Visual aids for teaching history and application to the Plymouth High School.

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VISUAL AIDS FOR TEACHING HISTORY
AND
APPLICATION TO THE PLYMOUTH HIGH SCHOOL

PEKARSKI - 1941
VISUAL AIDS FOR TEACHING HISTORY

AND

APPLICATION TO THE PLYMOUTH HIGH SCHOOL

by

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INTRODUCTION

Many high school courses have to be covered with complete absence of historical contacts, such as in some of the territory West of the Alleghaney Mountains. However, in territory rich in the scenes of historical events, there is a different condition for the study of history.

The tendency to teach United States history without contact with historical materials is such a common error that a special study should be made of the maximal benefits that can be made to accrue to the students of history in a high school located in the midst of historical material.

The school selected for such a study is the Plymouth High School in Massachusetts. The writer knows the school and the environment of Plymouth well enough to be interested in developing a program of maximal use of illustrative material available there and expand the study to include reasons for the use of certain materials and possible generalizations as to the most valuable visual aids for history study.

PURPOSE

The purpose of the problem is to find as complete a list as possible of visual aids suited to history study. These are to be evaluated as to practicability to the school system, their value to the student, and arranged in groups according to their apparent general values. An application of the list will be made to the work in history in the Plymouth High School in Massachusetts.
WHAT ARE VISUAL AIDS?

If school instruction is to become more meaningful, visual aids must be used to make the pupils' experiences more varied and richer. What are visual aids, then? Most people would be quick to answer - motion pictures. However, they are not the only visual aids available to the classroom teacher, nor are they the ones most widely used.

In "Visualizing the Curriculum" a visual aid is said to be "any picture, model, object, or device which provides concrete visual experience to the learner for the purpose of (1), enriching or clarifying abstract concepts; (2), developing desirable attitudes; (3), stimulating further activity on the part of the learner".¹ In the words of Dorris, "Visual instruction simply means the presentation of knowledge to be gained through the seeing experience".² According to Roberts, "Visual education is a method of imparting information which is based upon the psychological principle that one has a better conception of the thing he sees than of the thing he reads about or hears discussed".³ In other words, these aids are supplementary devices by which the teacher hopes to establish accurate concepts and understandings.

PLACE OF VISUAL AIDS IN STUDY

One of the purposes of the use of visual aids in instruction is to do away with verbalism, which may be defined as the "term applied to the use of words without appreciation of the meaningful content of the context in which they are used." In literature there is an example of this when Hamlet was asked by Polonius, "What do you read, my lord?" His reply was, "Words, words, words". The use of visual aids in teaching history is an attempt to eliminate this verbalism from the results of school instruction. It is prevalent wherever abstractions are used without a varied background of experience.

Consider how difficult it would be for the average pupil to get an idea of the size and shape of the various states of the Union, or the general details of Colonial homes and dress, through hearing a discussion of them. How much easier and more interesting it would be to the pupil to show him a map of the United States or pictures and models of the Colonial times. The impressions are then accurate, clear, and meaningful. Instead of merely hearing about something, they have seen an image that will remain with them much longer.

The factor of interest became more important in teaching with the development of the psychology of learning. The

4. Hoban, Hoban and Zisman, op. cit., p.3.
idea was stressed that education should discover and develop these interests of the children. Modern educators attempt to make the school a place where they will be happy. The pupil will voluntarily spend hours and hours working on some project because the activity interests him.

Novelty of these Aids.
Visual aids are a change from the traditional activities of school such as reading, writing, reciting, or listening. The pupil experiences something different, and variety is always attractive to both adults and children.

Easy to Understand because of Concreteness.
If a thing is mastered quickly, the pupil is encouraged by his accomplishment. However, if he doesn't understand the material, his attention is liable to wander. A verbal description would be a roundabout method, whereas experiencing the object firsthand or an image of it, would result in more rapid and more permanent learning. 5

Economy in Education.
Just as in the management of an industry or a business, the conservation of time is important in education. The child should learn as much as possible in as short a time as possible. Not only this, but the material should be

made appealing. An old Chinese proverb says, "One picture is worth ten thousand words". Although we cannot take this statement literally, still we recognize that there is truth in the saying.

Holaday and Stoddard made a three year study of three thousand children and adults. They found that the age group from fifteen to sixteen acquired four-fifths of the information given in educational movies. They reached this conclusion from tests given after the movie was seen. They also found that there was a slow drop in the curve of forgetting. In reading history textbook material these pupils would not have acquired as much information in such a short time.  

Pioneers on the educational frontier do not have to champion the cause of visual instruction any longer. Scientific research has demonstrated its effectiveness. If any school is given a trained personnel, adequate equipment, and appropriate conditions, they can achieve results with visual aids that would not be possible otherwise. However, these aids will not perform miracles, even though there have been extravagant claims made for them. We are told that teachers and the textbooks will, in part or in whole,  

be displaced by them. Advocates of a visual programs must realize that there is no simple formula to guarantee that all the pupils will become well-integrated future citizens of our society. On the contrary, visual aids will furnish the stimulus to go to textbooks and the teacher for information and help.

PRINCIPLES UNDERLYING THE SUCCESSFUL USE OF VISUAL AIDS

An Intelligent and Cooperative Faculty.

