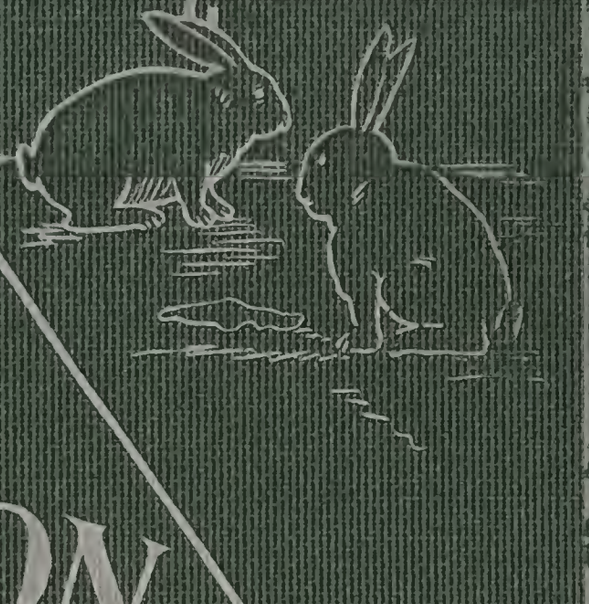
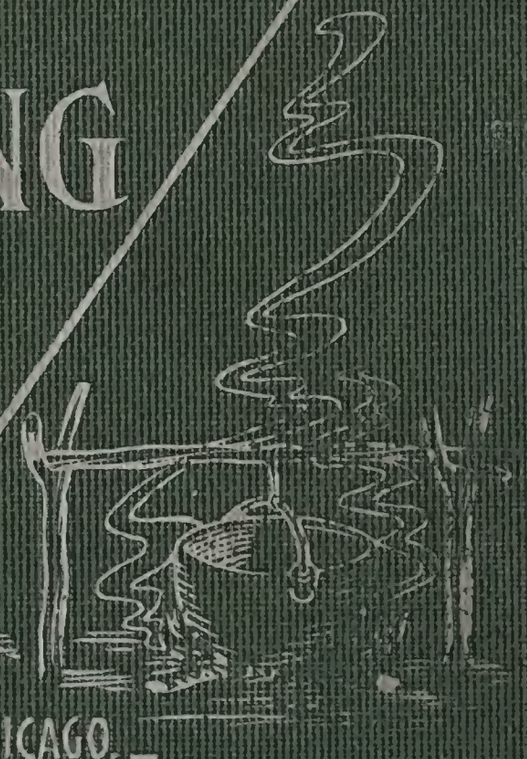


CRAYON CHALK *and* PENCIL DRAWING



A FLANAGAN COMPANY, CHICAGO

CRAYON, CHALK, AND PENCIL DRAWING

BY

GERTRUDE L. CLAYTON

OVER SIXTY STUDIES WITH SIX FULL PAGES IN COLOR

A. FLANAGAN COMPANY
CHICAGO

INTRODUCTION

THIS book is planned for several purposes, the chief of which is to give suggestions for drawings that the children can work from the studies contained herein. They may do this in several ways: First, by directly copying without variation; secondly, by using these as material for compositions of their own—most valuable practice; thirdly, by applying the suggestions given, in drawing other similar things from nature.

The majority of the drawings found here are sufficiently simple in their plan for the youngest child in school. At the same time they are just as practical for a much older child.

In teaching the small child details should be forgotten and the big simple direct facts expressed. As the child progresses in power of expression his drawings become more accurate because his power of observation increases. The principles involved in each drawing can be dealt with more or less fully according to the age and previous training of the pupil.

The child should be encouraged to collect good drawings—reproductions of photographs, etc.—from all sources as material for use in compositions and designs. He should be urged to use every opportunity to study the shapes of all plant and animal life available. His attempts to express in drawings his observations will encourage closer and more accurate study. For that reason drawing is an invaluable aid in nature study.

GENERAL DISCUSSION

CRAYON, CHALK, AND PENCIL DRAWING

GENERAL DISCUSSION

In its most general sense crayon drawing includes work with chalk, charcoal, and wax crayon.

These are the easiest mediums through which a child can attempt to express his ideas. They are soft, therefore every stroke tells; they are especially adapted to broad, big work, and at the same time can in skilled hands suggest all necessary detail. The technique of the material does not interfere, as in water-color work, with the freedom of expression.

Methods of Using Colored Chalk. There are two methods of using colored chalk:—

(1) *The Rubbed Method.* The color is rubbed into the paper with the fingers, a soft cloth, or a stomp. In this method it is best to sketch the drawing in lightly in outline, with chalk or charcoal, then put in the shadows. Work from the darkest parts toward the lighter, rubbing the colors into one another. Work one color over the other, to get the desired color and tone. Edges should be softened wherever indefinite effects are desired.

This method allows a child to work over and correct a study as long as he can see anything to correct. It is especially good for securing tone, value, and shape of masses. If it is badly handled, however, the result is a dirty, muddy study which is very unattractive.

(2) *The Line Method.* In the second method, which is the one followed in the directions for working up the later studies, the color is put on with the point of the chalk or crayon. The surface is not rubbed. The color and the texture of the paper are allowed to show in part. The colors are modified by working one lightly over or by the side of another.

This method produces a fresher, cleaner, clearer effect than the first.

Spraying. To preserve chalk drawings spray them with fixative. Enough fixative for the whole room can be made very cheaply by dissolving in wood alcohol as much powdered white shellac as the alcohol will take up.

A fixative sprayer may be bought for 15 or 25 cents. Put the small end of the sprayer in the bottle of fixative, bend the joint to a right angle or a little less than a right angle, and blow with a long, steady breath through the large end of the second tube. The spray will come from the upper end of the small tube, which is in the bottle.

The spray must be held far enough away from the drawing so that only a fine mist covers the latter. If it is held too close it will spot the sketch.

Wax Crayons. The various kinds of wax crayon are cleaner to handle than the chalks. The drawings do not require spraying. Wax crayon can also be used in coloring designs for which the chalk is not adapted.

Handling of Crayon. Since crayon work is closely related to water color, it is convenient in discussing it to use a few expressions generally applied to water-color work. Before attempting a study let the child make a few experimental sheets, to learn how best to handle the crayon. These might be worked up as rug designs.

First, hold the crayon loosely under the palm of the hand, with a broad surface next the paper. Beginning at the top of the sheet, stroke horizontally across. Do this slowly enough to produce an even surface. Fill the page. Let us call this a *plain* or *flat wash.*

Now, try a wash of graded intensity, beginning with a heavy stroke at the top of the page and lightening toward the bottom; then reverse the process, making the heavy tone at the bottom.

To secure a very dark tone it will be necessary to go over the surface several times, rubbing quite hard. For the sharper strokes on trees, etc., hold the crayon like a pencil.

Next, have the child experiment, to find the effect of one color over another.

Crayon Technique. The direction and character of the stroke must

be studied. At first we may be content to accept flat washes for all surfaces, but later we shall feel we need more interesting handling.

A vertical stroke may help suggest a vertical surface, a horizontal or a curved stroke a corresponding surface. An irregular or broken stroke will help secure corresponding surface effects.

In suggesting water use a horizontal stroke for the surface and a vertical stroke for the depth. The soft, fluffy down of the chicken needs a different handling of the crayon from the smooth, clean-cut edge of the cherry.

Study the best kind of stroke to use in different types of foliage. A vertical stroke can be used in the poplar, a slant or a rounded stroke for the oak, a slant or a horizontal for the evergreen. Try different methods for the same tree and use the one that seems to suggest best the manner of growth.

In landscapes the distant trees and ground should be made with horizontal strokes entirely.

The foreground may have the undertone laid on with horizontal strokes. The sharper strokes necessary to bring out the details, such as grass, weeds, stones, and shadows, should be put in above this.

Or the foreground may be worked entirely with vertical strokes as in Plate XXXIV.

Studies in Color

Blending. Draw nine rectangles about 1″x1½″. Take blue as a basis for this series and fill each rectangle with a wash of blue. Leave the first as it is; over the second wash red; over the third orange; then, in order, yellow, green, violet, brown, and black. If the child is sufficiently skillful he can grade the wash in each rectangle, beginning with a strong blue and lightening toward the bottom, then do the same with the color used over it.

Try each one of the colors in the same way.

If time allows, experiment with washes of three colors.

The result of these mixtures will vary somewhat with the quantity of each color used.

A color wheel like the illustration is useful for reference, even if time does not permit each child to make one. With the color wheel hanging in a convenient place for reference the child can always pick out his harmonizing and complementary colors.

We refer to red, blue, and yellow as the primary colors, and to orange, green, and violet as the secondary, because we are able with the first three pigments to produce, by mixing, the second group.

By reference to the color wheel we see that the colors found at opposite points of the diameters have the power to make each other appear more vivid when used together. These are the complementary colors—red and green, blue and orange, etc.

Color is modified in several ways. We may *lighten* by using the pure color but less of it; in other words, by decreasing its *intensity*. We secure a series of tones ranging from the full strength or intensity down to a very pale wash of the same color. This gives us a *tint* of the color.

We may add gray to modify the pure color. In this way we secure shades of the original color. These shades may vary in intensity from the very lightest to the very darkest possible.

We may modify a pure color by adding varying proportions of *another color*. This modified color may be used of any intensity desired. It may also be modified with gray as desired.

If this does not seem clear after being merely read, a little experimental work will make it so.

Take any color—red, for illustration. Starting with full strength or intensity, lighten gradually to the faintest possible tint, thus working out a scale of the tints of red.

Take red in the same way and mix with gray, using equal parts of red and gray for the middle spot. Above this let the gray predominate more and more, until at last you have a pure gray or black. Below the middle let the proportion of red become greater and greater until the lower part is pure red. This gives a scale of shades of red.

Warm and Cold Colors. While we are considering color another grouping into warm and cold colors presents itself.

Red, orange, and yellow are the warm, green, blue, and violet the cold

colors. Red is the warmest, blue the coldest. Yellow contains the most light.

In a picture the warm colors suggest to us nearness and light. The cooler colors suggest distance and shadow.

Whenever we wish to secure the effect of shadow or distance, as in an object whose own or local color is, for instance, red, we must modify that red and push it back by mixing with it some cooler color.

In the same way an object whose local color is cool may be made to seem near and in the sunlight by using one of the warm colors over it or mixing a warm color with it. Green foliage that is near at hand and in the sunlight will have a large amount of yellow with the green.

As all greens are mixtures of blue and yellow, the degree of warmth or coolness depends upon the amount of each one used. The greater the proportion of blue, the cooler the green will be; the greater the amount of yellow, the warmer the green. With violet, which is a mixture of red and blue, the same principle holds true, and we may have violet of varying degrees of warmth or of coolness.

Fundamental Principles. A few fundamental principles of color harmony make it possible for any person to secure color schemes which are good. A fine feeling for color is, of course, secured only by experience. Bad combinations, however, are absolutely unnecessary.

(1) We may use *different tones of the same color.* This can be done in two ways:—(a) By using different degrees of intensity of the same color. (b) By using different amounts of gray with the chosen color.

In the first we simply vary the strength or intensity of the color in the wash, combining perhaps three intensities of the same color.

In the second we mix perhaps a small amount of gray for the first tone, a little more for the next, and still more for the third, obtaining three intensities of the same color.

This gives a one-color harmony which is always pleasing and easily managed, though sometimes a little monotonous.

(2) *Related Harmony.* By referring to the color wheel we see that certain colors are related. These may be used together satisfactorily, making a related harmony. For instance, blue, bluish violet, and bluish

green have the common factor blue. In using such a color scheme we would generally add gray as a fourth color.

Any other group of related colors will be found satisfactory, such as brown containing considerable yellow; orange, and yellow. If a fourth color is added a gray green containing yellow will harmonize. In this yellow runs through the whole scheme.

(3) *Complementary Harmony.* The colors which are directly opposite each other on the color wheel are complements. They have the power of making each other appear more vivid. A complementary harmony is more difficult to manage successfully. If we take red and green, which are complements, a small amount of red may be used with a larger amount of green and with a third color made by mixing red and green.

Red and green may be harmonized by putting a wash of green over the red in crayons or by mixing red with the green, and by putting a wash of red over the green.

This modifies both the red and the green in such a way that with a gray made by an equal mixture of red and green a group of three harmonizing colors will be secured.

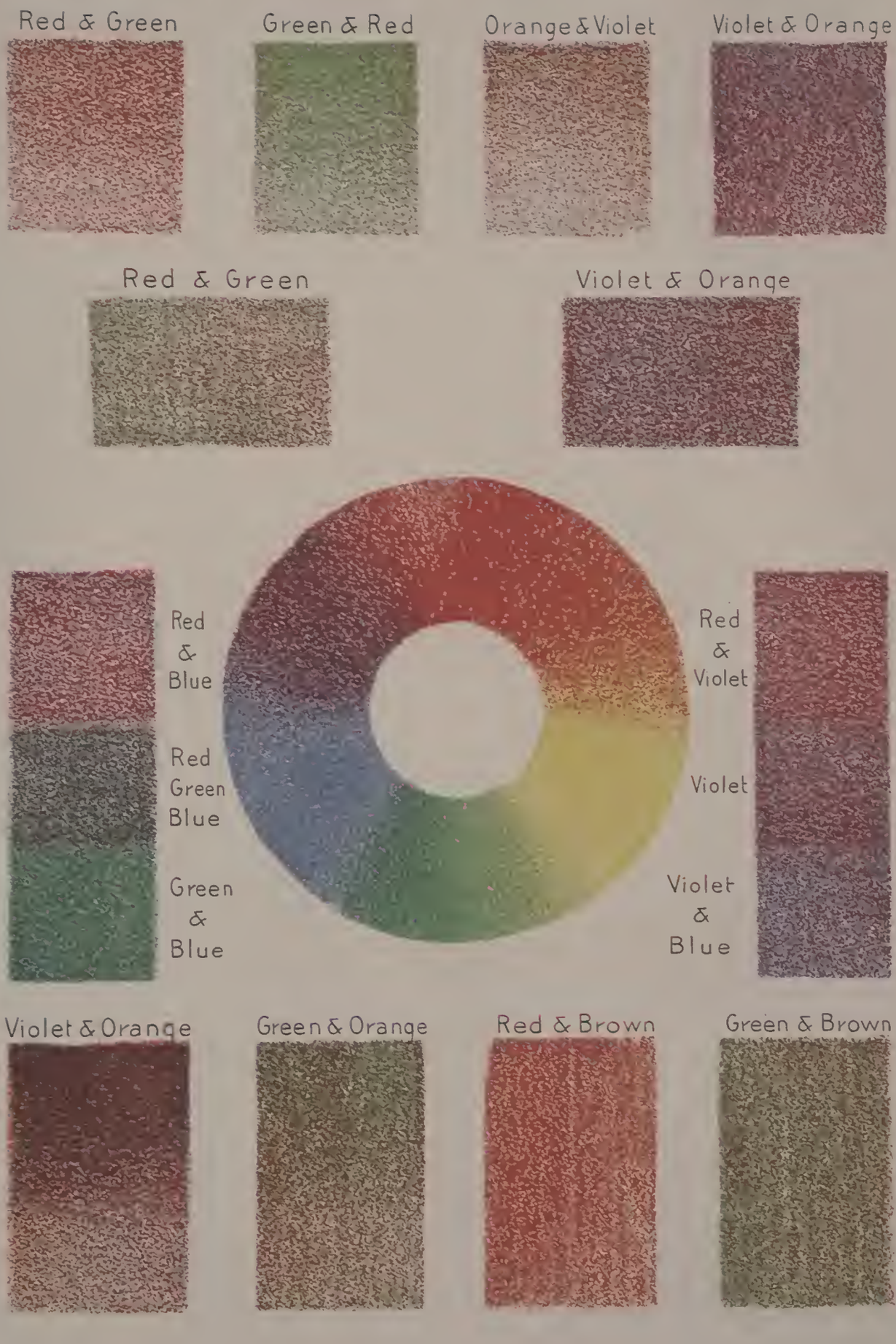
Blue and its complement orange are harmonized by the same method. Use the wash of orange over the blue and the wash of blue over orange. Mix the two equally for the neutral color.

(4) *Dominant Harmony.* The fourth and last principle is that of dominant harmony. This is one of the most important.

In this we find one color entering into every other color used and dominating it so that the general effect is of this one color first modified by various other colors. This is the element that gives the characteristic color to the different seasons and to the different atmospheric effects.

Line Drawing

In line drawing we may use any of the mediums such as crayon, chalk, charcoal, or pencil. The finer and more exact work requires pencil; while the other mediums are better adapted to larger, broader work. Children need to be trained first to secure the larger, freer style of work. For


Red & Green
Green & Red
Orange & Violet
Violet & Orange
Red & Green
Violet & Orange
Red & Blue
Red Green Blue
Green & Blue
Red & Violet
Violet
Violet & Blue
Violet & Orange
Green & Orange
Red & Brown
Green & Brown

this, crayon, chalk, and charcoal are by far the best mediums. Therefore it is well to reserve pencil work for those who have passed beyond the elementary stages of work.

