# Keele 8 U N IVERSITY 

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$$
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& \text { PART ONE } \\
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& \hline
\end{aligned}
$$PAGE No.'s

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IN POCKET AT BACK
A sample of the 'Creativity Programme' as used in the study.

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## Contains

## Overlays and underlays

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[^0]"Now, boys, it is not only on our great statesmen that the future of the world depends, it is you-who are about to take your place as responsible citizens, etc., etc. . . ."

Sunday Express, Jan. 13th, 1946
 STUDY TO TEST HYOMESSTS A: 1967/68.

86 subjects involved: Nales and Femeles, 1st Years (in tro forms) and 3xd Years (in two forms).

Note: ilso ircluded are the dates for the administration of the VTCT ("innesota Tests of Creative Thinking), used in the provious study.

| TEnT | Fom: | DATE CZ <br> AD:IPISTRATIC: |
| :---: | :---: | :---: |
| $\because \mathrm{TCT}$ | 1st Year Yorm 1 <br> 1st Year Form 2 <br> 3rd Year Form 1 <br> 3rd Year Porm 2 | $\begin{array}{r} 2 / 11 / 1057 \\ 2 / 11 / 1967 \\ 28 / 11 / 1967 \\ 29 / 11 / 1957 \end{array}$ |
| $\begin{aligned} & \text { ARTMOM } \\ & \text { (The Fark) } \end{aligned}$ | 1 st Year Form 1 <br> 1st Year Form? <br> 3ri Year E゙crm 1 <br> 3rd Year Form 2 | $\begin{array}{r} 5 / 11 / 1967 \\ 30 / 10 / 1907 \\ 30 / 10 / 1057 \\ 8 / 11 / 1967 \end{array}$ |
| ART UCRK 2 <br> (Cril choice) | 1st Yeor Form 1 <br> 1st Year Nome ? <br> 3rd Year Form 1 <br> 3rd Yeer Form 2 | $\begin{aligned} & 22 / 11 / 1057 \\ & 13 / 19 / 1067 \\ & 13 / 19 / 1967 \\ & 22 / 19 / 1507 \end{aligned}$ |
| $\begin{aligned} & \text { CFQ (FCRHA) } \\ & \text { HSEQ (FOR:A) } \end{aligned}$ | 1st Yeer Form 1 <br> 1st Year Form 2 <br> 3re Year Zorm 9 <br> 3rd Year Form 2 | $\begin{aligned} & 23 / 11 / 1067 \\ & 20 / 11 / 1957 \\ & 27 / 11 / 1967 \\ & 28 / 11 / 1567 \end{aligned}$ |
| TTCT <br> (Ficural Pom \&) | 1st Year Form 1 <br> 1st Year Form 2 <br> 3rd Year Forn 1 <br> 3rd Year Form 2 | $\begin{aligned} & 1 / 4 / 1958 \\ & 1 / 4 / 1968 \\ & 3 / 4 / 1968 \\ & 3 / 4 / 1968 \end{aligned}$ |

* NOE 1: The TTCT was administered approximately 4 jonths after the nICT to avoid 'test soyhistication'.

NCTE 2: The lack of continuity wos due to: closure of school due to bad weather conditions, illness, and timeteble aiterations.
 DOST-TESTS FCR THE STULY TC TEST MYEOTHESIS B: 1967/63-1970

41 Subjects involved: The "..a?es and Females who vere 1 st Years in the Study to Iest Eypothesis A . The Tests and Art horks that were administered to these subjects in Stuld A were used as the FreTests in Stuay 3 .

| $\begin{aligned} & \text { TEOT OR } \\ & \text { PROGRAME } \end{aligned}$ | FCR: 1 CONTROL GROUP | rown 2 <br> EXPERI: ERTATA GRCUP |
| :---: | :---: | :---: |
| PRE-TROTS <br> ART $\because \because C R K 1$ <br> ART YCRK 2 <br> CFQ (FOM A) <br> TTCT (FORW) | $\begin{gathered} \text { (when 1st Years) } \\ 8 / 11 / 1967 \\ 22 / 11 / 1967 \\ 23 / 11 / 1967 \\ 1 / 4 / 1968 \end{gathered}$ | $\begin{gathered} \text { (when 1st Years) } \\ 30 / 10 / 1967 \\ 13 / 11 / 1967 \\ 20 / 11 / 1967 \\ 1 / 4 / 1963 \end{gathered}$ |
| FROGRATGE <br> E EXCT CNE: <br> Tivis OHE, <br> T:O OA TEREE | WCR:MI <br> TUITION | $\begin{gathered} \text { (vhen 3rd Years) } \\ 15 / 10 / 1969 \\ 29 / 10 / 1969 \\ 5 / 11 / 1969 \\ 25 / 11 / 1069 \end{gathered}$ |
| ELCMTRTMC: <br>  <br> TVC: \&C REMIMDER <br> IEARLET |  | $\begin{aligned} & 3 / 12 / 1909 \\ & 13 / 1 / 1970 \end{aligned}$ |
| EUEWEMM THREE (ONE UNIT) |  | $\begin{aligned} & 20 / 1 / 1970 \\ & 27 / 1 / 1970 \end{aligned}$ |
| POST-TESTS |  |  |
| ART \# OER 1 | 19/2/1970 | 3/3/1970 |
| ART YORK 2 | 5/3/1970 | 10/3/1970 |
| TTCT (rorm B | 12/3/1970 | 17/3/1970 |
| HSEQ (Form A) | 23/4/1970 | 21/4/1970 |

* NOTE 1: The dates eiven for the Programe administration are those when the majority of subiects comenced ench unit. As the pairs worked at their 'orn pace' some subjects dia not commence units on the dates civen.
NOTE 2: Lack of continuity was for the samo reasons given in iote 2 on Fage. Cne.


Scores of subjects involved in the Study to test Hypothesis A are shown in Tables:
$126 \quad 7 \quad 111214$ \& 15 (CPQ/HSPQ, TTCT, \& ART WORKS: 1967/68) plus Tables 51013 \& 16 (HTCT: 1967)

Scores of subjects involved in the Study to test Hypothesis B are show in Tables:
1234 (Control Group: CPQ/HSPQ, TTCT, \& ART WORKS: 1967/68-70) $6: 78$ 9 (Exp. Group: " " " ")

CONPLENE RAM SCORES FOR ALL SUBJLCNS IN ALL THETS

The scores on all test factors for all subjects involved in the studies to test Hypotheses $A$ and $B$ are given in twelve tables.
The Tests and Test Factors were:
CPQ/HSPQ scored for Creativity and Exvia
TRCT scored for Fluency, Flexibility, Originality \& Elaboration ART WORKS scored for Gestalt, Spontaneous, Originality \& Involvement

Also included in this PART Two are four pages of scores on the HTCT (1967/68 on.ly) scored for Originality and Elaboration.

The Tests administration Year and Group compositions were:
1967/68 (Study A) lst and 3rd Year



NOTE: Due to 'drop outs" the number of subjecs in study B were fewer than those in the lst Year in Study $A$. For convenience the numbers referred to in the body of the thesis are those pertaining to Study A; even though the reference may be to a test score obtained in 2970. Tho B IMo.'s, used for the statistical work, are also given in the tables.

| S's No.'s |  | $C P Q$ |  | TTCT |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | ACT. 1 | ACT. 2 |  |  |  | ACT. 3 |  |  |  |
| $\mathrm{V} \text { Крn7S } \cdot \mathrm{ON}_{\mathrm{N}} \mathrm{~s} \text { :S }$ |  |  |  | $\begin{aligned} & \llbracket \\ & -H_{4}^{4} \\ & \text { d } \end{aligned}$ |  |  | $\begin{aligned} & \stackrel{\rightharpoonup}{+} \\ & \underset{\sim}{H} \\ & \underset{\sim}{-1} \\ & \underset{\sim}{x} \\ & \underset{E}{-1} \end{aligned}$ |  |  |  |  |  |  |
| 1 | 2 | 56 | 32 | 015 | 4 | 4 | 2 | 19 | 9 | 7 | 4 | 24 |
| 2 | 2 | 58 | 30 | 522 | 5 | 5 | 6 | 27 | 7 | 6 | 8 | 21 |
| 3 | 3 | 62 | 34 | 225 | 8 | 8 | 8 | 16 | 11 | 9 | 7 | 23 |
| 4 | 4 | 56 | 34 | 015 | 8 | 5 | 10 | 4 | 10 | 8 | 10 | 10 |
| 5 | 5 | 67 | 24 | 023 | 6 | 6 | 7 | 23 | 7 | 7 | 15 | 17 |
| 6 | 6 | 60 | 24 | 413 | 5 | 5 | 4 | 3 | 1.2 | 1.1 | 17 | 27 |
| 7 | 7 | 81 | . 6 | 518 | 8 | 7 | 8 | 22 | 5 | 5 | 26 | 27. |
| 8 | 8 | 61 | 46 | 516 | 8 | 6 | 8 | 13 | 4 | 4 | 22 | 23 |
| 9 | 9 | 71 | 24 | 310 | 5 | 5 | 5 | 15 | 6 | 5 | 6 | 9 |
| 10 | 10 | 55 | 28 | 020 | 10 | 9 | 14 | 27 | 11 | 8 | 10 | 19 |
| 11 | 11 | 63 | 32 | 39 | 10 | 8 | 16 | 7 | 13 | 12 | 18 | 16 |
| 12 | 12 | 61 | 28 | 517 | 10 | 7 | 10 | 25 | 17 | 24 | 23 | 54 |
| 13 | - | 54 | 44 | 515 | 7 | 6 | 1 | 23 | 11 | 8 | 15 | 38 |
| . 14 | 13 | 57 | 38 | 525 | 7 | 7 | 11 | 41 | 11 | 9 | 14 | 35 |
| 15 | 24 | 63 | 34 | 314 | 10 | 8 | 13 | 37 | 18 | 14 | 27 | 30 |
| 16 | . 25 | 56 | 38 | 07 | 8 | 8 | 6 | 21 | 6 | 6 | 6 | 19 |
| 17 | - | 54 | 30 | 412 | 10 | 6 | 9 | 37 | 18 | 10 | 33 | 51 |
| 18 | 16 | 72 | 8 | 527 | 6 | 4 | 1 | 25 | 12 | 7 | 18 | 40 |
| 19 | 17 | 55 | 34 | 420 | 7 | 5 | 9 | 48 | 10 | 9 | 20 | 41 |
| 20 | . 28 | 50 | 32 | 49 | 7 | 7 | 7 | 21 | 9 | 8 | 12 | 26 |
| 21 | 19 | 66 | 32 | 314 | 10 | 9 | 12 | 7 | 9 | 8 | 13 | 17 |

TABLE L APPENDIX PART TYO





| $\begin{aligned} & \text { S's } \\ & \text { No. "s } \end{aligned}$ |  | T T CT |  |  |  | ART WORKS |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | TOTALS |  |  |  | WORK 1 |  |  |  | WORK 2 |  |  |  |
|  |  |  |  |  |  |  | Spontaneous |  | Involvement |  |  |  |  |
| 1 | 1 | 9 | 9 | 18 | 48 | 4 | 1 | 5 | 3 | 3 | 1 | 8 | 3 |
| 2 | 2 | 25 | 20 | 30 | 71 | 3 | 6 | 4 | 2 | 2 | 8 | 5 | 3 |
| 3 | 3 | 16 | 12 | 19 | 59 | 5 | 2 | 5 | 5 | 3 | 6 | 6 | 6 |
| 4 | 14 | 13 | 12 | 12 | 18 | 1 | 4 | 3 | 2 | 1 | 5 | 2 | 2 |
| 5 | 5 | 13 | 11 | . 39 | 71. | 7 | 1 | 6 | 5 | 5 | 3 | 5 | 6 |
| 6 | 6 | 17 | 15 | 17 | 22 | 2 | 3 | 1 | 1 | 1 | 2 | 2 | 1 |
| 7 | 7 | 12 | 12 | 22 | 98 | 8 | 1 | 9 | 5 | 6 | 2 | 8 | 4 |
| 8 | 8 | 16 | 15 | 30 | 70 | 7 | 4 | 5 | 4 | 6 | 5 | 8 | 4 |
| 9 | 9 | 14 | 13 |  | 82 | 3 | 4 | 5 | 4 | 5 | 7 | 6 | 4 |
| 10 | 10 | 16 | 14 | 23 | 46 | 2 | 4 | 4 | . 3 | 4 | 6 | 5 | 4 |
| 11 | 11 | 17 | 13 | 10 | 29 | 4 | 2 | 3 | 3 | 2 | 3 | 1 | 2 |
| 12 | 12 | 21 | 17 | 20 | 94 | 8 | 7 | 10 | 6. | 10 | 8 | 11 | 7 |
| 14 | 13 | 10 | 8 | 18 | 83 | 6 | 7 | 8 | 4 | 6 | 4 | 7 | 4 |
| 15 | 14 | 11 | 20 | 171 | 102 | 6 | 5 | 7 | 7 | 5 | 4 | 6 | 6 |
| 16 | 15 | 13 | 10 | 31 | 29 | 4 | 6 | 7 | 4 | 4 | 5 | 5 | 4 |
| 18 | 16 | 11 | 5 | 20 | 85 | 8 | 5 | 11 | 8 | 8 | 7 | 11 | 8 |
| 19 | 17 | 16 | 14 | 22 | 96 | 9 | 8 | 11 | 9 | 9 | 7 | 11 | 9 |
| 20 | 18 | 19 | 16 | 20 | 42 | 4 | 3 | 5 | 5 | 7 | 4 | 7 | 6 |
| 21 | 19 | 12 | 11 | 18 | 29 | 5 | 7 | 9 | 5 | 6 | 6 | 7 | 5 |

1967: lst Year Form 1: MTCT (Tasks 1, 2, \& 3)
21 Subjects: 11 Males, 10 Females

| $\begin{aligned} & \text { S's }^{\text {No. }} \mathrm{s} \end{aligned}$ |  | MTCT |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | TASK 1 |  | TASK 2 |  | TASK 3 |  |
| $\begin{aligned} & 4 \\ & 4 \\ & 0 \\ & 0 \\ & \vdots \\ & \vdots \\ & \vdots \\ & 0 \\ & 0 \\ & 0 \\ & \vdots \\ & \text { in } \\ & \text { in } \end{aligned}$ |  |  |  |  |  |  |  |
| 1 | 1 | 5 | 5 | 9 | 7 | 22 | 12 |
| 2 | 2 | 5 | 15 | 14 | 12 | 38 | 27 |
| 3 | 3 | 10 | 5 | 17 | 9 | 31 | 16 |
| -4 | 4 | 10 | 15 | 12 | 10 | 60 | 33 |
| 5 | 5 | 10 | 15 | 16 | 12 | 27 | 18 |
| 6 | 6 | 5 | 5 | 12 | 8 | 23 | 13 |
| 7 | 7 | 10 | 5 | 10 | 10 | 26 | 18 |
| 8 | 8 | 5 | 5 | 11 | 9 | 27 | 15 |
| 9 | 9 | 10 | 15 | 11 | 8 | 34 | 21 |
| 10 | 10 | 10 | 15 | 7 | 7 | 21 | 13 |
| 11 | 11 | 10 | 5 | 8 | 6 | 28 | 12 |
| 12 | 12 | 10 | 5 | 15 | 10 | 37 | 22 |
| 13 | - | 10 | 5 | 10 | 7 | 27 | 17 |
| 14 | 13 | 10 | 5 | 14 | 8 | 22 | 17 |
| 15 | 14 | 10 | 5 | 10 | 10 | 48 | 28 |
| 16 | 15 | 10 | 5 | 8 | 5 | 22 | 17 |
| 17 | - | 10 | 5 | 13 | 10 | 30 | 26 |
| 18 | 16 | 10 | 15 | 14 | 20 | 48 | 31 |
| 19 | 17 | 10 | 15 | 15 | 12 | 43 | 32 |
| 20 | 18 | 10 | 15 | 8 | 9 | 18 | 15 |
| 21 | 19 | 10 | 15 | 8 | 8 | 31 | 20 |