It is hard to realize that in many schools the first steps taken in developing a visual instruction program were the result of a salesman, a lecture, or a summer course taken by an administrator. A slide projector or a motion picture machine may be purchased and unpacked, but they may not have the slightest idea of how to use these things so that they will definitely be to the children's advantage.

This is the part of the program which makes the special training of teachers for it so important. A lack of intelligent cooperation will handicap the program. We must realize, however, that not all teachers and administrators should be expected to be enthusiastic or competent in such a program. A sensible campaign for such a program may be used by the school. It may take several months to provide a favorable setting for the support of such a program.

The education of the faculty may be promoted in several ways such as the following:

1. Reviews of literature on the subject
2. General faculty discussions
3. Reports of practices in other schools
4. Talks by experts
5. Visits to other schools
6. Demonstrations of equipment and materials

Sensory Aids should be Carefully Selected. Just as much care should be used in choosing visual aids for history as in choosing the best textbooks, correct seats and desks, and other materials for the school. Some of the community members may wail about the cost of the visual equipment anyway, and if poor purchases are made, criticism will be more justifiable.

Only expert opinion should be considered in selecting material for a visual aids program. In some schools there may be teachers, supervisors, or administrators, who, on the basis of experience and training in that field, would be competent to give worthwhile advice. Those teachers who will use them most of all, should be included in the committee for the final selection. The busy principal or superintendent, generally speaking, does not know enough about such things to be able to buy all the necessary equipment.

The Aids should be Appropriate to the Age and Experience of the Pupils.

"An aid is an aid only if and when it really aids".\textsuperscript{10} It will never aid maximally unless it suits the experience, background, and interests of the pupils. If it is too difficult to understand, there will be no ready learning, but discouragement. If it is too easy, undesirable pupil attitudes will be created because of a lack of interest. The teacher has to evaluate for herself which aids fit particular groups at particular points in their learning.

In the use of motion pictures little attempt has been made to classify them according to age groups. This is one of the handicaps of the film.

Mere Display is Not Use of Visual Aids.

Merely looking at a photograph, diagram, or motion picture does not mean that the pupil gets the full meaning from it. They should not be considered as magical devices because they are said to aid retarded children, save time, enrich the curriculum, and develop correct attitudes.\textsuperscript{11} They are not substitutes for instruction, but supplementary to it. The teacher has a definite part in the program by leading the pupils to understand and appreciate the material.

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9. Pertinent literature is briefed in Part III of Dale, Dunn Hoban and Schneider's, "Motion Pictures in Education."
In using some of the aids there may be a danger that the pupils are attracted by the unusual characteristics, and miss the point of the lesson for which the teacher is aiming. It is very easy to see the "trees" and not the "forest".

In instruction we find that the teacher is more effective than any material device used alone, and she can guide the pupils to see the "forest".

Do Not Use Too Many Aids.

In the past in formalized teaching, too few aids were in the classroom. However, some teachers may become so enthusiastic that too many will be used. There is a great interest among educators in this field and some teachers may consider visual aids a sure panacea for all their troubles. Some teachers desire to be obviously progressive by a liberal, but probably incorrect, use of new devices.

The classroom should be a neat, orderly place for children to live in. Pictures may be appropriately displayed on the walls, but to have the whole room cluttered up with long rows of miscellaneous pictures, often poorly mounted, sets a very poor example of an orderly place. No matter what the aid is, it should be introduced to the class when there is a definite need for it.\(^\text{12}\)

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Because the use of visual aids in instruction is accepted in current practice, it may seem natural to expect that a reliable list for their selection would have been developed, and that modern schools would use such a list as a basis for choosing their equipment. But the educator who searches for a scientific approach to his selection problem must "stumble through the oak forest of educational literature to find a few sprigs of evaluative mistletoe". An exception to this rule is "Materials of Instruction", Eighth Yearbook of the Department of Supervisors and Directors of Instruction, National Education Association, published in 1935.

The following is an attempted evaluation of such a list from the standpoint of value to the student and practicability to the school.

DISCUSSION OF DATA
All the material used in the discussion of data has been put into a chart on the next two pages. All the necessary information about each visual aid discussed is placed together and may be seen easily. For each item the data has been placed under the following headings: Practicability, cost, value to the student, and criteria.