In line drawing, also, we must translate, as it were, the masses of light and shade into lines. We must see edges of dark and light as well as of solid objects. This study of edges has a tendency to involve more detail than mass drawing. When we wish to make a detailed study of a leaf or a flower for a design we must first block in.

Proportion. Before blocking in, notice the proportion of the different parts—length and width. It may be a help to indicate these on the paper with short dashes.

Next, get the direction of the long lines. Draw them in with either a straight or a curved line, as seems more suitable for the given object.

Blocking. In this blocking we must consider first the main proportions, ignoring everything else. Connect prominent points with the blocking lines.

Use a soft, light line. Keep the crayon or charcoal well sharpened in a flat, wedge-shaped point. A pencil need not be so sharp for the blocking lines but must have a long enough point to allow the child to direct it well.

After the object is blocked in, erase the blocking lines until they show only faintly. Correct the proportion and add whatever details are considered essential. If it is necessary, erase again and work over as before.

Shading. Before beginning to shade, go over the lines with an eraser till they are barely visible. If the object is to be shaded entirely the outline will not show at all in the finished drawing. If the drawing is to be finished as a shaded outline, go over the faint outline which remains after erasing, accenting the parts in shadow, and as a result those left light will appear in relief.

Methods. In shading objects we have our choice of several methods of putting on the color:—

(1) We may use a stroke at an angle of about forty-five degrees, slanting downward and toward the left. Keep the lines parallel. Where they join avoid dark streaks.

(2) Lines may be used parallel to the surface of the object. In this method a vertical surface would be shown by vertical lines, a horizontal by horizontal lines. The lines used for a curved surface would show the direction of the curve.

(3) If a chalk or charcoal drawing is to be rubbed, it is better to put the strokes in vertically. Unduly dark or hard strokes must be avoided even if the work is to be rubbed afterward.

The quality of line used in outline work is of first importance. It must express as much as possible the surface, represented whether it is hard or soft, smooth or rough, etc.

Mechanical helps, in measuring proportion of parts, are good to help train the eye but only for that and should not be depended upon too much. To measure hold a pencil at arm's length, close one eye, and slide the thumb along the pencil until the height is measured off as exactly as possible.

Keep the arm fully extended and turn the pencil in such a way as to measure off the width. Compare the two.

The pencil must be kept exactly vertical or exactly in a plane parallel to the body.

The *direction* of *lines* and *angles* can be measured similarly. Turn the pencil or crayon carefully, so that it seems to cover the line required. Hold the paper vertically. Bring the crayon down to the paper without changing its direction. This will give the required angle or line of direction.

To obtain a correct result, it is necessary in doing this to be careful to turn the crayon only in a plane parallel to the worker. Imagine the pencil is held against a pane of glass which is exactly parallel to the person drawing.

Landscapes

In landscape painting, whether with crayon or water colors, we have several general points to consider before beginning actual work.

First, the general or dominant color. This is regulated by the season of the year, the locality, the time of day, and the condition of the weather.

The chosen conditions and resultant color scheme should be planned before the sketch is begun.

In the *spring* we have the pale yellow-green foliage, and the red, purple, and brown of twigs and trees; and generally a lighter sky than we find later.

As *summer* advances, the colors deepen and darken. The yellows are more yellow, the greens more vivid, and the blue deeper. Because of thicker foliage the shadows are darker.

In the *early fall* we have the reds, greens, yellows, and browns. The distance is a hazy blue or purple. Later, the brown and ocher colors predominate.

In *winter* the distance is generally quite gray; the earth, trees, etc., brownish. The snow gives us blue shadows.

Let the child himself notice the dominant color schemes of his locality and of the different times of day.

The *weather* gives a delightful variety in our landscape study. A rainy day puts a bluish mist between us and all objects. A gray day softens all the colors and blends the shadows.

The *varieties of trees* need to be studied with reference to their individual color as well as their shape and manner of growth. We have the silvery gray cottonwood, poplars, and sycamores with their light trunks; the stronger, brighter greens of the great mass of our trees, including the maple; and, last, the dark tone of the evergreens.

In nature we do not find an object of one flat color. We know a tree is green, but we see that in the sunlight it is a yellow green and in the shadow a bluish green.

In the same way we see a variety of color in the foreground, to secure which we must use touches of as many colors as necessary. We may use brown, green, yellow, and blue (very sparingly); or green with red, orange and yellow. Be careful in using many colors to keep the dominant color strong and clear above all the others.

In a child's first efforts in landscape we are satisfied to secure a carefully laid wash of one color for sky and another for ground. When working with older children, however, we may use a wash of yellow, violet, or gray

with the blue of the sky, to vary the effect. The wash of the sky color may be brought down over the distant trees, to avoid sharp edge lines there.

In coloring skies avoid too intense a blue. The stick should be used very lightly.

At first a road may be put in as brown. Later, yellow may be worked into the foreground. Blue or violet may be used for the shadows cast by strong sunshine. Shadows cast on the snow are distinctly bluish and quite clear.

The shaded side of the tree is made with either black and blue over green or, better, red and blue over the green mass of foliage. A warm shadow is produced if red is the last color used. If blue or green is the upper color the result is a cool shadow. As shadows are generally cool, it is best to let the blue or the green predominate.

Trunks of trees are made with either brown and green or—in the case of lighter-colored trunks such as those of the sycamore and the birch—yellow and gray or brown.

Landscape Composition. Since the success of a landscape sketch depends largely upon the arrangement of the parts, it is well to consider the general principles that concern composition.

The first of these is *balance.* We must divide our space first by the sky line, then by the edges of the big masses, in such a way as to secure a good proportion between sky and ground and between these and the masses of trees or other objects of which the landscape is composed; in other words, so that the masses balance. The masses of the foliage should be put in with no meaningless irregularities and breaks; the masses of light and shade kept as large and simple as possible. Notice how exceedingly flat and big the masses are in the moonlight.

The spacing of the vertical lines of the composition must be planned. An irregular spacing is more attractive than a measure that is as easily grasped by the eye, as in equal or half spaces. Lines cutting diagonally across a corner or across the picture should be avoided. The lines should be arranged so that as the eye follows the lines of the various parts it is led toward the main feature of the picture.

The eye follows a diagonal across the picture over to the edge, and

unless there is some break or turn to lead it back into the picture for a further look, it travels on to some other picture in turn.

For this reason the lines of direction of the various elements should lead toward each other and toward the principal object.

Composition. The two most common arrangements are, perhaps, the circular and the triangular. In the former grouping of lines and masses the lines curve toward each other.

Perhaps the elongated flattened S arrangement used very extensively by Corot might be considered a variation of that.

The balance of dark and light must be planned. In studying this point it is a good plan to work out a landscape in black and white, leaving the paper for the white and rubbing the crayon in quite strongly for the darks. In this way the question of color is eliminated for the time being and attention can be placed on the other sides of the problem.

After some studies have been tried in two tones, we may add a third by using the crayon more lightly to produce a gray. These little studies can be used as panels, booklet covers, calendar tops, card decorations, or in any other way suggested by the individual needs of the school.

Harmony. The law of harmony discussed later in design holds good in landscape also.

For that reason a great variety of different trees in a landscape is disagreeable. Introducing unnecessary unrelated objects which do not concern the real sketch is a violation of this law.

Rhythm is discussed later in design. In landscapes we consider rhythm as produced by an agreeable flow of line and mass in the picture.

In working to secure this we wish to avoid monotony of direction and shape and at the same time keep a sufficient relation between the parts of the picture so that we have one composition.

Enough has been said in preceding pages about color and color composition.

Object Drawing

The two plates of sample objects illustrate the use of the shaded line in drawing. All familiar objects which are simple in shape are good for studies of this type. Toys of all kinds, kitchen utensils, articles of wearing apparel, books, type solids, flowers, vegetables, and seeds all make good studies.

Methods of Teaching. At first hold or place the object studied on a level with the eye, so that the shape shall be kept as simple as possible. Have the child look carefully at the object in this position; compare the proportions; if it includes curves notice these. Then put the object out of sight and allow him five minutes or less in which to put down the result of his observation. If necessary, get the object out and repeat the observation. This is an excellent exercise for cultivating closeness of observation and memory of form. Of course it is to be used only with objects of simple, definite shape, such as type solids, some vases and toys, etc.

In making a careful study of flower, fruit, or seed forms the study must be near enough each individual child for him to be able to see the characteristic points clearly and easily. The smaller the object, therefore, the closer it must be. In general, such studies need to be so close that only two or three children can possibly work from the same object. The best possible way is for each child to have his own study upon his own desk. It can be pinned to a piece of paper folded at right angles if not too heavy, or it may be fastened to a book, or held in one hand.

Arrangement. In all object drawing see that the object is placed well on the paper first, allowing a margin. A light line across what is to be the top and others at the sides and bottom are frequently helpful in getting a child to make the drawing the size intended.

Let him put in the main lines next. If he is drawing a vase these will be the sides perhaps; if a flower the main line may be the stem. Let him pick out the big lines and draw them in without attempting to put in the minor details.

After the big, important lines which give the general shape and proportion are carefully placed the drawing should be lightened with an eraser

and corrected as much as possible. Then the smaller points—such as details of edge, smaller turns, and curves—can be added.

Because a child has a tendency to make the details too prominent, and to sacrifice the big proportion to them, it is necessary to keep the objects depicted as free from unnecessary details as possible, and to train the pupil to select the characteristic elements in the object before him.

Shading. Shade may be expressed by *mass* and by *line*. Each has its especial value. Line drawing and shading are of especial value to the children above the first grades. In the elementary grades mass drawing is more generally useful than line work.

A small child sees the object as a whole rather than in outline and should be trained to express himself accordingly. Mass drawing is of equal value to the older pupil, but the older child must pay more attention to the edges of his masses—a fact which leads naturally to a study of lines.

In mass drawing it is best to place the object on the paper; that is, to plan the spacing and arrangement first. In some cases it is best to block in very simply, in very light lines, first. In other cases it is best to work the large masses in as directly as possible.

STUDIES FOR REPRODUCTION

STUDIES FOR REPRODUCTION

I

(1) The sky is a clear blue, lightened toward the horizon. Extend the blue wash down over the distant field, somewhat below the horizon. Beginning at the horizon, cover the ground with a wash of green.

In the foreground, wash over the green with yellow and add a few touches of brown. Shade the evergreen trees with black and blue.

As the maple tree is lighter in color and farther away, modify the green of the foliage with red and yellow. Use brown and green for the trunks.

(2) Carry this out with white chalk and charcoal on gray or tinted paper, making it a winter scene. Use chalk for the upper surface of the branches of the pine and charcoal for the shadows. Keep the wedge shape of the branches.

Plate XII gives a detail drawing of one variety of pine, showing the cone.

II

Place the horizon first. Sketch the tree, the house and the path very lightly with green or brown. The sky is blue. Wash over the ground with yellow, then lightly with green. Use a blue for the shadows. Tone the blue down with brown if necessary. Suggest the grass with a few vertical strokes. Use brown for the house and blue over the brown for the shadows of the roof, door and windows. Use brown for the path.

Continuing the study of trees, we have in the elm an arching, drooping, and most graceful shape. For that reason the elm is a favorite shade tree.

The orioles often build in the branches of the elm. Draw Plates XVI and XXVII in connection with the study of the tree. Read stories of historic elm trees.

This sketch may also be used in connection with pioneer life, as we often see this type of home on land recently settled.

III

Wash over the whole of the sketch, except the moon and reflections, with blue. Repeat with a light wash of gray.

Now work over the mass of foliage with green, deepening the shadows and reflections.

Put a few strokes of yellow for the reflections and tint the moon lightly with the yellow. Use a vertical stroke for the foliage and reflections, and a horizontal for the surface of the water. Keep the outline of both foliage and shadows very large and simple.

The willow loves the banks of streams. If possible have the children notice the difference between willows growing at the water's edge, where we find them spreading and trailing their branches in the water, and those found a little farther inland.

Point out how both keep the big, rounded, fluffy masses of foliage.

Compare this with Plate IV.

IV

The willow trees are a rather light green, secured by using yellow and a very little red over the green; add blue for the shadows. The trunks can be green with brown.

The sky is a rather strong blue, the distant trees bluish green.

In the foreground, work over the green wash with the sharper strokes of green, yellow, red and brown. Do not over-emphasize the different colors. Keep the dominant note the soft green of the willows. Emphasize the yellows in the sunshine.

Color at first to show a bright sunny day in June. Then color the same sketch with a blue and then a gray wash over the whole, to suggest a rainy day.

V

Let this be a sunset scene, showing the afterglow in the *eastern* sky.

The boats will catch something of the orange glow, the nearer one

showing this clearly, that farther away seeming dark against the sky. For the nearer boat, use orange, brown and a little yellow; for the more distant one a little orange and more brown. For the boats themselves use brown and black. The reflections repeat the colors in the boats, modified by the blue of the wash over the water.

VI

Color the wigwams brown. Suggest the pattern indefinitely in reds and yellows. At a distance the details will disappear.

The stones will be a very light wash of brown with violet and blue shadows.

The sandy beach should be covered first with yellow, then toned down with brown.

Sky and water are blue.

Vary the composition by using three or more wigwams. Introduce trees in the background.

IX

In this study the first consideration is good composition.

Place the flowers by using a very light oval. Sketch the stems in lightly, studying the curve and direction of the lines.

The centers of the daisies are a rich, dark brown, made by using violet and blue over brown.

The petals are orange, with touches of yellow in the lighter parts.

The leaves are green, toned down with red and yellow in the lights and red and blue in the shadows.

THERE is a flower, a little flower,
With silver crest and golden eye
That welcomes every changing hour
And weathers every sky.

—JAMES MONTGOMERY.

X

In many places it is possible to bring a stalk of corn into the schoolroom.

Notice how the blades clasp the stalk. In summer the corn is a strong, vivid green, with yellow tassels and the silk of the ear reddish brown. In autumn we have a yellow brown, with darker brown shadows.

NOVEMBER

THEN lift up the head with a song!
And lift up the hand with a gift!
To the ancient Giver of all
The spirit of gratitude lift!

—Old Song.

XI

Color the goldenrod flowers yellow shaded with orange.

The stems and leaves are light gray green, made by using the green lightly first, then over the green working a little red and blue. The study could be varied by adding a butterfly from Plate XXXVIII.

SEPTEMBER

September days are here,
With summer's best of weather
And autumn's best of cheer.
And the goldenrod lights slowly
Its torch for the autumn blaze.

—Celia Thaxter.

XII

The buds at the tip are yellow, shaded with brown. The twig is brown and green. The needles are green with touches of blue. The cone is brown, made richer by the use of orange in the lights.

Arrange this study carefully on the paper. Notice the curve and direction of the needles. See that the needles spring from the stem in groups of three to seven.

Find if possible different varieties of cones and draw. Notice the regular arrangement of the scales.

O, HEMLOCK TREE! O HEMLOCK TREE! how faithful are thy branches—
Green not alone in summer time,
But in the winter's frost and rime!
O, hemlock tree! O, hemlock tree! how faithful are thy branches!

—H. W. LONGFELLOW.

XIII

Block the rabbits in with fairly straight lines. Shade in gray.

Use this drawing as a study of proportion and characteristic position and if possible study from life.

Each rabbit could be blocked in with two ovals, if preferred, one for the head and one for the body. To vary, change the grouping and add a different background.

In drawing animals try to pick out the characteristic elements, the points which they alone possess. In the rabbit we have the long, sensitive ears, the large hind legs used in jumping, and the little tuft of a tail. Compare the rabbit with the squirrel on Plate XXX.

Work the rabbits with white chalk on gray paper, letting the gray paper stand for the upper part of the body and putting in the lower part with chalk, as their color lightens in winter. Add a little snow scene with trees in the distance.

XIV

Try the pussy willow in white chalk and charcoal on gray paper.

Then make color studies. As the flower grows larger more green shows.

Try violet and brown for the stem and bracts; violet and green for the pussies.

Notice how the stem enlarges to give support to the catkins. Do not outline; to do so would give a hard edge to something that should be soft and delicate. Keep the color in the pussies as dainty and fresh as possible. Keep the stronger color for the stems.

Now sweet and low the south wind blows,
And through the brown field calling goes,
"Come, Pussy! Pussy Willow!
Within your close brown wrapper stir,
Come out and show your silver fur!
Come, Pussy! Pussy Willow!"

XV

Arrange the tulip carefully in the space chosen.

Draw the stem and leaf very lightly in green. As the tulip leaf is very light in color, do not rub hard. Use blue over the green except in the lightest parts. The shadows are quite bluish.

