

Lowenfeld Kaleidoblocs
Instructions for use with Adults
by Dr Margaret Lowenfeld



Experience during the last world war impressed many observers with the discrepancy between the abilities of people as shown when subjected to psychological tests and the use they were able to make of these abilities when confronted by practical situations.

At the same time some individuals produced abilities which had not been expected and search for which had not formed part of the testing procedures.

Taking both possibilities and their importance in the assessment of personality into account, it seemed worthwhile to devise a testing procedure which might throw light upon both possibilities, and at the same time give us some additional information concerning the abilities of subjects to deal with problems in space perception not tackled in testing procedures in general use.

Kaleidoblocs were therefore designed to provide opportunity for the study of spontaneous behaviour and imaginative ability as expressed in the particular field of the perception, memorisation and manipulation of forms in space; and also for the study of the modes of thinking used by the subject in arriving at his conclusion.

There are three main elements in the test; to provide an opportunity for the exercise of spontaneous reactions to the constructive and imaginative possibilities presented by concrete objects of varied shape and colour which do not demand a fixed response; the solving of concrete problems in which a definite number of these blocks are used and the ability of the subject to memorise and reconstruct arrangements briefly presented to him.

These propositions are designed to reveal the ability of the subject to develop an interest in, to perceive the qualities of, and to manipulate practically such concrete forms. The problems on the other hand have been designed to form a general estimate of the individual's ability spontaneously to understand certain practical situations, to devise a plan of action to meet them, to put the plan into effective operation in a reasoned manner, and persist in it until its end has been reached.

The first part of the administration of the test is to demand of the subject that he uses his imagination and ingenuity to create spontaneously some object scene or design without having any previous experience of the characteristics of interrelations of the blocks. The second part consists of a number of defined problems and exercises, in which different aspects of the blocks are presented to the subject, giving him the opportunity to become familiar with the characteristics of the individual blocks, and a chance to demonstrate whether he can learn by experience of a visual and tactile type. In the third part the subject is asked to use his imagination

to create a human figure and an abstract design from a restricted number of blocks with which he is now familiar; then his ability is tested to memorise a visual image of blocks designed to represent common objects and an abstract design with a logical structure. In the fourth part the subject is asked to make use of all the experience he has gained of the blocks in putting all of them together to make a solid rectangle.

Concerning modes of use of the test material.

Section I

In the Lowenfeld Mosaic Test* a close relationship has been found between the use made of the test materials by an individual (5 two dimensional shapes in 6 colours) and basic qualities of personality such as the degree of integration, presence or absence of neurosis, mental deficiency or psychosis. The materials of the Kaleidoblocs test, though limited in number, offer possibilities of three dimensional construction that do not exist in the L.M.T. What is achieved with them can however be classified, studied and compared with the designs made with the L.M.T.

*The Lowenfeld Mosaic Test, by Margaret Lowenfeld, Newman Neame, London 1954

Whereas most test materials can only be used once with any individual experiments in construction or design with all the blocks can be repeated indefinitely.

This section of the test can therefore be used in three ways:

- a) As part of a battery of tests used in the study of a single individual.
- b) For study of changes taking place in individual development during psychotherapeutic treatment.
- c) For comparison of the individuals ability to perceive, memorise and manipulate three dimensional as against two dimensional material.

Section II: Problems 1-9

The second Section of the Test is designed to investigate the ability of a subject to deal with practical problems; to investigate the presence of specific abilities; to differentiate between differing types of adult personality.

Section III: Problems 10-13

The third section divides into two parts. In problems 10 and 11 the subject is asked to make an imaginative use of a certain proportion of the blocks; in problems 12 and 13 he is asked to perceive, memorise and reproduce arrangements of the pieces designed to represent familiar objects and an abstract logical structure.

Section IV: Problem 14

Having now an extensive experience of the blocks the subject is asked to make practical use of this for combining all the pieces into a solid rectangular block.

