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THE FINE AND INDUSTRIAL ARTS IN ELEMENTARY SCHOOLS, GRADE VII

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The stimulating sense of increased ability to handle materials and implements which comes only when work has been so organized in previous years as to give some degree of mastery along specific lines of manual arts is a strong supplement to the urge of the widening interests apparent in Grade VII.

In representation pupils who have learned to picture the general characteristics of objects, to draw with some degree of care, by thinking out the positions which lines and brush strokes should occupy, before instead of after making them, and who have attempted to portray effects of three dimensions, are now interested in gaining increased ability to make satisfactory drawings. This becomes evident in a desire to represent details with greater accuracy and to picture effects of distance and solidity so the results look like the object. The children appreciate the power to picture a book as lying flat, or a bowl as appearing to be round, or a house as showing its structural features and its apparent size.

In constructive work the pupils are sufficiently mature to undertake some simple individual projects and to appreciate standards of workmanship. Awakening aesthetic appreciation of beauty of proportions and outlines, and of fitness to purpose enables the pupils to use design understandingly in relation to their constructive work and to their school and home surroundings.

The following suggestions are offered regarding the phases which may appropriately receive emphasis in Grade VII.

Representation.—The use of drawing as a means of explanation and description in connection with other school subjects

should continue to be an important part of the work. This illustrative drawing offers to the teacher an excellent means of judging the extent to which drawing has become a practical means of expression. It plainly indicates the particular points in which the work is strong and the phases which require more skill and knowledge.

The drawing should be so conducted that there is the maximum of observation and interpretation on the part of the pupil. Ability to draw grows as the pupil compares his drawing with the object or idea and discerns points of likeness and difference so clearly that he knows where his drawing needs alteration and where it does not.

Too often this sort of observation is made by the teacher, who thus unwittingly obtains the practice in comparison of visual images while the pupil receives only the results in verbal terms. The possibilities of observation on the part of the pupils should be utilized to the full. If the lesson is in object-drawing, after the pupils have carried their drawings as far as possible by their own study they may exchange seats and drawings and give to each other the results of the new impressions thus obtained.

Those who persistently make their representations of objects too long and narrow may be seated beside those who have the habit of making drawings which are too short and broad. Those who are representing approximately the same view of an object may place their drawings side by side and compare results.

Some such methods as these will usually give a fresh impetus to observation which has begun to flag, and pupils who are trying to work out a certain pictorial effect will have the value of the impressions and suggestions of others after they have utilized to the full their own powers. One has only to teach drawing classes to find out how great is the temptation for the instructor to do the greater part of the observation which the children should undertake, and to point out the things which they should discover for themselves or for each other.

Experiments seem to show that better progress is made when pupils learn to draw a few things fairly well than when they pass rapidly from one object to another with no gain at each step

which relates definitely to that which follows. Thoroughness of mastery at this age is likely to be in inverse ratio to the number of different subjects undertaken.

The cumulative effect of a series of efforts to understand and represent a single object will be evident in some such succession of drawings as the following, where the attention at each step is concentrated upon a single aspect of the thing under consideration, thus defining the problem in the mind of both instructor and pupil, and furnishing a goal for effort and a standard of judgment.

In nature drawing, for example, suppose the topic to be a tulip.

1. Draw with brush and ink to represent with a few lines the growth and general character. Here the whole attention is focused upon the interpretation of the important characteristics. Details are of secondary importance. The movement of the long lines, and the main features of growth are the things to be expressed. The shadow of the plant helps interpret these. Comparison with the shadows of other plants emphasizes the individuality of each and helps to a better appreciation of that of the flower which is being studied (Fig. 1).

2. With a pencil sharp and hard enough to record facts, make careful drawings of details, such as the exact shape of a petal, the construction and outline of a flower and leaf and the fine curvature of a stem. Make blue-prints of the leaves and flowers so as to see a perfect interpretation of these forms. The purpose of these drawings is not primarily an artistic result but an accurate record of such facts as would be used for a science notebook, and which incidentally furnish excellent material for use in design (Fig. 2).

3. Sketch parts of the plant and color them so as to show the exact hue of petals, stem, upper and under side of leaves, etc.

4. Study and represent a flower and a leaf in different positions and turned at different angles (Fig. 3).

5. Make a completed drawing of the plant in pencil and in color.

6. Use the plant forms as elements in design (*a*) in a border

for embroidery, (b) in a surface pattern for wall paper, (c) in a single unit for a cover for nature-study papers.

