

**A MANUAL OF
CLAY-MODELLING**

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by

Mary Louisa Hermione Unwin

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PREFACE

Die Kunst, O Mensch, hast du allein

THERE are many signs that Art is to be made in future a part of general education; and, as is often the case with a movement which is widespread, the root of it is not simple, but divided into several ramifications. Many educational principles which are accepted independently of each other in the first instance, when carried out in practice are found to lead to the introduction of artistic training in ordinary school-work.

Of primary importance is Froebel's principle, that the constructive power of children, which was long trained only by chance, must in future be systematically attended to, so that they may be accustomed not only to hear and receive information, but in some definite way to exercise their faculties for shaping and making. In other words, the child must learn to express himself with his hands by making objects out of varied material.

Then, again, as a basis for Technical Education, the importance of using and improving the sense of touch, and the kindred sense of sight, is daily more and more insisted upon by those who have to deal with the rudiments of this kind of instruction.

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No one can study the principles of the right bringing-up of children without becoming aware of the necessity for Manual Training on moral and hygienic grounds. It is important, however, to remember that educational Handwork is not a mere question of muscular development. The aim of all work at school should be moral and intellectual improvement, and Handwork should form no exception to this rule. In this kind of instruction, if it is appropriate to child-life, and not a premature industrial training, the brain is reached through the muscle, and muscular activity is employed to expand the intellect.

No sooner are we led on varied grounds to see the need of teaching children to use their hands in construction, than we feel the advantage of teaching them to make things as beautiful as possible; and as soon as the desire to make passes into the desire to make beautifully, we pass from mere industry to at least a rudimentary love of Art. That 'industry without Art is brutality,' is a fact which has never been better illustrated than by Lord Beaconsfield in his description of the Black-country locksmith, whose workshop, with its apprentices, is powerfully depicted in 'Sybil.'

The truth is that to-day statesmen, poets, preachers, philosophers, economists, and friends of education, are all at one in emphasising the need of a widespread training in Art.

If, then, Art is to be taught in elementary schools, what form of it is most suitable for the purpose? I believe none is of more universal application or more

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fundamental than Clay-Modelling. As a foundation for artistic training, Modelling is superior to Drawing; for objects which are drawn must be represented as they appear, whereas objects that are modelled must be treated as a whole, just as they are in Nature. The expression of an Object with pencil or brush is a reduction of what is handled in space of three dimensions to the picture-plane, which is space of two dimensions. In Modelling, the student deals with the round, with mass, and with bodies as they are fully known to us. Modelling is an older art than Painting, and the best authorities insist upon it that the studio of the sculptor is the best preparation for the painter and the draughtsman.

The first rudiments of the Artist's skill are Perception and Manual Dexterity. These can be divided in thought, but not in practice. In trying to express what we see we learn to perceive more accurately.

The child-artist in his first school must learn to produce in clay the perceptions which he has acquired of natural objects. There is a true analogy between language regarded as the raw material of orators, poets and writers, and clay, which is the raw material of the artist. As artists in words must acquire command over language, so the modeller must learn to express in clay the ideas which he has derived from an accurate study of some natural object. He must learn, if I may venture on the phrase, 'to talk in clay.' This he can only do when his power of perception of natural objects is equalled by his manual dexterity. He must, in addition, learn the rules of his art, which have been evolved in the course of many generations, without appearing to be

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fettered and trammelled by their limitations. For school purposes, Modelling has the advantage over Carving. The plastic clay offers but little resistance to the hand of the modeller, and readily takes any form which it may be his will to produce. Wood and stone offer a stubborn resistance to the expression of the mental conception in these materials.

The sculptor has to accomplish the presentation of his ideal by hewing away that part of the material which surrounds his design while yet in the solid block. The modeller can build up his conception by a process of addition, and he can improve his mental conception as he works on the clay. It is easier for the modeller to correct his mental image, when the model of it is seen to be false, than for the carver, whose mistake remains unalterable.

The first training of the young artist is perception of Nature. In imitating an object he learns its nature. By words his teacher will explain to him the structure of the object and the meaning of characteristic points in it. By words the teacher may explain to him the beauty of form which may be observed in the natural object. By words, also, the child may be helped to see this beauty. For the perception of beauty in an object is an act of reason, in so far as it involves perception of unity in diversity, and tracing continuity where it is not apparent to a mere animal gaze. The child, however, can only really seize and fully apprehend the form and beauty of the object by an effort of thought and constructive imagination, such as is needed to make a model.