Administration of the Test

The mode of administration of the test depends upon two factors: the aim of the tester and the age of the subject. The instructions are therefore divided into those for Adults and those for Children, and each is again divided into the sections mentioned above.

All tests should be carried out on a flat but not polished surface.

Instructions may be repeated until they are understood.

Section I – Free Construction

1. The blocks should be placed in a casual heap on the table, with the box out of sight. The tester says: "Make whatever you like with these blocks." Careful note should be taken of the subject's general order of procedure in handling the blocks: and of intermediate compositions made between the beginning and the final arrangement. When the subject states that he has finished, the tester should ask him if he would like to give a title to his composition, whether it has any representational content, and whether he is satisfied with it - if not, what criticism he has to make of his production. If Abstract, the tester should note, whether in the final arrangement the blocks are vertically or horizontally disposed of or:

- Whether in both directions combined;
- Whether the structure is compact or
- Whether the blocks have been arranged so that spaces between the blocks are of essential significance;
- Whether all blocks are used or only some;
- Whether those not used are of a uniform type.

If the composition is Representational it should be noted whether the shapes of the blocks have been the main determinant for the structure: whether the impossibility of colour/form symmetry has been a frustrating element. The tester should then make his own estimate of the quality of the design.

Section II

In the responses to all the problems of Section II, whether the test is being used with children or adults, but especially in the testing of adults, three aspects of each problem need to be noted:

- a. The process by which the answer is arrived at
- b. The correctness or incorrectness of the answer given

- c. The time taken

PROBLEMS

1. The four large triangles are taken out and put together as a solid block as a solid block as a demonstration (see Fig. 1.) The tester says: "This you see is a solid block with smooth edges. It can be placed with the broader or narrower side downwards (Fig. 2 or Fig. 3) The tester separates the four triangles and says "In how many ways can you arrange the triangles to fulfil the conditions of a solid smooth edged block." Each change of position is counted separately.

Time limit: 10 minutes.

Answer: The 21 possible arrangements are shown in figs. 1 – 21.

2. The tester presents the blue rod and blue flat and the blue half-cube and says: "Can you arrange these blocks so that, looking down on them, you see 5 equal surfaces?"

Time limit: 2 minutes

Answer: See fig. 22

3. The tester presents all the blocks except the curved blocks and the triangles and says "Please sort these out by colour"
4. The tester removes the four thin rods and says: "Taking this" (a half-cube) "as a unit, of volume tell me how many units there are in each colour group. Each colour must be kept together".

Time limit: 5 minutes

Answer: White 4, yellow 5, green 9, red 10, blue 14.

5. The tester now says: "You see that there are now five groups each of a different colour. Can you combine some of the colour groups using all the pieces on the table in such a way as to make three groups each containing the same number of units. Colours can be combined but the pieces composing each colour group may not be separated."

Time limit: 5 minutes

Answer: Blue; green/yellow; red/white.

In both these problems the tester should note whether the value of the smaller groups is assessed first and the solutions obtained made use of in numerical assessment of the larger groups.

6. The tester says: "You have now three groups of an equal number of units. Can you arrange these into three identical shapes?"

Time limit: 5 minutes

Answer: Fig. 23 shows one suggested solution; there are five other possible solutions

7. The tester now adds the four rods and says: "You have sorted these by colour; would you now please sort them by shape."

When this sorting has been carried out, the tester says, "Can you separate these into two groups which can be distinctive in regard to shape, one from the other, so that it would not be possible for a member of one group to belong to the other?"

Time limit: 2 minutes

Answer:

- a) All blocks 1 cube unit thick in one group;
all blocks $\frac{1}{2}$ cube unit thick in the other,
giving one point of difference between the groups.
- b) All cubes and half-cubes into one group;
all longer pieces in the other, giving two points
of difference between the groups.

8. The tester removes the long blue rod, the red 2-unit rod, one cube and two half-cubes, and says: "Can you arrange these into two groups so that the relationships of the pieces in one group is the same as the relationships of the pieces in the other group."