A similar opportunity for concentration upon a single topic for a considerable period of time is found in landscape drawing in connection with geography. Suppose the country under consideration is Holland. A large drawing may be begun upon

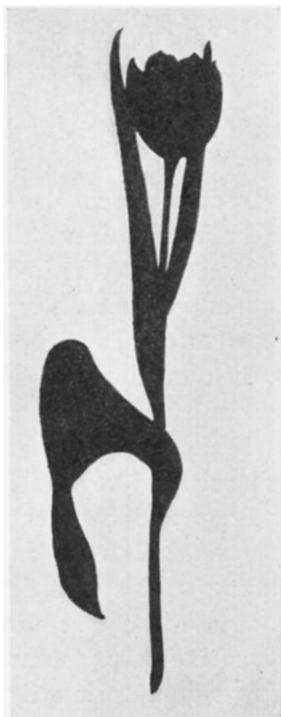


FIG. 1

the board and this may be modified or added to from time to time as the children obtain additional data or more definite knowledge of the subject-matter. Meanwhile each child may start a drawing of his own on a sheet of paper.

At first perhaps the results may be meager and include only a few suggestions of the country, such as a horizontal line to represent its level character and crude suggestions of canals and windmills. Collections of pictures and the hints gathered from

descriptions will immediately furnish new material. One group of pupils may be assigned to gather pictures of canals and learn how to represent them so they appear to stretch away into the distance. Another group may collect data regarding the appear-

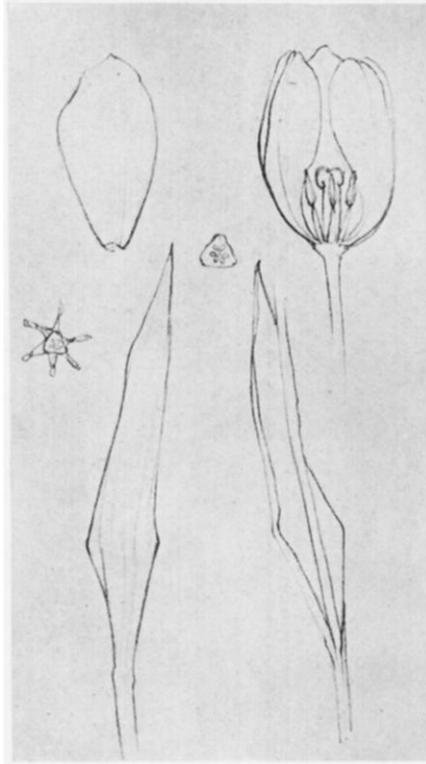


FIG. 2

ance of windmills, and still others may study canal boats, houses, and other items relating to Holland.

Day by day the picture on the board will grow and crude drawings be replaced by those which are more adequate because of the continued study. The individual sketches will give opportunity for original compositions. Children will be encouraged to practice on particular objects or effects until they have mastered

them. The geography thus furnishes a subject for the drawing, and that in turn is of value to the geography.

The children in Grade VII should develop increased ability to represent three dimensions in terms of only two, so that the solid objects which they draw upon the flat paper shall appear

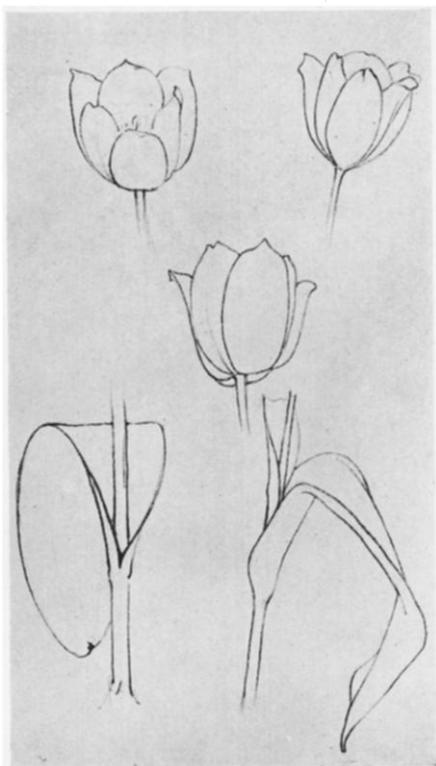


FIG. 3

as solid. This ability is best gained by supplementing the drawing from objects, with much experimental drawing from memory, in which the pupil learns to represent several objects, for example, a tumbler, half-apple, and box, illustrating the more common typical forms of solidity, cylindrical, hemispherical, and rectangular, until he can picture these in any position he chooses without reference to the object.

He should construct such forms on paper with his pencil over and over again, comparing and modifying them till their appearance satisfies his eye. He should do this till he forgets that he is working in two dimensions, and feels that he is shaping these forms in all three. He should not think of his foreshortened circle as an ellipse but as a circle which extends back into the picture and which he shapes until it is a satisfactory picture of a circle lying flat. He should build up his rectangular solids from imagination till his eye can detect any false construction or any shape that does not carry the impression of rectangular solidity. He should play with these figures till he can place them in whatever position he chooses. Modeling similar objects in plastic material is a valuable aid in developing power to draw them.