For the necessary discussion of the contents of the comprehensive table there is an order of attention to points concerned. For example, Flat Pictures, page 14. (a) General presentation of the idea; (b) Definition or other specification; (c) Value, including the items of practicability, cost, value to student, and criteria.
<table>
<thead>
<tr>
<th>Item</th>
<th>Practicability</th>
<th>Cost</th>
<th>Value to Student</th>
<th>Criteria</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Flat pictures</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. Textbook illustrations</td>
<td>Convenient</td>
<td>Inexpensive</td>
<td>Real and vivid</td>
<td>Size</td>
</tr>
<tr>
<td>b. Photographs</td>
<td>Easily available</td>
<td></td>
<td>Give concrete images</td>
<td>Accuracy of detail</td>
</tr>
<tr>
<td>c. Illustrations</td>
<td>Can be used repeatedly</td>
<td></td>
<td></td>
<td>Pertinence of detail</td>
</tr>
<tr>
<td>2. Maps</td>
<td>Outline maps involve student activity</td>
<td>Moderate</td>
<td>Large areas reduced</td>
<td>Size, detail, color, content, adaptability</td>
</tr>
<tr>
<td>3. Exhibits in school</td>
<td>Some material available in homes of pupils</td>
<td>Low if obtained from pupils' homes</td>
<td>First hand experience with objects</td>
<td>Authenticity of objects</td>
</tr>
<tr>
<td>4. Lantern-slide projector</td>
<td>Need for storage room for slides and projector and Breakable and heavy slides</td>
<td>Expensive</td>
<td>May be used for close group study</td>
<td>Up-to-date illustrations</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Quality</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Relevancy</td>
</tr>
<tr>
<td>Item</td>
<td>Practicability</td>
<td>Cost</td>
<td>Value to Student</td>
<td>Criteria</td>
</tr>
<tr>
<td>--------------</td>
<td>----------------</td>
<td>---------------------------</td>
<td>------------------</td>
<td>------------------------------------</td>
</tr>
<tr>
<td>Stereoscope</td>
<td>For individual, not group teaching</td>
<td>Expensive if whole class is provided</td>
<td>Produces illusion of reality</td>
<td>Same as for lantern-slide</td>
</tr>
<tr>
<td>Reflectoscope</td>
<td>Flat pictures may be used in it. No special pictorial material is necessary</td>
<td>Quite high for the machine itself</td>
<td>May be used for close group study</td>
<td>Quality of flat pictures Relevant to material being studied</td>
</tr>
<tr>
<td>Movie</td>
<td>Adaptable to any grade Large group instruction</td>
<td>High for equipment and operating expenses</td>
<td>Pupils retain more logical sequence of scene</td>
<td>Up-to-date Establish correct attitudes Clarity of film</td>
</tr>
<tr>
<td>Cartoons</td>
<td>Integration with other aids</td>
<td>Merely for paper and paints</td>
<td>Creates strong and lasting impression No complicated details ideas. Encourages</td>
<td>Neatness Easily understood</td>
</tr>
<tr>
<td>School journey</td>
<td>School program may not be flexible Many accessible sary places in Plymouth</td>
<td>No expensive equipment necessary</td>
<td>Deals with real things. Stimulates interest in history. Citizenship pre-training. Better teacher-pupil relationship</td>
<td>Integration with school work. Teacher and pupil preparation</td>
</tr>
</tbody>
</table>
From the beginning of time man has used pictures for expressing ideas or conveying information. At first scratch-es on rocks were the media of expression. Then through many developments came the use of papyrus, paper, pen, ink, and paint. It would be difficult to imagine modern life without pictures. We would have no illustrations, photographs, drawings, or post cards. Commercial and industrial interests realize the importance of pictorial devices or they would not spend so much money in preparing them.

Definition.

Emmert defines the flat picture as "a cross section of a visual experience at the instant it occurs. It stops motion, shows line and color, indicates special relationships, and portrays people, objects, and scenes in which motion is not an essential feature".  

Value of Flat Pictures.

The flat pictures are one of the most universally used aids in studying history. Some of the reasons for this are that they are, (1) real and vivid; (2) easily available; (3) convenient to use; (4) inexpensive; (5) can be used repeatedly.

15. Hoban, Hoban and Zisman, op. cit. p. 179.
There seems to be little excuse for any rural or urban history teacher not to possess an adequate supply of pictorial materials like photographs, post cards, and magazine illustrations. They may give a good background for the appreciation and understanding of the newer and more expensive visual aids whose use may effectively follow.

The Illustrated Textbook.

Pictures adorning the pages of history textbooks are nothing new, but too often the teacher ignores them. Besides this, some of them were too small to be significant or so poor in quality that they did not help the pupil much. To some history students a good picture may prove to be more valuable than any page of printed description. If a picture is considered to have sufficient educational value to take up space at all in the textbook, it should be of the best quality and large enough to be used effectively as a teaching device in history.  

The newer history textbooks are placing an emphasis on the need of pictures, and they are now being adopted universally. There has also been an effort to make the picture not merely an illustration, but a vitally important part of the text. Sometimes they are used as page decorations with little or no definite connection with the printed material.

16. Ibid., p. 205.
17. Dorris, op. cit., p. 72.
The importance of the illustrated textbook as a visual aid in history classes is considered even more important when we realize that a copy is made available to every pupil. They may refer to a picture continually without the bother of going to the bulletin board or a picture file.

APPLICATION OF FLAT PICTURES TO PLYMOUTH

For the teacher or pupil who is interested in photography there is a wealth of material available in Plymouth to make an excellent collection of historical pictures.

The following is a list of places and things that may be photographed to make up an interesting bulletin board:

1. Brewster Garden. Here there is a statue of the Pilgrim Maiden to symbolize the loyalty and courage of the women who came over on the Mayflower. In the garden there is a spring and the Town Brook, which are significant because the Pilgrims planned to settle there on account of the abundance of fresh water. Without this supply in Plymouth, they would have gone on to find another place for their home.

2. Statue of Massasoit on Cole's Hill overlooking Plymouth Harbor. Massasoit was king of the Indian tribe that was so friendly with the Pilgrims. He and Governor Carver ratified a mutual agreement by smoking the pipe of peace. For fifty years after this there was no war, until an Indian leader, King Philip, a son of this very king,

waged a war of bloodshed, the worst of its kind in colonial history.

