APPENDIX - C

CONSERVATION TASKS.

CONSERVATION OF NUMBER

TASK - I

Materials: Two identical small boxes, one big box and forty whistles.

Technique: 'S' was told to put twenty whistles in box - I and twenty whistle in box- II as shown in the figure I.

Question 1: (E) Is there equal number of whistle in box - I and box- II ?

Sufficient time was given for 'S' to count the whistles. Equality was established first before any transformation was made.

Question 2: (E) If the whistles of the box II are transferred into the bigger box III, will the number of whistles in box II and box III remain equal ? The 'E' directed the 'S' to transfer the whistles from box II to box III, carefully.

Question 3: (E) Do you think that the number of whistles in box II and III remain equal or any one of them has 'more' or 'less' number of whistles ? Pause for the 'S's reply - 'Yes' or 'No'.

Question 4: (E) Why it is so ? Give reason in favour of your answer.

S's answers were recorded carefully.
CONVERSION OF NUMBER

FIG. 1

I

II

III

IV
CONSERVATION OF NUMBER
(TASK - 2)

Materials: Three Identical card boards (9' x 12') 90 buttons, favicol.

Technique: Two rows A and B of fifteen buttons were made on card board I and II and III with the help of favicol as shown in the fig - 2.

Question 1: (E) Do the number of buttons in both the rows A and B equal? (Card board I is placed in front of S).

Question 2: (E) If the buttons in the row B are placed closely or placed in a zig zag manner will the number of buttons in row A and row B remain equal?

Question 3: (E) Do you think that the number of buttons in row 'B' and row 'A' remain equal or any one of them has 'more' or 'less' number of buttons on Card board II and III?

Pause for 'S's reply - 'Yes' or 'No'.

Question 4: (E) Why it is so? Give reason if favour of your answer.

'S's answers were recorded carefully.
CONVERVATION OF NUMBER

FIG. 2

I

A · · · · · · · · · · · · · · · ·
B · · · · · · · · · · · · · · · ·

II

A · · · · · · · · · · · · · · · ·
B · · · · · · · · · · · · · · · ·

III

A · · · · · · · · · · · · · · · ·
B · · · · · · · · · · · · · · · ·
CONSERVATION OF LENGTH
(TASK - 3)

Materials:
Three Identical card boards (9' x 12'). Six threads of equal length (6'), favicol.

Technique:
Two threads A and B were pasted on card board I, II and III with the help of favicol, as shown in the fig - 3.

Question 1:
(E) Do the length of both the threads A and B equal? (Card board I is placed in front of B).

Sufficient time was given for 'S' to think.
Equality was established first before any transformation was made.

Question 2:
(E) If thread B is pushed forward, or put in a curve manner, will the length of thread A and thread B remain equal?

Now the card board II and III were shown to 'S', one after the other.

Question 3:
Do you think that the length of thread 'A' and 'B' remain equal or any one of them has become 'Shorter' or 'longer' on length on card board II and III.

Question 4:
Pause for 'S's reply - 'Yes' or 'No'.

(E) Why it is so? Give reason if favour of your answer.

'S's answers were recorded carefully.
CONVERVATION OF LENGTH
FIG. 3

I

A ------------------------------------
B ------------------------------------ -

II

A ------------------------------------
B ------------------------------------ -

III

A ------------------------------------
B ------------------------------------ -
CONSERVATION OF LENGTH
TASK - 4

Materials: Three identical wooden sheets (9' x 12'), match sticks and favicol.

Technique: Two rows of A and B of five match sticks were made on sheets I, II, and III with the help of favicol as shown in the fig - 4.

Question 1: (E) Do the length of both the rows A and B equal? (Sheet I is placed in front of S.)

Sufficient time was given for 'S' to think. Equality was established first before any transformation was made.

Question 2: If row B is pushed forward, or put in a Zig Zag manner will the length of row A and row B remain equal?

Now the sheet II and III were shown to 'S' one after the another.

Question 3: (E) Do you think that the length of row A and B remain equal or any of them has become 'shorter' or 'longer' in length on sheet II and III?

Pause for the 'S' reply - 'Yes' or 'No'?