The old system of drawing type forms by carefully formulated principles of perspective failed partly because it attempted to train the intellect to reason out how objects appear under given conditions, while the important thing at this age is capacity for immediate visual satisfaction with what looks right without the necessity of referring to the intellect for confirmation. Statements of principles are valuable later on but as ordinarily taught do not seem to be of much practical help at this age.

One can seldom draw well an object the general type of which he has not mastered and made his own so he can draw it readily from imagination.

Construction.—The industrial work suggested for Grade VI is still more valuable in Grade VII. Among the projects suited to the abilities of the children are portfolios, letter files, and simple forms of bookbinding required in the making of sketch books, memoranda, and the binding of reference material gathered from magazines, etc., by teachers and pupils. The local needs will usually suggest the best problems.

In woodworking during Grade VI the pupils should have gained a practical acquaintance with the different saws and planes, with the rule, try square, gauge, spokeshave, hammer, nail set and sandpaper. The models attempted should have been such that their usefulness is not greatly impaired by inaccuracies

in form and measurements—the pen-tray, for example, may have reached its final stage somewhat narrower or shorter than originally planned, but this result is not so serious as would be the case with a table leg which must correspond exactly with three others.

A wise choice of models at the first enables the teacher to encourage freedom in the use of tools and to give the pupils a sense of achievement. The freedom and relative crudity of some of this work should not be confused with carelessness. The wide difference between the inaccuracy of a first attempt and slovenly work should be recognized.

In Grade VII the pupils should learn to use with some degree of skill the tools with which they have become acquainted during the previous year. The models should be such as make a greater demand for accuracy. The pupils should experience the sense of achievement that comes from producing from raw material well-constructed objects that are of some practical use. The construction work of Grade VII should be such as will bring both boys and girls into increasingly close relation with the occupations of home and community, and should satisfy the desire to be connected with the activities of the world and to do things which have social value. Cooking and serving meals, making garments which are to be worn, planning, as constructive problems in bench work, objects which are of use in school or at home, contribute to this end.

The children should know something of the historical and artistic evolution of industries, particularly those relating to their own constructive work and to local occupations, such as agriculture, building, iron- and woodwork, etc. They should know something of the great amount of thought and effort which have been expended in evolving the forms in which common things now appear. The stories of pottery and furniture and clothing are as full of interpretation of human thought and of the progress of civilization as stories of military campaigns. Such a treatment of history would add something more than a commercial interest to industrial products.

Excellent suggestions for various forms of industrial educa-

tion for country schools are to be found in the report of the committee of the National Education Association, July, 1905, upon "Industrial Education in Rural Communities."

Design.—In Grades VII and VIII the phases of design which call for judgment regarding the fitness of things and the beauty of proportions and outlines and the suitability of ornament are of increasing importance. The problems of constructive work are also excellent problems in design. The children should be brought up with the idea, impressed by example rather than precept, that the possibilities for beauty lie mostly in the planning and proportioning of essential parts of objects and not in added ornament. The finest beauty of a boat is its shape and not its decoration; of a chair, its proportions and not its carving. No element can add more beauty to the outside appearance of a house than the fine proportioning and spacing of doors and windows. Walter Crane states this principle well when he says,

Nothing has degraded the form of common things so much as a mistaken love of ornament. . . . Decoration or ornament we have been too much accustomed to consider as accidental and unrelated addition to an object, not as an essential expression and organic part of it; not as a beauty which may satisfy us in simple line, form, or proportion combined with fitness to purpose, even without any surface ornament at all.¹

Children are readily interested in making designs where the solution lies in the best possible disposition of necessary constructive elements with little or no ornamentation, and soon appear to enjoy such a problem partly because of the definiteness produced by its limitations. The lesson covers in Fig. 4 designed by elementary-school children, illustrate the different results obtained when the possibilities for good design in fine arrangement of parts are realized and when they are not. In *B*, (Fig. 4) the child without any foundation of previous training was left free to make his design as he pleased. He has not responded to the vertical and horizontal suggestions of the enclosing space but violates these with his diagonal printing. He finds no pleasure in experimenting with the architectural effects of fine

¹ Walter Crane, *The Bases of Design*, 90.

spacing and well-arranged margins. His primary interest is the barbaric one of collection and display with only secondary regard for arrangement. There is no lasting satisfaction and no clearly defined goal for this interest. It demands ever brighter colors and more profuse ornamentation.