3. Statue of Myles Standish in Duxbury, just across the harbor from Plymouth. The reason for his statue being in Duxbury is that he moved there later because Plymouth was becoming crowded. Captain Myles Standish was the military leader of the colony. He crushed a conspiracy that was being planned by unfriendly Indians. They found that even though he lacked stature, he did not lack courage.

4. Burial Hill. This was the site of the first fort in Plymouth. The advantageous position of this hill was another reason for selecting this section in which to settle. Two of the cannons are still there. During the first six months there, the death toll was the highest. The names and epitaphs on some of the stones are still legible.

5. Plymouth Rock. At the time of the coming of the Pilgrims this large jagged rock was a convenient place for the smaller boat from the Mayflower to land. The boat was not landed on the beach so that people had to wade to shore. The temporary mild weather at that time was deceiving, and many died as a result of bad colds obtained from getting wet.

6. The Pilgrim's Progress is reenacted every Friday in August. Those who take part are the descendants of the first Pilgrims, and are dressed in the authentic costumes of the time. They retrace the steps of the first settlers going
to church. Photographs of this group may be taken for the collection.

If photographs are not to be had, the teacher may buy postcards of these historical places in Plymouth. They are always available because of the demand for them by the tourists.

Pictures may be bought from the companies listed in the Appendix as sources of illustrations. There is also a list of masterpieces which may be correlated with American history.

MAPS

Man is map-minded. They are absolutely indispensable. To most adults a "map" means a colored poster hanging on the wall. This is correct for a formal map, but there are other types to be considered.

Maps are graphic representations of the surface of the earth or only parts of it, showing the different sizes and positions. Historical maps may reveal a great deal of information, if interpreted correctly, therefore pupils should be taught to read them intelligently. Neither written nor oral descriptions in the history textbook will help the pupil to visualize the world as much as a map will.

In the study of history they are as necessary as a textbook.

From the ancient days to the present, maps have developed from crude diagrams of the then known world, to the scientific charts of the world today. By skillful arrangement of colors and significant symbols, the modern maps tell almost a complete story.

The function of maps is to reduce the scale of large areas and long distances so that they are brought closer to reality to the students.\(^{21}\)

There are two things involved in realizing location:
1. Sense of direction.
2. Concept of distance.\(^{22}\)

Size.\(^{23}\)

For group instruction large wall maps should be used. Smaller ones, such as those in textbooks, are used for individual study. The area being studied will be an important factor in choosing the proper size.

Detail.
Information such as symbols, names of places, and titles should not confuse pupils and should be quickly legible.\(^{24}\) When possible, reading material should be horizontal, or at an angle that is not difficult to read. The lettering should vary enough in size and type so that differentiation will be easy.

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Color. Ever since maps were first made, color has been used to emphasize different sections of a region. However, it should not be so bright that it draws the attention of the pupil away from the real purpose of the map.

Content. Maps should contain information that is pertinent to the unit in history being studied. One map is hardly enough to make for the most efficient instruction. A great variety of maps may be used in teaching American history.

Adaptability. The map should be adapted to the age and grade level of the pupils.

Some maps are specifically designed for history teaching. An outline map is one of these. It usually contains the most important features such as rivers and main political divisions. There is added value to this type of map because the student is able to discuss and demonstrate at the same time.

Textbook maps may be mentioned as a particular type. They are advantageous because of the fact that the text material

27. Idem.
is directly related to them, and they allow for individual study. 29

APPLICATION OF MAPS TO PLYMOUTH

Maps are a necessary part of the equipment of a history classroom. In Plymouth High School maps showing the political arrangements and the topography of our country are available. These are used to advantage throughout the American history course of study.

When studying the Colonial period, the class may make a blackboard map as a project. On it they may have Cape Cod and the Eastern section of Massachusetts. The route of the Mayflower could be planned, and the discoveries at the Pilgrims' first stop at Provincetown Harbor could be discussed. This newly found land at Provincetown consisted of hills of sand, and was covered with woods and thickets - utterly unfit for agriculture. A party of men went ashore to explore this region. They unearthed an Indian granary of corn. These shining kernels of yellow, red, and blue were to be their salvation later.

A few days later eighteen men left the Mayflower anchored in the harbor, and went on an expedition down the coast to find a permanent place for settling. They sailed away in a shallop, a smaller boat that they took with them from Holland. They followed the coast to what is now Eastham,

south of Wellfleet Bay. Here they had their first encounter with Indians, who were frightened away. Their next stop was an island in Plymouth Harbor, although they thought it was the mainland. Under the leadership of Clark, several men went ashore. This is now Clark's Island.

On the mainland shore they found plenty of fresh drinking water, cleared land for planting, hills for defense, and a deep harbor. They hurried back to the Mayflower across twenty-five miles of open sea to tell the others of what they had discovered. They sailed to Plymouth and anchored in the harbor, looking upon their future home.

The pupils are familiar with this part of Massachusetts and as they plan the map and make it, they will relive the adventures of the Pilgrims.