Subjects No.'s l-ll are ifales
Subjects No.'s l2-21 are Females


| $\begin{aligned} & S^{\prime} s \\ & \text { No.' } s \end{aligned}$ |  |  | $\frac{\text { T T C T }}{\text { TOTALS }}$ |  |  | ART WORKS |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  | WORK 1 |  |  |  | WORK 2 |  |  |  |
| $\begin{array}{\|l\|} \hline 4 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 2 \\ 0 \\ 0 \\ 0 \end{array}$ |  | $\begin{aligned} & \text { P} \\ & 0 \\ & \tilde{1} \\ & \tilde{2} \\ & \underset{E}{1} \end{aligned}$ |  |  |  | $\begin{aligned} & \text { +1 } \\ & \text { N } \\ & \text { N } \\ & 0 \\ & 0 \\ & 0 \\ & \hline \end{aligned}$ |  |  |  | $\begin{aligned} & \text { + } \\ & \text { ru } \\ & \text { 0 } \\ & 0 \\ & 0 \\ & 0 \\ & 0 \end{aligned}$ |  |  |  |
| 22 | 20 | 19 | 15 | 22 | 33 | 4 | 4 | 3 | 1 | 2 | 3 | 3 | 2 |
| 23 | 21 | 5 | 4 | 4 | 16 | 1 | 5 | 1 | 1 | 8 | 2 | 6 | 2 |
| 24 | 22 | 18 | 16 | 18 | 26 | 4 | 4 | 4 | 3 | 1 | 5 | 3 | 1 |
| 25 | 23 | 9 | 7 | 12 | - 35 | 3 | 5 | 4 | 3 | 7 | 1 | 8 | 5 |
| 26 | 24 | 8 | 8 | 12 | 37 | 5 | 3 | 3 | 2 | 5 | 6 | 4 | 3 |
| 27 | - | 19 | 17 | 25 | 29 | 7 | 7 | 8 | 5 | 2 | 5 | 6 | 3 |
| 28 | 25 | 14 | 13 | 15 | 53 | 3 | 6 | 4 | 4 | 8 | 7 | 8 | 6 |
| 29 | 26 | 15 | 13 | 30 | 75 | 5 | 5 | 3 | 3 | 5 | 4 | 3 | 3 |
| 30 | 27 | 24 | 20 | 24 | 60 | 5 | 2 | 5 | 5 | 5 | 6 | 5 | 4 |
| 31 | 28 | 19 | 16 | 28 | 87 | 5 | 4 | 4 | 4 | 4 | 5 | 6 | 3 |
| 32 | 29 | 26 | 24 | 44 | 117 | 5 | 6 | 3 | 4 | 6 | 2 | 6 | 4 |
| 33 | 30 | 24 | 17 | 38 | 30 | 2 | 5 | 1 | 2 | 7 | 6 | 5 | 5 |
| 34 | 31 | 29 | 22 | 37 | 39 | 5 | 4 | 3 | 5 | 4 | 5 | 3 | 4 |
| 35 | 32 | 15. | 13 | 20 | 43 | 9 | 1 | 6 | 5 | 6 | 3 | 5 | 6 |
| 36 | 33 | 16 | 15 | 17 | 35 | 6 | 6 | 7 | 7 | 5 | 3 | 6 | 4 |
| 37 | 34 | 19 | 14 | 19 | 62 | 4 | 4 | 3 | 5 | 5 | 4 | 3 | 3 |
| 38 | 35 | 14 | 12 | 11 | 77 | 2 | : 5 | 2 | 3 | 3 | 5 | 2 | 3 |
| 39 | 36 | 18 | 16 | 19 | 66 | 5 | 4 | 4 | 3 | 4 | 4 | 3 | 3 |
| 40 | 37. | 27 | 16 | 19 | 59 | 8 | 7 | 10 | 6 | 6 | 5 | 5 | 6 |
| 41 | 38 | 22 | 20 | 24 | 71 | 4 | 3 | 5 | 4 | 8 | 7 | 7 | 7 |
| 42 | 39 | 24 | 22 | 41 | 89 | 6 | 2 | 7 | 7 | 8 | 2 | 9 | 8 |
| 43 | 40 | 11 | 9 | 24 | 31 | 5 | 5 | 4 | 4 | 5 | 5 | 4 | 4 |
| 44 | - | 24 | 17 | 36 | 75 | 10 | 8 | 9 | 9 | 9 | 7 | 10 | 8 |
| 45 | 41 | 1.3 | 12 | 12 | 34 | 7 | 7 | 6 | $\therefore 4$ | 10 | 28 | 12 | 8 |


| $\begin{aligned} & \text { sis } \\ & \text { No.l } \end{aligned}$ |  | HSPQ |  | T T C T |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | АСт. 1 |  | ACT | 2 |  |  | ACT |  |  |
|  | $\begin{aligned} & m \\ & 0 \\ & 0 \\ & 0 \\ & 0 \\ & 0 \\ & 0 \\ & 0 \\ & 0 \\ & 0 \\ & 0 \\ & \text { in } \\ & \hline i \end{aligned}$ |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 22 | 20 | 54 | 44 | 07 | 9 | 7 | 8 | 8 | 11 | 8 | 14 | 16 |
| 23 | 21 | 78 | 22 | 513 | 10 | 10 | 12 | 32 | 10 | 9 | 17 | 20 |
| 24 | 22 | 67 | 43 | 01 | 7 | 6 | 12 | 15 | 5 | 3 | 5 | 15 |
| 25 | 23 | 56 | 40 | 54 | 5 | 5 | 8 | 13 | 8 | 7 | 8 | 19 |
| 26 | 24 | 79 | 12 | $0 \quad 13$ | 4 | 4 | 5 | 7 | 4 | 3 | 8 | 16 |
| 28 | 25 | 69 | 36 | 013 | 10 | 9 | 16 | 14 | 8 | 7 | 11 | 13 |
| 29 | 26 | 61 | 48 | $5 \quad 27$ | 6 | 6 | 9 | 41 | 9 | 7 | 14 | 29 |
| 30 | 27 |  | 22 | 011 | 8 | 8 | 10 | 11 | 8 | 7 | 15 | 12 |
| 31 | 28 | 70 | 46 | $5 \quad 29$ | 9 | 8 | 15 | 27. | 7 | 6 | 19 | 22 |
| 32 | 29 | 50 | 53 | $0 \quad 32$ | 7 | 4 | 9 | 33 | 16 | 13 | 26 | 22 |
| 33 | 30 | 80 | 24 | 011 | 5 | 4 | 6 | 18 | 9 | 5 | 12 | 25 |
| 34 | 31 |  | 36 | 012 | 10 | 9 | 11 | 27 | 13 | 10 | 12 | 20 |
| 35 | 32 |  | 39 | 59 | 4 | 4 | 7 | 22 | 11 | 8 | 18 | 23 |
| 36 | 33 | 60 | 37 | $0 \quad 19$ | 6 | 6 | 5 | 24 | 9 | 9 | 27 | 14 |
| 37 | 34 | 55 | 35 | 036 | 7 | 6 | 9 | 26 | 12 | 7 | 19 | 19 |
| 38 | 35 |  | 37 | 0. 19 | 9 | 9 | 10 | 28 | 12 | 10 | 14 | 23 |
| 39 | 36 |  | 34 | 029 | 9 | 8 | 10 | 42 | 14 | 7 | 20 | 44 |
| 40 | 37 | 60 | 32 | $5 \quad 17$ | 7 | 7 | 10 | 13 | 15 | 11 | 24 | 18 |
| 41 | 38 | $61 \%$ | 31 | 423 | 7 | 7 | 8 | 35 | 10 | 6 | 9 | 32 |
| 42 | 39 |  | 37 | 045 | 10 | 8 | 10 | 66 | 15 | 11 | 42 | 26 |
| 43 | 40 |  | 37 | 56 | 5 | 5 | 7. | 20 | 4 | 4 | 4 | 12 |
| 45 | 41 | 42 | 49 | 425 | 7 | 7 | 9 | 26 | 13 | 12 | 13 | 27 |
| Subjects 22 - 32 (A No.'s) are Hales <br> Subjects 33-45 (A No. "s ) are Females <br> Study A No. subjects $27 \& 44$ had left since 1967/68 |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 13 |  |  |  |  |  |  |  |  |  |  |  |  |

## 14

|  | $\underset{\sim}{\sim}$ | S＇s No．Study A | 水元 |  |
| :---: | :---: | :---: | :---: | :---: |
| \＃ | N N N N N N N N N N N N N N N | S＇s No．Study B |  |  |
|  |  | F．luency |  |  |
|  |  | Flexibility |  |  |
|  | $\cdots \omega_{\sim}^{\sim}$ | Originaility | 皆 | $\bigcirc$ |
|  | $\cdots \underset{\sim}{0}$ | Elaboration |  |  |
|  | $\stackrel{\square}{\circ}$ | Gestalt |  |  |
| $\infty N \sim \rightarrow$ an w |  | Spontaneous | $\overline{0}$ |  |
|  |  | Originality | $\stackrel{\square}{ }$ |  |
| $\therefore 0600 \mathrm{ra}$ |  | Involvement |  | 㫛 |
|  | $\omega \xlongequal{\sim}$ | Gestalt |  | 贷 |
| $\triangle m$ |  | Spontaneous | こ |  |
|  |  | Originality |  |  |
|  | －amur man | Involvement |  |  |

[^1]1967: lst Year Form 2: HTCT (Tasks l, 2, \& 3)
24 Subjects: ll Males, 13 Females

| $\begin{aligned} & \text { Sis } \\ & \text { No.'s } \end{aligned}$ |  | M T CT |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | TASK 1 |  | TASK 2 |  | TASK 3 |  |
|  |  |  |  |  |  |  |  |
| 22 | 20 | 10 | 5 | 15 | 10 | 21 | 14 |
| 23 | 21 | 10 | 15 | 15 | 10 | 18 | 10 |
| 24 | 22 | 10 | 5 | 14 | 8 | 20 | 13 |
| 25 | 23 | 5 | 5 | 11. | 7 | 29 | 17 |
| 26 | 24 | 10 | 15 | 16 | 7 | 17 | 9 |
| 27 | - | 10 | 5 | 6 | 3 | 13 | 8 |
| 28 | 25 | 10 | 5 | 10 | 12 | 27 | 18 |
| 29 | 26 | 10 | 5 | 11 | 11 | 24 | 17 |
| 30 | 27 | 10 | 5 | 14 | 10 | 39 | 20 |
| 31 | 28 | 10 | 5 | 17 | 11 | 19 | 12 |
| 32 | 29 | 10 | 15 | 11 | 12 | 38 | 21 |
| 33 | 30 | 10 | 5 | 15 | 10 | 20 | 13 |
| 34 | 31 | 10 | 15 | 10 | 11 | 20 | 8 |
| 35 | 32 | 10 | 5 | 7 | 10 | 29 | 20 |
| 36 | 33 | 10 | 5 | 15 | 10 | 20 | 11 |
| 37 | 34 | 10 | 5 | 12 | 9 | 23 | 15 |
| 38 | 35 | 10 | 5 | 13 | 10 | 16 | 9 |
| 39 | 36 | 10 | 5 | 13 | 10 | 28 | 17 |
| 40 | 37 | 10 | 5 | 16 | 8 | 26 | 20 |
| 41 | 38 | 5 | 15 | 15 | 12 | 30 | 22 |
| 42 | 39 | 5 | 5 | 15 | 8 | 22 | 13 |
| 43 | 40 | 10 | 5 | 12 | 9 | 19 | 11. |
| 44 | - | 5 | 15 | 12 | 8 | 29 | 22 |
| 45 | 41 | 10 | 5 | 13 | 8 | 21. | 20 |

Subjects 22 - 32 (A No.'s) are Males
Subjects 33-45 (A No."s) are Females


|  | MGM M M M M f | S＇s No．Study A | u 0 0 0 0 |
| :---: | :---: | :---: | :---: |
|  <br>  |  <br>  | Creativity <br> Exvia | 驚 0 |
| $0 \& \Delta \omega 0 \omega+v \Delta \omega \omega$ <br>  | O $\omega$ ル O A GトルトOO <br>  | Originality <br> Elaboration |  |
|  <br> ज ம $\infty$ ज $\infty$ ज $\infty$ ज の $\infty$ の <br>  |  <br>  <br>  <br>  | Fluency <br> Flexibility <br> Originality <br> Elaboration | H H 0 $\square$ |
|  <br>  <br>  <br>  |  $\infty \stackrel{\leftarrow}{\leftarrow}$－ <br>  <br>  | Fluency <br> Flexibility <br> Originality <br> Elaboration |  |



[^2]Subjects No．＇s 46－56 are Males
Subjects No．＇s 57－67 are Females

|  | Sis No．Study A |  |
| :---: | :---: | :---: |
| 占占占占占占占占号坫占占占占占占占占 <br>  | $\left.\right\|_{\text {Elaboration }}$ |  |
|  <br>  | Originality <br> Elaboration |  |
|  <br>  | $\begin{aligned} & \text { Originality } \\ & \text { Elaboration } \end{aligned}$ |  |

Subjects No．＇s $68-76$ are Males
Subjects No．＇s $77-86$ are Females

|  | S＇s No．Study A | $\begin{aligned} & z_{0}^{0} \\ & 0.0 \\ & i=1 \\ & i=1 \end{aligned}$ |
| :---: | :---: | :---: |
|  | Creativity <br> Exvia | 岃 H D |
|  | Originality <br> Elaboration | 号 |
|  | Fluency <br> Flexibility <br> Originality <br> Elaboration | 号号 |
|  | Fluency <br> Flexibility <br> Originality <br> Elaboration | $\begin{aligned} & \text { R} \\ & \vdots \\ & \omega \end{aligned}$ |

