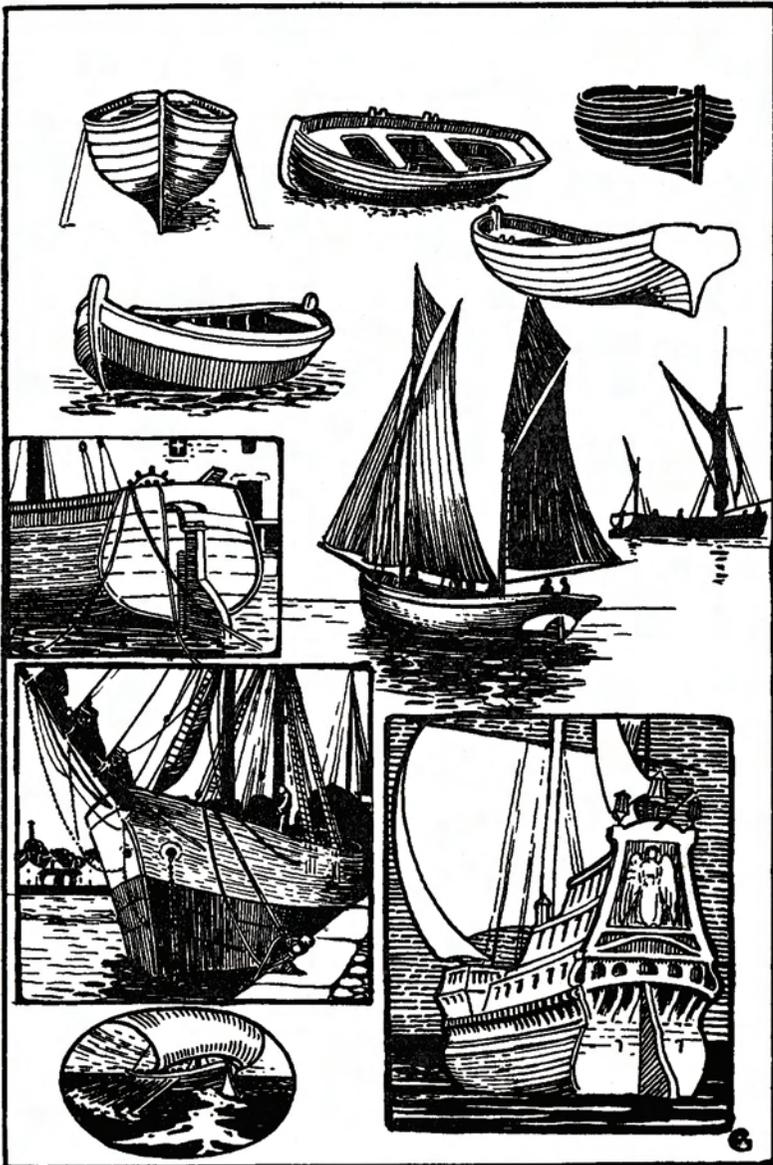


**DRAWING, DESIGN,  
AND CRAFT-WORK**



*BOATS—Suggestions for treatment of various types.*

**DRAWING, DESIGN,  
AND CRAFT-WORK**

by

*Frederick J. Glass*

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## PREFACE

THIS little book, which is the outcome of some fourteen years' teaching experience, was originally suggested by my work in connection with the training of teachers. I was often asked to recommend some book dealing concisely with the various subjects touched upon in the course of instruction. I was not acquainted with one which exactly met the need, and it was suggested to me that I should arrange my notes in book form. This I have done in the hope that they may be of some service to teachers, and others; especially at this juncture when Art training seems likely to take its proper place in the scheme of Education. This book does not pretend to deal exhaustively with any of the subjects touched upon, but is intended more as a series of suggestions upon which teachers may build up their own schemes, and also as an introduction to the subjects for the benefit of amateurs. Nor has any attempt been made to arrange the work in exercises suitable for the pupils of various years, since the classes differ so much in separate schools that only the teacher in charge of the particular class can form any estimate of what is suitable or otherwise.

I can only hope that the suggestions given here may be of use to teachers, students, and others interested

## PREFACE

in the plastic and graphic Arts, for much work still remains to be done before these subjects can occupy their proper sphere in the life of the nation.

This book is also intended to meet the requirements of the syllabus recently issued by the Board of Education.

My thanks are due to Mr. W. A. Burton for the photographs which appear in this book, and for his kind permission to publish the illustration of filagree work executed by him.

FRED. J. GLASS.

LONDONDERRY,

*July*, 1920.

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# CHAPTER I

## INTRODUCTION

“You’ve seen the world—  
The beauty and the wonder and the power,  
The shapes of things, their colours, lights and shades  
Changes, surprises—and God made it all!  
For what? do you feel thankful, aye or no?  
What’s it all about?  
To be passed o’er, despised? or dwelt upon  
Wondered at? Oh! this last of course, you say.”

—BROWNING.

It is hardly necessary to-day to advance a plea for the teaching of drawing, design, and craft-work. Their importance is, or should be, recognised by all authorities on education. It is well, however, that the teacher should have a clear comprehension of the part played by these subjects in the development of the intellect and character of the scholar. This is essential, firstly, that he may have confidence in his teaching, with a corresponding strength of purpose and enthusiasm; and, secondly, that he may be in a position to defend effectively his belief in the work he is doing. Despite

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the fact that the majority of educational authorities recognise its value, critics still abound who would have us believe that such work merely panders to effeminate tastes and a love of luxury, whilst denying its practical utility. Such critics need to be confuted; and this can only be done by formulating definite reasons for the serious study of the subjects in hand. At the outset we must recognise that man is complex and many sided, hence his needs are complex and multifarious. An unfortunate tendency exists in some quarters to regard human beings merely as productive machines with a capacity for executing so much work upon which the profit (usually accruing to those holding this view) will be so much, and that education should, therefore, be designed on this basis. Such an opinion is unworthy of consideration, and may be dismissed at once. It must be granted that, as far as possible, all human capacities are worth developing, otherwise the curriculum will have a bias, tending to develop certain faculties, leaving others to become atrophied. It is in some such comprehensive scheme that art work, as here dealt with, plays its part. It develops certain powers for which no scope is permitted in other subjects. The faculty of observation is quickened by training the vision, whilst the memory is cultivated to retain the images thus correctly seen. Drawing is a method of expression older by far, and more natural than writing, for the alphabet in use to-day is a development of early picture writing. Again, the child as soon as he can walk endeavours to express graphically the beings and objects amongst which he lives, making no attempt to write.

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It is interesting to note the gradual progression of these childish efforts even without guidance. The first productions are unintelligible to all but the child who readily gives names to them. Then shapes begin to appear, almost invariably men and houses—the first things about which the child has definite thoughts. As the mental power grows the house will develop chimneys, windows, and a door; the man will become possessed of arms, legs, a body, and a head with features, for which details there has previously been a sublime disregard. With the increase of ideas the need for expression will expand, and boats, horses, engines, trees, and even sky and clouds are attempted, all regardless of such trifling things as proportion, perspective, or colour. They are statements of impressions made upon the consciousness, knowledge gained from feeling, smelling, tasting, and hearing, as well as seeing. The wise teacher bears this in mind and encourages the individuality. The first lesson for infants should be an opportunity for the expression of thought, and the things drawn will be those which are clearest in the mind. Objects and people at home, toys and characters from nursery rhymes—things which have impressed him. The savage, too, unable to write, draws. Our prehistoric forefathers have left us rude representations of animals drawn long before writing came into use. The creative faculties are also encouraged by this work, and the love of making things (common to all healthy children) is turned to educational advantage. At the same time there is inculcated a sense of neatness and accuracy combined with skill in handling tools. This results in a perfect harmony between brain and

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muscle, unattainable by any other means. Finally it develops an appreciation of the beautiful, thus adding a source of enjoyment capable of giving much pleasure. Taste grows also as the mind unfolds, and, if wisely directed, will lead to the choice of beautiful objects with which to surround themselves. This will have its effect in the home, in the buildings and streets of cities, towns, and villages, which sadly need beautifying; and the beautifying of the environment will react on the minds and characters of the generations growing under its influence. The influence of environment is too widely recognised to need dilation.

Reasons enough surely for the inclusion of the work in our school curriculum!

Much harm has been done in the past by unintelligent methods of teaching. A copy was put before the pupil (beautiful enough perhaps to one capable of appreciation, but to the child meaningless) and the order issued "Copy that!" No explanation of its meaning or wherein lay its beauty, for too often the teacher would have been nonplussed if asked to explain it. And so the drawing lesson was usually a period of boredom. This can hardly be called drawing instruction, for unless the interest is aroused, and the mind fixed on the subject in hand, no impression is made, and as far as education is concerned the time is wasted.

This difficulty still presents itself, and will continue to do so. The teacher's aim must be always to hold the interest of the class. Presuming that the lesson we have in hand is a first lesson to young children, it is easy

## INTRODUCTION

to make it worrying or boring by insisting too much upon the correct method of holding chalk, crayon, or pencil, or by setting an uninteresting subject. Lead up to methods of handling by easy stages.

## MATERIALS

The materials at our command are chalk, charcoal, pencils, H., H.B., and B., india-rubber, pen, Indian ink, brush, water or body colour, clay, modelling paste or plasticine, and paper.

**CHALK:** For chalk a specially prepared blackboard is best, but linoleum, or American Morocco cloth of dull surface, or even brown paper, make good substitutes.

**CRAYON OR CHARCOAL:** For crayon or charcoal, brown paper or tinted crayon paper are used in addition to white. The best paper for charcoal is that which is specially prepared for the purpose, "Michallet" or "Ingres." These can be obtained in buff, white, and grey, and drawings of practically any degree of finish can be executed upon them. A beautiful range of tone from a delicate grey to a velvety black is easily obtainable with charcoal, and it may be rubbed with the finger or stump to produce even tones, the lights being picked out with chamois leather, bread, or rubber.

**CRAYON:** Crayons bring in colour, and as colour has a strong appeal for the child, an early use is recommended. The soft type are preferable, being easy to handle, the only drawback is that they smudge easily and are very fragile. The wax crayons are stronger and

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do not rub so easily, but they are less sympathetic. Each pupil should be supplied with a box and taught the names of the colours, beginning with the primaries—red, yellow, and blue. Crayons are excellent for mass drawing on brown paper, and may also be used for pattern, object, and nature drawing. The teacher should instruct the class in the use of the crayon and show them how to obtain the secondary colours by mixing two primaries, red and yellow = orange; red and blue = purple, and yellow and blue = green. The mixing may be done either by rubbing one colour over another, or by placing alternative strokes of the two colours side by side, the effect of which will be a blend of the primaries resulting in the desired secondary. Textures may also be suggested by varying the direction and quality of the stroke.