Time limit: 5 minutes

Answer: See figs. 24 – 25.

When completed, the tester says: "Can you describe in words the relationships of these pieces to each other?"

Answer: Each group consists of a whole and the whole split into halves and quarters.

9. The tester takes the four triangles, fits them into a solid rectangular block Fig. 3 and says: "Using any of the pieces can you construct an identical block and tell me the number of cube-units (Cubic capacity) in this block?"

Time limit: 3 minutes

Answer: 12½

Section III

10. The tester presents all the blocks except the curved blocks and says: "Please construct with these the representation of a person, you can use as many or as few blocks as you like".

Time limit: 5 minutes

11. When this has been completed and recorded the tester disarranges the blocks and says: "Would you now make these any design you like. You should, if possible, use all the blocks."

Time limit: 10 minutes

12. The tester selects 3 objects out of Figs. 26 – 35 as suitable for the age and temperament of the subject, constructs each in turn out of sight of the subject, allowing him 30 seconds in which to study it; the object is then taken to pieces and the blocks mixed with the others. The tester says, "Will you please construct this chair, table, sofa..." (or whatever the object may be).

Time limit: 3 minutes

Note should be taken if attention is paid to the colours.

13. The tester places the white, red and green half-cubes, in that order, in a row before him, leaving the space of one cube unit between, as shown in the diagram (Fig. 36). On top of these he places the five unit blue rod. The green, the red and the white cubes are placed on the blue rod as shown; the flat blue block is now placed connecting the white and green cubes, and on top of that, the two-unit red block is centred, the blue half cube being placed centrally above this block. The subject is allowed to look at this for 30 seconds; the blocks are then separated. The tester says: "Can you reconstruct that arrangement?"

Time limit: 5 minutes

If successful, the subject should be asked to explain his processes of thought in arriving at his answer.

The blocks have been arranged in a logical manner as follows:

Form: The form contains pyramids, the blue rising, the red inverted.

Colour: The colour is an alternating sequence of red and blue with two diagonals formed by the green and white units.

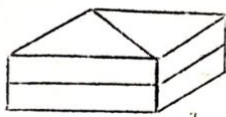
Section IV

14. All the blocks are presented and the tester says: "Can you build these into a single solid rectangular block?" If after 5 minutes the arc is still taken as determining the length of the block, the tester says: "It does not have to be that length; I will give you another 3 minutes to see if you can make it".

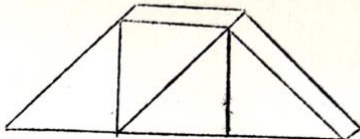
If he is still unsuccessful, the subject is given the empty box and asked to fit the pieces into the box.