Subjects No.'s 77 - 86 are Females Subjects No.'s 68-76 are Hales

| $\begin{aligned} & \text { S's } \\ & \text { No. "s } \end{aligned}$ | $T \mathrm{~T}$ CT |  |  |  | ART WORKS |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | TOTALS |  |  |  | WORK 1 |  |  |  |  | WORK 2 |  |  |
|  |  |  |  |  |  |  | $\begin{aligned} & \text { な } \\ & \text { H } \\ & \text { H } \\ & \text { of } \\ & \text { H0 } \\ & \text { H } \\ & \text { H } \end{aligned}$ |  | $$ | $$ |  |  |
| 68 | 16 | 13 | 21 | 63 | 3 | 4 | 6 | 4 | 7 | 6 | 6 | 4 |
| 69 | 20 | 14 | 34 | 55 | 5 | 6 | 8 | 7 | 2 | 5 | 6 | 4 |
| 70 | 17 | 15 | 42 | 39 | 2 | 5 | 4 | 5 | 4 | 4 | 2 | 2 |
| 71 | 28 | 20 | 64 | 127 | 9 | 7 | 11 | 9 | 10 | 1 | 13 | 8 |
| 72 | 13 | 12 | 28 | 63 | 4 | 5 | 5 | 5 | 5 | 3 | 3 | 6 |
| 73 | 14 | 11 | 17 | 24 | 2 | 5 | 2 | 4 | 1 | 4 | 1 | 1. |
| 74 | 18 | 14 | 26 | 87 | 3 | 4 | 5 | 2 | 6 | 4 | 8 | 3 |
| 75 | 18 | 14 | 63 | 75 | 6 | 3 | 9 | 6 | 2 | 4 | 4 | 3 |
| 76 | 17 | 14 | 29 | 46 | 1 | 5 | 2 | 2 | 2 | 5 | 3 | 3 |
| 77 | 3.1 | 20 | 45 | 89 | 7 | 2 | 8 | 7 | 6 | 2 | 10 | 7 |
| 78 | 28 | 20 | 45 | 69 | 9 | 7 | 12 | 8 | 5 | 2 | 10 | 8 |
| 79 | 18 | 14 | 41 | 59 | 7 | 6 | 7 | 6 | 5 | 3 | 7 | 4 |
| 80 | 27 | 21 | 32 | 79 | 5 | 4 | 4 | 4 | 6 | 3 | 8 | 5 |
| 81 | $20^{-}$ | 18 | 4.1 | 61 | 8 | 13 | 9 | 7 | 5 | 6 | 10 | 8 |
| 82 | 19 | 14 | 29 | 65 | 4 | 3 | 7 | 3 | 5 | 7 | 5 | 6 |
| 83 | 30 | 20 | 64 | 84 | 6 | 2 | 1.0 | 7 | 7 | 7 | 11 | 8 |
| 84 | 20 | 15 | 30 | 96 | 5 | 4 | 7 | 5 | 8 | 6 | 8 | 7 |
| 85 | 19 | 15 | 24 | 22 | 6 | 3 | 7 | 6 | 5 | 4 | 7 | 4 |
| 86 | 26 | 17. | 41 | 120 | 8 | 1 | 1.1 | 8 | 9 | 1. | 11 | 8 |

1967: 3rd Year Form 2: MTCT (Tasks 1, 2, \& 3)
19 Subjects: 9 Males, 10 Females

| $\begin{aligned} & \text { S's } \\ & \text { No.'s } \end{aligned}$ | MTCT |  |  |
| :---: | :---: | :---: | :---: |
|  | TASK 1 | TASK 2 | TASK 3 |
| 4 3 3 $\vdots$ 0 0 0 0 0 0 0 |  |  |  |
| 68 | $10 \quad 15$ | 1110 | 3320 |
| 69 | 1015 | $10 \quad 7$ | 4416 |
| 70 | 105 | 16 8 | 3518 |
| 71 | 1015 | 1212 | 4626 |
| 72 | 105 | 1211 | $32 \quad 13$ |
| 73 | 105 | 116 | 1812 |
| 74 | $10 \cdot 5$ | 1210 | 2117 |
| 75 | 105 | 1010 | 24 11 |
| 76 | 10 5 | 118 | 4114 |
| 77 | 105 | 1711 | 5327 |
| 78 | 55 | 158 | 2111 |
| 79 | 105 | $9 \quad 7$ | 2714 |
| 80 | 105 | 1812 | 6427 |
| 81 | 10. 5 | 1112 | 2516 |
| 82 | 105 | 1512 | 4426 |
| 83 | 105 | 1312 | 5628 |
| 84 | 105 | 168 | 2816 |
| 85 | 10.5 | 76 | 42 |
| 86 | $10 \quad 15$ | 1111 | 4826 |

Subjects No.'s 68-76 are Males
Subjects No.'s 77 - 86 are Females

CONTINTS
The following eighty-eight pages are divided into three sections:

TORRANCE TESTS OF CREATIVE THINKING (TTCT)
Examples of subjects' work in the TPCT (Acts. 1, 2, \& 3) from 1968 and 1970. Theş examples are referred to in Chapters Seven and Seventeen. There is an introductory page and fifty three pages of examples.

ART WORKS
Illustrations of subjects' ART WORKS (1 \& 2) from the 1967/68 and 1970 test administrations. These are referred to in Chapters Seven and Seventeen. An introductory page is followed by seven pages of illustrations.

## PROGRAMME FEEDBACK

Examples and Illustrations of subjects' responses to those Elements and Units of the 'Creativity Programme' where 'overt' responses were required. The Programme was worked through in 1969/70. The 'feedback' is discussed in Chapter Seventeen. An introduction is followed by twenty-five pages of examples and illustrations.

## LIST OF CONTENTS

PAGE No.'s
TTCT: Examples of subjects' work (Introduction) 23
TTCT: Examples of work done in 1968
$24-57$
THCT: Examples of work done in 1970
$58-76$
ART HORKS: Illustrations of subjects' work (Intro.)
ART WORKS: Illustrations of work done in 1967 78-81
ART WORKS: Illustrations of work done in 1970
81-84
PROGRAIIIE FEEDBACK: Examples and Illustrations (Intro.) 85
PROGRAMIIE FEEDBACK: Element One responses 86-92
PROGRAIHE FEEDBACK: Element Two Fesponses: Brainstorming 93-101
PROGRAMIE FEEDBACK: Element Three responses: Paintings 102-110

NOTE: As pencil was used for most work in the TYCT and the
Creativity Programme some of the examples and illustrations are rather faint due to the limitations of the reprographic process.

The following pages are examplas of subjects' work in the Torrance Tests of Creative Thinking (TTCT) for the 1968 and 1970 administrations. There are twenty-nine examples covering the three test Activities. Form A was used for the 1968 administration. These examples are numbered 1 - 18. Numbers l-. 21 are examples of high and low scoring in the following four factors:

FLUENCY FLEXIBILITY ORIGINALITY \& ELABORATION
Numbers 12 - 18 are extra 1968 examples included for further comparisons with the 1970 examples.

INumbers 1 - Il are those examples that relate to the study to test Hypothesis A: numbers $1-5$ are referred to in Chapter Saven.

Form B was used for the 1970 administration; the examples are nunbered 19-29. These examples are compared with the 1968 exanples in the study to test Hypothesis B: see Chapter Seventeen.

High scoring for Fluency and Flexibility in 1970 is seen in example 19, and for Elaboration in example 29. These exaraples are also used for comparison purposes. Low scoring examples for 1970 are not shown.

ITEY TO ABBREVIA'TIONS USED

| THCT | $=$ Torrance Tests of Creative Thinking |
| ---: | :--- |
| ACT | $=$ Activity No. |
| EG | $=$ Example No. |
| S | $=$ Subject's No. |
| High | $=$ High score |
| Low | $=$ Low Scors |
| FLUE | $=$ Fluency |
| FLEX | $=$ Flezibility |
| ORIG | $=$ Originality |
| ELAB | $=$ Elaboration |
| Incr | $=$ Increase from 1968 to 1970 |
| Decr | $=$ Decrease from 1968 to 1970 |
| Stat | $=$ Little change from 1968 to 1970 |

NOTES: 1. Many examples have more than one page: the pages are thus numbared, i.e. (page i), (page ii), (page iii) for each exemple.
2. In general Activity and Example numbers are at the TOP of the (page i) of an example: Date, S's No., and data are at the BOTTOIA.
3. Scores for the TTCT can be found in the Full Scores for each subject: 1 ppendix pp. 4-21.

By adding lines to the incomplete figures on this and the next page, you can sketeh some interesting ohjects or pictures. Sgain. try to hink of some picture or object that no one else will thimk of. Try to make it tell as romplete and as interesting a story as you can by adding to and huilding up your first idea. Make up an interesting title for each of your drawings and write it at the botlom of each block next to the momber of the figare.


1968 S 54 Low FLEX


## Activity 3. LINES

In ten minutes see how many ohjects or pielures you can make from the pairs of straight lines below and on the next tro payes. The pairs of straight lines should be the main part of whatever you make. With pencil or crayon add lines to the pairs of lines to complete your pieture. You can place marks helween the lines, on the lines, and outside the lines-wherever you want to in order to make your picture. Try to think of things that no one else will think of. Make as many different pictures or objects as you can and put as many ideas as you can in each one. Nake them toll as complete and as interesting a story as you can. Add names or titles in the spares provided.


8. TELSRRAP POLES

9.

ARCHWAY



25.

26. $\qquad$ 27.


28
28.
nantio in uss


2 Your mire LUNAR ORBITER 4


## Activity 3. LINES

In ten minutes see how many objects or pictures you can make from the pairs of straight lines below and on the next two paes. The pairs of straight lines should be the main part of whatever you make. With pencil or crayon add lines to the pairs of lines to complete your pietare. You can place marks between the lines, on the lines, and outside the lines-wherever you want to in order to make your picture. Try to think of things that no one else will think of. Make as many different pictures or ohjects as you can and put as many ideas as you can in each one. Make them tell as complete and as interesting a story as you can. Add names or titles in the spaces provided.

2.

5. $\qquad$ 6. $\qquad$

## Activity 3. LINES

In ten minutes see how many objects or pichures you can make from the pairs of straight lines below and on the next two pages. The pairs of straight lines shoth the the main part of whatever you make. With pencil or crayon add lines to the pairs of hines to complete your picture. You can place marks between the lines, on the limes and outside the lines-wherever you want to in order to make your picture. Try to think of things that no one else will think of. Make as many different pictures or objects as you can and put as many ideas as you can in each one. Nake them tell as completr and as interesting a story as you can. idd names or titles in the spaces provided.


1968 S 9 Low FLUE FLEX

$\qquad$ 8.

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GOON TO NLXT PAGE

Activity 2. PICTURE COMPLETION
By adding lines to the incomplete figures on this and the next page, you can sketch some interesting objects or pictures. Aguin, try to think of some pieture or object that no one dse will think of. 'Try to make it tell as romplete and as meresting a story as you can by adding to and buikding up ? our first idna. Make up an interesting tithe for each of your drawings and write it at the bothom of each hook next to the number of the figure.

TMCT ACT 2 EG 5 (page i)


TACT ACT 2 JG 5 (gage ii)


## Activity 2. PICTURE COMPLETION

By adding lines to the incomplete figures on this and the next page, you can sketch some interesting objects or pictures. Again. try to think of some picture or object that no one else will think of. Try to make it tell as complete and as interesting a story as you can by adding to and buidding up your first iden. Make up an interesting tille for each of your drawings and write it at the bottom of each block next to the number of the ligure.


1968 S 15 High FLUE

TROT ACT 2 EG 6 (page ii)




- rock title The mushroom som up there

I968 S 42 High ORIG

By addling lines to the incomplete figures on this and the next page, you can sketch some interesting objects or pictures. Again. try to think of some picture or object that no one else will think of. 'Try 10 make it toll as complete and as interesting a story as you can by adding to and building up your first idea. Make up an interesting title for each of your drawings and write it at the bottom of each block next to the number of the fire are

TIT ACT 2 EG 8 (page i)


1968 S 48 High FLEX ELAB

TRET ACT 2 EG 8 (page ii)


Activity 3. LINES
In ten minutes see how many objects or pictures you can make from the pairs of straight lines below and on the next two pages. The pairs of straight lines should be the main part of whatever you make. With pencil on rayon add lives to the pairs of limes to complate your picture. You can place marks between the lines. on the lines, and outside the lines-wherever you want to in order to make your picture. Try to think of things that no one else will think of. Make as many different pictures or objects as you can and put as many ideas as you can in each one. Make them tell as complete and as interesting a story as you cam. Add names or titles in the spares provided.

TACT ACT 3 EG 9 (page ii)


1. Therrand Pinferciodz

2. 


4. $\qquad$ The Shoside. -. The (wondtwiltest The fore if bricks.


20. Finst-mAtived B=a


In ten minutes see how many ohjects or pielures you can make from the pairs of straight lines below and on the next two prores. The pairs of straight lines should be the main part of whatever you make. With pencil or crayon add lines to the pairs of lines to complete your picture. You can place marks between the lines. on the lines, and cutside the lines - wherever you want to in order to make your picture. Try to think of things that no one else will think of. Make as many different pictures or olijects as you can and put as many ideas as you can in each one. Nake them tell as complete and as interesting a story as you can. Add names or titles in the spares provided.


1968 S 64 Low FLUE ORIG

8. Win Dow s
9. $\qquad$

10. $\qquad$ 11 $\qquad$ 12. $\qquad$


13

14.





TICT ACP 1 EG 11 (page i)


## Activity 3. LINES

In ten minutes sec how many ohjects or pichures you can make from the pairs of straight lines below and on the next two pares. The pairs of straight lines should be the main part of whatever you make. With pencil or crayon add lines to the pairs of lines to complete your pieture. You can place marhs between the lines, on the lines, and outside the lines-wherever you want to in order to make your pieture. Try to think of things that no one else will think of. Make as many different pictures or objects as you can and put as many ideas as you can in earth one. Make them tell as complete and as interesting a story as you can. Idd names or titles in the spaces provided.

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TTCT ACT 3 EG12 (page i)
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1968 S 2 (compare with EG 19)


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## Activity 3. LINES

In ten minutes see how many objects or pictures you can make from the pairs of straight lines below and on the next two pages. The pairs of straight lines should be the main part of whatever you make. With pencil or crayon add lives to the pairs of lines to con:plate your picture. You can place marks between the lines, on the lines, and outside the lines-wherever you want to in order to make your picture. Try to think of things that no one else will think of. Make as many different pictures or objects as you can and put as many ideas as you can in each one. Make them tell as complete and as interesting a story as you can. Add names or titles in the spues provided.


1968 S 6 (compare with EG 20)

7. elits choes

8. Beole Shele-

10. Dust bin

11. Oven

12. $\qquad$

13. $\qquad$ 14. $\qquad$ 15. $\qquad$


## Activity 2. PICTURE COMPLETION

By adding lines to the incomplete figures on this and the next page, you can sketch some interesting ohjects or pictures. Again. try to think of some picture or ohject that no one else will think of Try to make it tell as complete and as interesting a story as you can by adding to and building up your first idea. Make up an interesting title for each of your drawings and write it at the bottom of cach block next to the number of the figure.


1968 S 19 Stat FLEX
(compare with EG 24)


In ten minutes see how many objects or pictures you can make from the pairs of straight lines below and on the next two pages. The pairs of straight lines should be the main part of whatever you make. With pencil or crayon add lines to the pairs of lines to complate your picture. You can place marks between the limes on the lines, and outside the litics-wherever you want to in order to make your picture. Try to think of things that no one else will think of. Make as many different pictures or objects as you can and put as many ideas as you can in each one. Make them til as complete and as interesting a story as you can. Add names or titles in the spares provided.

TACT ACT 3 EG 16 (page i)


1. $\qquad$
2. Fer


3. 



TTCTEACT 3 EG 16 (page iii)

 9.
 11.

12.


17 $\qquad$ 18 $\qquad$

## Activity 2. PICTURE COMPLETION

By adding lines to the incomplete figures on this and the next page, you can sketch some interesting ohjerts or pietures. Again, try to think of some pirture or ohject that moner dse will think of. Try to make it tell as complete and ats interesting a story as you ean by adding to and buikling up your first idea. Make up an interesting tille for each of your drawings and write it al the bottom of each block next to the number of the figure.