Such designs as *A* in Fig. 4 result from long experience in placing words where they divide the space most pleasingly, and

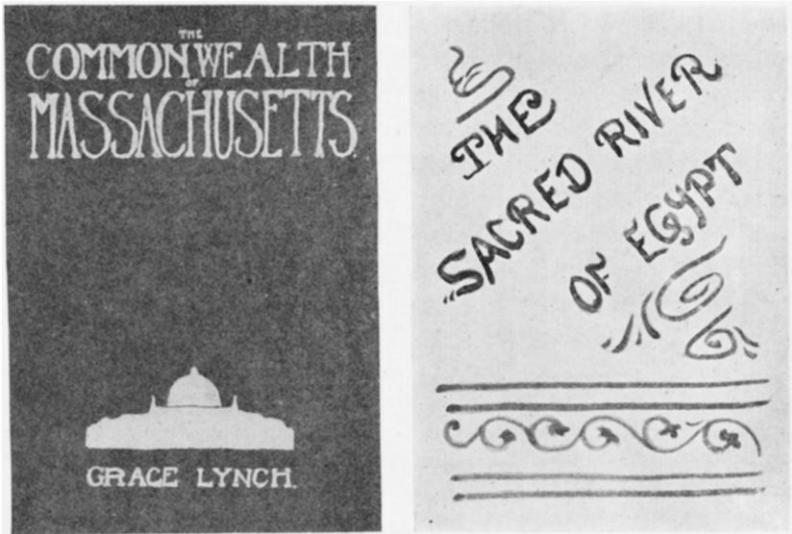


FIG. 4

in spacing letters in the words till satisfaction is awakened in the harmonious distribution of the words on the page and the letters within the words, rather than the profuse ornamentation.

In such a design as this the exact areas which the printing is to occupy are first chosen and the letters made to conform to these. Children show much interest in working out this problem. They like to experiment by printing the same word in rectangles differing entirely as to proportions, so that in each case the word shall exactly fill the given form (Fig. 5). Such printing should be done freehand and the spaces determined not by measurement but by tentative indications made at first by very light lines and gradually defined as the letters become equably distributed.

For excellent suggestions for teaching lettering see a series of articles by Mr. James Hall in the *School Arts Book*, 1909-10, and an article by Mr. Harold Haven Brown in the *Year Book* of the Council of Supervisors for 1906 entitled, "The Teaching of Lettering."

Design which consists in the best possible arrangement of given elements, so that they fulfil their purpose adequately and gracefully without recourse to sensational or incongruous interests, gives permanent satisfaction in a definite end attained and a single idea perfected. Thus is produced a thing of beauty which is "a joy forever."



FIG. 5.

Development of a feeling for beauty of form comes in part by the careful drawing of plant forms suggested for nature drawing, but this should be supplemented by practice in securing a freedom of style, which can be gained by making many free sketches of plant forms with a brush. The plant should be interpreted into as few lines as possible and this convention repeated till, like penmanship, it gains a swing and flow of line that is not labored. The best of the results may be worked over and perfected by the use of tracing paper.

Continued use of water-colors develops ability to match colors more exactly. The children should be expected to distinguish and record relatively subtle differences in color tones, such as the difference between the green of the upper and that of the under sides of leaves. In addition to practice in matching colors, a special study of color intensities will aid discrimination. This may be done by having the children select some color, for example, blue, and paint a spot as intensely blue as the paints will produce, and another spot of gray which is the same value as

the blue, that is, neither lighter nor darker, but such a gray as would be obtained by photographing the blue with a plate that rendered the colors in their true relative values.

Have them paint other spots, each time mixing an increasing amount of gray with the blue, so that the spots approach gray without becoming lighter or darker. Let them select from these spots three which make equal steps in intensity between pure blue and gray and cut and mount samples from these to put with the blue and gray so as to form a series of five equally graded steps of intensity. In a similar manner make charts of the other five spectrum colors. Have the children use these charts to show the relative intensity of colors in nature which they are attempting to match.

The study of good pictures, which is of value in all grades, becomes of increasing importance in Grades VII and VIII because of the greater possibility for aesthetic appreciation which becomes evident then. Details of picture study suitable to both these grades will be discussed in the next article.

A reasonable standard of attainment has been reached at the end of the seventh year if the children have developed skill and sureness in the lines in which they are working, so that in drawing, the general character of objects can be shown by a confident rapid sketch and the details truthfully recorded in a careful drawing; in constructive work if the tools can be handled rapidly and with certainty resulting from much practice; and when in the field of design, there appears increasing pleasure in objects well planned and constructed from a utilitarian standpoint and finely proportioned and shaped from the standpoint of formal beauty.