**TINTED PAPER:** Tinted paper should be selected with the desired result in mind; thus, china and glass on grey paper could be represented with chalk for the high lights and charcoal for the shade. White objects on white paper can be represented by toning the background. Again the crayon is applied openly, with a space between each stroke; the colour of the paper helps to bind the tints together and so to produce harmony. Light and shade of a simple nature should be attempted at an early stage, such as fruit with a spot of high light and a passage of shade, leaves with light on one side and dark on the other, etc.

**PENCIL:** This is perhaps the most useful of all the implements in use. For freehand a fairly soft *pencil*

## *MATERIALS*

is best as it requires but little pressure; B. or H.B. is the most useful, while for geometrical work an H. is necessary. The pupil should be taught to sharpen the pencil correctly, as a poor point is difficult to draw with. The cut should taper smoothly and evenly to the point, with no unsightly jags. The chief danger to be guarded against in this work is holding the pencil too stiffly and using the fingers only instead of the whole arm, for wrist, elbow, and shoulder joints should be allowed free play. This the teacher must watch, the more so as the writing lesson tends to restrict the free play of joints. The most suitable position for the paper in free drawing is nearly vertical, with the pencil lightly held between the thumb and the first two fingers, and the little finger resting lightly on the paper. Easels, or a specially constructed stand, for the board (with the paper pinned on it) to lean against whilst the lower edge rests on the knees, are the most suitable for free drawing.

For geometrical and the more accurate types of drawing a desk, or table with a board rest, is necessary. Heavy lines that plough into the paper should be discouraged, but at the same time the pupil should be instructed to take advantage of the whole range of which the pencil is capable, from a delicate grey to a velvety black. The system of "lining in" with a thin wirey line is of no value. Let the aim be the representation of form; suitable methods of expression will follow, and at any time a varied line is better than a thin monotonous one.

## DRAWING, DESIGN, AND CRAFT-WORK

**RUBBER:** The rubber should be soft, or the surface of the paper will be destroyed. Some teachers advocate the abolition of the rubber owing to its abuse, but it is very doubtful whether any useful purpose would be served. It might be withdrawn occasionally as a disciplinary measure if the teacher feels that the pupils are using it too much; the best corrective, though, is brush drawing.

**BRUSH:** The brush is the most sympathetic of all the implements used in drawing. It should be of good quality, even for beginning. Sable is best, but fitch is a good substitute; camel hair is poor, and, excepting a large one for laying washes, brushes of camel hair are not worth while, as the hair has a tendency to stay at an awkward angle to the shaft when in use. Sable and fitch have more spring and will return instantly to the straight when lifted from the paper.

**WATER-COLOUR:** Water-colour is useful for brush work, exercises in colour, still-life, etc. (See Colour Section, Chapter IV.)

**BODY COLOUR:** Body colour is the term used to distinguish between opaque colour and transparent water-colour. In water-colour, as generally understood, the light is supplied solely by the white paper upon which the work is executed. The colour is applied in transparent washes in such a way as to tint the surface to the required depth. The light parts would consequently receive a thinner wash (*i.e.* the paper would shine through more distinctly) than in the dark portions, where the light of the paper requires veiling. With body

## MATERIALS

colour the paper plays no part in the lighting. This is obtained by the use of an opaque white pigment, either Chinese white mixed with transparent colour to give it body and to render it opaque, or powder colour ground with gum and glycerine, or other suitable medium. The sketches of Brabrizon show the use of Chinese white with water-colour, and the colour is very charming, the lights being of a beautiful pearl-tinted quality. For larger work of a coarser nature, such as scene painting, powder colour mixed with glue size is frequently used.

**TEMPERA:** Yolk of egg is another medium, and tempera colour in tubes can be purchased from fine art dealers. For poster work Winsor and Newton Matt colours, or the Clifford Milburn colours are useful. They dry flat and are even in texture. For designs and work intended for reproduction, when an even flat surface is desired, body colour is of great value.

**MODELLING CLAY:** For modelling, clay is the most sympathetic and most easily handled material. It works smoothly and freely, and a good surface is readily obtainable. It is perhaps a trifle messy for very elementary pupils, and it needs some attention to keep it in a workable condition.

**PLASTICINE:** Plasticine or modelling paste is therefore often used in preference, as it is cleaner and more easily kept, but for any work of importance, or requiring a good finish, clay is decidedly the best.

## FIRST LESSONS

**THOUGHT AND EXPRESSION:** Drawing is a method of expression, but unless there is something to express, the acquisition of a method is useless, hence the primary aim of the drawing lesson should be the formulating of clear definite thoughts, together with practice in expressing them. A thing must be seen intelligently before it can be drawn correctly, and the quality of thought behind the look determines the accuracy of the vision. "The eye sees only that which it brings the power to see." Bad drawing is the result of wrong thinking, and the mental effort made by the child is of greater importance than the actual drawing. Aim then at teaching the child to think; facility in expression will follow. If something really needs expressing it will find a medium somehow. A certain amount of instruction in holding chalk, crayon, or pencil, and in controlling the muscles involved is necessary at first.

**CHALK DRAWING:** A few exercises in free-arm chalk drawing, similar to those illustrated on **Plate 1**, will be useful. Oval and circular forms, swinging curves, and exercises based on letter forms (all easily and naturally obtained) afford fine practice in control and freedom. The interest and mental effort is enhanced by allowing the child to embellish and elaborate, producing animal, bird, flower, or any form that fancy may dictate. The teacher should demonstrate the swing of the arm, using shoulder, elbow, and wrist, just to indicate the method. The exercises based on simple letter forms (**Plate 1**)

FIRST LESSONS



PLATE 1—Suggestions for Free-arm Exercises in Chalk, Crayon, or Soft Pencil

## *DRAWING, DESIGN, AND CRAFT-WORK*

is a useful adjunct to the writing lesson, and helps to counteract the cramping tendency of that lesson. This might be followed by vertical, horizontal, and oblique strokes, turned later into boxes, houses, frames, or anything else that encourages thought. See that the lines are free, bold, and decided, for self-reliance and decision are worth developing.

As soon as interest begins to flag, start something else, for nothing is achieved by keeping children at a lesson that has become boring. It is well to return to blackboard work from time to time, between the later exercises in pencil, colour, etc., for the sake of its freedom.

**PENCIL:** For pencil work a soft pencil (say a B.) is preferable, and here again methods of handling might form the first lesson. Just show them how to hold it, and tell them to draw anything they like. Generally they will have no difficulty in deciding on a subject, but if they have, then a few vague suggestions may be offered. Remember that the object is to stimulate thought and to teach the child to decide for itself. Young children are usually quite confident, and will tackle anything, from a cathedral to an express train; the timidity and diffidence that comes later are too often the results of unintelligent teaching and carping criticism on the part of the teacher.

These first drawings may be altogether unlike the objects as we understand them, but the child draws from imagination, building round some salient features which have impressed themselves upon him. For

## OBJECT DRAWING

instance, the express will be a cloud of smoke with a few circles suggested for wheels, and the rest a meaningless lot of lines. Meaningless to us perhaps, but the child will explain it all, and it is better to suggest improvement than to condemn, because we do not understand. Better take it that we have lost the power of reading these shorthand notes, than to try to impose our own conception. Try to enter into the child's thoughts and help to mould and direct.

**TEARING SHAPES:** A useful variation is afforded by allowing the children to tear simple shapes from paper, an easy leaf or vegetable form, or anything else that may occur. Pricking round the outline and then tearing is another variation, both of which add interest and afford valuable training. If these torn shapes are mounted on a background of suitable colour, the effect will be improved.

## OBJECT DRAWING

The aim in the object drawing lesson is primarily to teach the pupils to see correctly, to set down truthfully and freely the facts seen, and to store the mind with definite mental images for future reference.

**FLAT SHAPES:** In the early stages, simple flat shapes such as envelopes, fans, kites, frames, or shapes cut from cardboard, *e.g.*, shields, heart shapes, diamonds, crosses etc., placed within full view of the class are perhaps the best, the aim being to teach the pupils to see the relative proportions of the different parts. The

teacher should then discuss the width as compared with the height, the length of one line as compared with another, etc., taking care not to tire the children before allowing them to draw. The object might be drawn on the blackboard either before the class has attempted it or afterwards, as the teacher shall decide. If it is demonstrated before they make their attempt, they are apt to copy the teacher's drawing instead of trying to draw what they see of the object. If the demonstration takes place afterwards, they can compare what they have done with the drawing on the board. Whether the demonstration should be before or after the child has drawn is a matter for each teacher to decide according to individual taste and experience.

**OBJECTS DRAWN WITH STRAIGHT LINES:**

A few lessons on flat shapes might be followed by simple cylindrical shapes, such as jars, tins, jam-pots, etc., placed on the eye level to avoid ellipses, and drawn with straight lines. This is an easy approach to forms in the round. Here again proportion and the relation of part to part form the basis of the instruction. Conical objects and objects of combined cylindrical and conical form will follow. **Plate 2** illustrates a few suitable objects for these lessons.

**ELLIPSES:** After a sense of proportion and some ability to draw has been acquired, the ellipse might be attempted. This is always a difficulty with beginners. They know that the object is actually circular in plan, and usually they draw it so. The teacher carefully explains the principles that underlie the foreshortening of the circle, making it appear as an ellipse. Some simple



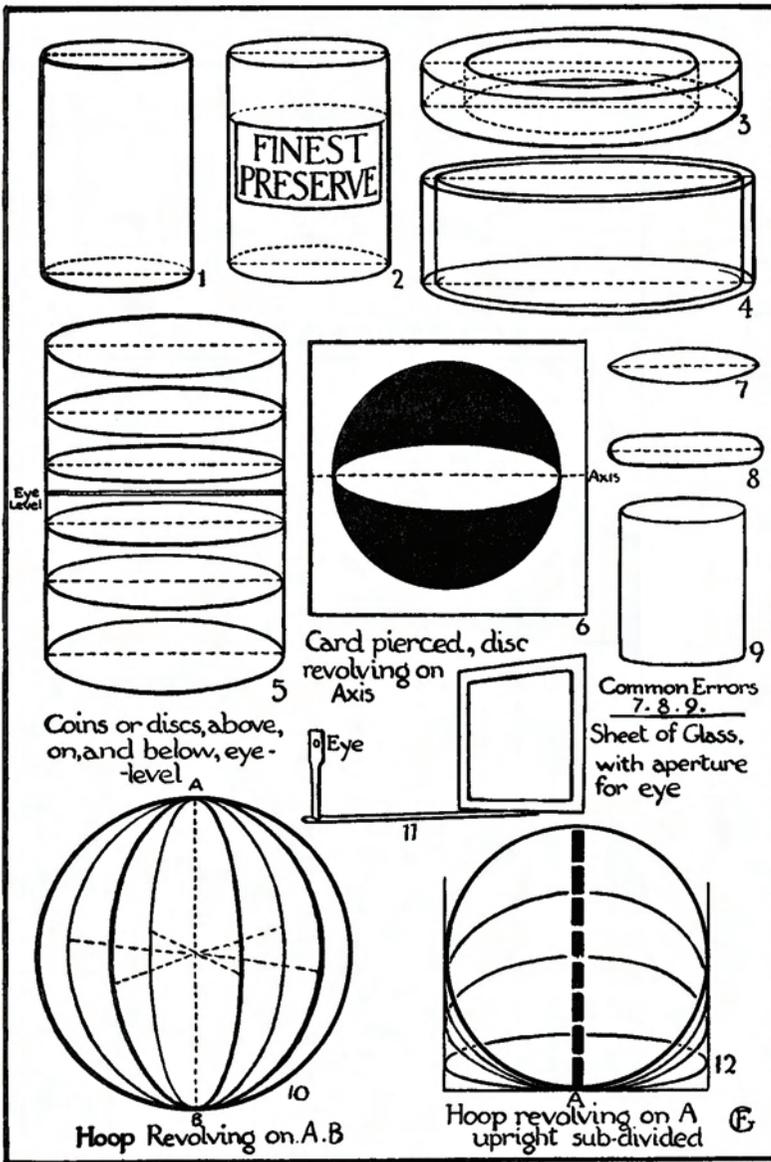


PLATE 3—Diagrams to illustrate the "Ellipse."