**SCHOOL EXHIBITS**

Any school can and every school should establish a school museum. There is usually a wealth of material within easy reach of almost all schools. The only thing that is required may be the ingenuity to discover available items and the decision to secure or make them.\textsuperscript{30} Many teachers have started collections with little financial aid from the board of education. Indeed, one way to get their support

is to demonstrate the value of an aid such as this.\textsuperscript{31} Pupils will be willing helpers in finding material.

We know that man's early learning was about things and it came from contact with things. Now, in a formalized system of education man realizes the value of direct experience.\textsuperscript{32} These school museums have a great deal of value. In the first place, they provide an outlet for the collecting instincts of the pupils, and induce self-activity.\textsuperscript{33} In the second place, a child will prize more highly a thing he himself has found for study, than an object someone else has found and placed before him to look at and study about.\textsuperscript{34}

At the beginning of collecting materials it will be well to observe some cautions, among which are:

\begin{enumerate}
\item [(a)] Be careful in labeling and arranging the articles in the exhibit.\textsuperscript{35}
\item [(b)] Do not collect too many duplicates.\textsuperscript{36} Objects that are all alike will deaden the interest of pupils.
\item [(c)] Do not allow the museum to become a collection of curios.\textsuperscript{37} Material should be chosen for its help in illustrating a particular lesson.\textsuperscript{38} Teachers should guard against the tendency to include things only because they are beautiful or interesting.
\end{enumerate}

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\end{flushright}

\textsuperscript{31} McKown and Roberts, op. cit., p. 79.
\textsuperscript{32} Idem.
\textsuperscript{33} Dorris, op. cit., p. 85.
\textsuperscript{34} Idem.
\textsuperscript{35} Idem.
\textsuperscript{36} Hoban, Hoban and Zisman, op. cit., p. 79.
\textsuperscript{37} Ibid., p. 80.
\textsuperscript{38} Koon, op. cit., p. 19.
APPLICATION OF SCHOOL EXHIBITS TO PLYMOUTH

In a town like Plymouth, which is historical at almost every corner, it would be an easy task for the teacher, with the cooperation of the pupils and parents, to set up an interesting exhibit of the Old Colony days.

Some of the homes have pewter and brassware that were used in the seventeenth century. They may also possess silver bowls, spoons, and knives. The fact that they didn't have forks at that time, is interesting. That is the reason for the large quantity of napkins that were used.

In Plymouth there are people who have made a collection of Indian arrow heads that have been found in that vicinity. If possible, the teacher could borrow a few of them to show the pupils how primitive their weapons of defense were, even when compared to the Pilgrims' old muskets. Several homes have models of the Mayflower. Some of the boys in the class may be interested in building a model of a twentieth century luxury liner, and use the same scale that was used on the Mayflower. This contrast will show what a great deal of difference three hundred years has made in the development of water transportation.

During the time when the Harlow house is open, samples of the cloth woven from wool and flax may be obtained, and then compared with our machine-made materials of today. If the class brings in samples of cotton cloth, they may ask whether the Pilgrims had that type of material. In their
reading they will find that at that time cotton was not available to the settlers at Plymouth Colony, only wool, and the flax they were able to grow in the fields.

PROJECTED STILL PICTURES

Lantern-Slide Projector.

This type of visual aid has been used for many years, and it is one with which many teachers are familiar. The material to be projected is reproduced on a glass slide three and one-quarter inches by four inches. This machine may be used in a semi-darkened room so that the student can take notes while the picture is being screened. The teacher should be careful not to show any unnecessary slides. Only those directly correlated with the history lesson should be used.

In using the glass slides there is a wealth of material available in the field of history - priceless historic documents, photographs of great people, noted places and landmarks. However, there are several disadvantages in using this type of projector:

(1) The slides are made of glass and are breakable.
(2) The slides require space for storage.

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41. Idem.
42. Dorris, op. cit., p. 155
43. Idem.
(3) Glass slides are heavy, and if rented may costquit a bit for transportation besides the rental fee. 44
(4) The cost of slides may prevent a school from building up its own library. The prices range from forty cents to one dollar and a half for individual slides. 45

Hand Stereoscope.

A special camera takes two pictures at a time from slightly different points of view. The prints are mounted side by side. When seen through the lenses of a stereoscope they are enlarged and merged into one view which appears to have three dimensions. 46

The chief drawback to making the hand stereoscope a vital part of history instruction is that it can be used by only one pupil at a time. 47 Because of this it is not particularly suited for secondary schools, but adapted more for rural schools. 48

Although the cost of stereoscopes is not too great, 49 it would run up to quite an expense to supply a whole class with them, and also to provide the stereographs (double pictures) for each of them.

Reflectoscope.

This type of projector reflects light from any photograph,

44. Idem.
45. McKown and Roberts, op. cit., p. 125.
47. Bining & Bining, op. cit., p. 311
49. McKown and Roberts, op. cit., p. 131.
The chief advantage of this machine is that no special pictorial material is necessary. The earlier reflectoscopes were unsatisfactory because the heat from the lamp destroyed the pictures. However, the newer machines are equipped with cooling systems.

APPLICATION OF PROJECTED STILL PICTURES TO PLYMOUTH

The Plymouth High School does not have any of the projectors for still pictures that have been discussed. However, other schools may have them, and use them advantageously, except for the stereoscope which has been found unsuitable for secondary school classes in history.