THCT ACT 2 EG 17 (page i)


1968 S 33 (compare with EG 27)




## Activity 3. CIRCLES

In ten minutes see how many objects or pictures you can make from the circles below and on the next page. The circles should be the main part of whatever you make. With pencil or crayon add lines to the circles to complete your picture. You can place marks inside the circles, outside the circles, or both inside and cutside the circles-wherever you want to in order to make your picture. Try to think of things that no one else will think of. Make as many different pictures or objects as you can and put as many ideas as you can in cach one. Make them tell as complete and as interesting a story as you can. Add names or titles below the objects.


1970 S 2 Incr FLUE FLEX
High FLUE FLEX


TTCT ACT 3 EG 19 (page iii)


Activity 3. CIRCLES
In ten minutes see how many objects or pictures you can make from the circles below and on the next page. The circles should be the main part of whatever you make. With pencil or crayon add lines to the circles to complete your picture. You can place mans inside the circles, outside the circles, or both inside and outside the circles--whercver you want to in order to make your picture. Try to think of things that no one else will think of. Make as many different pictures or objects as you can and put as many ideas as you can in each one. Make them tell as complete and as interesting a story as you can. Add names or titles below the objects.


orinve


1970 S 6 Dear BLAB

clock

man


Activity 3. CIRCLES
In ten minutes see how many objects or pictures you can make from the circles below and on the next page. The circles should be the main part of whatever you make. With pencil or crayon add lines to the circles to complete your picture. You can place marks inside the circles, outside the circles, or both inside and outside the circles-wherever you want to in order to make your picture. Try to think of things that no one else will think of. Make as many different pictures or objects as you can and put as many ideas as you can in each one. Make them tell as complete and as interesting a story as you can. Add names or titles below the objects.


Dilly bunter


PICT ACT 3 EG Nl (page ii)
$x \times x$


Dilack

$\square \times$



$x$
$x$
$x$


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## Activity 2. PICTURE COMPLETION

By adding lines to the incomplete figures on this and the next page. you can sketch some interesting objects or pictures. Again, try to think of some picture or object that no one else will think of. Try to make it tell as complete and as interesting a story as you can by adding to and building up your first idea. Make up an interesting title for each of your drawings and write it at the bottom of cach block next to the number of the figure.


1970 S 15 Decr PLUE FLEX ORIG
Incr ELAB

THCT ACT 2 EG 23 (page iii)


## Activity 2. PICTURE COMPLETION

By adding lines to the incomplete figures on this and the next page, you can sketch some interesting ohjects or pictures. Again, Iry to think of some picture or object that no one else will think of. Try to make it tell as complete and as interesting a story as you can by adding to and building up yeur first idea. Make up an interesting litle for each of your drawings and write it at the bottom of each block next to the number of the figure.



## Activity 3. CIRCLES

In ten minutes see how many objects or pictures you can make from the circles belon and on the next page. The circles should be the main part of whatever you make. With pencil or crayon add lines to the circles to complete your picture. You can place thark inside the circles, outside the circles, or both inside and outside the circles-wherever you want io in order to make your picture. Try to think of thinge that no one alse will thin of. Make as many different pictures or objects as you can and put as many ideas as sou can in each one. Make them tell as complete and as interesting a story as you can. Bha names or titles below the objects.

## TTCT ACT 3 EG 25 (page i)



1970 S 23 Incr FLUE FLEX ORIG EMAB

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## Activity 3. CIRCLES

In ten minutes see how many objects or pictures you cam make from the circles below and on the next page. The circles should be the main part of whatever you make. With pencil or crayon add lines to the circles to complete your piclure. You can place marks inside the circles, outside the circles, or both inside and outside the circles-wherever you want to in order to make your picture. Try to think of things that no one else will think of. Make as many different pictures or objects as you can and put as many ideas as you can in each one. Make them tell as complete and as interesting a story as you can. Ald names or titles below the objects.



By adding lines to the incomplete figures on this and the next page, you can sketch some interesting objects or pictures. Agilin, try to think of some picture or ohject that no one else will think of. Try to make it tell as complete and as interesting atory as your ran by adding to and building up) your first idea. Make up an interesting litle for each of your drawings and write it at the botion of each hock next to the number of the figure.

## TTCT ACT 2 EG 27 (page i)



1970 S 33 Decr FLUE FLEX ORIG

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\begin{array}{|l|l|}
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\hline & 0 \\
6 & 3 \\
7 & 1 \\
\hline
\end{array}
$$

## PICT ACT 1 EG 28 (page i)



P- resent a:
space ship


## ART WORKS: ILLUSTRATIONS OF SUBJECTS' WORK

The following seven pages are selected illustrations of the subjects" Art Works 1 and 2 performed in the $1967 / 68$ study to test Hypothesis $A$ and the 1970 study to test Hypothesis $B$.

ART WORK 1 was a set theme - 'The Park".
ART WORK 2 was the subject's 'Own Choice' of theme.
The Art Worlss were scored on the following four judgments:
GESTALT SPONTANEOUS ORIGINALITY \& INVOLVERENT
There are twenty illustrations in colour and monochrome. Illustr-i. ations 1 - 10 are examples of Art Works performed in 1967. I.llustrations 11 - 20 are examples of Art Works performed in 1970, except for No.'s 17 and 19 which are 1967 examples included for comparison purposes.

KEY TO ABBREVIATIONS USED
WK 1 = Art Work 1: "The Park"
WK 2 = Art Work 2: 'Own Choice"
ILI = Illustration No.
S $\quad=$ Subject's No.
High $=$ High scoring
Low $=$ Low scoring
Avge $=$ Average or moderate scoring
GEST $=$ Gestalt
SPON = Spontanoous
ORIG = Originality
IIVO = Involvement
Incr $=$ Increase from 1967 to 1970
Decr $=$ Decrease from 1967 to 1970
Stat $=$ Little or no change from 1967 to 1970
NOTE: Scores for the Art Works can be found in the Full Scores for each subject: Appendix pp.


III I
1967 S 13
WK I
High GEST ORIG


ILL 2
1967 S 41
WK 2
High GEST SPON ORIG

IIL 3
1967: 65
WK 1
High SPON ORIG ITVO


IIL 4
1967. S 69

IKK 1
High ORIG

$\frac{\text { ILL } 5}{1967}$ S 69
WK 2
High GEST ORIG INVO


ILI 6
1967 S I
WK 1
LOw SPON


ILL 7
1967 S 4
WK 2
Low GEST ORIG INVO


ILL 8
1967 S 47
WK 1
Low GEST ORIG INVO


ILL 9
1967 S 86
WK 2
Low SPON


ILL 10
1967 S 14
HK 2
Low SPON: High ORIG


ILL 11
1970 S 7
WK 1
Decr SPON (Low SPON)
Incr GEST ORIG


ILI 12
1970 S 19
WK I
Stat
High GEST SPON ORIG INVO


ILI 13
1970 S 18
WK 2
High ORIG


ILI 14
1970 S 40
WK 2
High GEST ORIG


IL工 15
1970 S 23
IK 2
Low SPON INYO


ILL 16
1970 S 24
MK 2
Low GEST SPON ORIG INVO


III 17
1967 S 42
WK 1
Low INVO
Avge GEST ORIG INVO
(compare with ILI 28)


IJ, I 18
1970 S 42
WK 1
High GEST ORIG
Incr GEST SPON ORIG INVO


ILL 19
1967 S 32
WK 1
Low ORIG
Avge GEST INVO
(compare with ILL 20)


IIT_ 20
2970 S 32
WK 1
High GEST ORIG INVO Incr GEST ORIG IINVO

## PROGRAMHE FEEDBACK: EXARIPLES AND ILLUSTRATIONS

The following twenty-five pages are examples and selected illustrations of the responses made by the experimental group subjects as they worked through the 'Creativity Programme'.

Scores and other relevant feedback are dealt with in Chapter Seventeen, Section 3: Examination of Programme 'Feedback".

Examples and illustrations are selected from the following Programme Elements and Units:

ELIMIENT ONE: UNIT ONE: "WHAT IS A CREATIVE PRODUCT?"
Responses of subjects No.'s 2, 4, 9, \& 11
UNIT TWO: "WHO IS LIKEIY TO BE A CREATIVE PERSON?" Responsas of subjects No.'s 3, 6, \& 9

ELENENT TWO: UNIT TWO: "YOU TRY SOLE BRAINSTORNING" (Parts 1 \& 2) Responses of subjects No.'s 3: 7, \& 8

ELEMENT THREE: "BRAINSTORM A PAINTING" (Vritten \& Painted responses) Responses of subjects No.'s $30,32,40,41,42, \& 45$

HOTE: The examination of the 'feedback' from the Creativity Programme is concerned with the internal evaluation of the programme and is not part of the study to test Hypothesis B.

CREATIVITY PROGRATHE
ELUENT ONE：＂MHAT IS CREATIVITY？＂ UNIT ONE：＂FITAT IS A CREATIVE PRODUCT？＂

PAIR No． 2 Males SCORAS SHEET

| PRODUCT IUIABER AND NALIF． |  | FACTOR COLUNHS |  |  |  |  |  |  |  |  | ． | JUDGEMIENTM COLUTIT |  |
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| 2. | Hexcogonal House | 1. | cl | 1 | 2 | 1 | 0 | 1 | 1. | 0 | 7 | Creame | 0 |
| 3. | WHTCl | 1 | 0 | 0 | 1 | 0 | 1 | 7 | 1 | 0 | 5 | Cresidie | 0 |
| L1，． | 1．Later Camyar | 1. | I | 1 | 0 | $\bigcirc$ | 1 | 0 | 1 | 1 | 7 | Snantin | 1 |
| 5 | Pitcure． | 1 | 2 | 1 | ， | 7 | 1. | 1 | C | 1 | 7 | $C_{1-\infty} \operatorname{lup}$ | 0 |
| 6. | Sponge | 1 | 0 |  |  |  |  |  |  |  | －1 | Uosted | 0 |
| － | Bntinsamdre | 1 | ${ }^{5} 1$ | 0 | $\bigcirc$ | $1$ | 3 | 7. | $\bigcirc$ | 0 | 11. | Losi Crecter: | 0 |
| 6 | Craurd | 0 | ） |  |  |  |  |  |  |  | （ 3 | Usalobe | 1 |
| 9 | Cardilo | $1$ | 1 | 0 | $0$ | 0 | 0 | 1 | 0 | －1 | 1. | lessCrentur | 0 |
| 10 | $R a^{+1} 1-$ | $-1$ | $1$ | 0 | 0 | $1$ | 0 | $1$ | $0$ | 1 | $5$ | Creative | $1$ |
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| $\omega$ | হ | $=$ | $\overline{0}$ | － | 0 | $\checkmark$ | $\sigma$ | c） | － | Cu | （－） | － | PRODUCT NOLSER |  |
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|  |  |  |  | $\begin{aligned} & \hline n_{2} \\ & x \\ & n \\ & D \\ & \frac{2}{0} \\ & \hline \end{aligned}$ |  |  | $\begin{array}{\|l\|} \hline 07 \\ 0 \\ 3 \\ 3 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \end{array}$ |  |  | $\begin{gathered} \frac{2}{2} \\ \frac{2}{n} \\ -\overline{5} \\ -0 \\ \infty \\ \infty \end{gathered}$ | $\begin{gathered} x \\ \hline 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \\ 0 \end{gathered}$ | $\begin{aligned} & D \\ & D \\ & 0 \\ & 0 \end{aligned}$ | HaNE OR PITLIE OF PRODUCT． |  |
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|  |  |  | － | － | $\bigcirc$ | － | － | 2） | $\sim$ | 0 | $\square$ | － | CRIGINAL |  |
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|  |  |  | － | 0 | $\bigcirc$ | － | 0 | － | 0 | 0 | － | － | COAPLEX |  |
|  |  |  | － | － | 0 | － | 0 | － | － | － | － | － | integrated | 5 |
|  |  |  | $\bigcirc$ | $\bigcirc$ | $\bigcirc$ | 0 | $\bigcirc$ | － | 0 | － | － | － | PERSONALITY | 管 |
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|  |  |  | $\bigcirc$ | － | $\bigcirc$ | － | 0 | － | － | 0 | － | $\bigcirc$ | ILASTERY OP LIEDIA |  |
|  |  |  | － | 0 | $\bigcirc$ | 0 | － | － | － | － | － | － | CHATGES EmVIRONLANT |  |
|  |  |  | $\sigma$ | 9 | 0 | $\cdots$ | F | $\overline{\mathrm{C}}$ | $\checkmark$ | － | 5 | $\sigma$ | TOTAL SCORT |  |
|  |  |  |  |  | 愿 |  | $\begin{array}{\|c} \mid n \\ n \\ n \\ 0 \\ 0 \\ \hline 1 \\ \hline \end{array}$ | 第要 | $\begin{aligned} & \frac{n}{\infty} \\ & \frac{0}{2} \\ & \frac{1}{2} \\ & \hline i \end{aligned}$ |  | $\begin{aligned} & \frac{\pi}{3} \\ & a^{2} \\ & 3 \\ & \frac{2}{6} \end{aligned}$ |  |  |  |
| $\infty$ |  |  |  |  | － | $x$ | － | － | － | $\times$ | － | － | POIMIS COLUETH |  |

[^3]

[^4]

[^5]CREATIVITY PROGRAMME
EL AMENT ONE: "WHAT IS CREATIVITY?"
PAIR No. 3
UNIT TWO: "WHO IS LIKELY TO BE A CREATIVE PERSON?"


CREATIVITY PROGRAMME
ELHENT ONE: "WHAT IS CRBATIVITY?"
UNIT TYO: "WHO IS LIKELY TO BE A CRFATIVI PERSON?" Females ANSWER SHEET

| STORY | IS THIS PERSON LIKELY TO BE CREATIVE? |
| :--- | :--- |
| NO. | Write Yes or No to start with, and then give your |
|  | reasons for your choice. |

No. 1
Not Energetic veisetele.
is docs not see ats purses sicks of $t$ he is not. emational

No. 2 Galley is aducntéroxs, questioning luke s variety, energetic she is tumorous and emotional parsevenes al. does not think hard and deeply. EIrdividullok. Yes.
No. 3 Yes, he is creative and questioning the is aducostarenes He is verestule. Energetic, pereseuers contemplative un induirelice hes Numerous and Emotional.

No. 4 No sheis not creative, questioning, adurntiroses, weretile she is ensigdic at school but not al home, dues not frizarenes she cis complemplated not un induridual she is not humorous and not emerteral
 ut fort boll. not comtemplainti not presouencing he is net om i induvideual he is not humerus is not emoter.

No. 6 Ven y creative is questioning is adenterous she is vervetie enargatic she is primeverine, contemplating, an indurduadidt can be humereus at times and is emotional yes.
CREATIVITY PROGRAMME
ELeMENT ONE: "WHAT IS CREATIVITY?"PAIR No. 9
UNIT THO: "WHO IS IJTKELY TO BE A CREATIVE PERSON?" ..... Females
ANSWER SHEET
STORY IS THIS PERSON LIKELY TO BE CREATIVE?
NO:reasons for your choice.
He is

astute
0

- humorous or energetic.
$\qquad$
No. 2 Yes.
She perseveres, always humorous, Energetic, Adventurous.

No. 3 Yes
individualist, Contemplates, versatile, energetic.

No. 4 NO.
she is nit energetic, Adenturous, individualist.