## OBJECT DRAWING

device for illustrating this should be exhibited, so that the ellipse alone occupies the attention. In **Plate 3** methods of dealing with this problem are illustrated. **Figure 6** shows a card from which a disc has been cut, and afterwards arranged so as to revolve within the circular hole left in the card. By placing the card against a dark background, the alterations in the apparent width of the disc, as it revolves, can readily be observed. The dark gap which retains the circular shape will act as a gauge, by which may be estimated the varying widths of the ellipse. Placing the disc at about the pupil's eye level, the teacher points out the gradual narrowing of the ellipse as it approaches the horizontal, until, when perfectly horizontal, only the edge is visible, appearing as a simple straight line. A hoop is also useful for demonstrating, and may be revolved as shown in **Figure 10**, or placed flat as in **Figure 12**. In the latter case a rod with equal divisions plainly marked upon it is placed vertically in front of the hoop. The rim part of the hoop farthest from the class is then gradually raised (or lowered), and the changes in height as indicated on the rod pointed out to the class. The width from side to side remains unchanged, only the height varies. The teacher's object is to give the children an intelligent grasp of the principles, and any method that stimulates the necessary reasoning may be adopted. After a little explanation the pupils might be allowed to draw the ellipse in a horizontal position. It should be pointed out that the long axis will be parallel to each pupil, and therefore horizontal with the short axis, making angles of  $90^\circ$  with the long one. The teacher will find that the

commonest errors in drawing are either to make the narrow end of the ellipse too square or too pointed. **Figures 7 and 8.**

**CYLINDRICAL OBJECTS:** The next lesson might involve the drawing of a jar or other simple cylindrical object. It will be necessary here to point out the alteration that occurs in the width of an ellipse according to its position with regard to the eye level. **Figure 5** illustrates a series of discs arranged at different levels showing the apparent widening from back to front as the discs rise or fall below the eye level. At the eye level a disc placed horizontally will exhibit only its edge, and will, therefore, appear as a straight line. As it descends below the eye level (still horizontal) more of its surface is seen; it, therefore, becomes wider from back to front, until, directly below the eye, we see its true shape, a plan in fact. The same change takes place as it rises above the eye. A clear grasp of this will help in the drawing of cylindrical objects, and will enable the pupil to get the upper and lower ellipses in correct relationship, together with any that may occur between. A common error is to make the base ellipse narrower than the upper when both are below the eye level, **Figure 9**. When the ellipse has been fairly well understood, conical objects and objects that combine cylinder and cone will follow. Geometric models can be employed to demonstrate principles, but when possible it is better to use common objects.

**COMMON OBJECTS:** Those objects which form part of everyday surroundings possess greater interest on that account for the pupil than geometric models,

OBJECT DRAWING

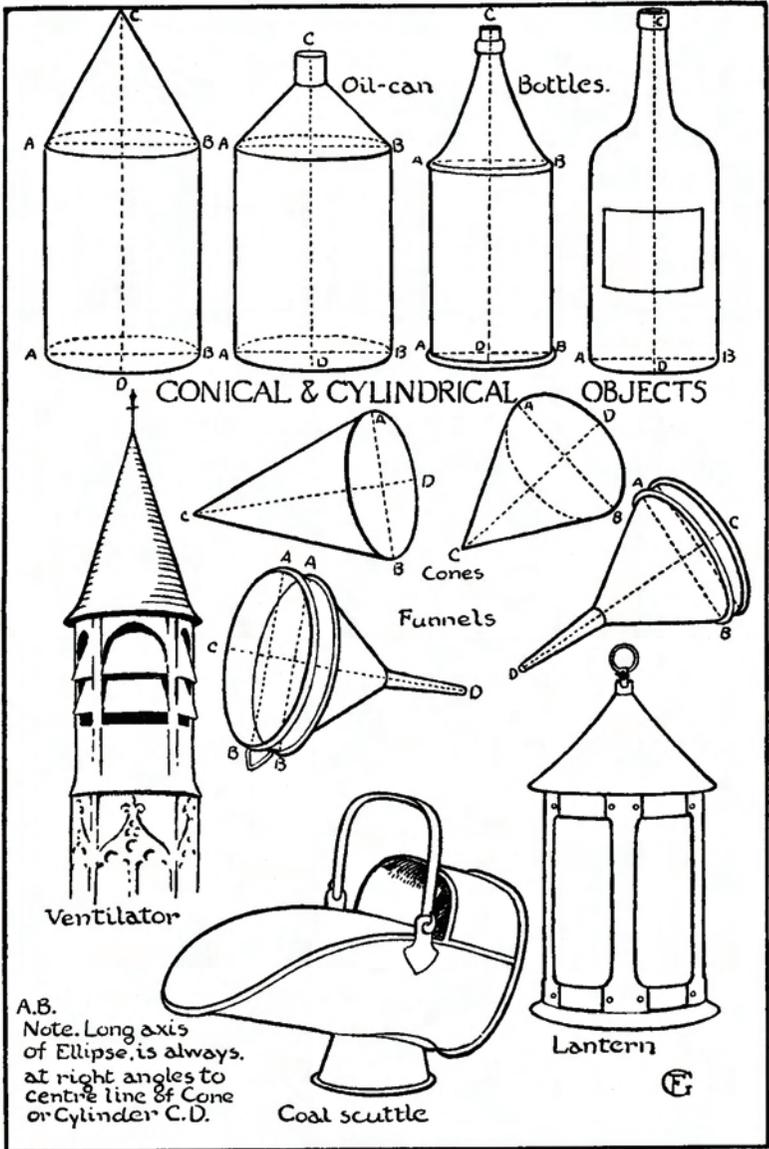


PLATE 4—Cylindrical and Conical Objects.

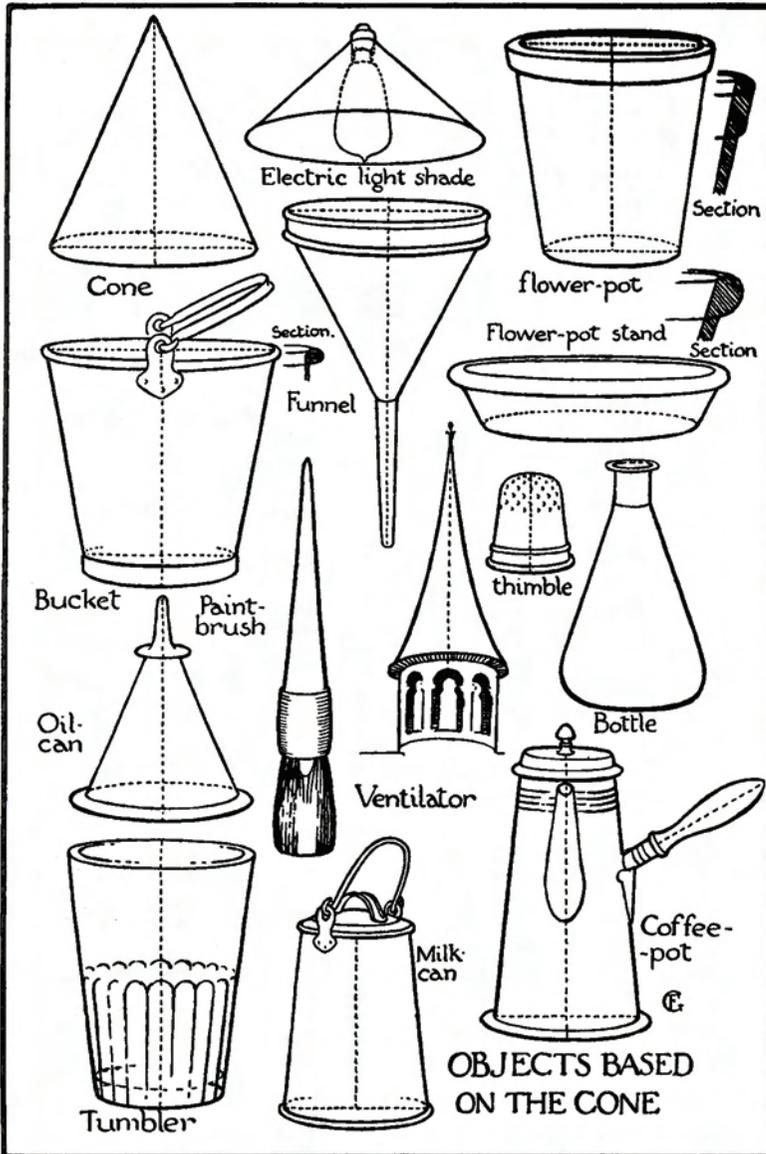


PLATE 5—Objects based on the Cone.