All the material used as flat pictures may be used with the reflectoscope, and may be of more value to the student because the figures would be enlarged on the screen. The lantern-slide projector requires a particular type of glass slide, and would, therefore, be more expensive to operate.

With so many other types of visual aids that may be used in the history course of study in Plymouth High School, there is no necessity for using machines to project still pictures.

50. Idem.
52. McKown and Roberts, op. cit., p. 131.
MOTION PICTURES

The world is too large for every child to come in direct contact with all its interesting and vital situations, and the school is too small to house all the significant representations.

No medium in the world's history has so universally influenced human behavior as has the motion picture. It is so influential in shaping habits of thinking and acting, that in countries ruled by dictators, the motion picture is strictly regulated and controlled by the state.

Recently there has been a new interest in the production, distribution, and classroom use of motion pictures. The production of good instructional films has increased greatly during the past five years.

Historical films distributed "gratis" may seem harmless to the teacher, even if they do contain commercial advertising. However, the goal of these companies is to capture the pupil's mind in a formative stage, and "bend it to some selfish interest". They try to arouse a favorable attitude to merits of their brand.

53. Hoban, Hoban and Zisman, op. cit., p. 93.
57. Idem.
There is a question as to whether we should allow the pupils to see this kind of movie because the school cannot afford to buy good ones. We may also ask, "Should we give children carbon dioxide to breathe if air is unobtainable?" The answer is obvious. Schools should stop trying to get "something for nothing".

The following criteria for selection of historical moving picture films should be studied before choosing one for the class:

(a) Scenes should be in a logical and understandable sequence. First things should be shown first.

(b) Of course, a teaching film should be accurate and up-to-date, considering all advances that have been made.

(c) The effect of a film upon attitudes should be considered. A film that encourages prejudice toward people of other nations should never be used as a teaching film for history.

(d) A film should be selected in terms of its bearing on the problems being considered by the pupils in history.

It is possible to state that the improvement in learning, resulting from the use of films, is greatest where the motion pictures are most highly correlated with the history course of study, and where most recently produced films are used.

58. Ibid., p. 20.
60. Idem.
61. Dale, Dunn, Hoban, Schneider, op. cit., p. 257.
62. Ibid., p. 256.
63. Hoban, Hoban and Zisman, op. cit., p. 113.
The motion picture is decidedly superior to verbal methods in presenting facts, but its superiority to other visual aids varies with the type of material being used.64

Historical moving pictures help the pupil to retain the factual material shown.65 It has been mentioned before that Holaday and Stoddard made a three year study with three thousand subjects, and found that pupils fifteen and sixteen years of age retained four-fifths of the material presented in movies.66

The development of interest in history is one of the greatest values of the moving picture.67 Freeman and Wood conducted an experiment with the use of films, and one of their conclusions was: "An increased interest in school work and a sustained interest in the topics studied".68

APPLICATION OF MOTION PICTURES TO PLYMOUTH

The Plymouth High School is fortunate in having a sound motion picture projector. How much more valuable it is for the history students to hear, as well as to see, a movie. In this way an additional sense is being used. Not only that, but the verbal explanation is composed by subject-matter specialists in collaboration with the research staff of the producers.

64. Ibid., p. 114.
66. Idem.
In making use of this projector in history classes, the teacher does not have to confine its use to the Colonial Period. Films are available for every phase in history, and may be used throughout the course of study.

The Yale Chronicles of America Photoplays has been the most widely used of the dramatic films for instruction in history. No attempt has been made to make the films spectacular and to distort historical facts for drama. They adhere to authenticity.

In the Appendix there is a list of the film sources which may be referred to when selecting films. Most of them have catalogs listing the available sound and silent films for history, rental fees, number of reels, etc.

**CARTOON**

A pictorial appeal which has taken the world by storm recently is the cartoon. The modern cartoonist holds a unique place in political life today and has a wonderful power for arousing interest and spreading propaganda.69 There is a legitimate place in every class in history for appropriate cartoons.70

Certain standards should be followed. The drawing should be primarily for visual effectiveness and secondarily for

69. Dorris, op. cit., p. 113.
70. Idem.
appreciation. The eye should grasp the situation quickly. The cartoon should have a direct attack so that its point is not dulled by second hand devices. It is like having to explain a sick joke.

Drawings should contain essential features and not a superabundance of detail. The significance of the sketch in relation to the work in history should be emphasized and not its conception as a work of art. Originality of expression may be encouraged in this way.

APPLICATION OF CARTOONS TO PLYMOUTH

Appropriate cartoons may be used to advantage in every history class, no matter where the school is situated. In the Plymouth school, however, the abundance of actual historical material of the Colonial period will help the students to develop more striking ideas for cartoons. For example, few people stop to think of the Pilgrims' real situation when the history textbook states that these settlers were on the verge of starvation. Actually, they could always have fish, but didn't use it much. They ate oysters and clams when they were half starved, but never liked them. "Sea food" was no treat to them, although it is considered a delicacy today. They did not discover the cranberry until later. Besides this, there was plenty of

72. Ibid., p. 221.
73. Bining & Bining, op. cit., p. 318.
game in the forest. Using these facts as a background, a pupil may make a cartoon that will leave a lasting impression.

A group project may be developed by pupils particularly interested in cartoon-making, by making a whole series of drawings covering this early period in Plymouth.