NO. 5
No he isxit undurdualist, Mumacio,

No. 6
yes the is Adventuress, Emotional, unduidualist, questioning.

BRATISTORM SHEFT (Answers to problems)

NAME: $\qquad$ (If you use more than one sheet, put your name on each shoot.)
Luik the Dean, shat the Chindous Fit. Auglam domes.

2.
3.


Torpedo

NAME: $\qquad$ (If you uso more than one sheet, put your name on each shot.)
pot-
wive throud in 1 $1-$
plastic clothes.
Wear None.
Chem (H) $2 i$.

Armorer
aras stints.
PVC clotens
Animal skins
asbestos clothes punt them nil

I progy fon amues
Stenlung
Buabrmil
2.


3.

Busn
Mackes thinys.

PAIR No. 7
Females
Page 1
(If you use more than one sheet, put


Un burnalale clothes. lerdios wiuthoust fuses. waler prove clothes Keep worrericine away from


NAME: $\qquad$ (If you use more than one sheet, put your name on each sheet.)


Tent
Wabarproós clothes.
Unburnaible stopthes,
Moth proof.
un tairaisle:
pester material
Leather clothes un shuiulkaible.
Warnatsle.
Plastic clothes.
clothes that coon be cleaned without washing them to Much Stain les.

Un creasabsle.
clothes that no ns go baggy Woollen clothes Hab doit go bitting o big.
Keep tin Cushion most of iva time.

$$
\text { Part } 2
$$

Help old poole －Ask them for sene holp your movies do work．When ill good mood help disabled people．
Be good．Be Kind．
Clean the car：maker the boils．
Go to the shop for your parent．
Faith $r$ wipe up．Dust．
Do come ironing．
Be good mannered
agee wish what your parvis．sous．
By them a preserve
Not get into trouble with the Police
Babe E价至a Do pars time vows．

$\left.\begin{array}{l}c_{c}^{c} \\ c_{c} \\ c_{c}\end{array}\right]$


Unbreakable
 lin spoliate．

Making Models.

PaIR No. 7
Make a same.

Dolls house
Garboard houses.
collect them.
Plastic Dolls.
plastic Guns
Carboard. model of a
Church.
Carboard Shapes

NAME: $\qquad$ (If you uso more than one sheet, put your name on each sheet.)
that Breinstempa 1

1. Alarm that go of when the house is an fire so that every body con goff cred of the house bafly,
2 Howe eledrice wires for chehed every yean.

colcano


Dan't wash as often
Hewer thick materiel
Put see thiourcis Plastic over or clothes cis they to not wear so fast or gel dirty.
wear made goths or Eumbior deaths
Tor Sha or brother Dresser.
Just but Sase doris in waler in catered it weareny them out in a wositima machine

Do meers for your Suren:
Howe ar porl turn wib dxem Paopss sour Ask our Perante. wirm lthey one in a goach moth.


 By chochlake money and exchoingine for reach monily

Have $k$ on a piller

$\{$ Have it on a epring ry m new soff
notile

Poils Hourea, farm yord, litte cheder brewe. Tablee, Taibeing bartes, Pencil caser, mater boy toens.


$$
\text { in chairs }_{\text {Bed }}^{B}
$$

Example of written responses to Part 1

Subject No. 30
Choice af 'Emotion' - FBAR
iA man trapped in a cave with a grisserly bear
2 Filing of a cliff
3 Walling the plank
a Ship rocking in wrought sea
5 .. ghost house

- rending away down abank on a tractor
, aerplane diving to wards ground
6 House an fire
$q$ in front of firing squad
to bull chairs someone across field
". Jumping, ofF 100 storey Flint
12 being torched
- going rob bf kngejed
by being Shot

Sulbject No. 32
Choice of Emotion - FEAR
IW0man atiacled with krepe iecterly Licreams
2). man drowneng in water, foce hom king
3) mar in surk sandes screams,
4) talling of a clift.
5) mand doctor cutting a pirsons arm off.
b) raused ayebrouss

7 mouth open urde.
8) hands claspad againsior head
9) standing still like asteitue,

110 foll over bachwards stift.
iil) man in sinkurg ship.
12) hands over mouth,
13) man laughing in fear
14) man crauling like snake
15) bitting raik.
14) grinding tedth
17) Man cutting uroman tin dt
18) druieing a woodern fitake itreunh heart
29. Putling peoples nails completty outo.


ELMMENT THREB: 'BRAINSTORM A PAINTING:
Example of writtem responses to Part 1
Subject No. 40
Choice of Rmotion - MISERY
gone away. urtien your púz:
Some prograinex on idecivion.
MISERY.

All atone on a dull day.
Nofather and Mothes lill you of seine hrines you trel.
Moving to ansthee house. ysil cine nst
which means leauring your fricrid Warixad. same id Tour pat hou has to be put tio Sheep Serrowifines. when your fat.. wimen your uely. WORRICD. lll

When your thum road are in BROKEN UN MOMES MIJED UTD a utied diair. PRUR心艮. Blind
fusmale abandefzoned
Mitnev whs cail't afford
Co kicp of her chill
pernis? falheb fies)

Example of written responses to Part 1

Subject No. 41
Choice of Emotion - FEAR

Fear. .
screaming?
terrifying
Fear of a bully.
Fear in an accicieris.
Ferns when your apoines to s die. Petrifying.
Going meat and thin.
Feer of being haunted

- Fear of being Kidnapped.

Terr of semen
Comelier suite.

ELEMENT THREE: 'BRAINSTOR MA PAINTING'
Example of written responses to Part 1

Subject No. 42
Choice of Emotion - MISEREX
shy
when you our beak
miser
when Blind
in mos pitas.
Some owe crying or weeping Jolkines

Lost Your money pull ray War
Curet sleep.
Nothing to do Main want yo aft all alone Tined
easing rreinds at school
working.
things on mind Boy Fining left you leaving rinds Rendocel


STomarer He e.
mourner $r$ faimen parted
Some one Red
Homeless
orpmand.
Canly't get male opRirght "isarsled.
pnilisest
un well!
Parents Bad.
Expecting

Subject No. 45
Choice of Emotion - MISERT
$0 \quad$ Is you Toot a pet Not being let cut

Rainy Dey, lowing unwonted Baby Death. Not being tiled. no food to eat, no rooney for clothes.
7 zing in pain. Ill. 100 partners. lost. Going to sec Doctor. Giving to

Boyfriend crying getting up in mowing


Subject No. 30
Finished Painting FEAR


Subject No. 32
Finished Painting FEAR

ELEIENT THREE: BRAINSTORM A PAINTING
Illustrations of the Finished Product (The Painting)


Subject No. 40
Illustration of
response to Part 2


Subject No. 40
Finished Painting MISERY


Subject NO. 41
Finished Painting FEAR

Illustrations of the Finished Product (The Fainting)


Subject No. 42
Illustration of
response to Part 2


Subjoct INa. 42
Finished Painting MISERY


Subject No. 45
Finished Painting HISERY

The following 17 pages are Tables of Correlations for the $\mathrm{CPQ} / \mathrm{HSPQ}$, the TTCT and the ART WORKS involved in the studies to test Hypotheses $A$ and $B$. Tables $I$ to $7 c$ are concerned with Study $A$. LIST OF CONTENTS
NO. $\quad$ TITLE

1. INTERJUDGE CORRELATIONS: ART WORKS 1967/68

Ia CORRELATIONS: (STUDY A)
PAGE No.
la CORRELATIONS: TTCT \& ART WORKS: ALL SUBJECTS n
Ib CORRELATIONS: TTCT \& ART WORKS: lst YEAR SUBJECTS
Ic CORRELATIONS: TTCT \& ART WORKS: 3rd YEAR SUBJECTS
1d CORRELATIONS: TTCT \& ART WORKS: MALE SUBJECTS
Ie CORRELATIONS: TTCT \& ART WORKS: FEMALE SUBJECTS
?

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2 CORRELATIONS: CPQ/HSPQ \& ART WORKS: 3rd YEAR FORM 1
3a CORRELATIONS: CPQ/HSPQ \& TTCT: MALE SUBJECTS "
3b CORRELATIONS: CPQ/HSPQ \& TTCT: lst YEAR FORM 2
4a INTERCORRELATIONS: ART WORKS: ALL SUBJECTS
"

4b INTERCORRELATIONS: ART WORKS: 1st YEAR SUBJECTS
4c INTERCORRELATIONS: ART WORKS: MALE SUBJECTS
n

5a INTERCORRELATIONS: TTCT: ALL SUBJECTS
H
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5b INTERCORRELATIONS: TTCT lst YEAR SUBJECTS
$n$
5c INTERCORRELATIONS: TTCT: FEMALE SUBJECTS
6a CORRELATIONS:: TTCT \& MTCT: ALL SUBJECTS
6b CORRELATIONS: TTCT \& HTCT: 3rd YEAR SUBJECTS
6c CORRELATIONS: TTCT \& MTCT: MALE SUBJECTS
7a CORRELATIONS: ART WORKS \& IUTCT: ALL SUBJECTS
7b CORRELATIONS: ART WORKS \& ITTCT: lst YEAR SUBJECTS
7 c CORRELATIONS: ART WORKS \& MTCY: FEHALE SUBJECTS
8a \& 8b CORRELATIONS: TTCT \& ART WORKS: ALL SUBJECTS (STUDY B)
8c CORRELATIONS: TTCT \& ART WORKS: MALES 1970
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8d CORRELATIONS: TTCT \& ART WORKS: CONTROL 1970
8e CORRELATIONS: TTCT \& ART WORKS: EXPERIMENTAL 1970
9a CORRELATIONS: HSPQ \& ART WORKS: EXPERIMENTAL 1970
9b CORRELATIONS: CPQ \& ART WORKS: EXPERIMENTAL MALES "70"
10a CORRELATIONS: $\mathrm{CPQ} / \mathrm{HSPQ}$ \& TICT: EXPERIMENTAL 1970
10b CORRELATIONS: CPQ/HSPQ \& TTCT: EXPERIIENTAL MALES 167"
10c CORRELATIONS: CPQ/HSPQ \& TTCT: CONTROL MALES 1970 "
10d CORRELATIONS: CPQ/HSPQ \& TTCT: EXPT. FEMIALES 6T/68 \#
11a \& 11b INTERCORRELATIONS: ART WORKS: ALL SUBJECTS "
12a|\& 12b INTERCORRELATIONS: TTCT: ALL SUBJECTS "

## APPENDIX TASTE 1 INTERTUDGE CCRRETATIONS: ART YORKS 1967/68

Raw scores for Art forks 1 and 2 for Gestalt, Spontaneous, Originality and Involvement for 1 st Year Form 1. Judges 1 \& 2 .

The 'r' is given for each factor for Art Forks 1 and 2: 't' is given for the two lowest 'r's'.

Significance levels $1.725 \mathrm{p} \leq .10,2.845 \mathrm{p} \leq .01 \quad(\mathrm{~N}=22)$


It is seen that all correlations are significant ( $p \notin .01$ ) except for Art Work 2, Gestalt judgement which is only significant at an unacceptable level ( $p \approx .10$ ).
Note: The scores of one subject who left before the main study with the TTCT began, were included in these Interjudge Correlations. There was, therefore, an extra subject in this Form's N's.

APPENDIX TABLE 1a CORRELATIONS: TTCT AND ART $\because O R K S: ~ A L L ~ S U B J E C T S ~$
Correlations; TTCT hcts. 1, 2, 3, and Total for Originality and Elaboration, with Art Morks $1 \& 2$ for Gestalt, Spontaneous, Originality and Involvement。

Significance levels: $\underline{.212} \mathrm{p} \leq .05, \quad .277 \mathrm{p} \leq .01 \quad(\mathbb{N}=86)$

| TTCT | ART WORKS |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | VORK 1 |  |  | YORK 2 |  |  |  |
|  | CESm SPON | ORTS | Irive | CEST | SFOd | ORIG | IMvo |
| ACT 1 ORIG | 23433 | 165 | 166 | 171 | -10 | 192 | 157 |
| ELAB | 290-76 | 288 | 255 | 278 | -50 | 312 | 276 |
| ACT 2 ORIG | 9378 | 126 | 142 | 142 | 32 | 176 | 164 |
| EILAB | $340 \quad 41$ | 413 | 449 | 343 | 26 | 429 | 151 |
| ACT 3 ORIG | 26792 | 409 | 439 | 177 | 16 | 344 | 346 |
| ELAP | $449 \quad 73$ | 561 | 536 | 448 | -21 | 482 | 586 |
| TOTAL ORIG | 281100 | 396 | 426 | 209 | 21 | 360 | 353 |
| EIfAB | $431 \quad 29$ | 527 | 518 | 430 | -9 | 494 | 540 |

## APPENDIX TABTE ib CORRELATIONS: TTCT AND ART VORXS: 1 st Yr. SUBTECTS

Correlations; TTCT Acts. 1,2,3, and Total for Originality and Elaboration, with Art Works 1 \& 2 for Gestalt, Spontaneous, Originality and Involvement.

Significance levels: $\quad .294 \mathrm{p} \leftrightarrows .05, .381 \mathrm{p} \leq .01$ ( $\mathrm{N}=45$ )

| TTCT | ART YORKS |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | HORK 1 |  |  |  | WORK 2 |  |  |  |
|  | GEST | SPON | ORIG | INVO | GEST | SPON | URIG | INVO |
| ACT 1 ORIG | 287 | 75 | 261 | 327 | 250 | 159 | 277 | 334 |
| ELAB | 228 | -178 | 187 | 277 | 133 | -81 | 215 | 249 |
| ACT 2 ORIG | -22 | 182 | 6 | 87 | 84 | 9 | 82 | 74 |
| ELAB | 315 | 72 | 332 | 417 | 307 | -82 | 380 | 45.4 |
| ACT 3 ORIG | 125 | 183 | 108 | 184 | 124 | 40 | 61 | 190 |
|  | 299 | 27 | 476 | 455 | 320 | -22 | 358 | 520 |
| TOTAL ORIG | 133 | 207 | 127 | 221 | 164 | 61 | 123 | 222 |
| ELAB | 335 | -1 | 410 | 477 | 319 | -77 | 369 | 503 |

APPENDIX TABTE 1c CORRELATIOMS: TTCT\& ART WORKS: 3rd Yr. SUBJECTS. Correlations; TTCT Acts. 1, 2, 3, and Total for Originality and Elaboration, with Art Works 1 \& 2 for Gestalt, Spontaneous, Originality and Involvement.

Significance levels: . $308 \mathrm{p} \leqslant .05, .398 \mathrm{p} \leqslant .01 \quad(N=41$ )

| TTCT |  | ART YORKS |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | HORK 1 |  |  |  | YORK 2 |  |  |  |
|  |  | GEST | SPON | ORIG | Invo | GEST | SFON | ORIG | Invo |
| ACT 1 | ORIG | 190 | -8 | 177 | 105 | 81 | -202 | 176 | 33 |
|  | ELAB | 359 | 22 | 415 | 282 | 408 | -16 | 407 | 315 |
| ACT 2 | ORIG | $\begin{aligned} & 265 \\ & 385 \\ & \hline \end{aligned}$ | $\begin{array}{r} -64 \\ -11 \\ \hline \end{array}$ | $\begin{array}{r} 248 \\ 452 \\ \hline \end{array}$ | $\begin{aligned} & 177 \\ & 383 \end{aligned}$ | $\begin{aligned} & 235 \\ & 142 \end{aligned}$ | $\begin{array}{r} 63 \\ 138 \\ \hline \end{array}$ | $\begin{array}{r} 275 \\ 453 \\ \hline \end{array}$ | $\begin{array}{r} 266 \\ 402 \\ \hline \end{array}$ |
| ACT | 3 ORIG | 432 | 49 | 490 | 510 | 310 | -2. 1 | 467 | 404 |
|  | EJAB | 637 | 127 | 638 | 595 | 612 | -19 | 601 | 646 |
| total | ORIG | 452 | 23 | 495 | 485 | 324 | -31 | 481 | 404 |
|  | ELAB | 548 | 61 | 596 | 508 | 577 | 57 | 579 | 548 |

APPENDIK TABLE 1d CORRELATIONS: TTCT \& ART WORES: MALE SUBJECTS
Correlations; TrCT Acts. 1, 2, 3, and Total for Originality and Elaboration, with Art Works $1 \& 2$ for Gestalt, Spontaneous, Originality and Involvement.