OBJECT DRAWING

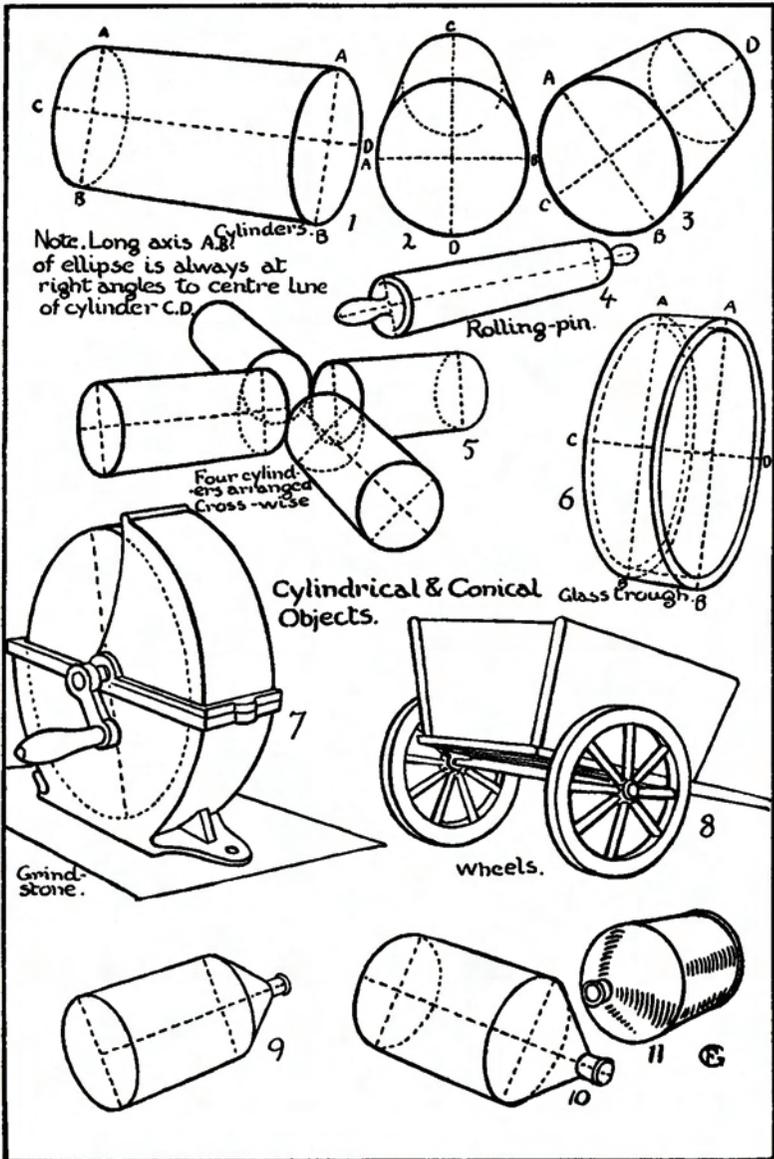


PLATE 6—Cylindrical and Conical Objects.

which seem detached from ordinary experience. Suitable objects abound; cans, electric light shades, flower-pots, buckets, bottles, and many others form useful models. **Plates 4 and 5** illustrate a few of the more common ones. The teacher should see that the lines representing the sides in these objects are tangential to the ellipses. A common error is to make a sharp angle between the side and the base ellipse. **Figure 9, Plate 3.** This is caused by not drawing the complete ellipse. Following the lessons dealing with the ellipse in a horizontal position, the vertical and oblique ellipse should be dealt with. The principle involved here is that the long axis or longest dimension of the ellipse is at right angles to the line of vision and not necessarily vertical. This is illustrated on **Plate 6.** In the cylinders it will be noted that the long axis is at right angles to a line drawn midway between the two converging lines of the cylinder. **Plate 4** shows the cone on its side, a line from the apex midway between the two sides is at right angles to the long axis of the ellipse. A considerable amount of practice will be required to force home these principles so that the pupil will be able to draw the ellipse correctly in any position. Jars with labels afford good examples of ellipses at varying heights. Generally the pupil forgets that the label follows the contour of the jar, and will make it, together with the lettering on it, square. Where rims and mouldings occur it will be found useful to explain the section, purpose, and construction of such details. The pupils will obtain a more intelligent grasp of the form, and consequently a surer method of representing it. At this stage of the

OBJECT DRAWING

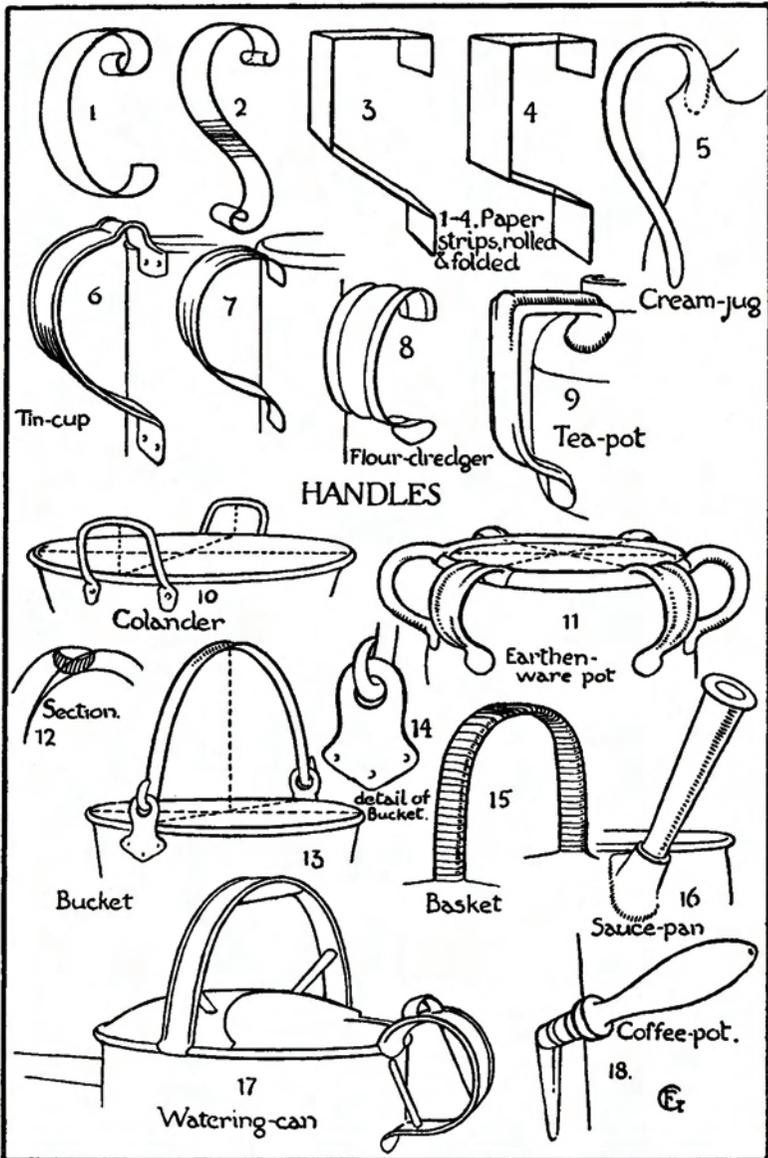


PLATE 7—Handles of various types.

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pupil's development the teacher cannot afford to let details be scamped. It is not merely the ability to draw that is involved, but also the character of the pupil. A difficulty overcome will render other problems easier, at the same time developing habits of concentration. The length to which details should be carried is a delicate matter to decide, for little good can come of keeping pupils at a task from which all interest has vanished. The suggested explanation of the section, construction, and the purpose of these details will help to stimulate interest, and consequently further effort.

A separate lesson or series of lessons dealing with such details as spouts, handles, rims, etc., might be given. Strips of paper rolled and folded to resemble handles form an easy approach. This might be done by each pupil following the teacher's example. Drawings from these, placed at different angles, will render the task of drawing handles from the actual objects an easier one. **Plate 7** illustrates a few of the various types of handle in common use. The difference between wood, metal, and earthenware handles dependent on the nature of the material is worth pointing out, also the methods of construction, fixing, etc. A few enlarged drawings made on these lines will facilitate the rendering of such details as they occur in future lessons.

**RECTANGULAR OBJECTS:** Rectangular objects in perspective should now be attempted. It is hardly wise at first to worry the pupils with perspective theory. They should be taught to gauge the relative sizes of different parts, at first with the eye alone, for the object aimed at is to train the eye to see, rather than to impart a

OBJECT DRAWING

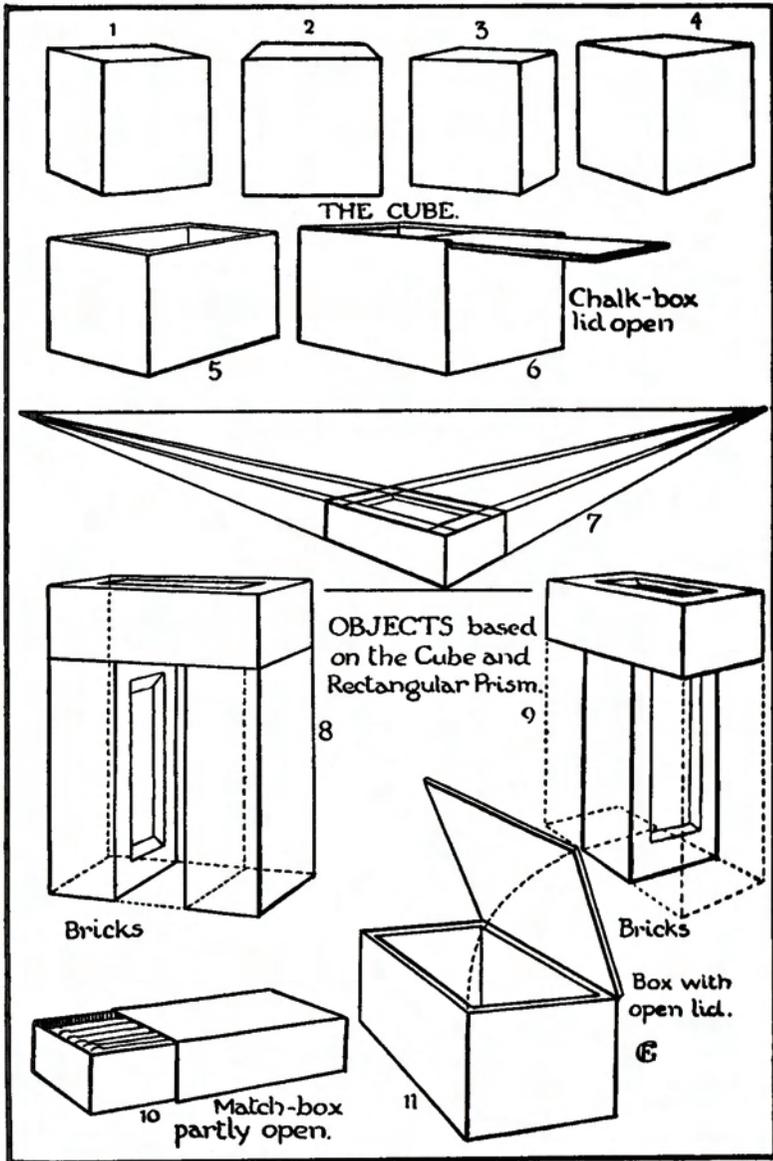


PLATE 8—Objects based on the Cube and Rectangular Prism.