SCHOOL JOURNEY

There has been evidence of a spasmodic use of the school journey from the time of the early Greeks. Groups of students received instruction as they walked about the streets in Greece in company with a scholar. In the seventeenth century Comenius recommended that, as far as possible, people be taught from the actual things and places, not books. Late in the nineteenth century Francis Parker introduced the school journey in his school at Chicago.

This type of lesson offers unusual and rare opportunities. The formal schoolroom atmosphere is left behind, and the teacher and pupils meet on a common ground with a common interest. The teacher often discovers latent interests and abilities never dreamed of. In visiting a museum with historical relics, the pupils are brought into direct contact

74. Dorris, op. cit., p. 61.
with things as they actually were at that period in the history of the United States. Opportunities are afforded for developing keenness of observation. Some people may visit a museum or historical shrine and see practically nothing. Observation means more than seeing; it means seeing and interpreting.

These trips stimulate interest in the study of history, after the pupils have visited a historic shrine or a museum where documents, clothing, utensils, and other evidences of the past are on exhibition.

School journeys offer opportunities for good citizenship training. Each student should have special duties and responsibilities. The teacher and the pupils should make some plans before visiting a place. They should not be allowed to wander aimlessly without a real purpose, and merely be "exposed" to educative possibilities. This would be a waste of good time.

APPLICATION OF SCHOOL JOURNEY TO PLYMOUTH

There are many places in Plymouth that could be studied by the pupils on a school journey. One of the best lessons of this type would be a visit to Pilgrim Hall, a museum of

75. Hoban, Hoban and Zisman, op. cit., p. 42.
76. Idem.
77. Koon, op. cit., p. 23.
78. Dorris, op. cit., p. 62.
79. Ibid., p. 69.
early relics. Here they will see not only pictures or replicas, but also the original articles. From what they see, they can picture the daily life of the Pilgrims in early Plymouth.

The dishes for everyday use were wooden plates called "trenchers". There are twelve of these that belonged to Captain Myles Standish, and sixteen of his pewter dishes. Also, in the Standish case is the famous Damascus sword of the military chieftain of the Pilgrims. It was captured from the Persians at Jerusalem in 637 by the Saracens, and it is probable that this famous blade came down to Captain Standish from the Crusaders.

Many authentic relics and personal belongings of the Pilgrims are displayed in Pilgrim Hall. Some of these are the Patent of Plymouth Colony, the chairs of Elder Brewster and Governor Carver, which were brought by them in the Mayflower, the Peregrine White cradle, and a carved pew back from the old parish church at Scrooby, England.

The valuable library consists of three thousand books. Some of them are very rare, and if destroyed could not be replaced. The oldest volume bears the imprint 1559. Most of the books brought over by passengers of the Mayflower were Bibles.
In the marble vestibule hangs a large picture of the "Landing". Farther on there is a portrait of King James I together with a number of maps and local views of Plymouth, illustrative of changes which have taken place.

The portraits of the great men of Plymouth Colony will help the pupils to think of them as real men, not as almost mythological characters. They consist of Edward Winslow, who was governor in 1633-1636 and 1644, and Josiah Winslow who was born in Plymouth in 1628, and who became the first native governor of the Colony in 1673 to 1680. It has been lamented that there is no portrait of William Bradford who was once governor, and who wrote a history of the "Plimoth Plantation", perhaps the most important source book of early American history.

In the lower hall is the frame of the "Sparrowhawk", wrecked on Cape Cod at Orleans in 1626, her company finding refuge and assistance at Plymouth. To see the remains of a vessel as old as the Mayflower, though somewhat smaller, suggests some of the perils of an ocean voyage in the days of the Pilgrims. These boats would look like tugs beside the Queen Mary.

Another interesting journey would be to begin at the mouth of the Town Brook, where it empties into the harbor. The Plymouth Rock was here originally, so that is where the Pilgrims first set foot on the mainland in that section.
Leyden Street, or First Street, as it was called in 1620, runs parallel to the brook. They built their homes, and later local industries along the banks. The headwaters of the stream are in Billington Sea, about two miles away. It is called this because John Billington ran away from the settlement one day, and discovered a body of water which he told the rest of the Pilgrims was a sea. Since then it has been called Billington Sea.

Leyden Street leads directly to Burial Hill. Here repose the ashes of those who survived the first winter, the others being buried on Cole's Hill. Marble tablets mark the location of the Old Fort, which was advantageously situated here in order to guard the harbor and the homes by the shore. There is a marble obelisk in memory of Governor William Bradford, the second governor. On the south side is inscribed: "William Bradford of Austerfield Yorkshire England. Was the son of William and Alice Bradford. He was Governor of Plymouth Colony from 1621 to 1633 1635 1637 1639 to 1643 1645 to 1657". He held the same office from 1621 to 1657, except for five years, which he declined.

For many years the colonists had other cares and other uses for their little savings than to provide stones to mark graves. These had to be imported from England at much cost, and consequently it was some years before any were able to afford the expense. The oldest stone is that to the memory
of Edward Gray, one of the wealthiest merchants in the colony. It is dated 1681.