Question 4: (E) Why it is so ? Give reason in favour of your answer.

'S's answer were recorded carefully.
CONVERSION OF LENGTH

FIG. 4

I

A

B

II

A

B

III

A

B
CONSERVATION OF WEIGHT
TASK - 5

Materials: Two identical balls of wheat dough, two plastic plates.

Technique: Two balls of wheat dough were given to 'S' as shown in fig - 5 and they were asked to weigh the balls to ascertain the equality of the two balls.

Question 1: (E) Do the weight of both the balls equal?
Sufficient time was given for 'S' to think. Equality was established first before any transformation was made.

Question 2: (E) If Ball A is pressed like a plate or rolled like a snake's body, will the weight of ball A and B remain equal?
(E) directed the 'S' to press or roll the ball B carefully.

Question 3: (E) Do you think that the weight of 'Plate' or Snake's body remain equal to the weight of the ball A or any one of them has become heavier or lighter?

Question 4: (E) Why it is so? Give reason in favour of your answer.
'S' s answer were recorded carefully.
CONVERVATION OF WEIGHT

FIG. 5

A
B

A
B'

A
B''
CONSERVATION OF WEIGHT
TASK - 6

Materials: Two identical transparent glasses, One water jug, One narrow bottle and one wide container.

Technique: Two glasses of water were given to 'S' as shown in fig.-6 and they were asked to ascertain the equality of water in each glass.

Question 1: (E) Do the weight of both the glasses of water are equal?
Sufficient time was given for the 'S' to think. Equality was established first before any transformation was made.

Question 2: (E) If we pour the water of one glass into a narrow bottle or a wide mouthed container, will the two vessels have equal amount of water?
(E) Directed the 'S' to pour the water of glass A into the narrow mouthed bottle and into the wide mouthed container carefully.

Question 3: (E) Do you think that the weight of water in the bottle and container are same as that of the glass A or any one of them become 'heavier' or 'lighter'.
Pause for the 'S' reply - 'Yes or No'.

Question 4: Why it is so? Give reason in favour of your answer.
'S'. answer were recorded carefully.
CONVERSION OF WEIGHT

FIG. 6

A

B

C

A

B

B'

A

B

B''
CONSERVATION OF AREA
TASK - 7

Materials: Eight identical plastic squares. (1' x 1')

Technique: Eight squares were given to 'S' in two groups A and B as shown in the fig - 7.

Question 1: (E) Do the area of the group A and B equal?
Sufficient time was given for 'S' to think. The term 'Amount of space, room taken or amount of surface was also used in the place of 'Area'. Equality was established first before any transformation was made.

Question 2: (E) If the squares of group B are re arranged in the different forms, will the area of both the groups A and B remain equal or any one of them has 'more' or 'less' amount of surface?

(E) directed the 'S' to re-arrange the squares of group B in any form (part I, III).

Question 3: (E) Do you think that the area of group A and group B remain equal or any one of them has 'more' or 'less' amount of surface?

Question 4: (E) Why it is so? Give reason in favour of your answer.
S's answer were recorded carefully.
CONVERVATION OF AREA
FIG. 7

A

B

A

B'

A

B''
CONSERVATION OF AREA
task-8

Materials: Two identical cardboard pieces of 12 x 12 cm. areas were used in the task.

Technique: Two cardboards A and B of equal area are shown to the subject as shown in fig - 8.

Question 1: (E) Do the area of both the cardboard pieces A and B are equal?

Sufficient time was given for 'S' to think. The term 'Amount of space', room taken or amount of surface was also used in the place of 'Area'. Equality was established first before any transformation was made.

Question 2: (E) If we cut the board A into four different geometrical figures and then placed in different positions, will the area of both the cardboard remain same?

(E) directed the 'S' to arrange the four different cardboard in the form shown to him by figure 8.

Question 3: (E) Do you think that the area of card-board A and card-board B remain equal or any one of them has 'more' or 'less' amount of surface?

Pause for the 'S' reply - 'Yes' or 'No'.

Question 4: (E) Why it is so? Give reason in favour of your answer.

S's answer were recorded carefully.
CONVERSION OF AREA

FIG. 8

A

B

A'

A''