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knowledge of mechanical aids. The pencil held at arm's-length between the eye and the object may be used to correct the measurements after they have been gauged by the eye; but a series of measurements taken with the pencil, and set down on paper without a preliminary judgment by the eye is of little value. A box or a brick are good objects to start with. **Plate 8.** First see that each pupil is directly facing the object. It should be possible merely by raising the eyes to obtain a direct view of the object. In schools where the desks are fixed in rows it is difficult to arrange this, but by providing a number of objects this difficulty can to some extent be overcome. The ideal classroom should be furnished with a seat and a trestle (to lean the drawing board against) for each pupil. These can be readily adjusted, so that each pupil has a direct view of the object. When the class is properly arranged the teacher might discuss the object and ask a few questions with regard to its proportions, the direction of its boundary lines, etc. By these means he impresses upon the pupils such facts as, vertical lines are always vertical no matter what their position with regard to the eye; horizontal lines parallel with the spectator remain horizontal, whilst horizontal lines receding from the spectator do so at an angle. Horizontal parallel lines receding from the spectator appear to converge, and distant lines naturally appear shorter than similar lines which are nearer to the eye. A framed sheet of glass, to the bottom of which a strip of wood is fixed, having an upright with a hole pierced for the eye at the end farthest from the glass (**Figure 11, Plate 3**) is useful in helping the pupils to

## *OBJECT DRAWING*

realise the appearance of objects. The pupil closes the left eye and with the other looks through the aperture. With a piece of soap, damp chalk, or a brush and stiff paint, he proceeds to trace the outlines of the object as he sees them on the glass. This helps him to realise the difference between the object as it actually appears, and the object as he thinks it appears. We must not forget that things become familiar to us in their entirety; we know them from handling and from seeing them from all points of view. The child would fain give us the whole of the facts as he knows them. Some little care and patience is necessary to get him to see correctly without confusing what he knows of the object with what he sees at the moment. When the teacher considers it advisable a simple explanation of the laws of "Perspective" may be given. It is hardly necessary for ordinary purposes to go beyond "Horizontal Perspective." The position of the horizon, and the fact that all parallel horizontal lines receding from the spectator converge to an imaginary point upon it, is enough. Where the pupils are grouped round a central object the height of the horizon can readily be judged by the eye-level of the pupil opposite. An estimate of its height can be formed by comparing it with some line in the object. Its relative position on the paper can then be judged. Parallel lines above the spectator and receding from him appear to converge downwards towards the horizon; similar lines below appear to converge upwards towards the horizon. Lines parallel to the spectator are represented as geometrically horizontal, and lines parallel to the spectator and to each other are also horizontal and parallel. Vertical lines

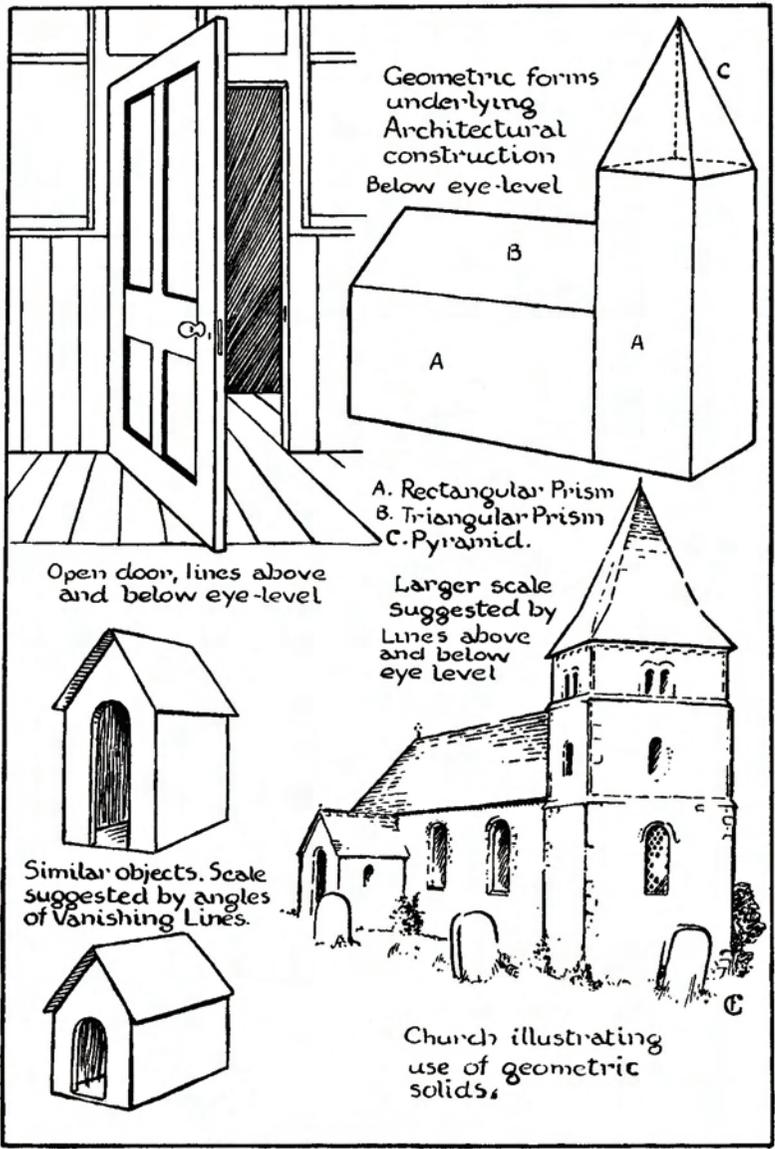


PLATE 9—Geometrical Forms underlying Architecture.

## OBJECT DRAWING

remain vertical. The lines of ceiling, floor, and walls of the school-room afford a useful demonstration of these facts. In the street the lines of house-fronts, pavements, roadways, and tram-rails can be used to illustrate the convergence of line. The aim is to teach the pupils to see the diminution of surface and convergence of line, and it is a good plan to extend the lines beyond the limits of the object to ensure correct “vanishing.” The “Scale” or apparent size of the object depends entirely upon the relation which these converging lines bear to each other and to the horizon, as will be seen by referring to **Plate 9**. The Church and the geometric models illustrating the forms upon which it is based are instances of the difference in size suggested by lines above and below the eye-level, and lines entirely below the eye-level. The kennel and the sentry-box are other instances of different sizes in similar objects suggested by this means. Parallel lines that are oblique rather than horizontal will appear to converge to an imaginary point situated above or below the horizon and not to a point upon it. The difficulty here is usually to determine in which direction they do converge. A useful plan is to decide upon the nearest lines and to remember that lines “vanish” from the spectator and not towards him.

A knowledge of perspective will certainly be an aid in solving some of the problems that occur in object drawing, but the eye should be trained to see as much as possible. The difficulty of gauging the angles made by receding lines is hard for the pupil to overcome. The sheet of glass previously mentioned will assist, but

other devices may be adopted. The pencil held at arm's-length and revolved in a plane parallel to the pupil until it lays along the line helps in gauging the angle. Care must be exercised to keep the pupil from turning the pencil away from him instead of revolving it in a plane parallel with himself. It should be explained that all lines are drawn on the surface of the paper, and cannot be drawn through; therefore, if the pencil be not parallel with himself it indicates a line that cannot be drawn on paper. If the sheet of glass is placed in front and the pencil revolved whilst lying flat on the surface of the glass until it lays along the line, it would help to demonstrate the point. The hands of a clock revolving round the dial can be so placed as to represent any straight line that can be drawn on paper. All the straight lines in an object or group of objects are either vertical, horizontal, or somewhere between the two. The lines between—the oblique lines—may be either midway between, *i.e.*, making an angle of  $45^{\circ}$ , or they may approach either the vertical or the horizontal, but all must bear some relationship to these two. A large dial with revolving hands is useful in assisting the pupils to grasp this truth. The main difficulty lies in the fact that the line in the object recedes from them, and they are nonplussed at the idea of representing it on a flat sheet of paper. When this obstacle has been overcome the gauging of the angle is easily accomplished. The clock affords an interesting example of this, for it is rarely necessary to read the numerals to know the hour, the position of the hands, the angles at which they stand is sufficient. Some clocks have no numerals, merely spots

## *MEMORY DRAWING*

to indicate their positions, but so accustomed are we to the XII. vertically above the VI., to the IX. and the III. lying in a horizontal line, with the other numerals placed at equal thirds between, that the numerals are not necessary; the marks serve equally well. This being the case with the clock, a similar comparison of oblique lines with the vertical and the horizontal will help in judging their angles. The upper edge of the drawing board resting on both knees will serve as a gauge for the horizontal, and the pencil held vertically for the vertical lines. Teach the pupils to see the shapes in the background, and the spaces that occur between the objects; this helps considerably, and is far too often neglected.

## **MEMORY DRAWING**

Memory drawing should be practised in conjunction with object drawing. The pupils may be asked to draw from memory an object previously drawn from sight, either from the same position or to imagine themselves in another, and to draw the object as they think it would appear from the altered view point. Again, an object may be studied for four or five minutes while the teacher suggests a few points to be observed, such as the proportion of height to width, position of handle (if any), or any noticeable feature connected with the object. The object is then withdrawn and the drawing made from memory. It is a useful plan to make the pupils close their eyes and try to visualise in the mind the object studied. When they have done this they will

## *DRAWING, DESIGN, AND CRAFT-WORK*

probably find that some details have escaped them; another glance at the object will fix the details in the mind. This should take place before the drawing is attempted, for upon the clarity of the mental image depends the drawing. The pupils may afterwards be allowed to correct their own drawings whilst the teacher again points out the salient features of the object in full view of the class. Another plan is for the teacher to describe an object and its position, as, a box with one angle directly in front and two sides receding at equal angles at a certain distance below the eye-level; two jars, one standing upright and the other lying on its side close against the first, its open end or top facing towards the right and on the eye-level; an electric light shade above the eye-level, and so on. The teacher can easily find examples.

Still another form is drawing an object studied out of school, the choice being either left to the pupil or suggested by the teacher.

Memory drawing is invaluable in developing the faculty of observation. It necessitates a mental effort to fix the form in the mind, and also enlarges the imagination; for imagination is simply the power of calling up at will the images stored in the memory for such purposes as we may desire. Unless an object is correctly observed it cannot be correctly memorised, the result being that nebulous indefinite images impossible to express will float through the mind, and exasperate us when we are needing the accurate definite ones which can only be formed by correct observation.