Color the flower orange shaded with red, or yellow shaded with orange, or any other combination found in nature.

The tulip is one of the flowers most easily used for designs. The shapes are so large and simple that the smallest child can arrange them as a border, an all-over design, or a book cover.

XVI

The head, neck and back of the oriole are black. The wings are black, edged with white. The bill and the feet are black. All other parts are a strong orange yellow.

The branch is a light gray, made by using yellow over a lighter tone of black. The leaves are yellow green.

Compare the oriole with the bluejay, Plate XVII. Use these sketches in connection with the nature study. Find drawings of other birds and compare them with these, as to shape of bill, head, and body, as well as color.

Hush! 'Tis he!
My Oriole, my glance of summer fire
Is come at last, and, ever on the watch,
Twitches the packthread I had lightly wound
About the bough to help his housekeeping.

—James Russell Lowell.

XVII

Try to secure a good placing of the nest, jay and branch.

Sketch in lightly with gray. The back of the bird is violet over blue, lightening on the under parts. The markings around the throat and crest are black. The tail feathers are tipped with white.

The nest is brown in the darkest parts, and a light yellow and brown on the lighter sides.

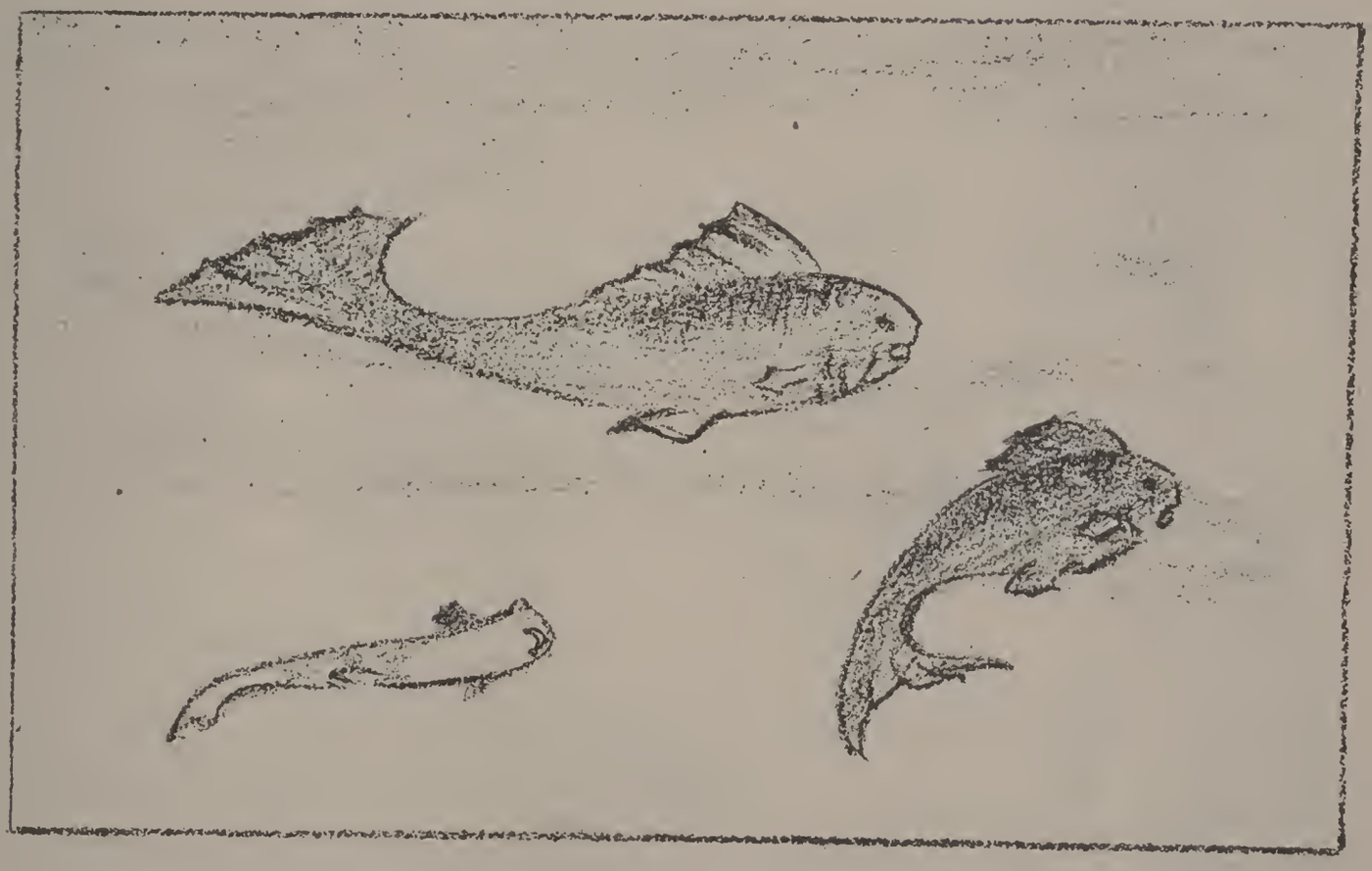
The branch is brown, with yellow touches where the light strikes the rough bark and blue in the shadows.

In making the first sketch draw a long, unbroken curve from the tip of the upper bill to the tail. Then draw the lower curve, keeping it as simple as possible. These lines should be very light. Now go back to the upper line and add the crest. Draw the legs, placing them so that they support the weight of the body.

XVIII

Gracefulness is a characteristic of the fish. Sketch these fish in with yellow. Color very lightly on the under side and on the upper use yellow and orange and perhaps touches of red and black.

Suggest the water lightly in blue.



The fish might be treated in a gray green color scheme by working over first in green and later touching with gray.

An aquarium is an interesting addition to any schoolroom. If one can be secured let the children draw and color the fish from nature.

The Japanese have painted fishes most charmingly. Perhaps some prints can be secured which will add interest to the work. Fishes also make decorative border designs, combined with seaweeds.

XIX

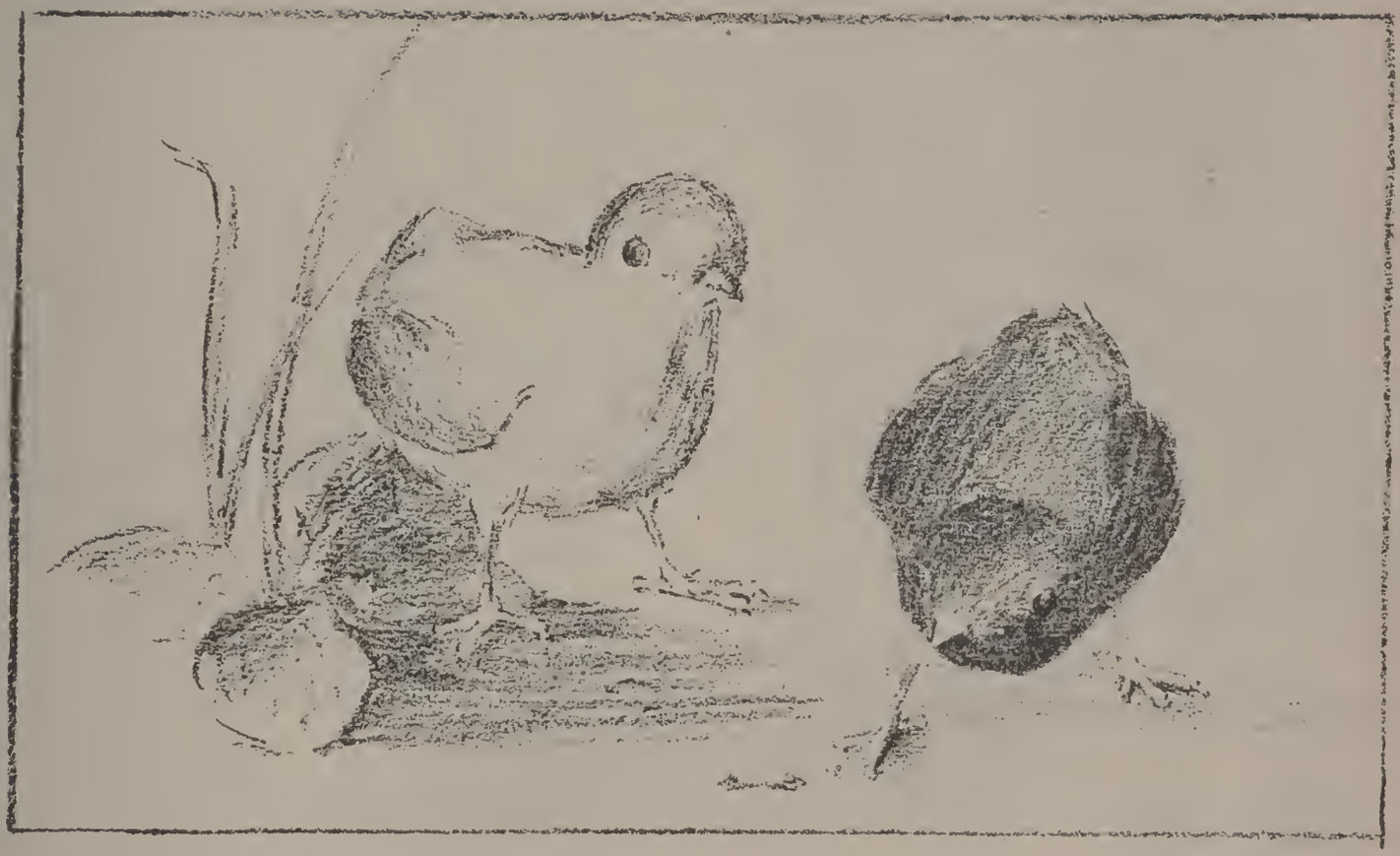
Use a wash of violet over blue for the sky, letting the violet be more distinct along the horizon.

Sketch the shocks of corn very lightly in brown. Put in the shadows of the shocks with brown and cover the ground lightly with the same. Then go over the whole picture, except the sky, with yellow, making the yellow wash stronger in the foreground.

Touch the shocks and ground lightly with violet or blue to deepen the shadows and draw a few of the blades and stalks more carefully.

Shade the pumpkin with orange.

How straight and tall and stately stand
  Its serried stalks upright and strong!
How nobly are its outlines planned!
  What grace and charm to it belong!



XX

Draw the chickens lightly in yellow. Keep the lines soft, so as to preserve the soft, fluffy effect of the little chicks.

Draw the plant in green, lightened with yellow, and the ground brown.

Shade the yellow chick with orange on wings, bill and feet, and the darker one brown with orange.

Said the first little chicken,
With a queer little squirm:
"I wish I could find
A fat little worm!"

Said the next little chicken,
With an odd little shrug:
"I wish I could find
A fat little bug!"

Said the third little chicken,
With a faint little moan:
"I wish I could find
A wee gravel stone!"

"Now see here," said the mother,
From the green garden patch:
"If you want any breakfast
Just come here and scratch!"

XXI

(1) Place a wash of blue over sky and water. Darken the water at the horizon with violet. Place a wash of green over the ground, shading it with brown near the water. Draw the tree trunks and branches with blue over brown. Draw the foliage with green and shade it with brown. Draw the boats lightly with black.

(2) Autumn sunset. Place a wash of yellow over the entire picture. Softly shade both sky and water with orange toward the horizon. Color the water a little darker than the sky at the horizon. Place a wash of blue, then a wash of brown over the ground. Allow yellow and brown to predominate near the water. Color the foliage brown shaded with violet. Draw the boats with violet.

Let the rocks be the soft yellow gray of limestone. Darken next the water where it is worn back.

Bring out the details of bushes and grass more clearly in the foreground.

XXII

Draw the moon and its reflection with yellow. Draw a few yellow ripples in the dark part of the water. Place a deep wash of blue over the sky. Make the clouds with black over the blue. Draw the darker part of the water with blue shaded with black. Draw the foliage with black over green. Make the reflections of the trees in the water with black.

Keep the strokes for the surface of the water horizontal.

In the moonlight all details are lost and we see only the big masses of light and dark. Therefore we must depend entirely upon the outline to identify objects.

Poplar trees are very useful in landscape composition. They are simple and easily drawn. In grouping them consider the space division carefully and avoid dividing the spaces in halves or equal parts.

Work this out in distinct tones, keeping the moon and reflections the lightest next the sky, then the water a tone darker. The trees, bank, and reflections can be put in as one flat tone.

XXIII

First place a light wash of yellow over the cherries, then shade them with red, making the strokes follow the outline of the fruit. The ones in shadow may be shaded with blue. Draw the stems with brown and the leaves with green shaded with red and blue.

The stem divides the space into two similar but slightly unequal parts. Leaving the larger space at the bottom gives an effect of airiness.

The grouping is also balanced, but not regularly.

Notice the stem of the fruit carefully, as to its joining both with the twig and with the fruit.

Suggest only a few of the veins in the leaves. Let the leaves keep their natural positions, some turning toward the observer and some showing only in part.

The Japanese are noted for their simple, direct method of representing flowers, grasses, fruit, etc. Try to show the character of the fruit with as few strokes as possible.

XXIV

Sketch the cabin lightly with brown.

Let the blue wash of the sky extend over the evergreen trees and the distant field.

Draw the distant trees with green over the blue. Draw the trees in green and shade. The trunks of the pine trees may be black with green.

Color the walls of the cabin brown and the roof brown over yellow. Shade with black.

Draw the path with brown.

Let this be an illustration of a pioneer log cabin, such as we find throughout the Eastern and Middle States, with the virgin forest behind.

This cabin is simply a variation of the cube. Two sides only are visible. The corner which is nearest will seem longer than the other two and will begin nearer the lower margin.

All receding parallel lines will converge toward a common imaginary

point on the horizon. As these vanishing points are at quite a distance, there will be only a slight difference in the height of the walls at the nearest and the farthest points of the cabin.

All lines below the eye and horizon, such as the door and the doorstep, slant upward. Lines above the eye and horizon, as the ridgepole of the roof and the chimney, slant downward.

XXV

If possible secure some crocus flowers and color from nature.

The lighter blossoms are yellow shaded with orange. The white crocuses have some violet and gray touches in the veins and shadows. The darker ones are a violet blue.

The leaves are green, with a light touch of blue.

As the flower tube grows smaller the color fades into white.

The cup of the crocus is round seen from above. From the side, therefore, we have an ellipse, broken by the curve of the petals. The long axis of the ellipse shows the position of the flower head.

XXVI

Draw the body of the boat first in brown. Then place the mast and draw the sail. Do not let the edges be too distinct. Shade in very smoothly. Keep the sky very pale. The lake is one tone darker, except where we get the broken reflection. This is quite dark. Sketch the figure very simply and keep the edges soft.

The slant of the mast and the curving of the sail show the action of the wind. We also see that the wind is light, because the water is rather quiet. Sketch the upper line of the boat as an elongated letter S.

XXVII.

Draw the branch and leaves from nature, when it is practical to do so.

The stem might be brown with touches of red; the leaves green, with a yellow tone in the light and blue in the shadow.

The oriole's nest should have a light wash of yellow first, then shadows of brown and gray. Let the character of the strokes help show the hair and grasses of which the nest is made.

XXVIII

A snow scene. The sky is blue with violet; the water blue, darkened with violet and black. The distant field is the same in color, but lighter.

The willow trees and bridge are brown, shaded with violet and blue.

The shadows on the snow are blue. Save out the patches of snow on the tree trunks in the first sketch.

XXIX

Sketch the turkey with brown. Color the wattle light red. Place a light wash of brown over the entire turkey. Shade it like the copy with black. Place a light wash of green over the ground.

As in all birds, the legs of the turkey are set well back under the body.

The front view of the bird shows its general spherical form, with the half-circle above for the spread of the tail.

The small child will enjoy dressing the turkey in a hat with a valise about his neck and a cane under his wing to suggest that he intends going away for Thanksgiving.

XXX

Place the squirrel first, as he is of the most importance. Color gray, lightening beneath. The tail is darker.

Use brown for the main color of the trunk and nest and blue for the shadows. A little gray and yellow can be worked over these colors where it seems best.

Avoid a hard outline in either the nest or the eggs. The latter may be any color the child prefers. If he wishes to suggest the robin's egg, color first with green lightly, then with blue, using gray for the shadows.

In the joy of his nature he frisks with a bound
To the topmost twigs, and then to the ground;
Then up again like a winged thing,
And from tree to tree with a vaulting spring.

—Mary Hewitt.

XXXI

Sketch in the house very lightly with black. Place a wash of blue over the sky. Place a light wash of gray over the blue. Draw the pine trees with green, and shade them with blue. Draw the distant trees with violet over the blue of the sky. Place a very light wash of violet over the distant snow and the roadway. Draw the bare trees with blue over brown. Color the walls of the house brown, or red over gray. Notice the perspective of the fence and the road. Do not forget the shadows. Suggest that the snow is clinging to the upper surfaces of the branches and fence by letting the white of the paper show or by drawing the study in white chalk and charcoal on gray paper.