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The commencement of the study of an object must needs be a process of analysis and dissection. How can unity be better restored to the fragments thus produced than by modelling the object as a whole?

Language, it has been well said, is a liberation of the understanding; and so, also, the modelling of a beautiful form is a liberation, or setting free, of the imagination.

It is of great consequence that the teacher should resort in the beginning to Nature itself, and not set the young child to copy beautiful forms which have been abstracted by artists from natural objects in past time. It is not ready-made Art which the child needs, but Art in the making. The child must learn to see with his own eyes at once the riches and the simplicity of Nature. He must perceive the beauty of an object, and in modelling it build up the beauty which he has comprehended.

Of course I am not advocating a crude naturalism. A work of Art is the work of a true artist, so far as it presents Nature; but yet the spectator must always be conscious that it is a work of art, and not Nature. An attempt to present an object by mere accumulation of details, slavishly imitated, and added together piecemeal, does not produce a work of art, even in a rudimentary way. Although the details must be exactly studied, and the meaning of each understood separately, the object must be rendered as a whole, and some details must be merged in the general mass for the sake of due effect in light and shade.

It will be the teachers' pleasure to show their pupils

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how beauty in natural objects is, so to say, scattered throughout them, and that it is the eye of the artist which condenses or concentrates it, and his hand which presents the beauty of Nature in a readily visible form.

All the magic of beauty which may bewitch the mind of man, and raise it far above the monotonous round of life's daily drudgery, may be drawn out of a few objects such as have been selected by the author of this little book.

I have observed that children take the greatest interest in the occupation, both while modelling these objects, and afterwards, when the models are completed.

It is fortunate for human progress that much that is most beautiful is most common and most cheap, demanding for its appropriation only some effort of attention and will. In Art, at any rate, there needs no costly apparatus to elevate the mind. Although few can become artists, all can become lovers of art, and learn to look on the artist's productions with sympathetic acknowledgment of his power. Many must apply themselves to art before one man of real genius can arise to adorn it. Apart, however, from all high success, the mere conscientious pursuit of an art enables the student to appreciate, as he could not otherwise do, the highest kind of work in the art which he studies, and—what is of great consequence—to know good work from bad. 'In the temple of Art, many who can never stand on the pinnacle may find a safe corner near

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the ground,' and education of which art forms a part will make the lives of all better and happier; for through a right study of Art the child may find a new joy in his home and usual surroundings. After a very little study of Art, things which seemed common and uninteresting become invested with rare charms and delights, which transcend all previous knowledge and belief, and raise the student to a new and purer atmosphere of life and thought.

While dwelling on the formative value of Clay-Modelling in education, I must not omit briefly to call attention to its utilitarian advantages. Clay-Modelling may be employed to illustrate and support many branches of study. It may help to make more intelligible a geographical knowledge of the surface of the earth, and render many events in history, such as battle-fields and sieges, more interesting to the children. In Science and Natural History its applications are endless; as an example, I would mention the modelling of a bean during germination at short, successive intervals, with the object of impressing on the mind the process of development. In the study of Horticulture, a series of models of a particular variety of the carrot or potato, when the plant has been subjected to varying treatment, would be of considerable practical value. Numerous instances will occur to every teacher, and therefore it is unnecessary to dwell at greater length on the utility of Clay-Modelling.

T. G. ROOPER.

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INTRODUCTION

§1. Aim of Manual

THIS Manual of Clay-Modelling and the Course of Lessons which it sets forth are intended to serve both for Classes of Teachers and of Scholars, and, excepting where the contrary is specified (as in **§10**, **§12**, and **§17**), the directions may be followed as they stand in either Class. The principles of the method of working are, of course, the same in both cases, but older pupils will make more rapid progress, and go through the whole Course in less than half the time required by a Class of Children.

