We Make Them Ourselves

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PUPIL-MADE visual aids when intelligently utilized make rich contributions to learning. However, as is true of all learning tools, the pupil-made visual aids, if they are to prove effective, must have a direct relation and adaptation to the particular teaching situation.

A pupil experiences considerable satisfaction in being able to present his point clearly and emphatically by using a visual aid he has prepared for his own purpose. In a classroom where the tool aspect of learning materials is stressed, pupils will make common and effective use of these valuable aids to learning.

When on an excursion, pupils may collect materials which they can organize into a useful exhibit. Often the finished exhibit will contain drawings, maps, or pictures which the pupils have made to supplement the collection of materials. Such an exhibit may well become a valuable addition to the school museum.

Appropriate use of sandtables and models made of clay, sand, papier-mache, or other materials often vitalizes learning situations markedly. A pupil may find his own drawing on paper, lantern slide, or blackboard to be the very best tool by which he can present his ideas to others.

For group discussion there are few visual aids which surpass the lantern slide, which may be examined at length and referred to again and again; in addition, it holds the attention of everyone by its size, clarity, and brilliance.

Some of the most valuable lantern slides are being currently made in the classroom by pupils and/or teachers as need for them arises. Many of these are produced photographically. Others are made on plain or etched glass, cellophane, or lumarith.

Pupils who recognize the tool aspect of pupil-made slides and have materials available are quick to take advantage of this medium for illustrating reports they wish to present to a group.

How to Make Lantern Slides

The simplest type of home-made slide is one of etched glass, which is similar to plain glass except that one side has been etched so that it is easy to write or draw on with pencil. If one wishes to use a cheaper and unbreakable medium for this work, lumarith (etched celluloid) is available. As in all such work, it is advisable to prepare the necessary drawing on a piece of paper the size of the slide or use a suitable printed illustration of the correct size and then trace from this onto the etched surface. If permanency is desired, cover the etched side with a piece of plain glass. Colored pencils, the colors of which reproduce very clearly on the etched surface, are obtainable. Slide inks and India ink are also often used advantageously on plain glass which, when coated with

Making learning tools is fun, both for pupils and teachers. What's more, it arouses latent interest in the youngsters and stimulates their thinking and activity along worthwhile lines. Here are ideas aplenty to help you and your students get started on your own visual aid program, with instructions for making a number of helpful learning tools. Ella Callista Clark is principal of Atwater School, Milwaukee, Wis.

shellac or other suitable substance, takes ink very readily. Ceramic pencil is usable on plain glass, and colored cellophane is often employed to produce unusually attractive slide effects. The silhouette of opaque material also lends itself very well to slide-making.

The cellophane slide is also a valuable tool and may be adapted to a number of uses. For example, as part of a speech correction activity, a group of pupils and their teacher recorded the oral language errors they heard in their room. Using this list as a basis, they devised drill exercises designed to correct these particular errors. To facilitate getting these before the class easily, a pupil typed the exercises on a cellophane slide. The class projected this directly onto the blackboard and by the use of chalk proceeded with drill. After the class finished, they filed the cellophane slide away for review purposes later. This saves time consumed in copying such material on the blackboard each time it is needed.

In making the cellophane slide, first plan the work so that it will fit into the area prescribed by the slide. Thirteen lines of single-space typing may be written per slide and thirty-three letter spaces of typing will fit on one line. When the copy is prepared, slip a cellophane sheet the size of a glass slide into a folded sheet of carbon paper and type the material on the cellophane through the carbon paper. Begin the typing at least one-half inch from the edge of the cellophane and maintain this margin on all sides. Now remove the cellophane sheet from the folded carbon paper and place it between two pieces of plain glass. A piece of binding tape on each side or a fifteen-inch strip framing the glasses completely will hold the cellophane in place.