This illustrates what is commonly called one-point perspective, in which the observer stands in the middle of a long, straight road which runs toward the horizon.

XXXII

Place a light wash of blue over the entire picture except the haystack. Draw the trees with green and place a wash of yellow over the ground. Color the haystack yellow and shade it with brown. Draw the barn with red and color the roof, doors, and windows black.

The road should be a dull yellow, becoming darker in the distance. Wash brown over a blending of orange and yellow. The shadow of the haystack is blue put on very lightly.

This sketch can be used in many connections—with a study of the harvest, with a study of farm life, or with a study of commercial geography.

Rearrange this study, using a group of two or three stacks. Let the direction of the stroke help give the effect of hay or straw.

Notice how the shadow is foreshortened or made narrow. Think of the direction in which the sun is shining as the shades and shadows are put in.

XXXIII

Sketch in brown both owl and stump. Notice the triangular shape from ear tufts to beak.

Color in brown and yellow, using the yellow and brown very lightly on the breast. The bars on the wing and the circles around the eyes should be shaded with violet as well as brown.

The shadows on the stump are violet and brown.

A little landscape might be added, showing, perhaps, distant trees and a barn.

It is easy at present to find good pictures of birds. Collect as many as possible and use not only in the nature study, but in drawing.

In this sketch the outline is made quite strong, but we may draw the bird without allowing the outline to be prominent at all, as in the case of the squirrel on Plate XXX.

Make a little sketch of the owl on the branch of a tree in the moonlight. Keep his colors very gray and indistinct.

XXXIV

Place the horizon, then the trunk and a few brown branches of the thorn tree. Use red very lightly for the blossoms on the tree, letting the paper show through for the white. Color the young leaves green, with some yellow.

The flowers in the meadow may be any color desired. Remember that

the color will grow more vivid and distinct in those near, and more gray and indefinite in edge in those farther back.

Use a vertical stroke for the nearer grass.

This sketch is included as a suggestion of the manner in which art may be used in connection with history and geography.

Encourage the child to make a scrapbook or collection of typical landscapes and costume sketches of the different countries he studies. It will help him picture them more vividly.

XXXV

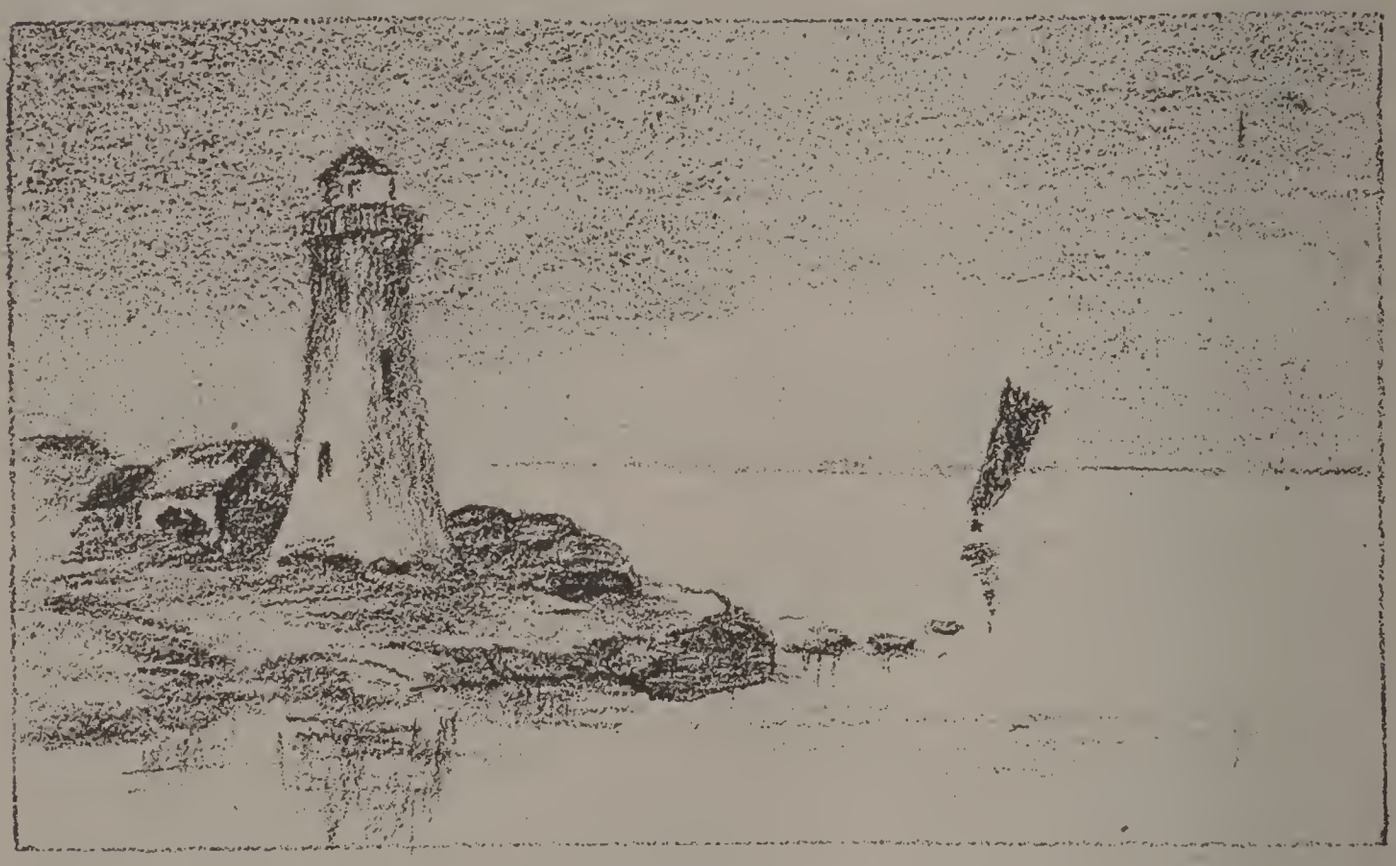
Place a wash of blue over the sky and distant bushes. Color the road with orange shaded with brown. Place a wash of green over the grass and distant bushes. Shade with brown. Draw the pine-trees with green shaded with blue. Draw the other trees with brown shaded with blue. Study their method of branching.

Consider the spacing and arrangement of the trees most carefully. These features are among the most important in the study.

The road must be carefully drawn, but at the same time the edges blend with the fields, so that there is no hard line of division between. In the distance it can barely be seen.

Suggest a few ruts in the foreground only. The horizontal strokes of the shadows of the tree help keep the road flat.

This would work up on gray paper into an excellent snow scene. Use white chalk for the ground and a few touches of white on the trees to suggest the clinging snow. Use charcoal for the darker parts of the trees.



XXXVI

Place a wash of blue, then a light wash of gray over the sky. Place a wash of orange over the lighthouse, cottage and rocks. Shade them with brown. Make the darkest shadows in the rocks with blue. Put a few light strokes of blue over the water and draw the reflections with brown and blue. Draw the boat with brown.

The little slits we see in the tower are windows lighting the stair that winds round and round to the top, where is the small tower holding the light. This is the type of lighthouse found on the Great Lakes. The lighthouse-keeper lives in the little cottage beside the tower.

Every day the color of the water seems to change. Use different color schemes. Color as we might see it just before a storm—with strong, dull blue and purple colors in the sky and water. The rocks and the lighthouse would show some of the same color, which would be secured by washing the violet and blue lightly over the real colors.

XXXVII

(1) Place a light wash of blue over the entire picture. Sketch the edges of the pool and the rocks with brown. Put a wash of green, then one of blue, over the distant hills. Put a wash of green, then one of light brown, over the ground. Draw the trees with brown shaded with blue. Shade the water with blue and the rocks with brown.

(2) Work the sketch up as a sunset scene, with a faint orange red in the sky and the same reflected in the pool. The tree trunks will seem very dark against the light sky. The ground should be darker than in the first color scheme.

XXXVIII

Draw the upper left-hand butterfly in green, shaded with violet. The markings are yellow. Draw the upper right-hand one of violet, shaded with green. Use blue markings. The lower butterfly is violet, shaded with yellow and orange and has brown marking.

The grass is brown and green; the bluebells blue and violet.

A wide range of coloring and shape is found in butterflies; therefore study those of any locality and reproduce.

Turn to Plate LIX. Compare the conventionalized butterfly with these insects.

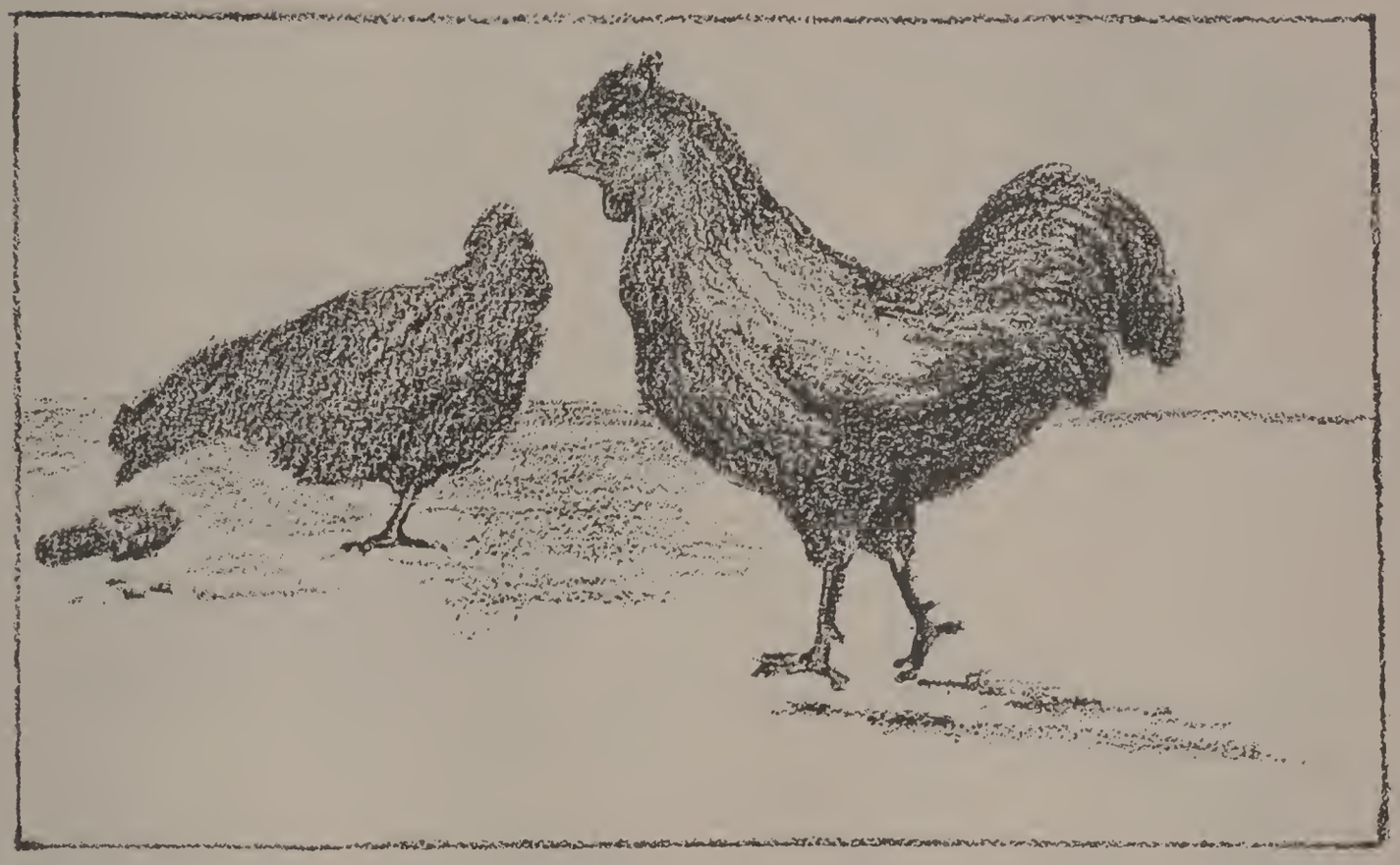
STUDIES

XXXIX

The windmill should be colored brown, the sails a very light tone of the same. The lowland is green, becoming very gray and violet in the distance. The sky and water blue.

Use a wash of violet over the lower part of the sky and the distant fields. Draw the house in brown and let this violet wash run across it.

Use brown and violet for the twigs in the foreground. Keep the horizon on the lower half of the page, and grade the wash for the ground carefully from foreground to distance. These two points will help give the effect of flatness and distance to the land.



XL

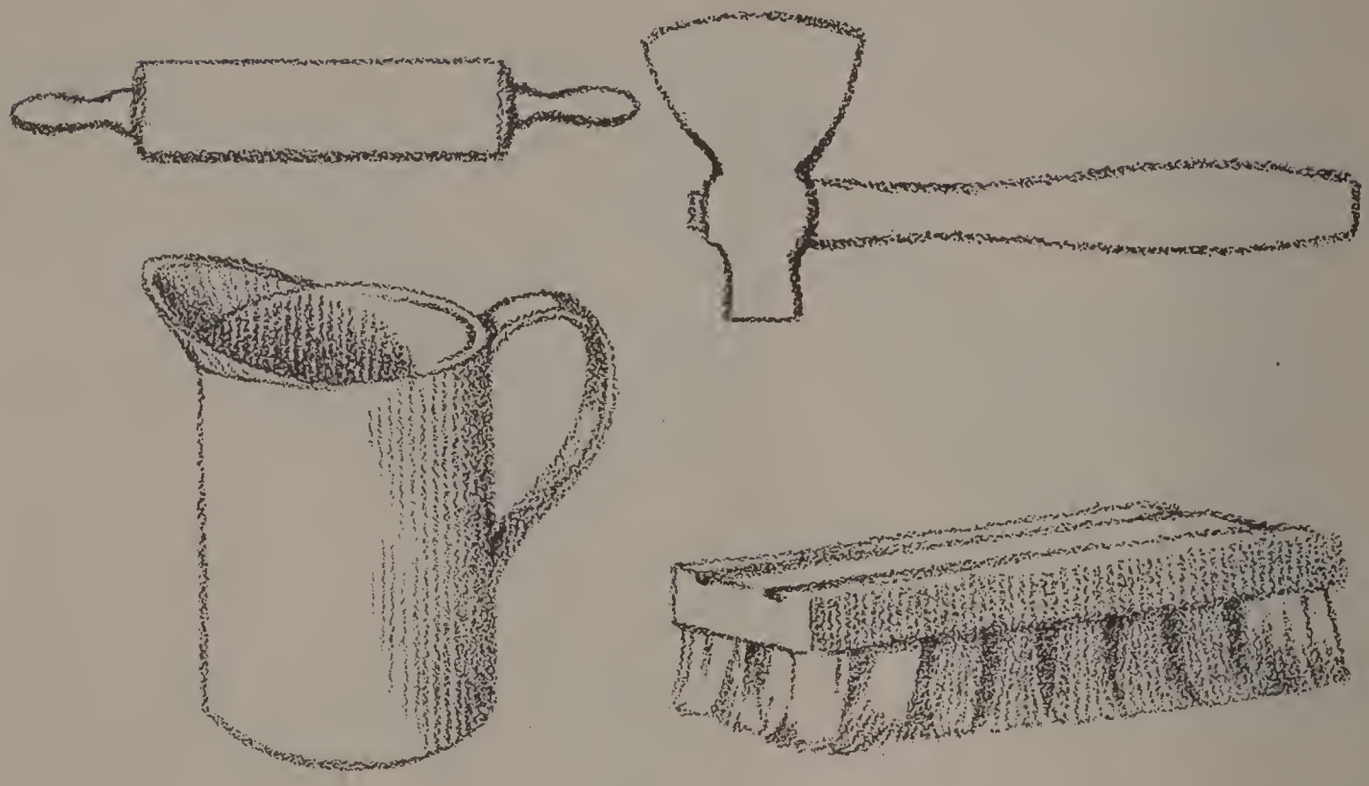
Sketch lightly in yellow.

Wash over both hen and rooster with yellow. Strengthen the shadows with gray. Touch the wing and tail feathers with orange. Use red for the combs.

Shade the rooster with brown and orange. Color the corncob brown and the grains of corn orange.

Study the coloring of other chickens and try the various color schemes found.

Avoid detail in the hen, which is farther away than the rooster.