§2. Artistic Value of Clay-Modelling

The practice of Clay-Modelling, when it is taught in the right way, develops the artistic powers more than any other form of Educational Handwork. Hitherto the artistic side of a child's nature has been much neglected in the ordinary school curriculum, and what art teaching has been given has been of a kind

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likely to crush rather than develop all artistic instinct, unless a child has been endowed with much more than the usual amount. In the Modelling-lesson there should be as little of the routine of ordinary lessons as is possible, so that it may be regarded as a recreation and a pleasure, and that each child may be free to do the work by the method he likes best, and to realise the delight of exercising his creative power—a feeling which is strong in all children. The better he succeeds, the further will his imagination be stimulated. A child is always ready to receive new impressions, and often sees things with a clearer eye than his elders, not having already made up his mind how he thinks they ought to appear. Thus there is sometimes a freshness about his work which is wanting in that of older people. He will often perceive and seize the essential characteristics of an object, probably without realising how he does so; and it should be our aim to develop and strengthen this power before it becomes dulled, that it may not be an accident that the model of the leaf looks leaf-like, or the model of the shell, shell-like. The earlier, therefore, that we begin, the better, and the more hope will there be of achieving good results.

§3. Teaching of Clay-Modelling should Precede that of Drawing

The teaching of Clay-Modelling should precede, not follow, that of Drawing, but if they are studied together by the same methods they will mutually aid each other. The same principles apply to both arts, but

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Drawing is a more abstract art than Clay-Modelling. In Drawing there are only two dimensions—length and breadth—to work with, instead of three, and therefore in Drawing the laws of foreshortening and perspective have to be understood, which at the outset present great difficulties to a child. But in Clay-Modelling the object is copied exactly as it is, in three dimensions—length, breadth, and height—and has to be considered from all sides; so that in modelling an object more is learnt than in simply drawing it, when only one point of view is studied.

In order that the two arts may help each other, the objects which a child has already modelled may be given as the first exercises in Drawing, and he should be taught to shade them in a simple way.

§4. Reasons for its Introduction into Schools

But it is not only for the end itself, but for the means by which this end is attained, that Clay-Modelling is specially valuable as a method of mental and manual training. It is a subject which appeals strongly to children of all ages, and it may be begun in the lowest classes, and carried on right through the school without a break, the work being continuous throughout. Many good habits of mind which may be more easily developed while a child is young are induced by its practice.

§5. Powers Developed by Clay-Modelling

The principal powers which the practice of Clay-Modelling develops are:—

- (1) Observation.
- (2) Accuracy, especially in the perception of form.
- (3) Dexterity of hand.
- (4) Sense of form and proportion.
- (5) Greater power in drawing.
- (6) Love and appreciation of the beautiful in form.
- (7) Enjoyment of the creative power in oneself.
- (8) Perseverance and patience.
- (9) Concentration of the attention.

§6. Suitable and Unsuitable Models

The objects which are most suitable as models for Clay-Modelling, and which will help most surely to develop these powers, are those which are simple in form, and yet have some element of grace or beauty in them, by reason of their variety of lines or graceful curves.

All objects given as models should be such that in reproducing them they must of necessity be moulded by the fingers. Those which can be turned out by a lathe, or a potter's wheel, or by any machine, better and more

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accurately than by a skilful hand are, for that reason, not suitable. Geometrical forms should be avoided: they are uninteresting, and give only a mechanical training, besides lacking beauty and the element of art. The difficulty of making two sides of an object exactly alike is great, and does not occur in copying natural objects, of which the sides never quite match each other, however symmetrical they may appear. The exercise of balancing the masses rightly in copying the natural object is far more valuable. Geometrical forms possess no variety of lines to enforce observation, no beautiful curves to be enjoyed. They have only straight lines, sharp angles, or symmetrical curves, which can be turned out much better by machinery than by hand.

There still remains the choice between a course of Natural Objects and of Conventional Models, both being suitable for reproduction in clay. But here the tastes of the students themselves, especially of children, pronounce very strongly in favour of Natural Objects. Far more interest is aroused in a child by an object of which he already has some knowledge, and which has a connection with his everyday life, than by a comparative abstraction, which is strange to him. The child will try with greater zest to copy an object which he knows, than something which does not convey a clear idea to his mind. This interest will add much to the enjoyment of the work, and should be fostered by giving at first familiar objects as models, and then proceeding to the less known; although it will be found that there are few models in the following Course with which children are unacquainted.