Significance Levels: $.304 \mathrm{p} \leqslant .05, .393 \mathrm{p} \leq .01 \quad(\mathrm{~N}=42)$

| TTCT | ART WORKS |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | WORK 1 |  |  |  | WORK 2 |  |  |  |
|  | GEST | SPON | ORIG | INVO | GEST | SPON | ORIG | INVO |
| ACT 1 | 135 | -58 | 28 | -68 | -7 | 67 | 52 | -110 |
| ELAB | 547 | 130 | 405 | 426 | 329 | -52 | 448. | 432 |
| ACT 2 ORIG | 208 | 216 | 177 | 136 | 125 | -5 | 221 | 189 |
| ETAB | 354 | 130 | 386 | 459 | 287 | -9 | 330 | 377 |
| ACT 3 ORIG | 338 | 324 | 491 | 519 | 68 | -164 | 202 | 222 |
| ELAB | 536 | 237 | 496 | 594 | 416 | -84 | 447 | 528 |
| TOTAL ORIGELAB | 347 | 310 | 448 | 446 | 83 | -122 | 226 | 211 |
|  | 522 | 182 | 487 | 566 | 384 | -47 | 451 | 501 |

APPENDIX TABIE 1 C CORRETATIONS: TTCT \& ART WORKS: FEWATE SUBJECTS Correlations; TTCT Acts. 1, 2, 3 and Total for Originality and Eiaboration, with Art fiorks 1 \& 2 for Gestalt, Spontaneous, Originality and Involvement.

Significance levels: $.298 \mathrm{p} \leq .05, .385 \mathrm{p} \leq .01(\mathbb{N}=44)$

| TTCT | ARI VIOPKS |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | WORK 1 |  |  |  | WORK 2 |  |  |  |
|  | GEST | SPON | CRIG | Invo | GEST | SPON | ORIG | Invo |
| ACT 1 CRIG | 191 | 81 | 145 | 218 | 241 | -142 | 192 | 214 |
| ELAB | 192 | -217 | 311 | 267 | 347 | - 23 | 304 | 337 |
| ACT 2 CRIG | 34 | -3 | 130 | 218 | 221 | 75 | 187 | 241 |
| ELAB | 293 | -22 | 687 | 433 | 373 | 12 | 505 | 558 |
| ACT 3 ORIG | 147 | -54 | 325 | 356 | 237 | 117 | 433 | 447 |
| ELAB | 221 | -7 | 481 | 340 | 326 | -100 | 372 | 477 |
| TOTAL ORIG | 163 | -33 | 332 | 393 | 297 |  | 445 | 475 |
| ELAB | 275 | -68 | 510 | 420 | 401 | -53 | 469 | 545 |

APFENDIX TABLE 2 CORRELATIONS: CPO/HSPQ \& ART : OORKS: 3rd Yr. FORN 9
Correlations; CPQ/HSPQ Creativity and Extraversion with
Art Works 1 and 2 for Gestalt, Spontaneous, Originality and Involvement.

$$
\text { Significance levels: } \quad .423 \mathrm{p} \leq .05, . .537 \mathrm{p} \leq .01 \quad(\mathrm{Nm} 22)
$$

| CPQ/HSPQ | ART WORKS |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | WORK 1 |  |  |  | WORK 2 |  |  |  |
|  | GEST | SPON | OPIG | Invo | GEST | SpOiv | ORIG | Iivo |
| CREATIVITY | 485 | 395 | 545 | 514 | 357 | 206 | 344 | 370 |
| EXTRAVERSION | -262 | -332. | -370 | -373 | -265 | -290 | -304 | -292 |

 Correlations; CPQ/FSPQ Creativity End Extraversion (Exvia) with TTGT Acts. 1, 2, 3, and Total for Originelity anc Elaboration. Significance levels: $\quad .304 \mathrm{p} \leqq .05, .393 \mathrm{p} \leq .01$ (ii = 42)

| CP/ HSPQ | Trces |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | ACI 1 |  | ACT 2 |  | ACI 3 |  | TOPA |  |
|  | ORIG | ESAR | ORIG | ETAB | ORIG | ETAB | CRIG | IAB |
| CREATIVITY | 269 | 17 | -88 | -70 | 128 | -185 | 121 | -99 |
| EXTRAJERSION | -80 |  | 264 | 416 | 322 |  | 320 | 395 |

APETHDIX TAB E 3 B CCRREATIONS: CPG/USPQ \& TTCT: 1st Yr. FOR: 2 WATE SUBJECTS

Correlations; CEZ/HEPQ Creativity and Extraversion (Exvia) \%ith TTUT Acts. 1, 2, 3, and Total foir Oricinality and Riabcration.

$$
\text { Significance levels: } \quad .602 \mathrm{p} \subseteq .05, .735 \mathrm{p} \subseteq .01(\mathrm{~N}=11)
$$

| CPQ/HSPQ | PTCT |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | ACT 1 | ACT ? | ACT 3 | POMAL |
|  | ORIC ELAB | ORIG BTAB | ORIG EJAB | ORIG FLAB |
| CREATIVITY | $367-453$ | -607 -236 | -164-176 | -266-279 |
| EXTRAVERSION | 266 766 | 451 692 | $627 \quad 695$ | $593 \quad 750$ |

## APPETDIX TABIE 4E IMTERCORRRTARIORE:ART WORVS 1 \& 2 ALT SURJECTS

Intercorrelations; Art Works 1 \& 2 Gestalt, Spontaneous, Originality and Involvement.

Significance levels: $212 \mathrm{p} \leq .05, .277 \mathrm{p} \leq .01 \quad(\mathrm{~N}=86)$

| AFT WORKS |  | ART MORKS |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | ART MORE 1 |  |  |  | ART MORK 2 |  |  |  |
|  |  | GEST SPON ORIG TNYO |  |  |  | GEST SPON ORTG INVO |  |  |  |
| ART MORK 1 | GEST | 1000 |  |  |  |  |  |  |  |
|  | SPON | 185 | 1000 |  |  |  |  |  |  |
|  | ORIG | 849 | $\underline{254}$ | 1000 |  |  |  |  |  |
|  | Invo | 777 | 300 | 829 | 1000 |  |  |  |  |
| ART MORK 2 | GEST | 524 | 294 | 512 |  | 1000 |  |  |  |
|  | SPCN | 56 | 351 | 116 | 157 | 140 | 1000 |  |  |
|  | CRIG | 554 | 311 | $\underline{715}$ | 640 | 762 | 186 | 1000 |  |
|  | Invo | 680 | 280 | 718 | 745 | 772 | 242 | 847 | 1000 |

APFENDIX TABLE 4b INTERCORREFATIONS: ART WCRKS 1 \& 2 1St Yr SUBJECTS.
Intercorrelations; Art :"orxs 1 \& 2, Gestalt, Spontanecus, Originality and Involvement

Significance levels .294 p . 05, .381 p

| ART WORKS | ART WORKS. |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | ART WORK 1 |  |  |  | ART MORK 2 |  |  |  |
|  | GEST SPCN ORIG INVO |  |  |  | GEST SROH ORIG INVO |  |  |  |
| ART WORK 1 GEST | 1000 |  |  |  |  |  |  |  |
| SPON | $\begin{array}{r} 73 \\ 848 \\ \hline 774 \\ \hline \end{array}$ | 1000 |  |  |  |  |  |  |
| ORIG |  | 162 | 1000 | 1000 |  |  |  |  |
| Invo |  | 236 | 807 |  |  |  |  |  |
| ART WORK 2 GEST | 413 | 228 |  | $\underline{530}$ | 1000 |  |  |  |
| SPCN | 150 | 493 |  | 182 | 243 | 1000 |  |  |
| ORIG | 580 | 236 | 630 | $\underline{635}$ | 770 | 310 | 1000 |  |
| INVO | 610 | 215 | 672 | 791 | 788 | 290 | 828 | 1000 |

Intercorrelations; Art Works 1 sc 2, Gestalt, Spontaneous, Originality, and Involvement

Significance levels: . $304 \mathrm{p} \leq .05$, .394 $\mathrm{p} \leq .01$ (if : 42)

| ART WORKS | ART MORKS |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | ART WORK 1 |  |  |  | ART YORK ? |  |  |  |
|  | GEST | SPON ORIG INVO |  |  | GEST | SPON ORIG |  | Invo |
| ART WORK 1 GEST | 1000 |  |  |  |  |  |  |  |
| SPON | 91 | 1000 |  |  |  |  |  |  |
| ORIG | 783 | 181 | 1000 |  |  |  |  |  |
| INYO | 607 | 340 | 752 | 1000 |  |  |  |  |
| ARI WORK 2 GEST | 344 | 327 | 323 | 287 | 1000 |  |  |  |
| SPON | -201 | -94 | -214 | -99 | -336 | 1000 |  |  |
| ORIG | 459 | 379 | 463 | 334 | 681 | -175 | 1000 |  |
| INVO | 472 | 419 | 500 | 565 | 678 | -200 | 756 | 1000 |

## APPEIDIX TABLE 53 INTERCORRELATICIS: TIOT: ALL SUBJECTS

Intercorrelations; TTCT Acts. 1, 2, 3 and Total for Oxiginality and Elaboration.

Significance levels: . $212 \mathrm{p} \leq .05, .277 \mathrm{p} \leq .01(\mathrm{~N}=86)$


APFEMDIX TABLE 5! INTERCORRBLATIOMS: TTCT: $15 t$ Yr SUZJECTS.
Intercorrelations; MICT Acts 1, 2, 3 and Total for Originality and Eladoration.

$$
\text { Significance levels: } .294 p \leqslant .05, .381 p \leftrightarrows .01(11 \pi 45)
$$



APPENDIX TABLE 5 C INTERCORRELATIONS: TTCT: FEDALE SUBJECTS
Intercorrelations; TTCT Acts 1, 2, 3 and Total for Originality and Elaboration.

$$
\text { Significance levels: .238 p . 05, .385 p . } \quad .01(\mathrm{~N}=44)
$$

| THCT | TTCT |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | ACT 1 | $\frac{A C T}{2}$ | $\begin{gathered} A C T \\ \hline O R I G E T A B \\ \hline \end{gathered}$ | $\begin{array}{\|l\|l\|} \hline \text { TORAL } \\ \hline \text { ORIG ELAB } \\ \hline \end{array}$ |
|  | CRIC ELAB |  |  |  |
| PTCI ACP 1 ORIG | 1000 |  |  |  |
| ELAB | 421000 |  |  |  |
| AGT 2 ORIG | 112191 | 1000 |  |  |
| ELAB | 63524 | 4291000 |  |  |
| ACT 3 ORIG | -13 160 | $\underline{425} 580$ | 1000 |  |
| ELAB | 211566 | $233 \quad 553$ | 1031000 |  |
| tutal omig | 174192 | $641 \quad 612$ |  |  |
| ELAB | $123 \quad 753$ | $3 \div 8 \quad 882$ | $437 \quad 4$ | 1000 |
|  |  |  | $437 \quad 892$ | 5231000 |

AFPENDIR TABJE 6a CORREFATIOMS: FTCN AID TNTCT: ATT SJETECTS
Comrelation; TTCT Acts 1, 2, 2, and Total for Originality and Elaboration with MrCT Tasks 1, 2, and 3 for Originality ard Elaboration.


| MTCT | TTCN |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | ACT 1 |  | ACT 2 |  | ACT 3 |  | TOTAL |  |
|  | ORIG | ELAB | ORIG | ELAB | ORIG | ETAB | ORIG | It AB |
| HTCT PASK 10 | --183 | -33 | 86 | 108 | 88 | -49 | 66 | 26 |
|  | 46 | 292 | -2 | ? 07 | -52 | 49 | -38 | 144 |
| TASK | 50 | 156 | -90 | 113 | 23 | 123 | 3 | 149 |
|  | 63 | 430 | 214 | 515 | 375' | 358 | 375 | 516 |
| TASK 3 ORIG | 14 | 372 | 287 | 422 | . 441 | 335 | 442 | 443 |
|  | 161 | 412 | 306 | 518 | 365 | 449 | 407 | 550 |

APPEMDIX TABTE 6b CORRELATIONS: TTGT AND MTCT: 3RD Yr. SUBJECTS.
Corrolations; THCT Acts 1, 2, 3 and Totai for Originality and Elaboration with MTCT Tasks 1, 2 , and 3 for Originality and Flaboration.

Significance levels: . $308 \mathrm{p} \subseteq .05, .398 \mathrm{p} \leq .01(\mathrm{~N}=41)$

| MTCT | TTCr |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | ACT 1 | ACT 2 | ACT 3 | TOTAL |
|  | ORTG ELAB | ORIG BLAB | ORIG ELAB | ORIG ELAB |
| MTCT TASK | -158 166 | 147 | -121-168 | -127 -1 |
|  | -85 466 | $23 \quad 356$ | $246 \quad 399$ | $196 \quad 444$ |
| TASK = ORIG | 15159 | -92 107 | 123122 | 107124 |
|  | $74 \quad 433$ | 445686 | 493 494 | $526 \quad 659$ |
| TASK 3 ORIG ELAB | $8 \quad 413$ | $399 \quad 453$ | $420 \quad 345$ | $444 \quad 475$ |
|  | $179 \quad 450$ | 511583 | 386 | $466 \quad 610$ |

## APPENDIX TABLE 6C CORRSLATLOAS: TTCT AND RTCT: FALE JUPTECTS

Correlations; TrCT Acts. 1, 2, 3 and Tutal for Originallty and Elaboration with liTCT Tasks 1, 2, and 3 for Originality and Elaboration.


| MTCT | Tres |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Act 1 |  | ACT 2 |  | ACT 3 |  | $\therefore$ motal |  |
|  | ORIG ETAB |  | ORIG | ETAB | CRIG ELAB |  | ORIG ELAD |  |
| MTCT TASK | -154 | 45 | 312 | 238 | 205 | -11 | 234 | -121 |
|  | -99 | 271 | 20 | 222 | -23 | 83 | -32 | 220 |
| TASK 2 | 166 | 144 | -189 | 24 | -45 | --51 | -62 | 36 |
|  | 87 | 550 | 239 | 561 | 282 | 499 | 304 | 621 |
| TASK 3 ORIG | 38 | 274 | 264 | 205 | 328 | 207 | 341 | 254 |
|  | 130 | 376 | 352 | 352 | 298 | 383 | 354 | 427 |

## AREENDIX TABLE Ta CORRELATIONS: ART HOERS AHD HTCT: ALL SURTECTS

Correlations; Art Works 1 \& 2 for Gestalt, Spontaneous, Orfeinality and Involvement withirTCT Tasks 1, 2, and 3 for Oriéinality and Elaboration.