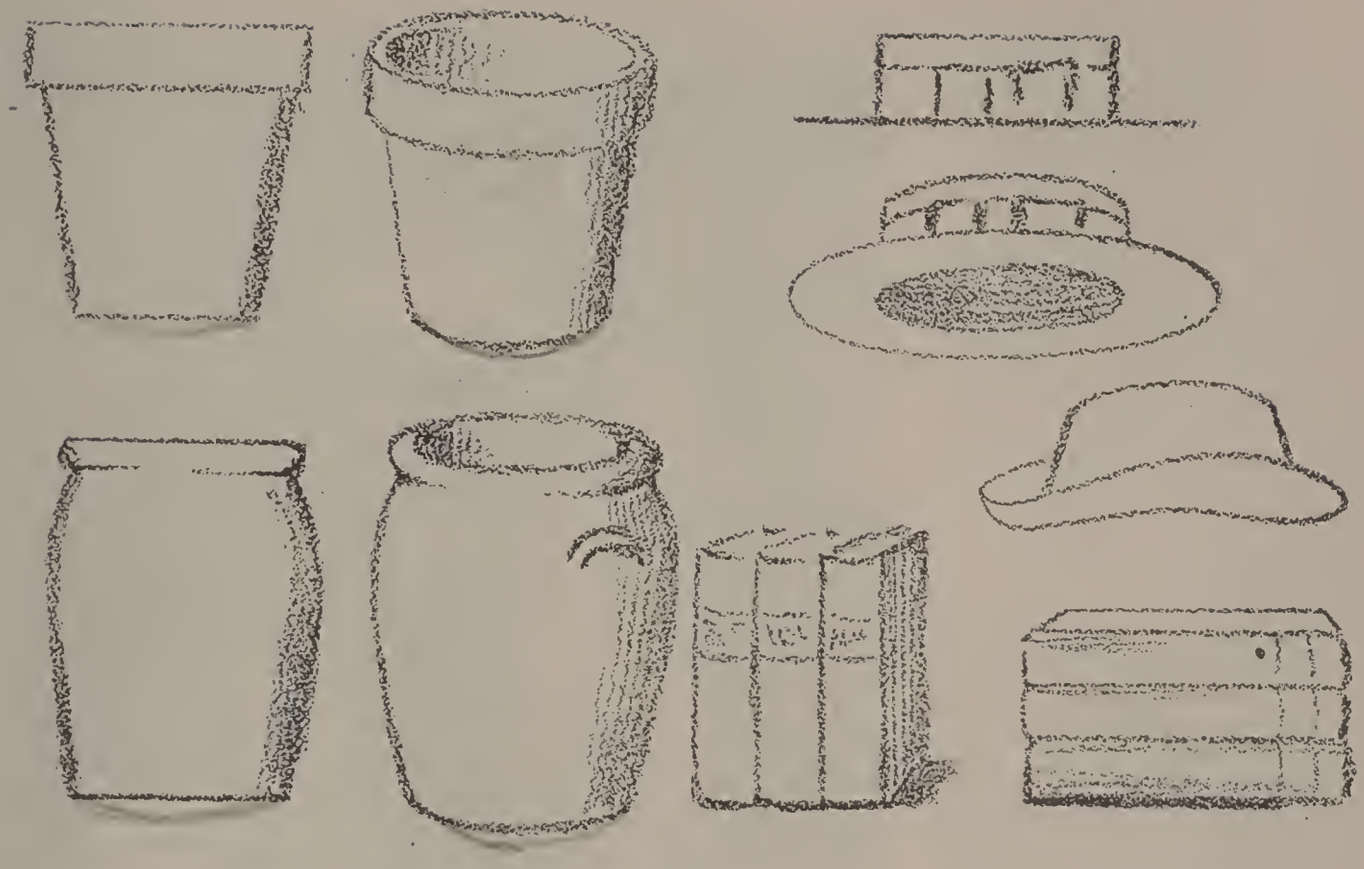
XLI

This is a group of such simple objects as can be secured in any school. If it is possible work from objects. Notice the proportion and the quality of the lines. This is an opportunity for a study of line shading.

Draw with gray crayon.

Secure other simple objects from the homes of the pupils—such as a large spoon, a dipper, a saw, a hammer, cups, bowls and dishes, crocks, casseroles, jugs and candlesticks of various kinds that are simple in shape. Different kinds of brushes; a broom; jars of various kinds; bottles; boxes and baskets with and without lids; shells; books; articles of clothing, as shoes, hats, caps—all make good objects for practice.

The two upper sketches are called two-dimension drawings, as only length and breadth are shown, without thickness which demands perspective. Small children should be given many two-dimension drawings.



XLII

In this group of objects the flowerpot and the jar are in the first position on a level with the eye; the top and the bottom are therefore seen as straight lines. In the second position they are below the level of the eye, and the top and the bottom show as ellipses.

The sailor hat furnishes a similar problem, excepting that it is placed above the level of the eye for the second drawing.

The books show the convergence of parallel receding lines. Draw in black.

Keep the lines soft and gray. If the children display a tendency to let the lines become hard, rigid, and pinched, avoid working in pencil and do all work with crayon and charcoal for a while. Each one of these drawings should be from 2½ to 6 inches in hight.

Group books in different ways: open one of them; let one of the books that is standing lean against the other two, which remain upright.

XLIII

Sketch and shade in black or color. Study light and dark carefully. Notice the light rims.

Group any two objects that are related in use, and draw. Place one somewhat in front of the other.

In all hollow cylindrical objects, as the cup, and all hemispherical ones, as the bowl, the light falls most strongly on one certain point on the *outside* of the object, and will fall on the *inside* at a point exactly opposite this light. The same thing holds true with the shadows: the shadow on the inside is opposite the shadow on the outside. Keep the edges that catch the light distinct.

XLIV

Sketch the geranium lightly in orange. Wash over with red and shade in the darkest parts with blue.

Draw the leaves in with green. Shade with yellow in the lights and red in the shadows.

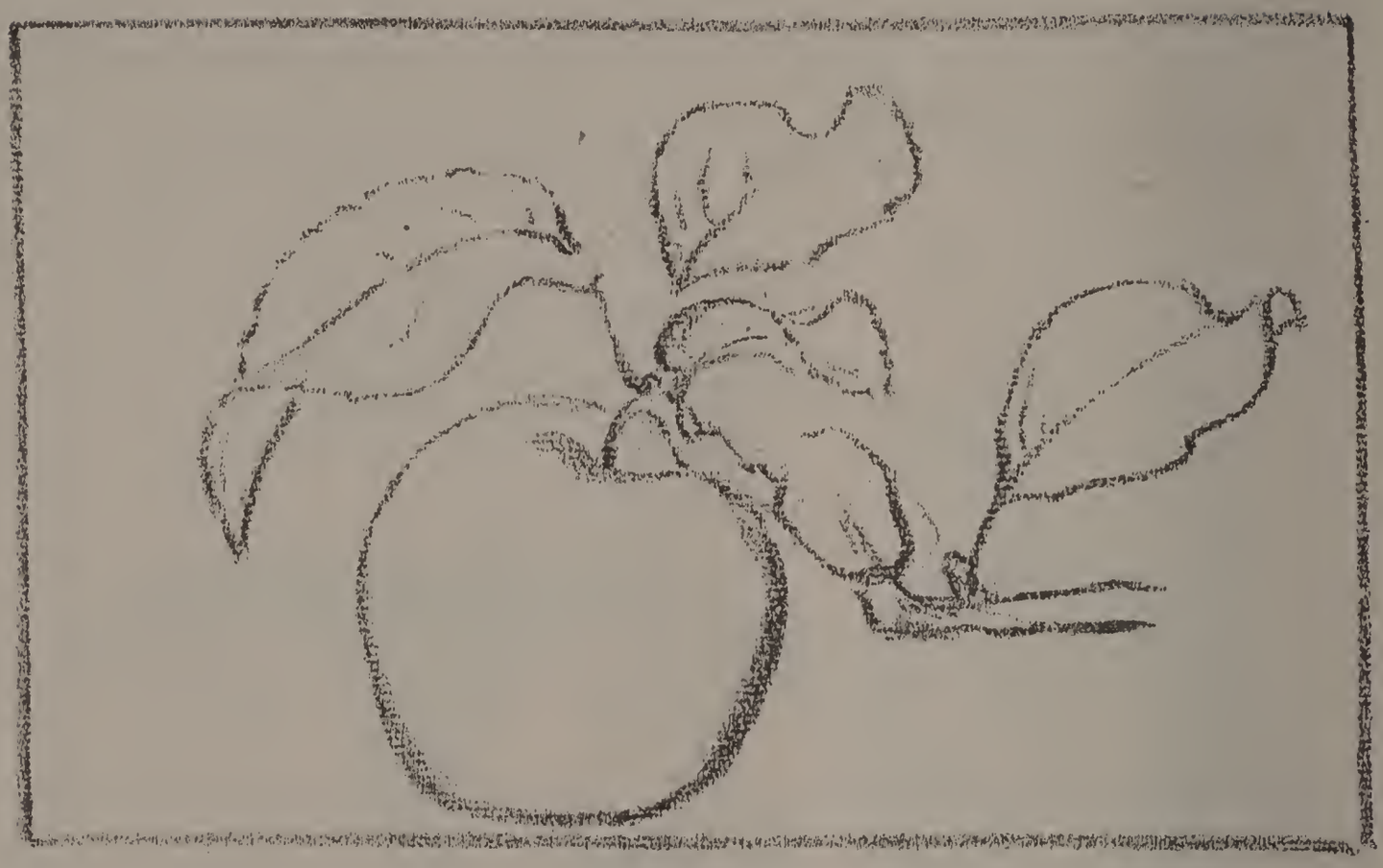
Keep the shapes and masses simple.

XLV

Sketch carefully in green.

Color the peach first with yellow, then with red. The leaves should be green shaded with red. Make the stem brown.

Keep the color soft and fresh. Avoid hard rubbing on the surface of the fruit.



XLVI

Sketch in green lightly. Study the shapes of the leaves in different positions.

Notice the difference between the peach and the apple leaf in color, shape, and manner of growth.

Color the apple in yellow and green or yellow and red.

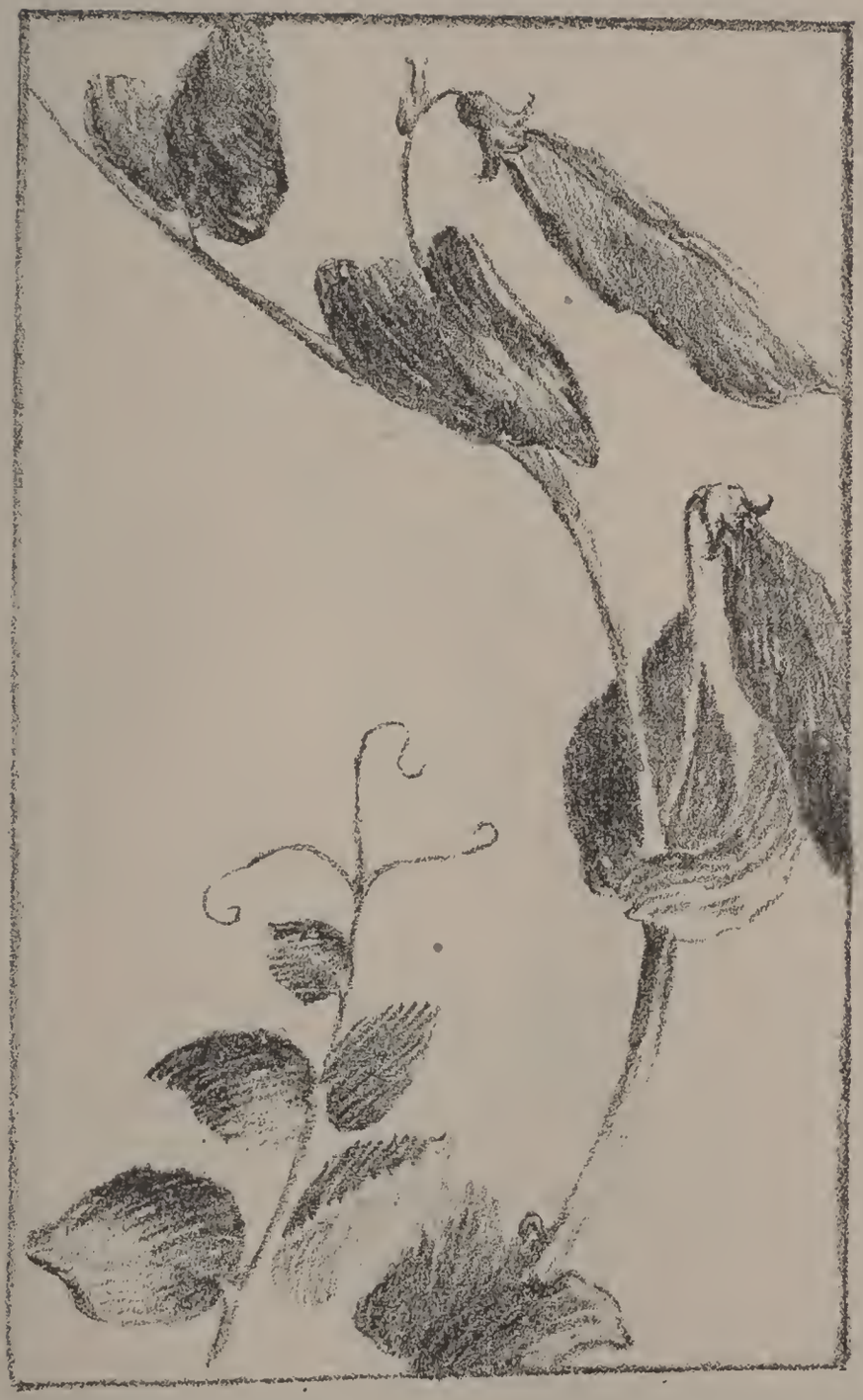
Instead of a color study, this may be reproduced as it is—a shaded line drawing.

Work this out in three tones. If an apple growing on its twig cannot be secured one may be tied to an apple spray and fastened to a model stand in front.

Read the suggestions for the study of the apple in various nature study books.

Tell the story of Appleseed John. ("Type Lessons in Nature Study and Literature." A. E. McGovern.)

XLVII



Sketch carefully to get as good an arrangement as possible. Study its characteristic manner of growth.

As the pea is a light bluish green, use lightly considerable blue in working this up.

For the sake of practice in different methods of handling the crayon, let us use distinct lines in shading this study. In doing this way each stroke must be thought out carefully before it is put on the paper. Try to think continually of the direction of the surface curves.

Many other garden plants make excellent studies when well arranged; for instance, the squash, the pumpkin and the potato leaves and flowers or fruit as the season permits. Beets, carrots, tomato leaves and fruit, corn, gourds, and melons also may be used, as they are easily obtained.

Notice that the pea, like many other plants, has two kinds of leaves. Draw carefully the leaflet that clasps the stem. Try to show in the arrangement the strong, upright growth of the plant.

XLVIII

This is another shaded outline study. It can be colored if desired, the green being made darker and richer than for the pea. Use blue, yellow and red over the green foundation wash.

The plant studies in this section should be carefully studied. They will afford a large amount of material for designs. The plants used are exceedingly decorative and adapt themselves easily to many uses.

Compose or arrange the leaves and the pod carefully. The stem gives the main line of direction. The leaves and the pod add other lines which give variety and at the same time are sufficiently similar to each other to be harmonious

Study the curve the leaf-stem makes as it joins the main stem, which thickens to support it. Make detailed drawings of individual leaves and pods. In such studies as this, block in the proportions, observe closely the edges, veins, stems, etc.

XLIX

The clover makes an interesting study.

If color is desired, use red for the flower, with some touches of blue in the shadow. On the green leaves place a few touches of yellow and blue, to emphasize dark and light.

Use the clover leaf in a border design, breaking the space left between the leaflets at the top by dropping the upper border line in a little point or other simple shape. Keep the lower border line the heavier.

Arrange this border on a cup and saucer. Work it out as a continuous line design suitable for braiding.

Make drawings of the different varieties of clover in connection with the nature study. Notice the points of difference and those of resemblance. For a more elaborate study place a couple of sprays of the clover in a vase of simple shape and color and paint with the crayon. A bee might be added, as bees are always to be found among the clover.

L

The grape lends itself well to a color study. The fruit itself may be green or purple; the leaves shaded with blue and the stem brown.

For a more elaborate color scheme, use lightly both blue and violet for the grapes; and over the first green wash of the leaves work yellow and violet.

Watch the direction of strokes in both grapes and leaves.

The principles that apply to landscape composition and design hold just as firmly with reference to the arrangement of plant and fruit studies—namely, balance, harmony, rhythm.

Study closely the shape of the leaf and the arrangement of the notches; the way the leaf joins the stem, and the small stem and the larger; the kind of curve characteristic of the tendrils; the shape of the bunch of grapes; the proportion of the bunch and the separate grapes to the leaves.

LI

The blackberry is selected as one of many berry fruits which make fine studies for either outline or color.