## *METHODS*

### **METHODS**

Much controversy has been waged from time to time as to the merits and demerits of the various methods of treatment. Thick line, thin line, sketchy line, precise line, shading and no shading have all had their advocates and their opponents. It scarcely seems worth while arguing about it; the aim should be to teach observation and expression, and the particular method adopted is not of primary import. The “neat line” is too often the standard by which the work of a class is judged, rather than by its capacity to express form. Outline is, after all, an arbitrary method of depicting form—a mere convention. Objects are visible to us as tone against tone and colour against colour, so the most truthful method is the “light and shade” method. There is no reason why this should not be adopted as soon as muscular control and a moderate capacity for expressing form has been acquired. Where the outline convention is adhered to the line should be as free as possible, using the whole arm to produce it, and not confining the movements to wrist and fingers only. Realisation of shape is the end in view, not neat lines. It is true that in careful finish and neat lines lies the evidence of a certain discipline, which may be of value; but the teacher is the best judge in such matters, and no rules can be laid down as to the type of line that should be used. Let it be an expressive line that shall represent form as accurately as the pupil’s skill will permit, and as free as may be.

## CHAPTER II

# MECHANICAL DRAWING

THE approach to this subject should be made as easy and as interesting as possible. The child mind has to be led gradually up to the neatness and accuracy inseparable from mechanical drawing.

**RULER:** Perhaps the first instrument to begin with should be the ruler, which will need explanation from the teacher, who expounds what the divisions are, and how to use them. The use is best illustrated by allowing the class to measure their pens and pencils, pieces of string, coloured paper, etc., one dimension only, after which, two dimensions; post-cards, envelopes, slates, book-covers, lids of boxes or anything handy.

**PAPER RULER:** Another interesting lesson may be given by allowing the class to make a paper ruler of their own from strips of paper. A halfpenny is exactly 1 inch in diameter, and if one is placed on a strip of paper the inch may be marked and the paper folded so that the creases mark the inches. By folding again half-inches may be indicated, and a further fold will give quarter-inches, and so a serviceable ruler may be made. This can be used in the manner suggested for the ruler.

## MECHANICAL DRAWING

The next stage is drawing straight lines in various directions, after which two points may be placed at a convenient distance and a line drawn between, followed by measured drawings of post-cards, envelopes, etc.; then larger objects such as slates, frames, book-covers drawn to scale.

**SQUARES:** A lesson on the use of T square and set squares should follow and parallel lines drawn vertical, horizontal, and at angles of  $45^\circ$ ,  $60^\circ$ , and  $30^\circ$ . The teacher points out the fact that one angle of the square is a right angle or  $90^\circ$ , and the other two angles make  $90^\circ$  between them; it will thus be easily seen that in the  $45^\circ$  square, the two angles being equal will necessarily be half of  $90^\circ$ . The  $60^\circ$  set square is explained in a similar manner.

**COMPASS:** The compass is now introduced and the fact that the circumference of a circle is everywhere equidistant from the centre. Here again a slip of paper is useful. If a number of holes are perforated at one end and a pin stuck through the other into the drawing paper, a pencil may be inserted into the holes perforated and circles drawn. This serves to impress the fact that the circumference of the circle is equidistant from the centre. Other facts connected with the circle should be dealt with; the radius (distance from centre), diameter (width from side to side, or two radii), arc (any part of circumference), segment (part of circle bounded by arc and chord), semi-circle (half-circle), and so on. There are many books on Geometry available; these notes are merely intended to serve as an introduction. **Plate 10** indicates a few exercises that might follow

DRAWING, DESIGN, AND CRAFT-WORK

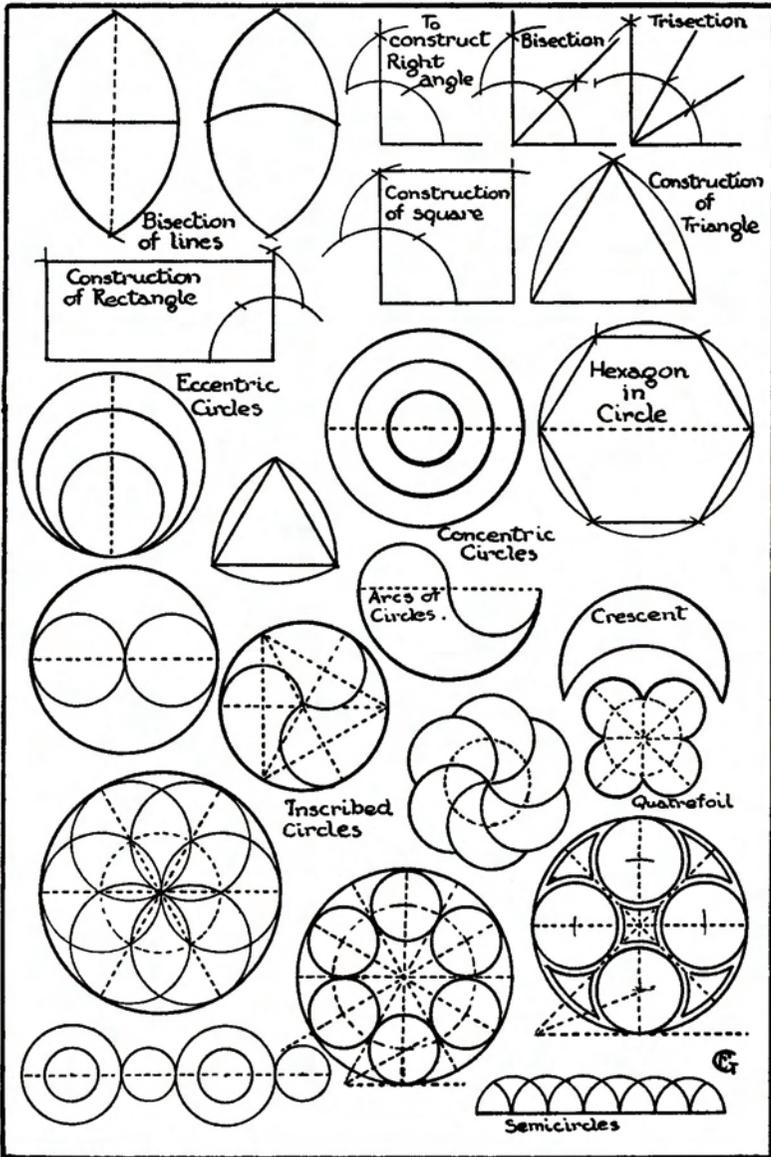


PLATE 10—Mechanical Drawing.

MECHANICAL DRAWING

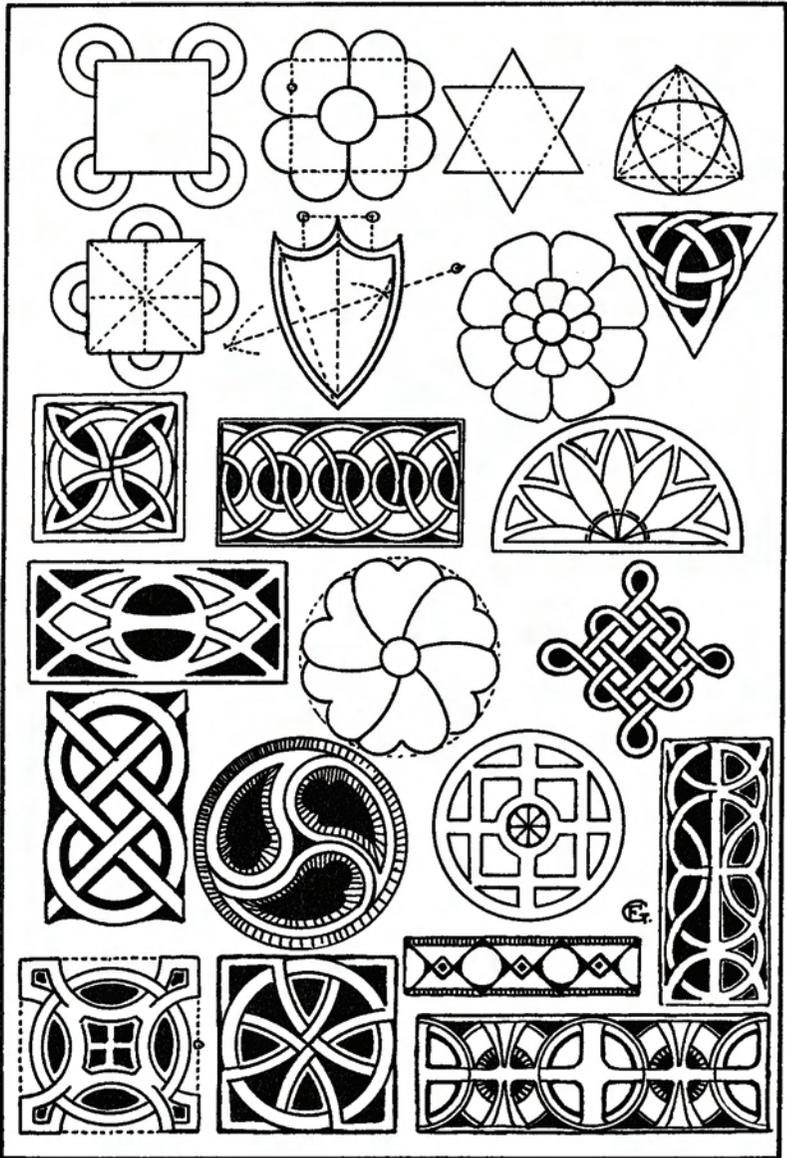


PLATE 11—Pattern Drawing.

when the instruments are understood and some facility in handling has been acquired. Sub-division of lines and angles, construction of simple figures, concentric and eccentric circles, inscribed circles, etc. Pattern drawing would follow upon this. **Plate 11** illustrates a few simple ones; the teacher can easily evolve a number of others, and also allow the pupil to do so. Many geometric patterns can be obtained from linoleums, wallpapers, and other designs, whilst quite a number of books are available from which to draw inspiration.

### NATURE STUDY

“For, don’t you mark, we’re made so that we love  
First when we see them painted, things we have passed  
Perhaps a hundred times, nor cared to see;  
And so they are better painted—better to us,  
Which is the same thing. Art was given for that—  
God uses us to help each other so,  
Lending our minds out.”

—BROWNING.

“The boy encouraged to imitate some natural object will ever after see in that object something unseen and unknown to him before, and he will find the time he formerly did not know what to do with henceforth full of pleasurable sensations.”

—G. F. WATTS.

Nature affords an endless variety of form and colour from which to choose. In introducing this subject each child might be given a simple leaf, fruit, vegetable, or

## NATURE STUDY

shell, and told to draw it, allowing each pupil to do it in his own way.