Plymouth contains many old buildings anti-dating the Revolution. Old houses still remaining are the Kendall Holmes house, built in 1666; the Leach house, built in 1679; the Shurtleff house, 1698; and the William Harlow house, 1677, built partly of the material of the old fort on Burial Hill. During the spring, the Harlow house is busy with activities that were carried on by the Pilgrims in the seventeenth century. Corn planting is done just the way they used to do it. Inside the house women dressed in costume are carding, spinning, and weaving wool and flax and making tallow candles. After seeing how things were made under the domestic system, pupils will realize that there was always something for the Pilgrims to do to keep them busy. The beginning of the Industrial Revolution in America changed their lives a great deal.

Some of these homes in the new world make us realize that these Puritanical people did have a sense of beauty and comfort, way back in the seventeenth century. After 1630, the Pilgrims lived better, had more to eat, had better houses, more freedom than any of them had in Scrooby, England.
MORE VALUABLE VISUAL AIDS FOR HISTORY

Moving pictures
Flat pictures
Maps
School journey

LESS VALUABLE VISUAL AIDS FOR HISTORY

Cartoons
Exhibits in school
Lantern-slide projector
Reflectoscope
Stereoscope
HISTORICAL POINTS IN AND ABOUT PLYMOUTH

Pilgrim Hall

National Monument to the Forefathers

Cole's Hill
  Statue of Massasoit

Brewster Garden
  Statue of the Pilgrim Maiden
  Town Brook

Harlow House 1677

Burial Hill
  Site of first Meeting House
  Cannon from the Mayflower
  Bell made by Paul Revere in Unitarian Church

Plymouth Rock

Clark's Island

William Crowe House 1664

Howland House 1666

Daniel Webster House, Marshfield

Peregrine White House, Marshfield

Grave of Myles Standish, Duxbury

John Alden House, Duxbury

Captain's Hill, Duxbury
  Home of Captain Myles Standish
  Monument of Myles Standish
The visual aids that may be advantageously used in history classes have been discussed and placed into two groups - more and less valuable. The basis for this evaluation is the readings that have been done concerning these visual aids. In applying these aids to Plymouth High School, it has been shown what a teacher may do with so much historical material near at hand. The list of historical points in and about Plymouth may help the teacher realize how much material there is available if she will only take advantage of it.


Freeman, F.N., editor Visual Education, Chicago, Univ. of Chicago Press, 1924


APPENDIX
LIST OF SUGGESTED READINGS ABOUT PLYMOUTH


Eaton, Walter P., Plymouth, Copyright by the New York, New Haven, and Hartford Railroad Co., 1928.


SOURCES FOR ILLUSTRATIVE MATERIAL

Pictures
G.P. Brown and Co., 38 Lovett St., Beverly, Mass., (Catalog for five cents)

F.E. Compton & Co., Dept. F, 500 Fifth Ave., New York City

Denoyer-Geppert Co., 5235-57 Ravenswood Ave., Chicago, Ill.

George Washington Memorial Association, 386 Fourth Ave., N.Y.C.


Photographic History Service, 5537 Hollywood Blvd., Hollywood, California
Maps
Denoyer-Geppert Co., (Address under Pictures)
Department of Commerce, Washington, D.C.
Rand McNally and Co., Chicago, Ill.

Film Sources

Boston University School of Education, Division of Teaching Aids, 84 Exeter St., Boston, Rental cost $2. a reel per day plus transportation both ways. For a copy of complete list of Teaching Aids write to Prof. Abraham Krasker at above address.

J. Gifre, Inc., 37 Winchester St., Boston, Mass. If film is not in their stock they will be sent for from a larger company.

Cinema, Inc., 234 Clarendon St., Boston, Mass. Illustrated catalog received on request.

Eastman Kodak Co., Rochester, New York

Film Library of New England, 239 Columbus Ave., Boston, Mass.

Films, Inc., Main office at 330 W. 42nd St., New York City, N.Y. Complete catalog available.

Mr. Norman Moray, c/o Warner Brothers, 321 W. 44th St., New York City. Historic featurettes in technicolor. Write for "Living American History" which is especially prepared to help the teacher of American history.

Pathescope Co., 438 Stuart St., Boston, Mass. Catalog of available sound and silent films for $.10

Society for Visual Education, Inc., 100 E. Ohio St., Chicago, Illinois

Visual Educational Service, 131 Clarendon Street, Boston, Mass.

Y.M.C.A. Motion Pictures Bureau, 347 Madison Ave., New York City. Write here for joining a motion picture group for lower prices.
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<th>Artist</th>
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<tr>
<td>Boyes, A.W.</td>
<td>Departure of the &quot;Mayflower&quot;</td>
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<tr>
<td>Barsse</td>
<td>Priscilla Spinning</td>
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<tr>
<td>Boughton, G.H.</td>
<td>John Alden and Priscilla</td>
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<td>&quot;</td>
<td>Early Puritans of New England</td>
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<td>Pilgrims Going to Church</td>
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<td>Puritans' First Winter</td>
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<td>Return of the &quot;Mayflower&quot;</td>
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<td>Bickwell, A.H.</td>
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<td>Cobb, Cyrus</td>
<td>Paul Rever's Ride</td>
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<td>Johnson, E.</td>
<td>Boyhood of Lincoln</td>
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<td>Trumbell, John</td>
<td>Declaration of Independence</td>
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Approved by:

W.F. Welles

W.H. Harrington