The leaves are a much stronger green on the upper than on the under surface. For the upper surface, shade with yellow for the lightest parts, with violet and blue for the darker.

The stems of the berries are green, with violet touches. The calyx of the berry is the same, and the berry is blue, with a violet surface wash.

Study the details of structure as directed for the grape; next concentrate the attention upon the composition. Consider first the balance of leaves and fruit. The leaves and fruit give variety and interest to the composition. Arrange the lines of the stems to secure harmony of line and rhythm.

Space the masses in such a way that we have a main mass, which is the center of interest, and smaller subordinate masses. Let the children plan other compositions, using these or similar plant and berry forms.

DESIGN

Method of Teaching. Design may be approached in the schoolroom in several different methods. The following has proved useful:—

In the fall, for the first month's work, have the children make as many careful pencil outline studies of flower and plant forms as possible. Select flowers, leaves, and fruit of simple shape, which adapt themselves easily to design, such as phlox, daisies, grapes and leaves, the morning glory, the bittersweet berry, etc. Have each blossom and leaf drawn in at least two positions, showing top and side view.

Then let the child make with a compass a number of circles about 1½″ in diameter. Divide these circles into varying numbers of equal parts—some into thirds, some into fourths, fifths, sixths, etc. The divisions can easily be made freehand. Using the flower leaf and petal forms, arrange rosette shapes in these circles. Pick out the best of each child's work and let him repeat the design regularly over a paper, then color. This will give him an all-over spot design which can be used as an end paper in a booklet.

Next, taking some plant form from their September work, let the children arrange a border. In arranging the border we must consider two lines of direction. First there must be a continuous movement forward. We see this illustrated in the wave and spiral curves. Then, if the border is to stand, there must be a vertical movement in addition. Avoid overemphasizing a slant line or the design will seem unbalanced. Shapes leading the eye back to the vertical will obviate this danger.

The primitive races used many straight-line borders which are illustrated here. These are within the reach of the smallest child's ability to execute. They show the variety of effect possible with limited means.

Principles. In general, we measure a design with reference to three rather broad fundamental principles; namely, *balance, harmony* and *rhythm.*

Balance. In considering balance we have two varieties—regular and irregular. The human figure balances regularly on a central vertical axis, the two sides corresponding exactly, part for part. In a design unit, however, we may have a shape on one side of the axis balanced by another shape on the opposite side. This irregular balance is illustrated in the plate of units. In coloring we must also consider the balance of tone.

Harmony. Under harmony we should consider whether the different parts of the design are adapted to one another. *Variety* would be included in this, as a design must include enough different elements to create interest and yet not so many as to make confusion. A design *must interest.*

We have harmony of *shape,* of *line,* and of *color,* therefore.

Rhythm is secured by the repetition of shapes. The problem is, therefore, to secure the most agreeable possible spacing and flow of line in the units.

Source of Units

Design shapes may be derived in two ways—first, through plant and animal forms; secondly, through abstract shapes.

Abstract shapes such as are to be seen in Indian pottery and textiles, when traced back to the original idea, are found to be based upon some natural form. The zigzag so often employed in different forms in Indian designs is a conventionalized representation of lightning or of running water.

In making a design based upon natural forms we must keep in mind the characteristics of growth and shape and must simplify.

We may carry this simplification to the point where we retain only the abstract form. In that case we have entirely conventionalized the object. Or we may retain some of the individual peculiarities and not reduce it quite so closely to an abstract form. In that case we shall have a conventionalized design. The old Egyptian wave border has been so thoroughly conventionalized that it has lost every naturalistic suggestion and is purely an arrangement of lines.

Thus we may develop designs that obey the laws of balance, rhythm, and harmony, that are interesting and adapted to their use, while apparently

considering only the problem of producing a form that is adapted to the space.

There must be enough conventionalization to adapt the form to the space and material in order to produce a good design.

A design that is to be repeated many times as in a border must be more strictly conventional and more carefully studied than one not so repeated.

Applied Design

In applying designs we have to consider the design itself and then its suitability to the material to be used. Every design that is to be applied must be drawn with reference to the practical limitations of the material to be used. We must also consider whether or not the given design is suited to the purpose for which the article is to be used.

Motive. As the child wishes to decorate various articles, he has a motive for studying and making designs.

When he begins to consider the objects about him everywhere, he may realize the breadth of the field which applied design includes.

In school a child may make for himself boxes of cardboard or tilo matting, booklet and portfolio covers, candle and lamp shades, cushion covers, valentines, Easter cards, and Christmas cards.

The furnishing of a toy or doll house calls for a study of design applied to all kinds of house furnishing and wall and floor decoration.

As soon as needlework is introduced we have another need for design both in the shaping and in the decoration of the article.

Cross-stitch is one of the easiest and most practical forms of needle decoration for school purposes. Cross-stitch may be applied to mats, towels, scarfs, cushions, curtains, aprons, and dresses. The colors used are few in number and the masses kept flat.

The designs for cross-stitch should be planned on unruled paper first. After the shape and spacing are decided upon the design should be worked out on squared paper, which may be bought for that purpose. In cross-stitch work no curved lines are possible. The nearest approach to a curve is a series of small squares like steps.

The cross-section paper, or any paper which has been ruled into squares, is very useful in working up many geometric designs. A few of its possibilities are here illustrated. Many of the designs found in old textiles can be worked out on the squared paper. It also is most useful in finishing book-cover and rug designs.

Book-binding is a craft which requires design. The design for a book cover must follow the structural lines of the cover, which are rectangular. Therefore any design for a book cover must consider that cover as a rectangular space to be cut into pleasing proportions. The corners may be accented. The space may be cut into panels of agreeable proportion. The corner designs may connect, making a border design. A spot design may be repeated regularly over the whole surface, forming what is called a powdered design. In book covers or any rectangles avoid emphasizing the diagonals by running the title or ornament on those lines.

The *title page* affords an opportunity to teach careful lettering. The *end paper* under the cover requires a good all-over design.

Stenciling. Reference has been made before to stenciling. So much poor work has been done in this line that it seems dangerous to recommend it. At the same time, a good design well stenciled and used in an appropriate place is very satisfactory. Plates LIX and LX are fine examples of Japanese stencils.

Wax crayon may be used for stenciling, in the following manner:—

Draw the stencil carefully. Keep in mind the fact that the background must hold together after the pattern, formed by the openings, is cut out. Leave little straight bars or ties wherever necessary to keep the openings from being too large or to fasten down points that would be loose otherwise. Cut the stencil with a sharp knife or pair of scissors. Rub the crayon over the openings until the required color and intensity are secured, then remove the stencil and iron with a warm iron to melt the wax foundation of the color.

Of course there are various other mediums, such as easy dyes which fade when washed, prepared stencil colors, and ordinary oil colors diluted with gasoline. These are all more difficult to handle, as the brush must be kept very dry in order to prevent the color from running.

Wood Block Printing. The rooster, Plate LIX, is a specimen of wood block printing. Large simple shapes are suited to this work. We can print on either cloth or paper. The wood block and stencil are related and either may be used in many cases. Wood block printing is a simple, primitive method of decorating, and in its simplicity lies one of its chief charms.

The drawing should be made on thin paper. The part that is to be raised is painted in; then this paper is pasted on a block of wood. Any smooth, even-grained piece—such as bass, pear, or cherry—will serve. All the wood under the white paper is cut away for about one-fourth of an inch. Begin by cutting around the edge of the design carefully, holding the knife slanting away from the design. Next make another cut, about one-fourth of an inch outside the first, slanting toward the first. This loosens the wood in a V-shaped cut, so that it can be removed easily. Finish by removing all the remaining unpainted surface. Rub off what is left of the paper pattern.

Any paper may be used to take impressions, but an unglazed paper is best. The ink for printing may be the ordinary printer's ink, oil colors used as stiff as possible, or water color thickened with starch. The water color is used on slightly dampened paper. The color is applied to the raised surface with a bristle brush or cloth pad.

Linoleum may be pasted on a block of wood and cut instead of wood. This is much easier to do, but is of course, like all substitutes for the genuine thing, not quite so good. Sometimes it is possible to have a class of girls make prints by using linoleum where they would be unable to cut the wood blocks.

Methods of Repeating Design Units

In every repeating design each unit is complete within a certain definite, regular space.

Spacing. In order to repeat the design over the whole space we must decide upon the spacing of the repeat, and fix that upon the paper in some way, either by placing dots at regular intervals for the very small child, or by laying out the shapes with the ruler.

The spaces most easily used in a schoolroom are the square, the oblong, and the diamond.

Drop. In arranging the repeat, we need also to plan for the amount each design is to drop; that is, whether the design drops a whole unit, a half, or some other amount. A drop of one-half for each series, or of the whole unit, is the most easily managed. If simple enough, the design may be repeated free-hand.

Tracing. When it is necessary to trace the design, the tracing may be done in any one of several ways:

(1) The under side of the drawing may be blackened with a soft crayon or pencil. Then lay the design in the desired place and with a sharp point trace over the lines very carefully. Repeat as many times as necessary. As the black wears off, the under surface must be blackened afresh.

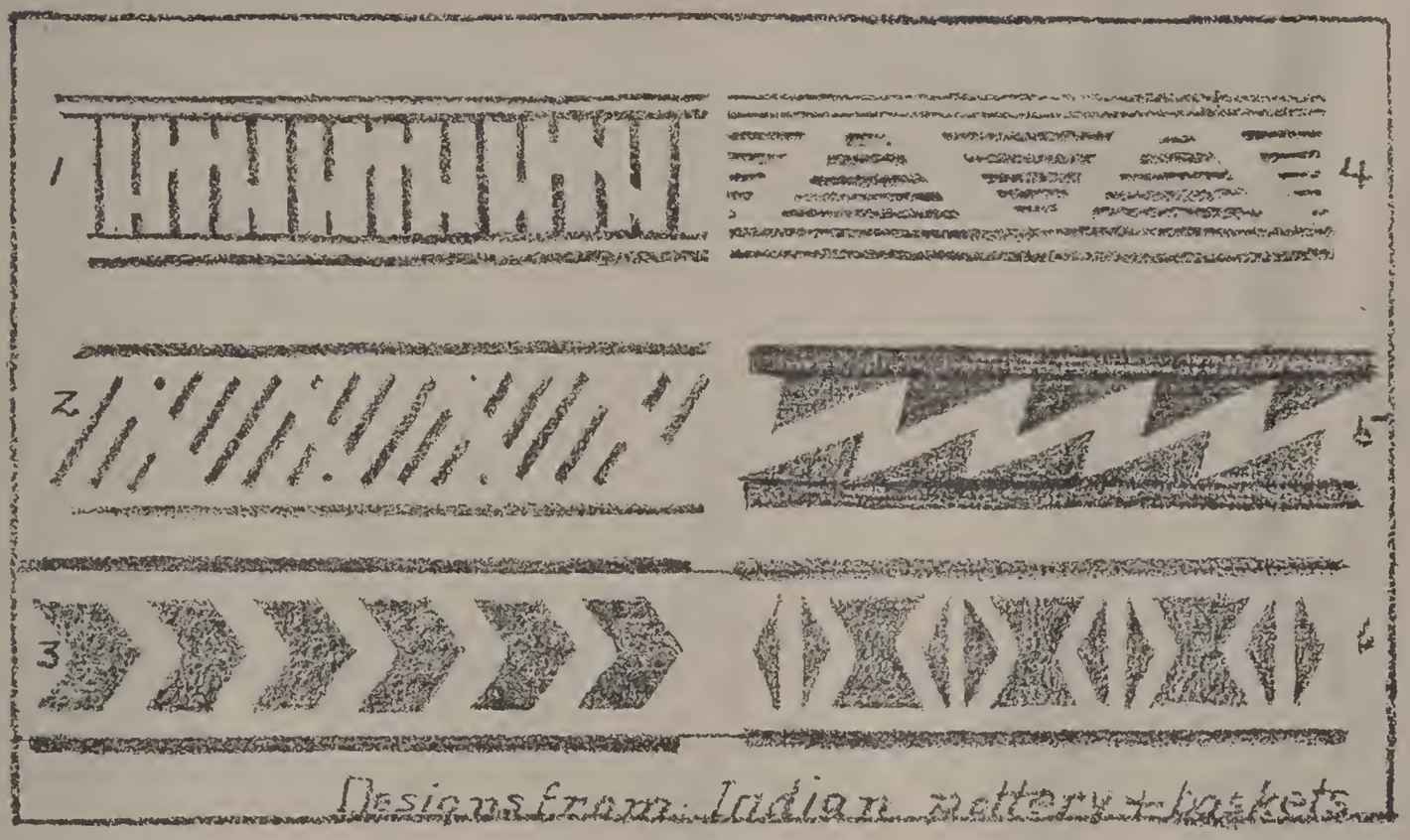
(2) We may trace with the prepared carbon tracing paper. This comes in several colors, black being the most generally useful. Draw the original unit, put the carbon paper face downward under it. Go over the design with a sharp point.

(3) We may also use a transparent tracing paper. While this method is sometimes a little slower than the other two, it is much more satisfactory for older pupils. From the original drawing trace the design upon a thin, tough, semi-transparent paper. Many drawings can be finished on this paper, as it takes colored crayon splendidly and water colors fairly well.

If the work is to be finished on it, push the original drawing about under the paper and get the best spacing possible.

If this transparent paper is only a means of transferring the design to another paper, after tracing on the prepared paper turn it face downward and go over the lines on the under surface. Turn the paper face upward, place it in the desired position, and trace over the lines of the upper surface. This leaves a faint gray mark on the paper which may have to be corrected with the pencil to secure very accurate work.

A very soft pencil should be used, but it must be kept sharpened to a very fine point. Sand paper is best for keeping the point in good condition.



LII

These borders should be drawn about an inch in height.

For No. 1 draw a series of triangles whose points are about an inch apart. Fill in with vertical lines bringing out the pattern.

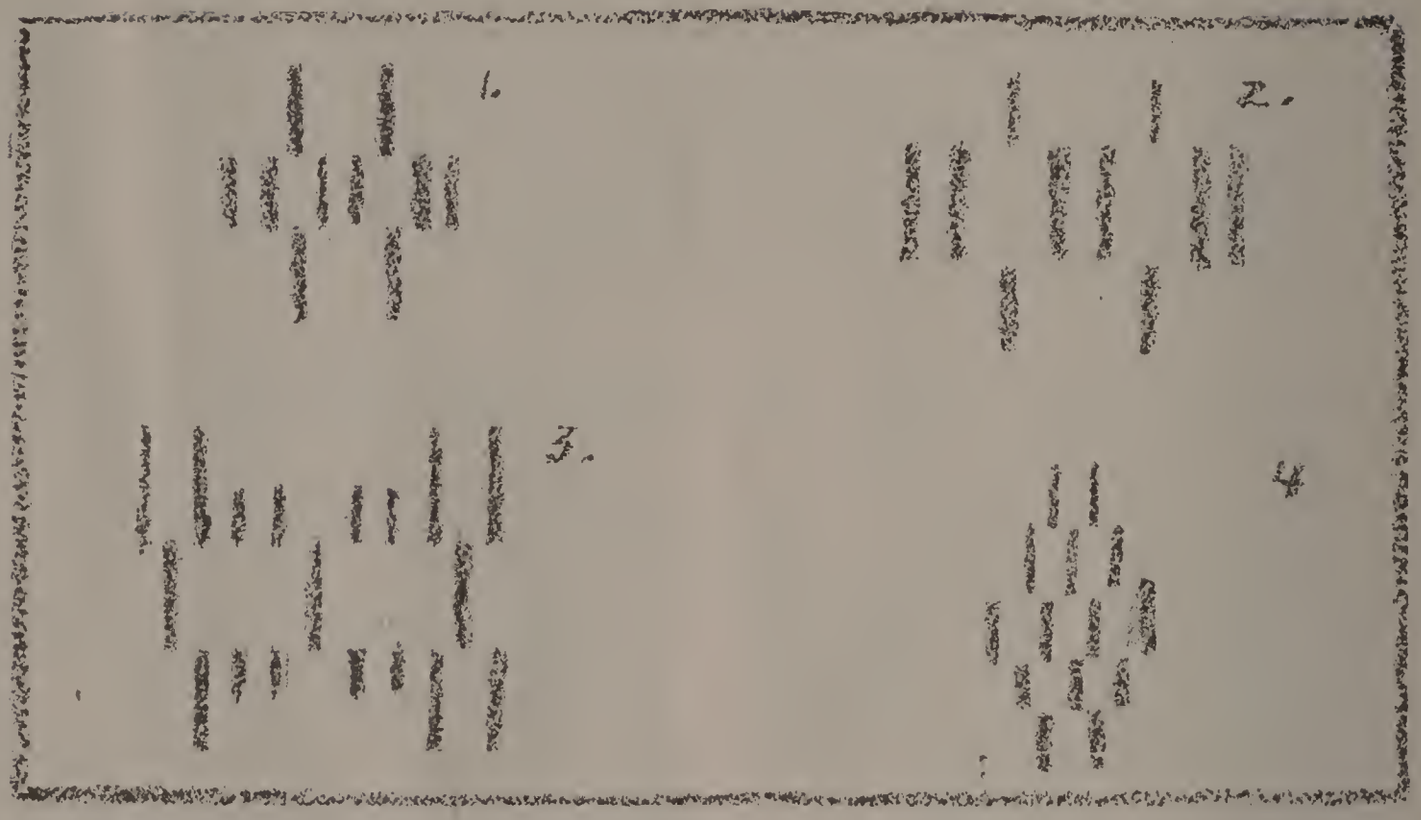
For No. 2 draw the border lines; then draw very lightly two diagonal lines at any angle desired. Fill in with diagonal lines the spaces remaining.