**MASS DRAWING:** Mass drawing with crayon or brush is best for first lessons. After this attempt the teacher, by means of questions, leads to a truer perception of shape and detail. Another method is to point out some essential features before the drawing is commenced. But whatever method is adopted it should be borne in mind that the end in view is to teach the child to see, and to see he must think. It is better to give a separate object to each child, for then other senses than sight are brought into play, and the knowledge thus gained is rendered more exact and permanent by the attempt made to draw it. The child will, at first, only be able to express some part of the truth, the amount increasing with the development of the vision and the power of expression. Give the pupil a cherry and his first attempt will probably produce a flat circular mass. The teacher inquires if nothing more can be seen, which inquiry might elicit "the stalk." A further question may lead to a darkening of one side and the adding of light to the other, so by questioning the facts become apparent, and the power of expression grows *pari passu* with the vision.

As before stated, in these early lessons where detail cannot be expected, chalk, crayon, or direct brush work is most suitable. For variety, the shapes drawn can be cut with a penknife or scissors and mounted on paper of a suitable colour. White flowers on brown paper, green leaves on white are effective, and the interest thus given to the lesson is well worth the teacher's trouble.

## *DRAWING, DESIGN, AND CRAFT-WORK*

Care is necessary in the selection of objects for study, for, on the one hand, if they are too easy, the pupil loses interest, whereas, on the other, if too difficult, or if too much is expected, he loses confidence.

**DETAILS:** As control of the hand increases, more careful studies with the pencil may be attempted, and even a light wash of colour added. When this stage is reached more accurate rendering of details must be insisted upon. There will always be a tendency to scamp joints, serrations, veins, and other difficult parts. This the teacher has to watch, and should insist upon an effort being made to overcome these difficulties. This will result in increased facility and power of concentration.

**PENCIL:** In pencil work, variety in the line helps to express the characteristics of a plant. The pencil (really a very sympathetic implement) is capable of producing tones varying from a velvety black to a delicate tender grey. The whole range is at the command of the draughtsman, and the power of expression depends upon the ability to use it. A strong line for the contour of a leaf (varied to suggest the undulations of the edge) with more delicate lines for veins and inner markings, and sharp dark touches at the joints, all help to give life to the drawing. The foreshortening and curvature of leaves, of which a few examples are given on **Plate 13**, will afford excellent practice. Flowers too are best expressed by a line of uneven quality. A strong varied line for the contours, with delicate markings at the petals, and sharp sparkling touches on pistils and stamens, all make for charm and vitality.

## NATURE STUDY

**PEN AND BRUSH:** The pen and brush are both useful for making studies. They lead to precision of treatment, and a surer handling. The same object treated in different media helps to bring out its characteristic features, form, colour, light and shade, texture, etc. Pupils should occasionally be allowed to bring their own objects for study; this encourages them to think and to use their eyes in the selection of the object. The interest thus aroused is naturally far greater than when the object is placed before them in class. The teacher will probably find that young children will be more strongly influenced in their choice by the colour of an object than by its form. The range of natural objects suitable for study is very wide, and material can easily be found for all classes; from the youngest child to the most advanced art student. It is useless to suggest the objects that should be used for the first standard, second standard, and so on; the teacher is always the best judge in such matters. Pupils vary considerably, and again, what one teacher would consider suitable another would ignore. But in the varieties of flowers, leaves, buds, twigs, fruits, vegetables, fungi, seaweed, birds, animals, etc., there is sufficient material for all tastes and requirements.

**TYPICAL FORMS:** Numerous plant, bird, animal, and other studies of natural form are given in the **Plates 12 to 50**. The majority of the plant studies are accompanied by decorative treatments of leaf and flower. **Plates 14, 19, 20, 22, 23, 24, 27, 28, 29, 32, 33, 35, and 40**. This method of treatment should be encouraged, for, apart from its value in design, the drawings produced

are typical of the plant. Recognition of the type aids in the appreciation of its form, and also of any variation that might occur.

**GEOMETRIC BASES:** Flowers properly grown will generally fit into geometric shapes, *e.g.*, the Syringa, Clematis, and Fuchsia into a square, **Plates 22 and 34**; Columbine into a regular pentagon, **Plate 24**; Daffodil into a regular hexagon, and so on. Those blossoms which most nearly approach the geometric shape, *i.e.*, in which the petals are equally grown, may be accepted as the basic type, and used as a standard. Not only is this type of analysis useful in design, and for acquiring a knowledge of the plant, but it is a valuable mental exercise as well. If the pupil is encouraged to make marginal studies of typical leaves, flowers, joints, etc., before attempting the growing plant as a whole, it will assist him in noting any variation that occurs, and also in rendering truthfully the foreshortened parts.

## **MASS DRAWING AND SILHOUETTE**

At the best, outline is an arbitrary method, for objects are visible to us as one colour upon another, or as a tone upon a tone. There is an edge of colour or an edge of tone, but never an outline. So for expressing form, mass drawing affords a much truer and simpler method than outline. It is most suitable for early lessons, as the child can realise better the shape of a colour mass than the shape bounded by an outline. Crayon, chalk, and brush, are all good for this purpose. Natural and common objects afford good subjects for mass

## NATURE STUDY

treatment, and as the mind is solely occupied with contour and proportion, it affords excellent practice in the expression of form. (See **Plates 53 to 57.**)

### TREES

“The creation of a thousand forests is in one acorn.”

—EMERSON.

Lessons of absorbing interest can be based on trees. The life-history of a tree is not only interesting but affords valuable opportunities for practice in drawing, as studies of the various parts at different stages of development may be made to illustrate the growth.

**GROWTH:** The seed which matures in the autumn falls into the earth, takes root, sends forth fibres into the soil and an upward tending shoot, which steadily grows from year to year until, in time, the tree attains perfection. From the first shoot which grows from the seed, others branch off annually, each with its group of leaves. When the leaves fall in autumn, buds are left behind them, well protected against the rigours of winter, to await the genial spring. Some of these buds produce new shoots, and some, less fortunate, remain abortive. Each year brings its quota of fresh shoots which spring from the twigs formed from the shoots of the previous year, and as they multiply the main ones grow in bulk, the first one which sprang from the seed becoming the trunk, and others of the earlier shoots becoming the main branches; and so, given favourable conditions, the plant grows and spreads

## *DRAWING, DESIGN, AND CRAFT-WORK*

until in the fulness of time it becomes that wonderful piece of natural architecture, a tree. Its roots burrow deeply into the soil, whilst above the desire of all its parts is to stretch upwards towards the light, which desire is responsible for the bareness of the trunk in the later stages of the tree. For as the leaf-bearing shoots spread above, they intercept the light, and the lower boughs, failing to receive the life-giving rays, drop away, leaving the main stem bare. This dropping away of the branches increases the uninterrupted length of the trunk, and each year adds to its girth. The leaves extract nourishment from the atmosphere, and the roots obtain the necessary mineral elements from the earth. Spring sees the tree put forth flowers, the summer sun turns them into autumn fruits and seeds, which lie dormant during the winter, to shoot up into new plants with the returning spring. And so it proceeds in an endless cycle, for, as Emerson says: "Nature is an endless combination and repetition of a very few laws. She hums the old well-known air through innumerable variations."

**POLLINATION:** Some trees are wind pollinated, others rely upon bees, butterflies, and insects to perform this duty, whilst some are capable of self-fertilisation.

**FLOWERS:** The "complete" flower is composed of "stamens" (male organs), "pistil" (female organs), and a leafy envelope for their protection. This envelope consists of the "calyx," usually formed of separate green leaves called "sepals" springing from the stalk; the "corolla" or "petals," often brightly coloured, and arranged within the calyx. Inside this envelope come

## NATURE STUDY

the stamens, each consisting of a stalk (filament) and a head (anther) which contains the pollen. The centre is occupied by the pistil, the base of which is the ovary, containing the ovules which develop into seeds after being fertilised by the pollen. At the apex of the ovary is the “stigma” which receives the pollen and then transfers it to the ovules or eggs. The calyx and corolla are usually composed of five sepals and five petals, though four is also a fairly common number.

**FERTILISATION:** As may be gathered from the above brief description the “complete” flower contains within itself both pollen and ovules, the fertilising medium and the egg capable of being fertilised. It is, therefore, possible in such trees as produce these complete flowers, for self-fertilisation to take place, but it is of rare occurrence, as cross-fertilisation is more beneficial to the species. It is interesting to note how Nature guards against self-fertilisation even when she gives the complete organs of reproduction to the one flower. This she does in some cases by maturing the stigma before the pollen is ripe, and in others by dispersing the ripened pollen before the stigma is matured. When a flower contains within itself both male and female organs it is termed “bisexual,” when one flower contains the male and a separate one the female organs it is “unisexual.” Some species bear both male and female (unisexual) flowers on the same tree, others bear male and female on separate trees, others again will bear male on one tree, female on another, and bisexual blossoms on a third. Occasionally the same tree will bear all three types of flower, male, female, and

bisexual, and is aptly termed polygamous. Trees which are wind-pollinated produce a large quantity of pollen, for, being carried by the wind, but a comparatively small proportion will reach the female organs of other blossoms. The petals of these flowers are not so brightly coloured or sweet-scented as are those which rely upon insects for pollination. The colours and scents of the latter have been adopted to attract insects, who, passing from flower to flower and tree to tree in search of honey, perform the office of fertilising agents. Many of these tree blossoms are of exquisite beauty, as apple, pear, cherry, horse-chestnut, hawthorn, cornel, almond, plum, rowan, blackthorn, and guelder rose. Others are difficult to recognise as flowers, the birch, oak, willow, alder, hazel, and sweet chestnut being of this type.

**FRUITS:** The fruits which follow the blossoms are also worthy of study, as, like the blossoms, many of them are beautiful in shape and colour. The red berries of yew, holly, rowan, hawthorn, and wild-rose; the winged seeds of maple, sycamore, ash, lime, and hornbeam; the hairy seeds of willows and poplars; the cones of pine, spruce, larch, and fir, all provide exquisite form and colour for the student. **Plate 51** shows the sycamore with winged seeds, buds, both resting and active, flowers, a leaf, bark, and the tree as it appears in winter and summer. There is an inexhaustible store of material for the teacher and student in the various species and component parts of trees, whilst the artist could hardly do without them, especially if he is a landscape painter. To make a series of studies at different seasons, and so to trace the development

## BRUSH-WORK

of the various portions, not only affords excellent practice in drawing but is fascinating exercise as well. The wonderful scale patterns in the buds, the diversity in the forms of the leaves, the varieties in the branching, the massing of the foliage, the forms and colours of blossom and fruit, the difference between the smooth bark of the young tree, and the scarred surface of the older one—what a store of material is here afforded for the draughtsman! The sycamore commences flowering when between twenty and thirty years of age. The sepals and petals are both green in colour, hence the blossom is not particularly conspicuous. Despite this, however, it relies upon insects for pollination. The flowers are male and female (unisexual). Its leaves are “opposite” (in pairs, one on either side of the stem) and “palmate.” The seeds are winged; the bark remains smooth for a long time, but ultimately becomes rough and breaks off in scales. The tree attains a height of sixty feet, and has a crown of variable form. **Plate 52** illustrates some typical tree forms.

