state.

The different forests are

The Apache National forest.

11	Coconino	11	11.
11	Coconada	11	11.
11	Crook	11	11.
11	Hiabab	11	11.
11	Prescot	11	11.
11	Sitagrar	11	11.
11	Tonto	11	11.
11	Tusayear	11	11.

About 55,000,000 ft. of lumber is cut in Arizona each year.

# Irigation

The Irigation of Arizona is made by dams canals and irigation ditches.

Roosevelt dam  
Horse Mesa dam, Mammom  
Flats dam, Blue Point dam  
and Coolidge dam are  
the dams of Arizona.

All together there  
is about 300,000  
acres of water.

# Minerals of Arizona

Arizona has one fourth of the world supply of Copper and has more minerals than any other state in United States. The greatest copper deposit in Arizona is in Cochise county. The minerals of Arizona are.

Copper  
Lead  
Zink  
Gold  
Silver.

## Highways

The Highways of Arizona are as follows. Number 89 is the most important. It starts at Nogales, goes through Tucson, Phoenix, Prescott, Ash Fork, Williams, Flagstaff and goes north to Lee's Ferry. Here they have built the biggest bridge in Arizona.

Number 79, The Old Trail National Highway, starts at Springerwill goes through Holbrook, Flagstaff, Kingman, and crosses over to California at Needles.

Number 80 starts at Rodeo New Mexico goes through Douglas, Tombstone Tucson, Phoenix, Buckey, Hila Bend and into Yuma.

## The Rainbow Natural Bridge

The Rainbow Natural Bridge is three-hundred feet high and has a span of two-hundred and seventy feet. It is located in Utah and the Colorado River flows under it.

## Crater Mound.

Between Winslow and Flagstaff there is a hole in the ground where a meteor fell. There are rich minerals in the meteor and many people have tried to get it.

## The Grand Canyon

The Grand Canyon is the greatest natural wonder in the world.

It is nearly a mile deep and if Niagara Falls were put in the Grand Canyon it would look like a common waterfall.

Mr. Powell was the first white man to go in the Grand Canyon.

# The Petrified Forest

The Petrified Forest is located east of Holbrook.

The trees were washed a river, were petrified and stayed there.

They used to take the wood east but the government has set aside places so the people will not take the wood away.

# The Ruins of Arizona

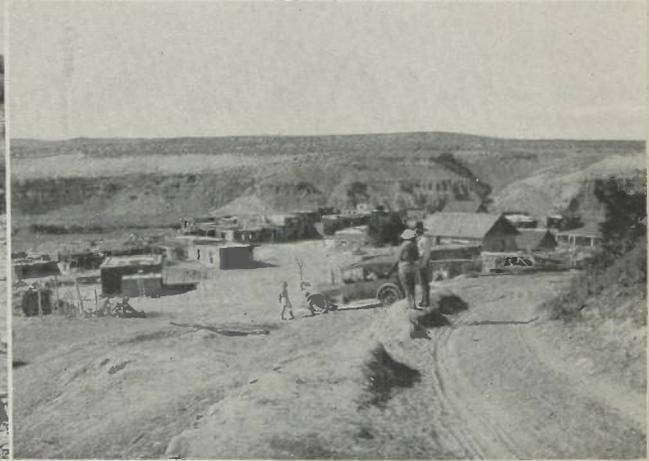
The ruins of Arizona are very interesting.

The Casa Grande Ruins are the most important. There are stone houses scattered around and they look like piles of rocks. The Walnut Canyon has very good Cliff Dwellings and the Montezuma Well and Castle are big Cliff Dwellings.

# The Animals of Arizona

The animals of Arizona are very interesting. They are as follows:

Wild Cat  
Lynx  
Mountain Lion  
Black Bear  
Deer  
Mountain Sheep  
Wolf  
Coyote  
Wild Turkey  
Wild Hog  
Porcupine  
Elk  
Raccoons.



Overlooking Little Colorado River Canyon  
Melgosa Petrified Forest

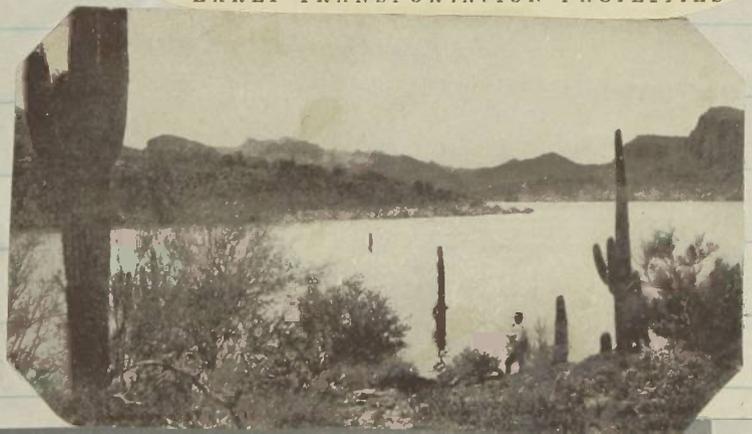
Scenes on Navahopi Motor Trip

Gorge of the Little Colorado River  
Moenkopi Indian Pueblo



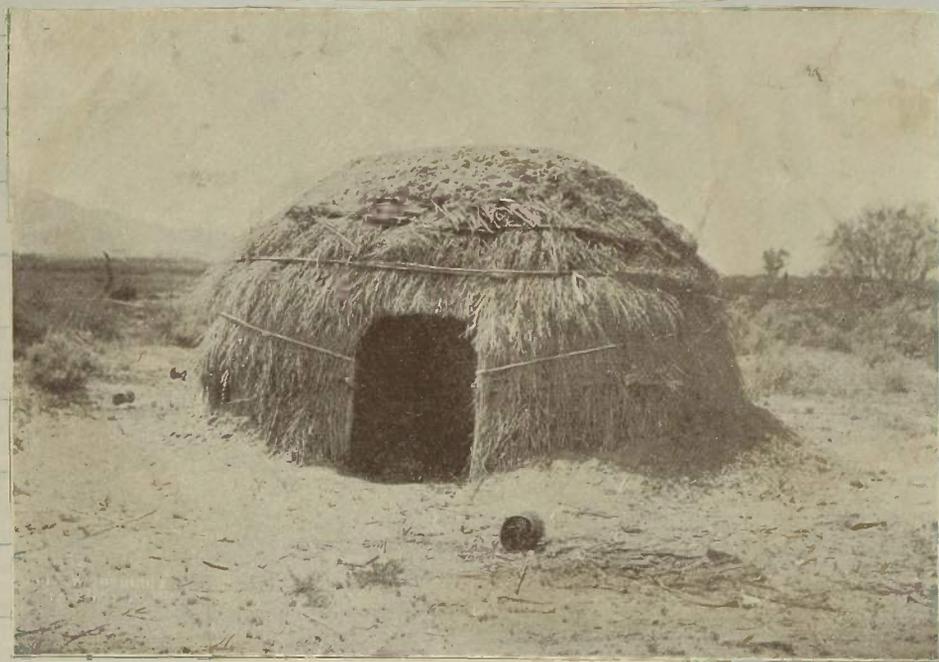
"EARLY TRANSPORTATION FACILITIES"

Fishing on a lake near Phoenix. Notice the budding flowers on the Sahuaro. When in full bloom each column wears a perfect crown of waxy blossoms of unsurpassed delicacy and coloring.





COTOC, A MARICOPA CHIEF, AND HIS WIFE



A TYPICAL PIMA "KEE", NEAR PHOENIX