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To begin with conventionalised forms is to try and teach a child by means which are altogether beyond his ken—to use the abstract instead of the concrete; though it is only of the latter that he has any knowledge. The conventionalised form is merely an opinion, artistic or otherwise, about the natural form, which is a fact. Therefore, to properly understand the former we must first study the latter. A child is unable to comprehend why the one should differ from the other, and if he succeeds in recognising in the conventional form something which he knows, he will probably mistake that for the object as it is in Nature. That is, he mistakes an opinion, about which ideas may legitimately differ, for a fact. It is a matter of education to appreciate conventionalised form, and that education should begin by studying Nature herself. Later, of course, in an artistic training, the two must necessarily be studied together.

It has been urged in favour of conventional types that they can always be done ‘in relief’—that is, projecting from a background—and that they are, therefore, better adapted for Clay-Modelling than objects which have to be modelled ‘in the round,’ because these latter are generally held in the hand while being worked, a method which, although it may seem to some easier for children, is against all the principles of the art. Objects modelled ‘in the round,’ unlike those modelled ‘in relief,’ are unattached to any background, and open on all sides except at the point which rests on the slab. The need, however, for holding the clay model in the hand is easily set aside by using the little armature described in §19, which, being buried in the model, supports it,

and makes it perfectly easy to work.

§7. *Choice of Methods in Working Models*

Although in this Manual accurate directions are given for the working of each model, it is not necessary that these should always be followed exactly, so long as the general principles of working laid down are adhered to. The end to be striven for is to obtain a lifelike representation of the object, not a copy that is merely slavishly accurate, with all the life smoothed and finished out of it. Finish itself is only of secondary importance compared with attaining the character of the model. We should be able to forget in looking at the copy that it is made of clay, so real should it appear.

A child who has any natural aptitude for Clay-Modelling may succeed better by doing the work in his own way, and not exactly according to the directions given. Originality of treatment, whether it follows the lines laid down in the directions or not, should be carefully encouraged and fostered, and by no means repressed.

§8. *Objects, and not Copies, to be Used as Models*

The objects themselves must be given as models, and not copies or imitations of them, however good these may be, because in working from a copy we are looking through other people's eyes, and therefore have not to use our own to the same extent. Thus a great part of the training is missed.

DIRECTIONS FOR WORKING THE MODELS

A Slab of Clay

(FIGURE F)

METHOD 1

1. Press pieces of stiff clay together on the board round the armature with the thumb, making the shape desired for the model. Be careful to give the slab the appearance of having right-angled corners from the first.
2. Make the slab about $\frac{3}{4}$ inch thick all over, or more if necessary for the model.
3. Smooth the top with the thumb, first in one direction, and then in the other.
4. Scrape off the uneven parts with the tool, and fill in any depressions with more clay.
5. Cut the sides straight with the tool, making them parallel with the edges of the board.
6. Smooth with the wet forefinger.

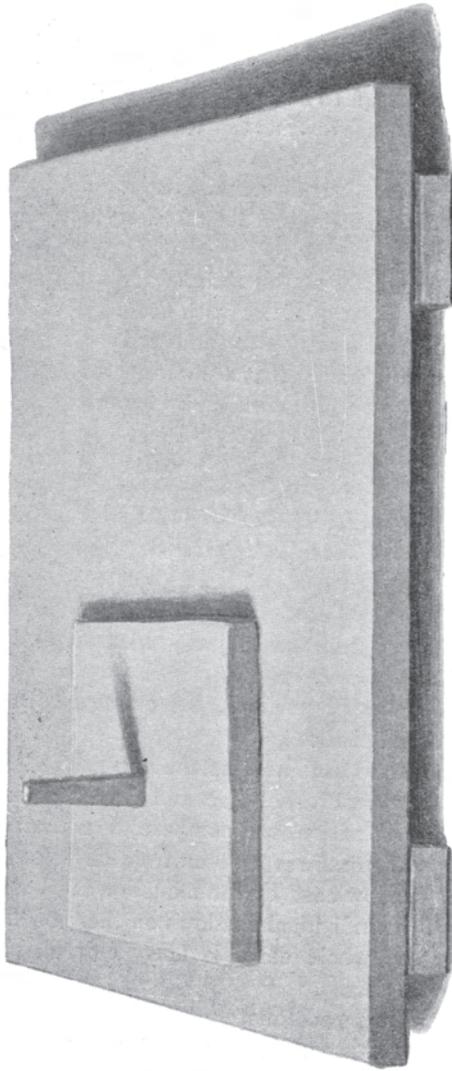


FIGURE F

METHOD 2 (*for children*)

1. Press pieces of stiff clay together on the board with the thumb so as to form the outline of a square or oblong, with the armature in the middle.