No. 3 Draw the enclosing border lines; within draw three horizontal lines. Space at the top, middle, and bottom, and draw the figure. Color the figure black with tan ground.

No. 4 Lay this border out as for No. 1. Fill in with horizontal lines.

No. 5 Draw the border. Draw a line through the center and space the points of the triangles. Use black and red over orange.

No. 6 Draw the light lines for the edges and center of the design. Space on these lines. Fill in with black. These borders were drawn from Indian pottery in which the patterns were black on an unglazed surface of yellowish or reddish ware.



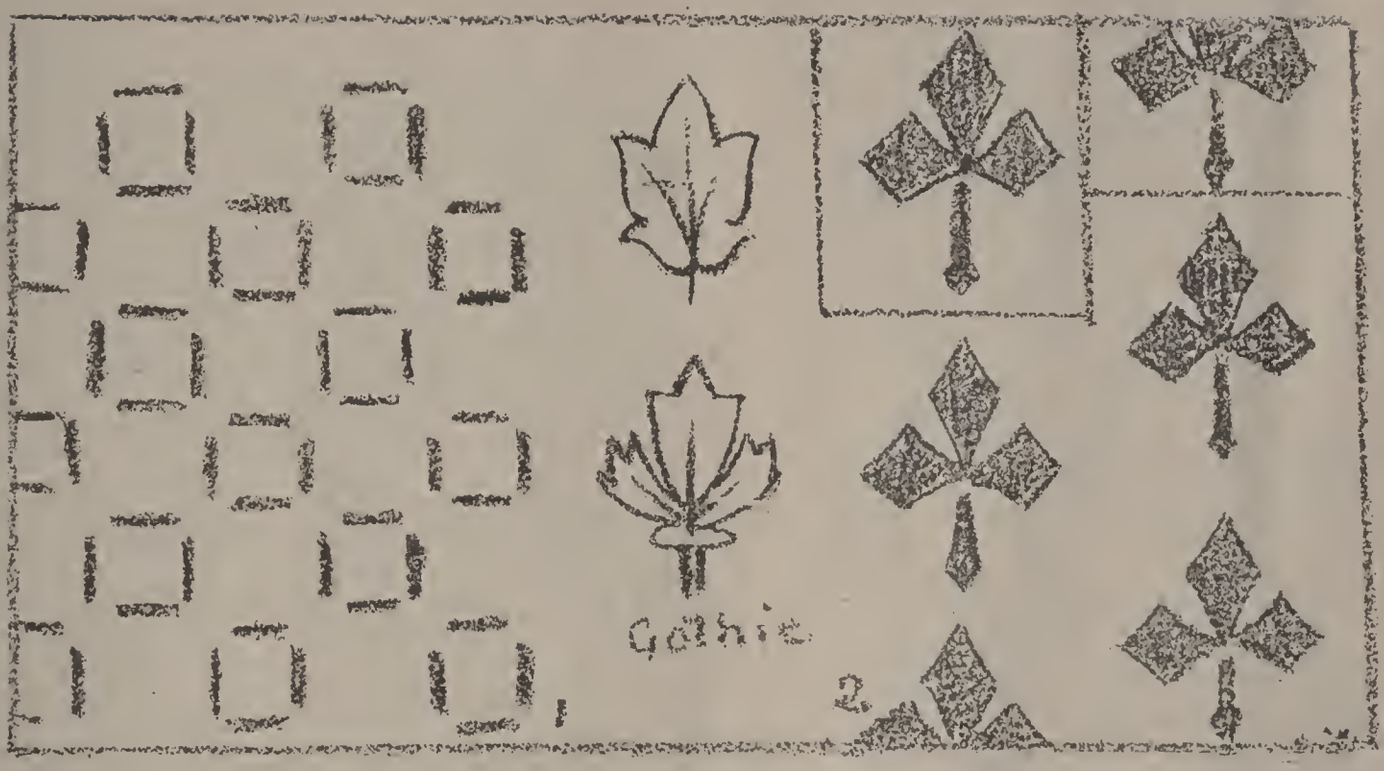
LIII

These interesting groupings of lines are taken from Swedish woven towel borders. Repeat each group of lines as a border or use as all-over designs. Any color desired may be used.

In No. 1 use about ⅜ of an inch between the longer lines, a little less than ¼ between the groups of two short lines, and a little more than ¼ between the groups. The whole group is 1¼ inches in height.

This is really a study in securing a good proportion of line and space. In all designs the fundamental lines must be carefully spaced and proportioned. It is well to concentrate the attention for a time on that one point.

Lead the child to see through lines on the blackboard that the more obvious proportions such as 1—1, 1—½ are not so pleasing as groupings which are uneven and which the eye cannot measure so easily. Therefore we find such proportions as 2—5, 3—5, 3—7, 5—7, etc., much more interesting. This holds true as to both the length of the lines and the width of the spaces between them.



LIV

Rule the paper into half-inch squares. Fill in the group of lines in alternate squares.

Space the paper into oblongs 1⅛″x1¼″ in size. Find the center of these oblongs and draw the leaf shapes. Either of the two leaves at the side can be substituted. The repeat drops one-half the block.

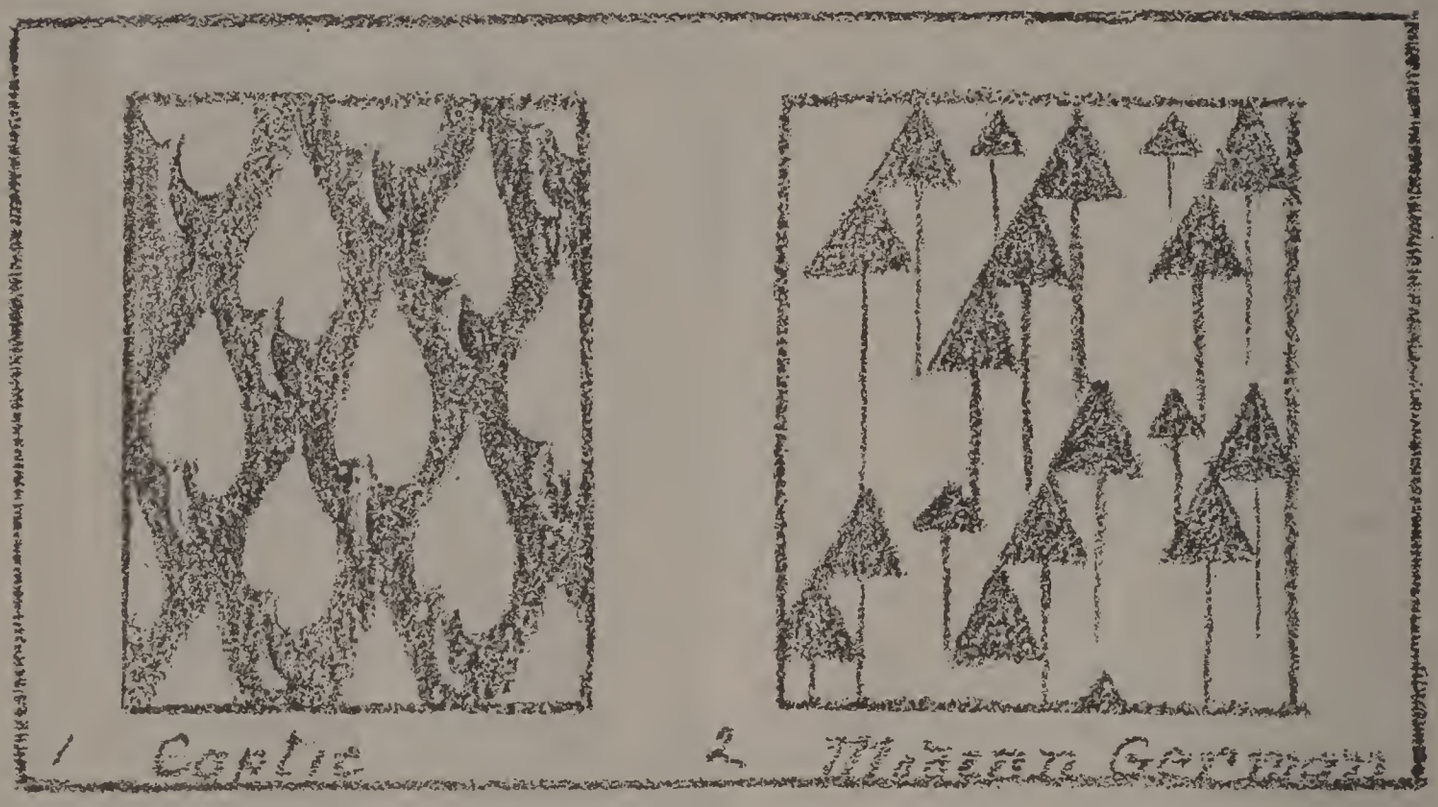
Cover the paper with a wash of yellow, then green. Darken the pattern with green.

If the teacher has a mimeograph or a hectograph the spacing can be done on that and the spaced paper given the small child to work on. Be sure the spaces are large enough to allow big, free work.

Simple spacings can be ruled by even a first-grade child himself, and afford excellent practice in using a ruler. Of course these lines should be very light and should be erased if necessary when the work is completed.

Substitute other leaves, either from nature or from good drawings and use the spacing in either No. 1 or No. 2.

Use the leaf of the grape and that of the bean.



LV

Space for No. 1 by drawing two sets of diagonal lines forming diamonds. The pattern drops one-half.

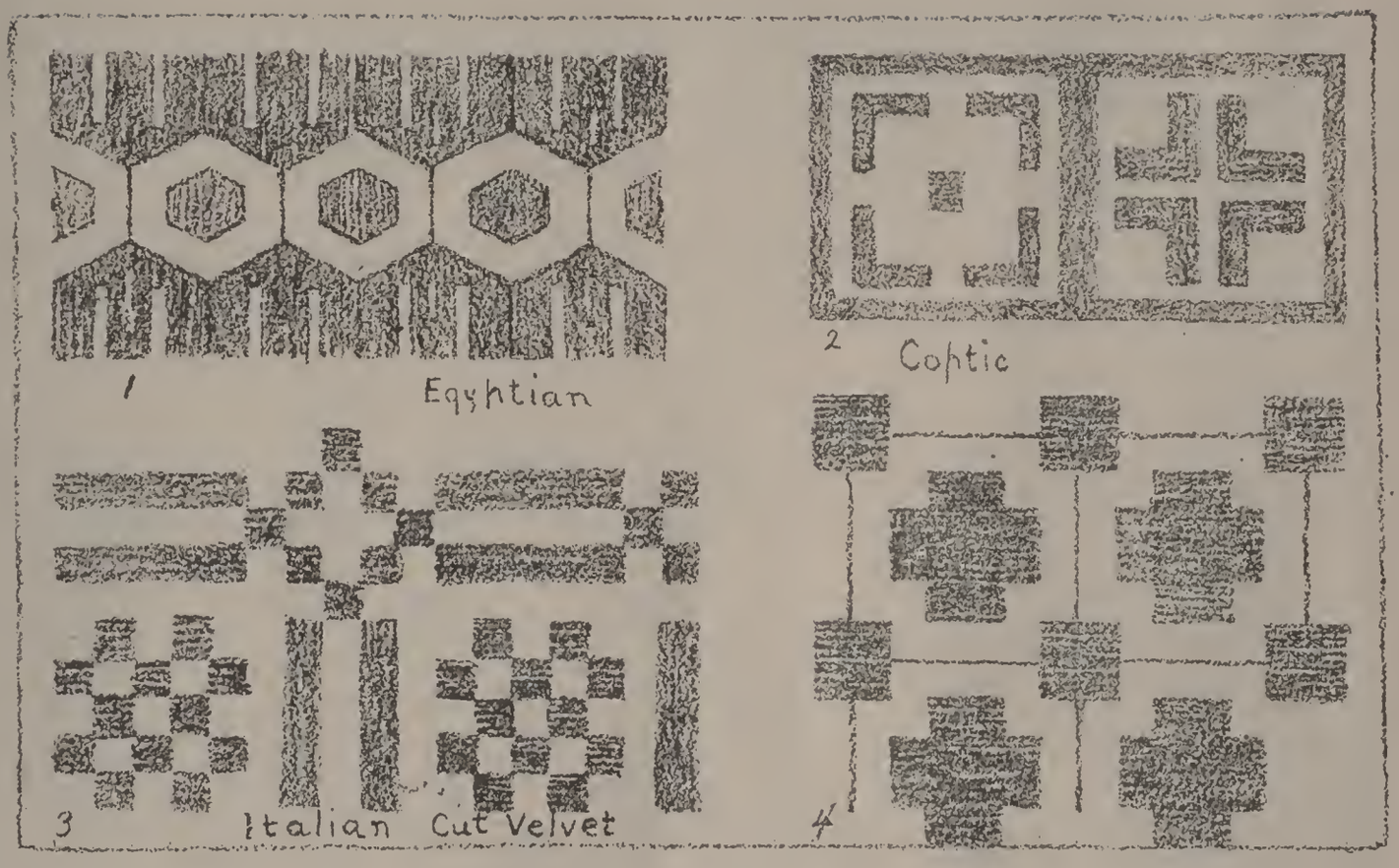
Color the background a reddish brown, leaving the leaf the color of the paper.

This is an old Coptic textile design.

No. 2 on this plate shows the possibilities of a simple form, such as a triangle in design. This is taken from a modern German wall decoration. Color in two tones of delft blue, which is secured by putting a light wash of brown over the paper first, then a wash of blue over the whole, finishing by rubbing the figures in with the blue.

Using the same diagonal spacing as in No. 1, substitute other units that can be arranged in a similar space.

In No. 2 substitute other simple shapes, keeping the same arrangement. Be sure the units are kept large enough. The size required will vary with the shape used.



LVI

This plate is to be worked out on squared paper. Use any two-tone or two-color scheme. These designs are especially interesting for their simplicity and fine balance.

The possibilities of geometric design are seldom realized. Children find work in it fascinating. Books of title designs and parquet floors give many good suggestions. Perhaps an old sample book of linoleum patterns can be secured from a store. This will give many good designs, which must be separated from the poor ones found in the same sample book.

Avoid cutting the space into many small, uninteresting bits. The designs given are exceedingly simple and yet have sufficient variety to be interesting.

Work out the design on plain paper first, getting an idea of the shapes and spacing desired. Then take the squared paper and work out the design freehand upon that. If desired, the ruler, etc., can be used later.