Time limit: 8 minutes

Answer: See diagram on lid of box



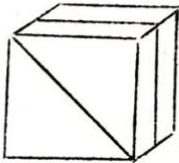
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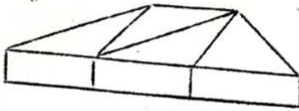
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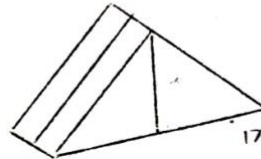
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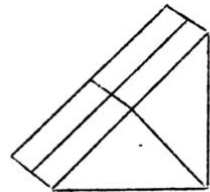
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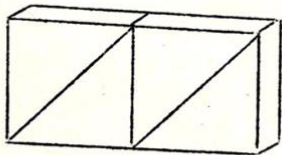
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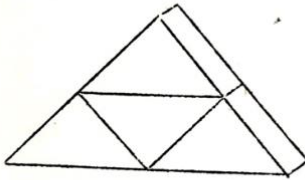
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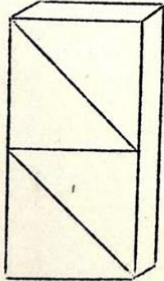
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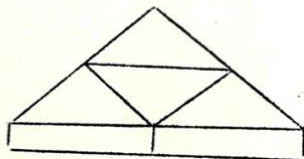
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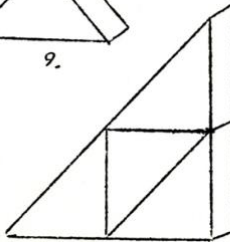
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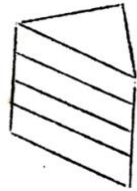
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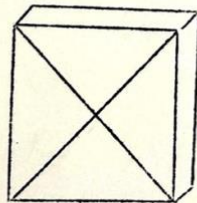
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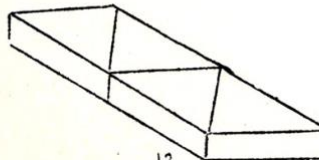
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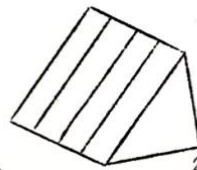
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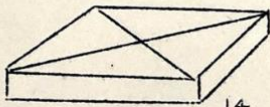
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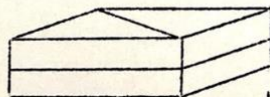
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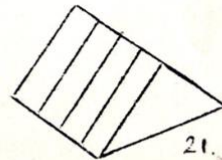
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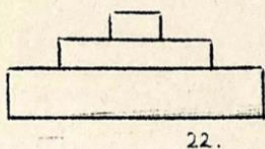
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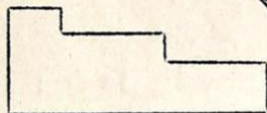
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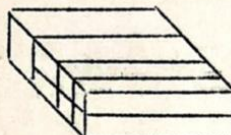
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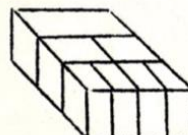
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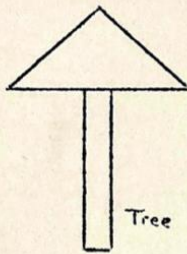
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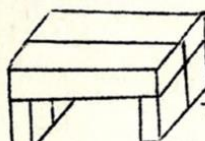
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Tree



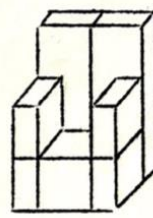
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Chair



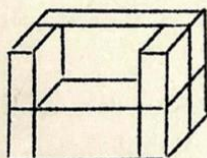
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Table

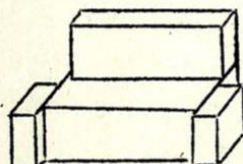


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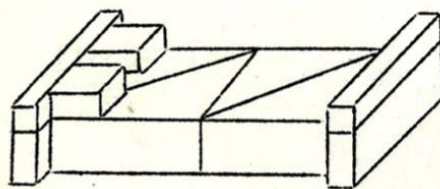
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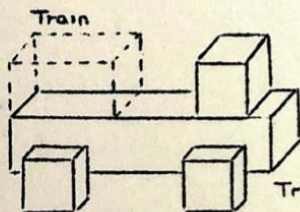
30. Sofa



31. Sofa

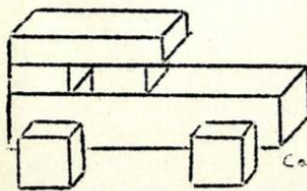


32. Bed



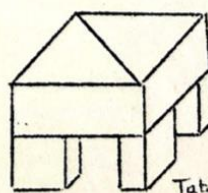
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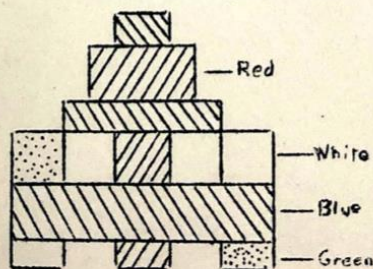
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Car



35.

Table



36.

Red

White

Blue

Green