## BRUSH-WORK

**BRUSH:** Of all the implements at the artist's command the brush is easily the best. Flexible and easy to handle, no other tool lends itself so sympathetically to the expression of thought and feeling. The teacher will do well to introduce the brush quite early into the drawing course for such exercises as mass drawing and brush-work. Each child should be provided with two or three brushes of good quality. Sable is undoubtedly

## *DRAWING, DESIGN, AND CRAFT-WORK*

the best, but fitch and Siberian hair are good substitutes. Camel hair is too limp for this purpose, having a tendency to remain at an awkward angle instead of springing back into line with the handle. Nos. 3, 5, and 6 are useful sizes. The pupils should be taught to take care of their brushes, and to bring to a point after each lesson, when they might be stood in a jar, handles down, to preserve the points.

**COLOURS:** Tube colours are the most convenient and may be squeezed into the saucers as required by the teacher. To start with chrome yellow, Prussian blue, and crimson lake are enough. The range of tints obtainable from these three is described in the section on colour. For demonstration the instructor will need a large sable, Siberian, or soft hog-hair brush, well pointed. The colour must be fairly thick or it will run, as the teacher needs to have his paper vertical in order to be seen by the pupils. Whiting is useful for blackboard work.

**BRUSH STROKES:** The first exercises will consist of brush strokes. A fully charged brush applied to the paper gives a characteristic blob. Variation in the amount of pressure will produce a thick or thin stroke. These strokes or blobs placed in vertical, horizontal, and oblique directions form the first exercise. **Plate 53.** When facility of handling has been acquired, the blobs may be combined to produce flower-forms, leaf-forms, buds, shells, and later, pattern. The brush might with advantage be used far more in the teaching of drawing than it is. The pupil learns that once a stroke is on the paper it cannot be erased like pencil; he consequently

## BRUSH-WORK

thinks a little more before applying it, and ultimately acquires a more decisive, direct method of drawing.

**LEAVES:** After a few preliminary practices in handling the brush, a simple spray of privet, laurel, or such like leaves might be attempted in direct brush-drawing. The midribs may be suggested by leaving a white line, and if the attention is concentrated on the edge nearest the rib instead of the outside curve, it will be found much simpler. **Plate 55.** Straight lines in various directions followed by squares, rectangles, and triangles are also excellent practice. Flower, animal, bird, in fact all natural forms lend themselves readily to this method of treatment. **Plates 20, 25, 28, 33, 35, 40, 43, 44, 45, 49, and 50.** The silhouette treatment peculiar to brush-work is invaluable for the study of form. The whole attention is concentrated on the contour and the shape bounded by it. The sharp contrast between this and the ground to which it is applied, renders the form clearly visible and easy to grasp. No light and shade or surface modelling distracts the attention; it is an exercise in pure form. Its decorative possibilities are enormous. **Plates 53 to 57.**

**NATURAL TINTS:** When some facility in handling the brush has been acquired, and the pupils have been taught the properties of colour, an attempt should be made at painting the objects in their natural tints. This involves the matching of colour. Leaves, flowers, shells, butterflies, etc., form useful subjects. A light but careful pencil sketch is first made, and the colours mixed, matching them as closely as possible to the corresponding colours in the example. Two or three

brushes are necessary, and colours should be applied as directly as possible, using plenty of water. If they are floated on the paper and allowed to run together, hard edges are avoided and a more brilliant transparent effect is obtained than by putting the washes on separately after allowing the previous ones to dry. A further opportunity occurs here for teaching the children to see colour. The child mind is not very sensitive to the more delicate tints, but strongly drawn towards the primary colours. The teacher should endeavour to lead the pupil to see the shades that enter into, and modify the predominating colour. A leaf, though its local colour is green, usually has blue and grey; and even purple and brown in its make up. This is explained by the fact that the surface of the leaf is more or less reflectory so that the colours of the sky and surrounding objects modify the green. This applies to practically all objects; a red vase will often exhibit purple, orange, and other tints, besides the dominant red. The remarks on harmony in the section on colour also apply in painting from nature. Despite the fact that colour appeals so strongly to children, and that they are more easily influenced by it than by form, it is difficult to teach them to discriminate between the delicate tints, but when pointed out, they soon learn to distinguish them.

For brush drawing pure and simple, the Japanese stand pre-eminent. A few examples of their work hung in the schoolroom would be useful to illustrate the possibilities of the medium, and also to familiarise the pupils with the delicate schemes of colour, and the fine decorative quality of Japanese brush-work. Environment

## *BRUSH-WORK*

has a tremendous influence on the growing mind, so the mere presence of such things is bound to have a refining effect upon the scholar seeing them every day in school.

**NATURAL FORMS:** **Plate 53** shows typical brush strokes and a few natural forms evolved from them. **Plates 53 to 57** show further examples of natural and conventional forms suitable for brush-work.

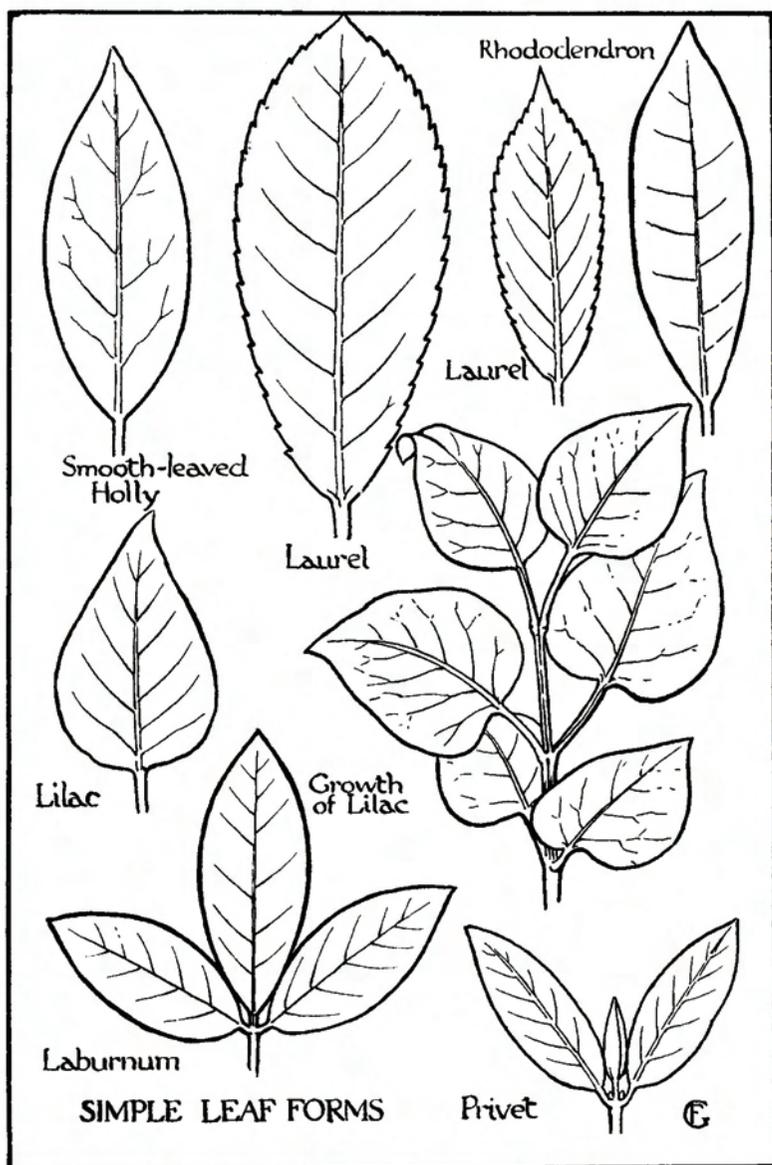


PLATE 12—Simple Leaf Forms.

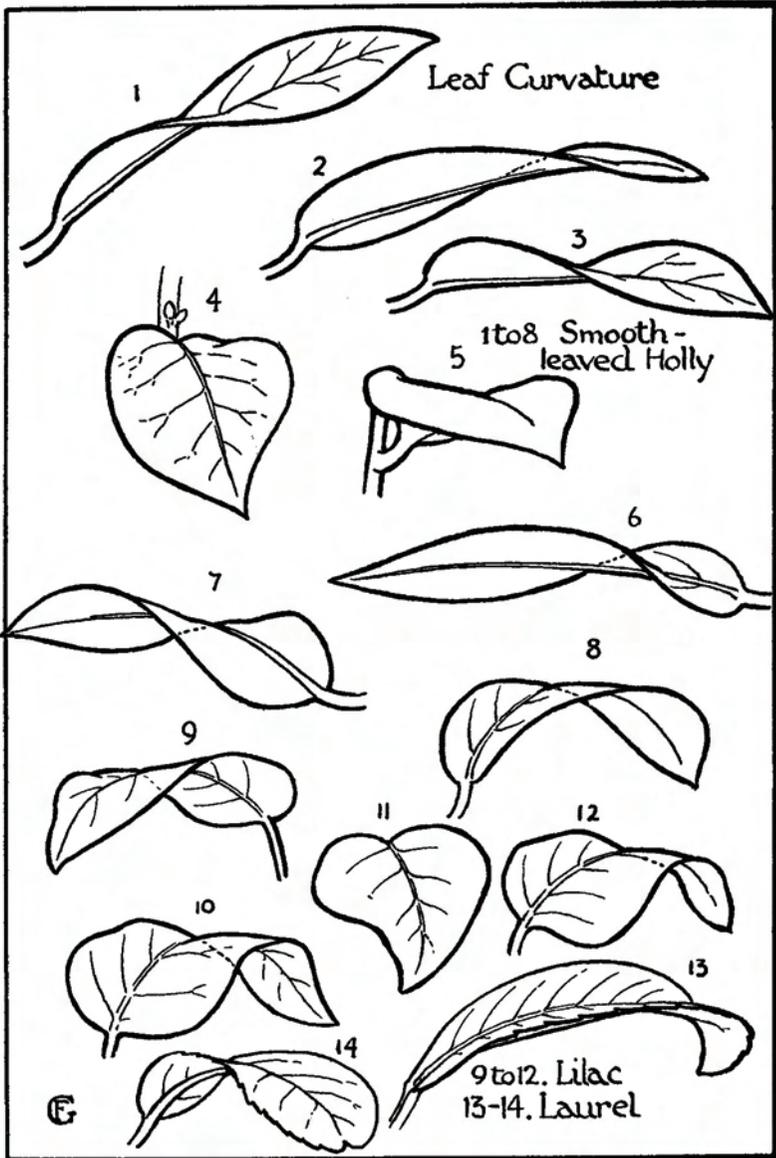


PLATE 13—Leaf Curvature.