Significance levels: . $212 \mathrm{p} .05, .277 \mathrm{p} .01$ (N a 86)

| HTCT | ATT HORKS |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | ART MORK 1 |  |  |  | ART MORK 2 |  |  |  |
|  | GEST | SPON | ORTG | Invo | GEST | SPON | ORIG | Inyo |
| MTCT MASK 1 | -89 | 56 | 13 | 33 | -83 | 59 | -87 | -42 |
|  | 18 | 98 | -30 | 83 | 205 | 60 | 153 | 108 |
| TAGK | -137 | -20 | -89 | -122 | 56 | 0 | 42 | 80 |
|  | 35 | 14 | 65 | 114 | 305 | 98 | 225. | 326 |
| TASK | 60 | 2 |  | 205 | 202 | -11 | 352 | 250 |
|  | 2.44 | 118 |  | 319 | 378 | 1.18 | 426 | 440 |

Correlations; Art Torks 1 \& 2 for Gestalt, Spoiataneous, Originality and Involvement with KTCT Tesks 1, 2 and 3 for Originality and Elaboration.

Significance levels: .224 p $\sqrt{3} .05$, .381p $\leqslant .01$ (N a 45)

| HTCT | ART MCRKS |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | ART MORS 1 |  |  |  |  |  |  |  |
|  | GEST | SPON | ORIC | IHYO | GEST SPON OSTC IMVO |  |  |  |
| IHTCT TASK 1 ORIG <br>  |  | 163 | 4 | 5 |  |  |  |  |
|  | -70 | 124 | -109 | 106 | 16 |  |  | 0.4 |
| TAST 2 ORIG | -118-234 | -5340 | $\begin{array}{r} -11 \\ -257 \end{array}$ | $\begin{array}{r} 8 \\ -32 \end{array}$ | $\begin{array}{r} 55 \\ 121 \end{array}$ | $\begin{array}{r} -68 \\ 38 \end{array}$ | 219 | 182 |
|  |  |  |  |  |  |  | -12-70 | $\begin{array}{r} 102 \\ 97 \end{array}$ |
|  |  |  |  |  |  |  |  |  |
| TASK 3 ORIG ELAB | $\begin{aligned} & -53 \\ & 152 \end{aligned}$ |  | $\begin{aligned} & 155 \\ & 329 \\ & \hline \end{aligned}$ | $\begin{array}{r} 83 \\ 274 \end{array}$ | 55249 | $\begin{aligned} & -50 \\ & 137 \end{aligned}$ | 150 | 202 |
|  |  |  |  |  |  |  |  |  |

## APPENDIX TABLE 7c CORRELATIONS: ART MORKS AND MTCT: FEMALE SUBJECTS

Correlations; Art Works 1 \& 2 for Gestalt, Sponteneous, Originality and Involvement with HTCT Tasks 1, 2, and 3 for Originality and Elaboration.

Significance levels: . 298 p $4.05, .385 \mathrm{p}$, 01 ( Na 44 )


APPENDIX TABLES Ba \& Bb CORRETATIONS TTCT \& ART VORKS: ALI SUBJECTS
Correlations: TICT Acts. 1, 2, 3, \& Totals for Fluency, Flexibility, Originality \& Elaboration with \&rt Forks 1 \& 2 for Gestalt, Spontaneous, Oricinality \& Involvement: 1967/68 \& 2970. Significance levels: $26 \mathrm{p} \leq .05, .36 \mathrm{p} \leq .01$ ( $\mathrm{IV}=41$ )



APPMNDIX TABLE 8 c COMRELATIONS TTCT \& ART HORKS: JALES 2970
TTCT Total for Fliency, FLexibility, Oríginality and Elaboration with Art Works 1 and 2 for Gestalt, Spontaneous, Originality and. Involvement.

Significance levels: $-36 \mathrm{p} \leq .05, .50 \mathrm{p} \leq .01$ ( $\mathrm{N}=21$ )


APPENDIX TABLE 8d CORRELATIONS TTCT \& ART WORKS: CONTROL 1970 THCT ACT. 2 for Fluency, Flexibility, Originality and Elaboration with Art Works 1 and 2 for Gestalt, Spontaneous, Originality and Involvement.

Significance levels: . $38 \mathrm{p} \leqslant .05, \quad .52 \mathrm{p} \leqslant .01 \quad(\mathbb{N}=19)$

| TTCT | ART WORKS |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | WORK 1 |  |  |  | WORK 2 |  |  |  |
|  | GEST | SPON | ORIG | INVO | GESTT | SPON | ORIG | INVO |
| ACT 2 F | -. 37 | -. 11.1 | $\underline{-.50}$ | -. 44 | -. 16 | . 22 | -. 28 | -. 25 |
|  | -. 47 | -. 04 | -. 57 | -. 56 | --27 | . 07 | -. 37 | -. 44 |
|  | $\underline{-.46}$ | -. 06 | -. 46 | -. 47 | -. 17 | - 21 | -. 06 | -. 29 |
|  | . 62 | . 23 | . .52 | . 51 | . 59 | . 22 | . 50 | . 48 |

APPENDIX TABLE 8e CORREIATIONS TMCT \& ART WORKS: EXPERIPENTAL 1970
TTCT ACT. 3 for Fluency, Flexibility, Originality and Elaboration with Art Works 1 and 2 for Festalt, Spontaneous, Originality and Involvement.

Significance levels: . $36 \mathrm{p} \leq .05, .49 \mathrm{p} \leq .01 \quad(N=22)$

| TICT | ART WORKS |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | FORKK 1 |  |  |  | WORK 2 |  |  |  |
|  | GEST | SPON | ORIG | INVO | GEST | SPON | ORIG | INVO |
| ACT 3 FLUE | - 30 | . 23 | . 44 | - 36 | -61 | -46 | - 68 | . 48 |
| FLEX | - 33 | . 25 | . 35 | . 24 | - 57 | . 44 | . 61 | . 42 |
| ORIG | -41 | . 16 | . 57 | . 35 | . 40 | . 17 | . 52 | . 42 |
| ELAB | - 22 | . 25 | . 41 | -45 | -42 | - 30 | . 38 | . 23 |

Correlations: $H S P Q$ for Creativity and Exvia with Art Works 1 and 2 for Gestalt, Spontaneous, Originality and Involvement. Significance levols: . 36 p 5.05 , $.49 \mathrm{p} \leq .01 \quad(\mathrm{~N}=22)$

| HSPQ | ART WORKS |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | WORK 1 |  |  |  | WORK 2 |  |  |  |
|  | GEST | SPON | ORIG | INVO | GEST | SPON | ORIG | INVO |
| CREATIVITY | -. 38 | $-.33$ | -. 53 | -. 49 | -. 29 | -. 42 | -. 46 | -. 46 |
| EXVIA | . 26 | . 41 | . 34 | . 38 | . 17 | . 52 | . 23 | . 36 |

APPENDIX TABLE 9b CORRELATIONS CPQ \& ART WORKS: EXPT. MALES 1967
Correlations: $C P Q$ for Creativity and Exvia with Art Works
1 and 2 for Gestalt, Spontaneous, Originality and Involvement. Significance levels: . $54 \mathrm{p} \leq .05$, . $71 \mathrm{p} \leq .01 \quad(\mathrm{~N}=10)$

| CPQ | ART WORKS |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | WORK 1 |  |  |  | WORK 2 |  |  |  |
|  | GEST | SPON | ORIG | IIVVo | GEST | SPON | ORIG | INVO |
| CREATIVITY | -. 34 | -. 06 | $\underline{-.58}$ | -. 38 | . 61 | -. 09 | .10 | .13 |
| EXVIA | . 78 | -. 22 | . 65 | . 67 | -. 12 | .12 | .13 | . 43 |

APPENDIX TABLES 10a, b, c, \& d CORRELATIONS CPO/HSPQ \& TTCT
Correlations: $C P Q / H S P Q$ for Creativity and Exvia with TTCT Activities $1,2,3$ \& Total for Fluency, Plexibility, Originality and Elaboration. Selected groups $1967 / 68$ \& 1970. Significance levels are shown with individual tables.

| TTCT | $\begin{aligned} & \text { TABLE 10a } \mathrm{HSPQ} \\ & \text { EXPERIIIEITAL } 1970 \quad(\mathrm{~N}=22) \\ & \frac{.36}{\mathrm{cRE}} \leq .05, \frac{.49}{\mathrm{p}} \leq .01 \\ & \end{aligned}$ |
| :---: | :---: |
| ACT 1 ORIG | -.09.. 18 |
| ELAB | -. 37 . 25 |
| ACT 2 FLUE | -. 05 . . 11 |
| FLEX | $.08-.07$ |
| ORIG | .11 .23 |
| ELAB | -. 30.26 |
| ACT 3 PLUE | -. 52.31 |
| FLEX | -. 55 . 40 |
| ORIG | -. 28 . 16 |
| ELAB | -. 19 . 15 |
| TOTAL FLUE | -. 41 . 28 |
| FLEX | -. 36 . 26 |
| ORIG | -. 26 . 27 |
| ELAB | -. 32.26 |


| TTCT |  |
| :---: | :---: |
| ACT 1 | 1 ORIG |
|  | ELAB |
| ACT 2 | 2 FLUE |
|  | FLEX |
|  | ORIG |
|  | ELAB |
| ACT 3 | 3 FIUE |
|  | FIEX |
|  | ORIG |
|  | ELAB |
| TOTAL | FLUE |
|  | FLEX |
|  | ORIG |
|  | ELAB |

TABLE 10 c HSPQ
CONTR. MALES 1970 ( $N=. L$ ) $.52 \mathrm{p} \leq .05, .68 \mathrm{p} \leq .01$ CREATIVITY EXVIA

| -.07 | .07 |
| ---: | ---: |
| .43 | -.05 |
| .- .51 | .42 |
| -.66 | . .65 |
| -.30 | .38 |
| .09 | .11 |
| .49 | .- .54 |
| .60 | -.59 |
| .25 | -.13 |
| .59 | -.55 |
| .16 | -.25 |
| .04 | -.05 |
| .14 | .00 |
| .44 | -.22 | $\begin{array}{rr}-.07 & .07 \\ .43 & -.05 \\ -.51 & . .42 \\ -.66 & -.65 \\ -.30 & .38 \\ .09 & .11 \\ .49 & -. .54 \\ .60 & -.59 \\ . .25 & -.13 \\ .59 & -.55 \\ .16 & -.25 \\ .04 & -.05 \\ .14 & .00 \\ .44 & -.22\end{array}$

TABLE 10a HSPQ
EXPERIMENTAL 1970 ( $N=22$ ) $.36 \mathrm{p} \leq .05, .49 \mathrm{p} \leq .01$ CREATIVITY EXVIA

TABLE 10b CPQ
EXPT: MALES 67/68 ( $N=10$ ) $.54 \mathrm{p} \leqslant .05, .71 \mathrm{p} \leqslant .01$ CREATIVITY EXVIA

| . .22 | $\underline{.55}$ |
| :--- | :--- |
| -.36 | $\underline{.73}$ |
| -.75 | .41 |
| -.69 | .38 |
| -.64 | .46 |
| .- .15 | $\underline{.67}$ |
| -.29 | . .73 |
| -.32 | $\underline{.74}$ |
| -.24 | . .74 |
| -.16 | -.73 |
| -.48 | $\frac{.66}{.65}$ |
| -.49 | $\underline{.70}$ |
| -.35 | -.74 |


| TABLE 10d ${ }^{\text {CP }}$ |  |
| :---: | :---: |
| EXPT. FENS. 67/68 ( $\mathrm{N}=12$ ) |  |
| . $49 \mathrm{p} \leq$ 。 | .65 p |
| CREATIVI | EXVIA |
| . 51 | -. 11 |
| -. 66 | -31 |
| . 47 | -. 7.4 |
| . 44 | -. 73 |
| . 18 | -. 35 |
| -. 16 | . 07 |
| . 30 | -. 68 |
| . 20 | -. 52 |
| . 44 | -. 62 |
| -. 06 | -. 26 |
| . 37 | -. 73 |
| - 31 | -. 64 |
| -49 | -. 60 |
| -. 38 | . 02 |

APY
Intercorrelations: Art Works 1 and 2 for Gestalt, Spontaneous, Originality and Involvement.

Significance levols: $.26 \mathrm{p} \leq .05, .36 \mathrm{p} \leq .01 \quad(\mathrm{~N}=41)$

| ART WORKS | WORK 1 |  |  |  | WORK 2 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | GEST | SPON | ORIG | INVO | GEST | SPON | ORIG | INVO |
| WORK 1 GEST | $-$ |  |  |  |  |  |  |  |
| SPON | -. .23 | - |  |  |  |  |  |  |
| ORIG | . 81 | -.13 | - |  |  |  |  |  |
| INVO | . 70 | -. 02 | . 75 | - |  |  |  |  |
| WORK 2 GEST | .36 | . 15 | . 39 | . 49 | - |  |  |  |
| SPOIN | -. 03 | . 39 | $-.09$ | . 00 | . 15 | - |  |  |
| ORIG | . 50 | . 07 | . 57 | . 56 | . 76 | . 20 | - |  |
| Invo | . 54 | . 05 | . 62 | .76 | . 76 | . 17 | . 80 | - |

APPENDIX TABLE 11 D INTERCORRELATIOIVS ART WORKS: ALL SUBJECTS 1970
Intercorrelations: Art Works 1 and 2 for Gestalt, Spontaneous, Originality and Involvement.

Significance levels: $2.26 \mathrm{p} \leq .05, \underline{-36} \mathrm{p} \leq .01 \quad(\mathrm{~N}=41)$

| , ART WORKS | WORK 1 |  |  |  | WORK 2 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | GEST | SPON | ORIG | IIVO | GEST | SPON | ORIG | IINVO |
| WORK 1 GEST. | - |  |  |  |  |  |  |  |
| SPON | . 30 | - |  |  |  |  |  |  |
| ORIG | . 80 | . 41 | - |  |  |  |  |  |
| INVO | . 79 | . 50 | . 83 | - |  |  |  |  |
| WORK 2 GEST | .61 | . 46 | . 64 | . 70 | - |  |  |  |
| SPON | . 21 | . 64 | . 29 | . 38 | . 46 | - |  |  |
| ORIG | . 64 | . 46 | . 73 | . 74 | . 89 | . 47 | - |  |
| INVO | . 71 | . 56 | . 69 | . 86 | . 75 | . 58 | . 82 | - |

## APPENDIX TABLE 12a INTERCORRELATIONS TTCT: ALL SUBJECTS 1968

Intercorrelations: TTCT Activities 1, 2, 3, and Total for Fluency, Flaxibility, Originality, and Elaboration.