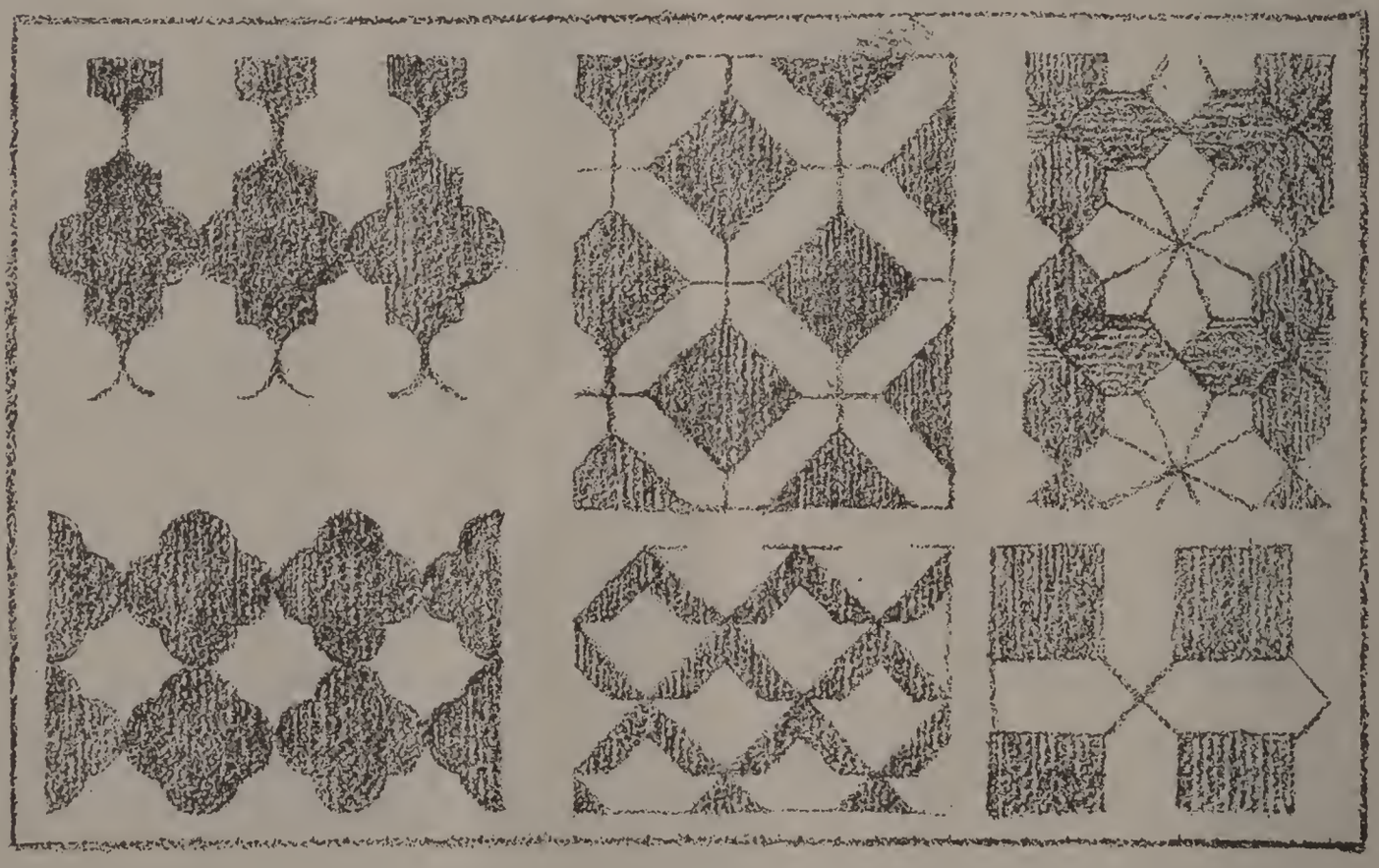
LVII

Work each of these designs out on squared paper.

Nos. 1, 2, 3 and 4 show arrangements of straight lines. No. 5 is composed of half-circles and No. 6 of half circles and straight lines.

Color as desired.

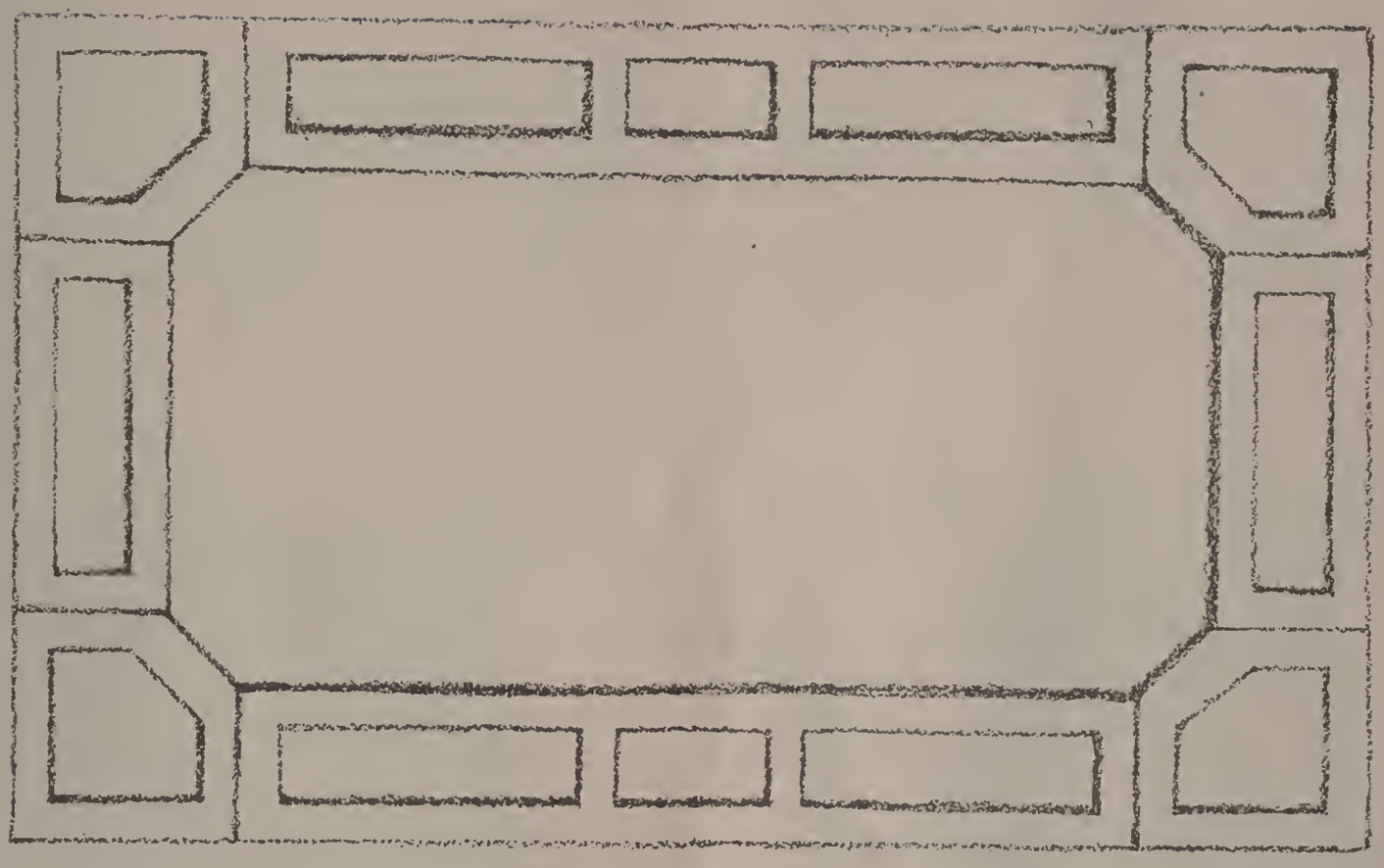
Nos. 1 and 4 are textile designs; Nos. 2, 3, 5 and 6 mosaic linoleum or oilcloth.



The squared (cross-section) paper can be secured from any school or artists' supply house. The squares are of various sizes. That ruled into ¼ inch or 16 squares per inch is the smallest that it is advisable to use.

If it is not convenient to get the special paper, the squares may be ruled by the child himself.

In this work use two tones of the same color, or two harmonizing colors.



LVIII

This is a study of a simple border arrangement within an oblong. Work it out on squared paper. Try other solutions of the same problem. Notice the variety secured by the different sized masses.

We may *use* the result in several ways. After the design has been worked out by the child it may be drawn on tinted water-color paper or thin cardboard, colored and tied through slits in the center to a piece of *blotting* paper. It may be used as a *calendar* frame by pasting a calendar just above the border on the lower side, and adding the words "Merry Christmas" above.

It makes also an excellent design for the border of a booklet cover, by adding the title and perhaps the name of the designer; or, if the cover is intended as a gift, the name of the person who is to receive it.

Work out a simple border design on the squared paper.

Start from the corner, making it the principal part.

Use this design as suggested above.

LIX

No. 1 in this group may be drawn as a border or cut as a stencil and filled in with crayon. Substitute other animals in simple straight line forms. The elephant, the squirrel, the cat, the rabbit, and the goose are good.

No. 2 should be treated as a stencil and drawn on a piece of stiff paper. This design is then cut out and the crayon rubbed over the openings. This

is an all-over pattern, which may be repeated in the same manner as either 1 or 2 in LIV.

No. 1 is suitable for a curtain stencil or wood block print for a child's room. It could be used as a book cover ornament either as a straight border or by arranging two roosters to face each other.

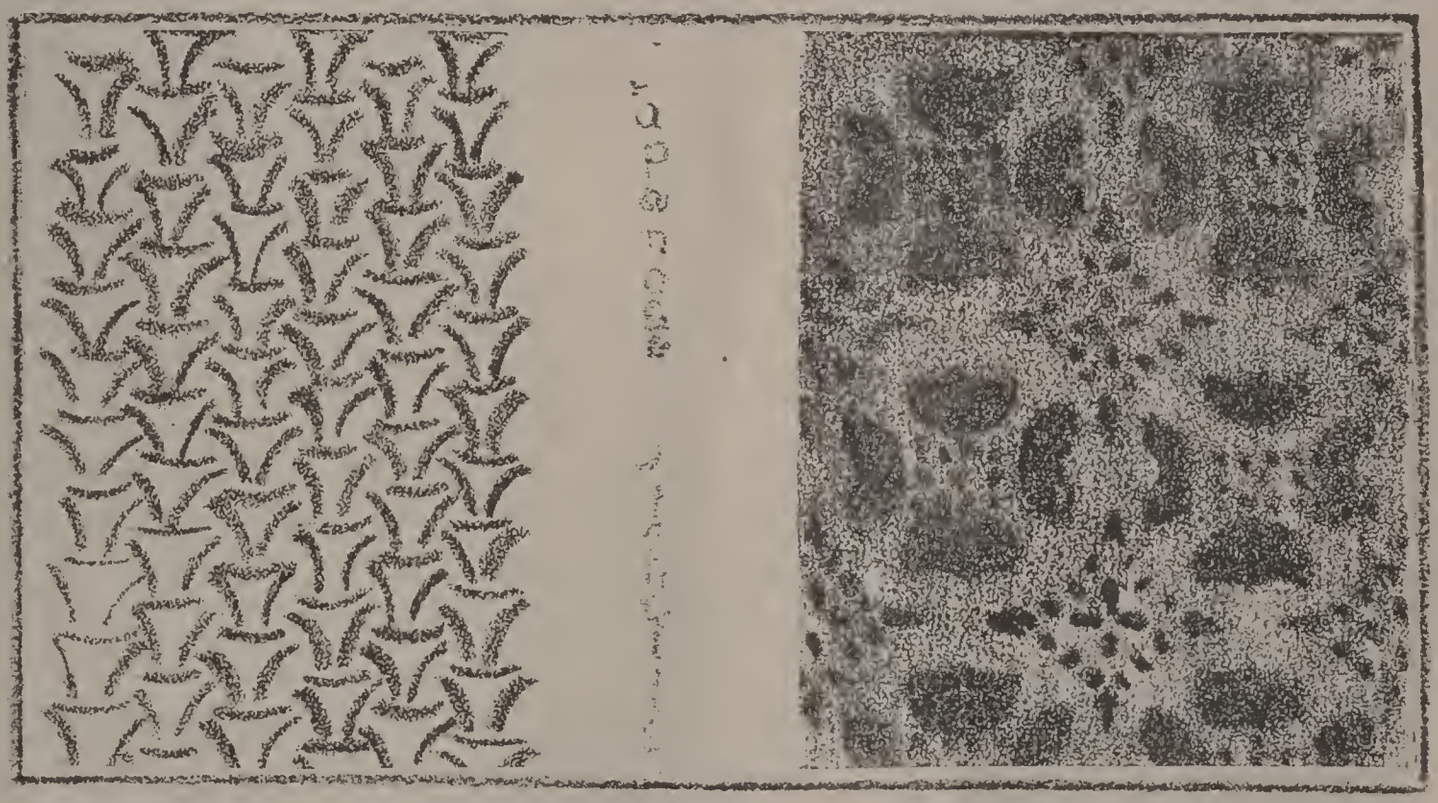
No. 2 makes an interesting pattern for a cushion cover.

These are both excellent examples of fitting natural forms into set shapes. Have the children adapt other plants and animals to square and oblong spaces. Cut them either as stencils or wood blocks and print.

LX

This group illustrates two simple and excellent Japanese stencil designs. Copy and then use them as suggestions for original designs along similar lines. They are simple enough for the smallest child, and yet are full of interest. Vary the shapes used in the second, preserving the arrangement.

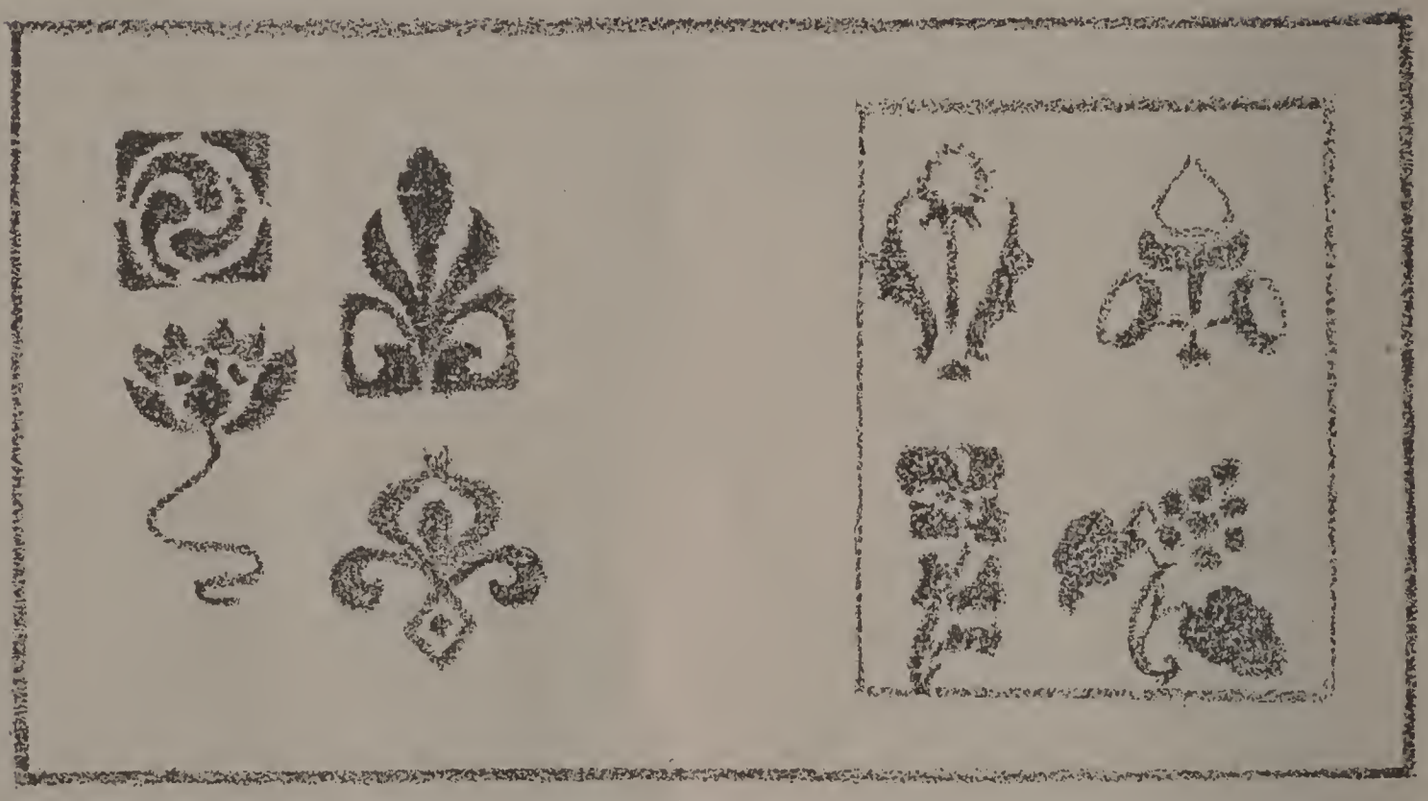
In coloring the first, use brown for the figure and yellow, modified with brown, for the background. Draw the figure first, then put in the background.



In coloring the second it will be found easiest to add color in its pattern also before adding the background.

Space the paper in squares, if desired, to help work out these designs. The larger figure in No. 2 could be worked in nine small squares of one-half to one-quarter inch each.

Let the children study different flowers for suggestions as to ways of varying this large unit. Study different groupings of stamens and pistils for the center.



LXI

This is a group of figures showing both regular and irregular balance in the unit. Draw these units and then originate others on similar lines. Many different flowers may be filled into a square as is shown in the upper left-hand figure. A stem may be added, and perhaps a spray of leaves on each side as in the dandelion.

The dandelion may be varied by showing a side view of the flower in place of the seed ball and by drawing the leaves in a full front view instead of side view.

Let the child work out some variations of the different units by substituting other flowers and leaves and using the same structural lines, and others by varying the structural lines themselves.

The untrained mind does not appreciate the beauty of conventional design. The desire for and appreciation of order, plan, and arrangement must be developed.