2. Fill in the outline with similar pieces of clay, making a thickness of about $\frac{3}{4}$ inch all over.

3. Smooth the top with the thumb, first in one direction, and then in the other.

4. Take one end of the knitting-needle in each hand, place it across the slab close to the armature, and draw it towards you, so as to cut the top perfectly smooth and even.

5. Do this in all four directions, turning the board round.

6. Wipe the knitting-needle on the sponge each time after using it.

7. Cut the edges of the slab straight by laying the knitting-needle on it parallel with the edge of the board, and press each end down on to the board.

8. Remove any pieces that are left behind.

9. Smooth the surface with the wet forefinger.

GENERAL DIRECTIONS APPLYING TO ALL MODELS

1. Build up the mass of the object, making it smaller rather than larger than the object, unless it is desired to enlarge it.

2. Consider the proportions, the character, the general effect of light and shade.

3. From time to time hold up the modelling-board on a level with the eye, with the object and the model on it side by side in the same position, and compare them from all sides.

4. Observe the outlines as seen from all points, and the shape of the shadow cast by the model on the board. Also the shapes of the individual shadows on the model.

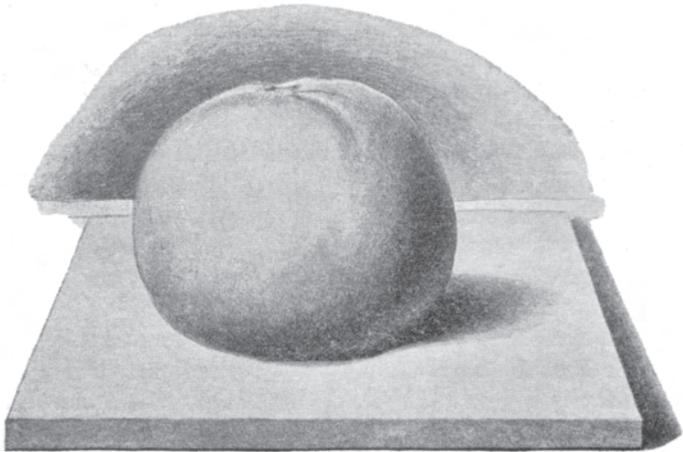
5. When the whole effect is fairly correct, put in the most noticeable details.

6. Then the minor details.

7. Give the texture of the surface, rough or smooth, etc.

DETAILED DIRECTIONS FOR WORKING THE MODELS

MODEL 1—AN ORANGE



Directions

1. Make a square slab round the armature.
2. Take small pieces of stiff clay (see §25), and press them together on the board until a lump about the size of the Orange is made.

NOTE—This insures the lump being solid throughout, with no holes left in the clay.

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3. Take the lump in the palm of the left hand, and roll it into a ball with the palm of the right hand, with a circular motion.

4. Smooth out any marks on the surface with the thumb.

5. Hold up the ball between the thumb and finger to observe the outline, pressing it into shape where necessary with the thumb.

NOTE—It is not necessary to strive to obtain a perfect ball, as its shape has to be spoiled again directly to make it like the Orange. It is quite enough to make it fairly round.

6. Press the ball into the general shape of the Orange, and put it on to the armature so that it touches the slab.

7. Hold up the board on a level with the eye, with the Orange and the model on it side by side in the same position, and compare their shape, noting at the same time the general mass, the proportions, and the shapes of the shadows from all sides.

8. Copy the form in the model by putting on pieces of soft clay and smoothing away the edges with the thumb, or by pressure of the thumb where necessary.

9. Carefully notice any flat parts.

10. Make the dimple at the top with the forefinger.

11. Pass the thumb round the dimple of the Orange to feel for any depressions. Make these in the model with the side of the thumb.

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12. For the calyx, roll up a tiny pill of clay between the thumb and forefinger, flatten it, and shape it with the tips of the thumb and forefinger.

13. Wet the under side on the sponge, and press it into the dimple.

14. Work it up with the tool.

15. To give the roughened appearance of the skin, roll a tiny bit of clay backwards and forwards between the thumb and forefinger to partly dry it; blunt the end, and prick the surface of the clay model lightly and closely all over with it.

16. Partly efface the pricks with the thumb, that they may not be more noticeable than in the Orange.