Hand-written materials, drawings, and tracings may be transferred to the cellophane with a stylus. Many kinds of tests, reading exercises, outlines, bibliographies, and other matter usually written on the blackboard may be placed on cellophane slides and kept for repeated use, thus obviating the need of copying material on the blackboard. Pupils or teachers can then supply with chalk the needed words, marks, or numbers as the lesson proceeds. Erasing the board clears the space for testing, if desired, and the cellophane slide is still as good as new for further use.

Maps for Greater Understanding

Heightened interest in current events has popularized the extensive use of maps which are appearing with increasing frequency in our newspapers and magazines. Since the current events of today become the history and geography of tomorrow, the school makes a definite contribution to the student's ability to meet certain life needs by capitalizing on this wide use of maps. Some teachers feel there is no better way of developing in pupils the ability to interpret maps correctly than by making maps. Often these are free-hand maps and may be unusually artistic. However, where economy of time must be considered, the traced map is a very useful tool. It has the advantage of approximate accuracy and is equally usable by pupils not particularly skillful in drawing.

Pupils often make effective use of maps which are obtainable on glass slides, film strips, or in printed matter by projecting the desired map on the blackboard or on a piece of paper. For example, a child in illustrating the reasons why the invasion of Germany is especially difficult at certain places, projected a map of the area concerned onto the blackboard and traced it. On this approximately accurate outline he located the physical features which act as

a barrier to invasion progress and readily explained these facts to the rest of the class. Such a map is not cluttered up with a mass of detail; it clearly emphasizes the particular features under discussion.

Similarly, in connection with the study of a country, a series of outline maps can be traced onto the blackboard or paper. One may be developed to show physical features, one rainfall, others population, vegetation, industries, political divisions, or whatever features it seems advisable to emphasize under the circumstances. Using a well-chosen series of such maps, a class can readily see the application and relationship of significant geographic principles. At the same time, the student who works on one of these maps does not soon forget what he has portrayed and presented to the class, and the class enjoys a realistic presentation.

A Scrapbook of Maps, Pictures, Charts

Along a similar line, pupil-made notebooks and scrapbooks may be much more valuable when illustrated with appropriate maps and pictures either hand-drawn and/or clipped from printed material. An interest along this line may also prove a springboard into rich opportunities for profitable use of leisure time.

No discussion of pupil-made visual aids would be complete without reference to graphs and charts, for these are extremely useful tools in many classroom situations. The horizontal or vertical bar graph, the line graph, the circle or pie chart, and the pictorial chart each has its special functions as have cartoons and posters. The diorama and peep-show lend themselves to classroom use in many instances. Space limitation does not permit development of this topic here. Therefore suffice it to call attention to their possibilities.

Stills and Movies With Your Camera

Cameras also open many possibilities for pupil-made visual aids. Wide use of the candid camera has popularized the 2" x 2" glass slide, in which natural colors are reproduced photographically with high fidelity as is true also of the colored movie. The motion picture which is the only visual aid that portrays action is especially useful when it is necessary to show motion. For example, one group of pupils made a motion picture film to show the rest of the school actual examples of local hazards to bicycle safety. In addition, they developed and showed in this same motion picture the skills which any good bicyclist should possess. Showing this pupil-planned and pupil-acted movie engendered in the rest of the student body the desire to set up tests of these skills and meet their requirements. This was done and tremendous increase in bicycle safety resulted.

Familiarity with techniques of preparing pupil-made visual aids and ability to use each of these appropriately for specific classroom needs is valuable equipment for any teacher. However no such materials possess any magic; the value inherent in any of them depends upon the skill and appropriateness with which they are used. On the other hand, their correct use can lift an otherwise dull lesson to the plane of living reality.

Ten Hours a Day for Thirty Days

More than 10,500,000 hours of the GI soldier's time are spent *each month* seeing War Department training films. This is the equivalent of the work that would be done by 35,000 men working for thirty days at a rate of ten hours a day. (It should be borne in mind that these figures do not include Army Air Forces.)