Significance levels: $.26 \mathrm{p} \leqslant .05, .36 \mathrm{p} \leqslant .02$ ( $\mathrm{N}=41$ )

| TTCT | ACT 1 |  | ACT 2 |  |  |  | ACT 3 |  |  |  | TOTAL |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | ORIG | ELAB | FLOE | FLEX | ORIG | ELAB | PLUE | FLEX | ORIG | ELAB | FLUE | FLEX | ORIG | ELAB |
| $\begin{array}{r} \text { ACT } 1 \text { ORIG } \\ \text { ELAB } \end{array}$ | $.09$ |  |  |  |  |  |  |  |  |  |  |  |  |  |
| $\begin{aligned} & \text { ACT } 2 \text { FLUE } \\ & \text { FLEX } \\ & \text { ORIG } \\ & \text { ELAB } \end{aligned}$ | $\begin{aligned} & .02 \\ & .11 \\ & .09 \\ & .24 \end{aligned}$ | $\begin{array}{r} .08 \\ .13 \\ .19 \\ .55 \end{array}$ | $\begin{aligned} & .87 \\ & . .77 \\ & .18 \end{aligned}$ | $\begin{aligned} & -. \\ & .74 \\ & .22 \end{aligned}$ | $.40$ | - |  | . |  |  |  |  |  |  |
| ACT 3 FLUE | . 16 | . 22 | . 64 | . 56 | . 42 | 232 | - |  |  |  |  |  |  |  |
| FLEX | . 20 | . 28 | . 61 | . 57 | . 54 | . 38 | . 91 | - |  |  |  |  |  |  |
| ORIG | . 48 | . 17 | . 52 | . 41 | . 44 | . 37 |  | . 59 | - |  |  |  |  |  |
| ELAB | . 31 | . 53 | . 23 | . 18 | . 24 | .67 |  |  | . 44 | - |  |  |  |  |
| TOTAL PLUE | . 11 | . 19 | . 83 | . 72 | . 59 | . 30 | . 96 | . 88 | . 62 | . 49 | - |  |  |  |
| PLEX | . 18 | . 26 | . 79 | . 81 | . 69 | . 35 | . 87 | . 94 | . 58 | . 48 | . 92 | - |  |  |
| ORIG | . 56 | . 20 | . 64 | .57 | . 68 | . 45 | . 59 | . 64 | . 94 | . 45 |  | . 68 | - |  |
| ELAB |  | . 75 |  | . 21 | . 34 | . 90 | . 46 | . 50 | . 41 | . 88 | . 40 | . 44 | . 45 | - |

## APPENDIX TABLE 12b INTERCORRELATIONS TTCT: ALL SUBJECTS 1970

Intercorrelations: THCT Activities 1, 2, 3, and Total for Pluency, Plexibility, Originality and Elaboration.

Significance levels: $.26 \mathrm{p} \leq .05, .36 \mathrm{p} \leq .01 \quad(\mathrm{~N}=41)$


The fraphs contained in this Part Five of the Appendix are concerned with the Study to Test Hypothesis B. They are referred to in Chapter IIineteen: Analysis and Interpretation of Data.

The Graphs in each Set are dram with 'equall axes' to facilitate comparisons. Interactions are shown in RED and BLACK. CONTENTS
SET ONE: B (SEX) pages a--e SET TWO: A (GROUP) x C (YEAR) pages a-g PAGE NO.'s SET THREE: A (GROUP) $x$ B (SEX) $x C$ (YEAR)

$$
130-134
$$

$$
135-141
$$

142-144 SET FOUR: D (TESTS) page a only: one graph of the 24 Tests. -145 SET FIVE: B (SEX) x D (TESTS) page a only SET SIX: C (YEAR) page a only

NUMBERS AND TITLES OF THE TWENTY-FOUR TEST ITEMS (D)

| TEST NO. | TITLE OF TEST |
| :--- | :--- |


| TEEST NO. | TITLE OF TEST | TEST ITEA FACTOR |
| :---: | :---: | :---: |
| $\begin{aligned} & 1 \\ & 2 \end{aligned}$ | PERSONALITY TEST: ${ }_{\text {" }}$ | CREATIVITY EXVIA |
| 3 |  | $\begin{aligned} & \text { ORIGINALITY ACTIVITY } 1 \\ & \text { ELABORATION } \end{aligned}$ |
| $\begin{aligned} & 5 \\ & 6 \\ & 7 \\ & 8 \end{aligned}$ | $" 1$ " n <br> $"$ " " <br> " " " <br>  $n$ $n$ | FLUENCY ACTIVITY 2 <br> FLEXIBILITY " <br> ORIGINALIIY $"$ <br> ELABORATION $"$ |
| $\begin{array}{r} 9 \\ 10 \\ 11 \\ 12 \end{array}$ | " " <br> " " <br> "  <br> $n$ " | FLUENCY ACTIVITY 3 <br> FLEXIBILITY " <br> ORIGINALITY " <br> ELABORATION $"$ |
| $\begin{aligned} & 13 \\ & 14 \\ & 15 \\ & 16 \end{aligned}$ |  | FLUENCY TOTAL <br> FLEXIBILITY " <br> ORIGINALITY $\prime \prime$ <br> ELABORATION $\prime \prime$ |
| $\begin{aligned} & 17 \\ & 18 \\ & 19 \\ & 20 \end{aligned}$ | ART WORKS JUDGEMENTS <br> " " n <br> " n " <br> " n n | GESTALT ART WORK 1 <br> SPONTAIVEOUS $n$ $n$ <br> ORIGINALITY $n$ $n$ <br> INVOLVENENT $n$ $n$ |
| 2. 22 23 24 |  | GETALT ART WORK <br> SPONTANEOUS $n$ " <br> ORIGINALITY " " <br> INVOLVEMENT " " |



MUST D 7 p $\leq .25$


B EFFECT•IN IVDIVIDLJAL TESTS


TEST D 8 p $\leq .05$


B EFFECT IN INDIVIDUAL TESTS

TEST D $9 \mathrm{p} \leqslant .01$


TEST D $3.20 \leqslant .25$

$\operatorname{TEST} D 10 \mathrm{p} \leq .25$



B EPFECT IN INDIVIDUAL TESTS
$\operatorname{TEST} D 13 \mathrm{p} \in .05$


TEEST D $17 \mathrm{p}=.005$



TESTD $16 \mathrm{p} \leq .025$

TEST D $18 \mathrm{p} \approx .25$


GRAPHS: SET ONE FACTOR B SEX (BI = MALES: B2 = FEMALES) page d日 EFPECT IN INDIVIDUAL TESTS

TESTD $19 \mathrm{p} \leq .001$
TEST D $20 \mathrm{p} \leqslant .001$



TESTD $2 . \mathrm{p} \leq .001$



## GRAPHS: SET ONE

E EFFECT IN INDIVIDUAL TESTS

$A 1=$ Control Group; $A 2=$ Experimental Group: $C 1=1967 / 68 ; C 2=-1970$


HOTA: Throughout Set Two Graphs Al, Control group is in Rill A2, Experimental group is in EInck

Graphs for all 24 TESTS (D) are included, even where not significant, for comparison purposes.
$\mathrm{Al}=$ Control; $\mathrm{A} 2=$ Experimental: $\mathrm{Cl}=1967 / 68 ; \mathrm{C} 2=.1970$

TEST DI p $\leq .250$


TEST D3 $\mathrm{p} \leqslant .000$


TEST D2 (not significant)


TEST D4 p $\leq .250$


136
$\mathrm{Al}=$ Control; $\mathrm{A} 2=$ Experimental: $\quad \mathrm{CI}=1967 / 68 ; \mathrm{C} 2=1970$ TESTD $5 \mathrm{p} \leq .250$

TEST DG $\mathrm{p} \leqslant .250$


TEST D7 p 5.05



$\mathrm{AI}=$ Control; $\mathrm{A} 2=$ Experimental: $\mathrm{Cl}=1967 / 63 ; \mathrm{C} 2=1970$ TEST D9 (not significant)


TMST DII $\mathrm{p} \leqslant .250$



TEST DI2 (not sign:)


138

GRAPHS: SET TWO IMTBRACTION A (GROUP) $\times$ C (YEAR)
page a
$\mathrm{AI}=$ Control; $\mathrm{A} 2=$ Experimental: $\mathrm{Cl}=1967 / 63 ; \mathrm{C} 2=1970$


TEST DIS $\mathrm{p} \leqslant .05$


TUST D14 p $\leqslant .250$

$\mathrm{Al}=$ Control: $\mathrm{A} 2=$ Experimental $: \mathrm{Cl}=1967 / 63 ; \mathrm{C} 2=1970$

TEST $017 \mathrm{p} \leqslant .100$


TEST D1.9 $p \leq .05$


TEST DI8 (not sign.)


TEST D20 $\mathrm{p} \leqslant .250$
 $\mathrm{Al}=$ Contral; $\mathrm{A} 2=$ Experimental: $\quad \mathrm{CI}=1967 / 68 ; \mathrm{C} 2=1970$


TEST D23 $\mathrm{p} \leqslant .250$



TESTI D24 (not sicn.)


GRAPHS: SET (THREE A (GROUP) $\times$ 日 (SEX) $\times C$ (YRAR) A1 (Control) A2 (Expt.): BI (Nale) B2 (Fem.) : C1 (67/68) C2(1970) 1. A $\times$ B for C. Test $D 18$



C2


## 2. A x C for B. Test II18



BI


B2


143

GRAPHS: BET THREE A (GROIP) $\times B$ (SEX) $\times C$ (YEAR)
Al (Control) A2 (Expt.): Bl (hale). B2 (Fem.) : Cl (67/68) C2 (1970)
3. $B \times C$ for $A$. Test D18

$$
\mathrm{Al}+\mathrm{A} 2 \mathrm{p} \leqslant .025
$$

+ AI


A2


144

GRAPHS: SET FCUR (ONE GRAPH ONLY) D (TESTS) $p=.001$ page a For KiY to Test Numbers see Key Page at the start of the Graphs (Appendix Part Five: p.129).

$$
\text { 웅옹ㅇㅇㅇㅇㅇㅇㅇㅇㅇㅇㅇㅇㅇㅇ } 145
$$

For KEY to Test Numbers see Key Page at the start of the Graphs (Appendix Part Five: p.129).


GRAPHS: SET SIX (ONE PAGE ONIY) C (YEAR) for D (Tests) paga a C1 (1967/68) C2 (1970): for TESTS D2, D3, D10, and D19

TEST $02 \mathrm{p} \leq .005$


TEST DIO p


TEST D3 $p \leqslant .05$


TEST D19 p
 $\mathrm{Bl}=$ Liales $\mathrm{B} 2=$ Females: $\mathrm{Cl}=1967 / 68 \mathrm{C} 2=1970$ \& TESTS D5 \& D6


FrOTE: A similax patterm was chserved. (i.e. B2 higher then B1 in Ol, but B2 lowar than B1 in C2) in the followinc rests at Lower letels ot simnificance:

TMST DI $\quad \mathrm{D}=.250$
TEST D7, $\mathrm{p}=.100$
TEST D14 $p=.250$ $\mathrm{Al}=$ Control $\mathrm{A} 2=$ Experimental: $\mathrm{Bl}=$ liales B 2 = Females A $x$ B for TEST D18 only: test with highest level of significance.


NO'Ti: A similar pattern Mas observed (i.e. Bl higher, or similar, in A2 than in $A 1$; and $B 2$ lower in A2 than in Al) in tho following restis et lower levals of sienificance:
TEST D2 $\quad \mathrm{D} \leqslant .100$
TEST D12 $0 \leq .100$
TUST $219 \mathrm{p} \leqslant .250$
TEST D2O n $\leq .200$
TEST D21 $n \leqslant .250$
TEST D23 p $\subseteq .250$
TEST D24 $\mathrm{p} \leqslant .250$

## APPEITDIX PART SIX

A
GROUP
l. CONTROL

2 EXPERIMENTAL
NOTE: 1 - BLACK LINES, 2 - RED LINES
Interactions can be compared by laying one graph on top of another. Use the white back of the folder underneath the two graphs being compared for ease of viewing.
There are 4 graphs of $D$ for A: 4 graphs of D for B: and 4 graphs of D for C: i.e. a set of 12 graphs.


| 12 | 3.4 | $5 \quad 6 \quad 7 \quad 8$ | $9 \quad 10 \quad 11 \quad 12$ | $1314 \quad 15 \quad 16$ | 17 | 1819 | 20 | 21 | $22 \quad 23$ | 24 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| CREA EXVI | ORIG ELAB | FLUE FLEX ORIG ELAB | FLOE FLEX ORIG ELAB | FLUE FLEX ORIG ELAB | CES | SPON ORIG | IEVO | GES | SFON ORI | INVO |
|  | ACT 1 | ACT 2 | ACT 3 | TOTAL |  | WORK 1 |  |  | WORK 2 | -1. |
| CPQ/HSPQ | TTCT (TORRANCE TESTS OF CREATIVE THINKING) |  |  |  | ART WORKS |  |  |  |  |  |

A Group
B2 Females CI Yearl 67/68
$60 \int^{20}$ A2 EXPERIMENTAL
GRAPH 9:B
$\square \mid$







| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 21 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |




KEY: for D TESTS 1 to 24






| 12 | 3.4 | $\begin{array}{llll}5 & 6 & 7 & 8\end{array}$ | 9 | 20 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| CREA EXVI | ORIG ELAB | FLUE FLEX ORIG ELAB | FLOE | FLi'X | ORIC | ELAB | FLUE | FLEX | ORI | ELAB | GEST | SPON | OKI | Invo | GES | SFON | OHIG | NVO |
| CR- EXV | ACT 1 | ACT 2 |  |  | 3 |  |  |  |  |  |  |  | K I |  |  |  | 2 |  |
| CPQ/HSPQ | TTCT (TORRANCE TESTS OF CREATIVE THINKING, |  |  |  |  |  |  |  |  |  | ART WORXS |  |  |  |  |  |  |  |









This is a sample of the CREATIVITY PROGRARIE exactly as it was administered to the EXPERIMENTAL GROUP in 1969/1970.

The CREATIVITY PROGRAIIIE is presented in Three Elements: the first two Elements being presented in two or more Units.

The format and tities being as follows:
ELEMENT ONE: "WHAT IS CREATIVITY?"
UNIT ONE: "WHAT IS A CREATIVE PRODUCT?"
UNIT TWO: "WHO IS LIKELY TO BE A CREATIVE PERSON?"
UNIT THREE: "WHAT METHODS DO CREATIVE PERSONS USE TO PRODUCE CREATIVE PRODUCTS?"

ELFRENT TWO: "BRAINSTORMING"
UNIT ONE: "HOW TO BRAINSTORM"
UNIT TWO: "YOU TRY SOME BRAINSTORMING"
THE "REMINDER LEAFLET" (this 'revision' leaflet was given to the subjects at this point)

ETERTENT THREE: "BRAINSTORUING A PAINTING"
APPENDIX: HINTS FOR IMPROVING YOUR CREATIVE POWERS
Given to the subjects for their own use as reference and revision, in association with the REMINDER LEAFLET, in an attempt to 'open the mind' to a creative attitude to life.

PROBLEXI ONE: How many different ideas can you think of to make it "safer at home"?
Here is a list of ideas thought up in about five minutes:
Look for dangerous things in the home.
Consider how anything in the home could be dangerous in some way to babies, children, adults, or old people.
Look out for fire dangers, look after matches, watch open fires are guarded, see oil stoves cannot be tipped over, and are of the self extinguishing typa; see that spark guards are used as well as the type that stop people or their clothes getting too near to the fire. Use only flameproof clothes. Be very careful when using candles, oil lamps, gas lamps and stoves. Watch out for fumes from oil stoves, coke, and gas firas.
See that the electricity is used aafely. Watch that plugs, sockets, cables and appliances are in good order. Do not overload any circuit. Use only the right fuses. Switch off before taking plugs out or putting them in. If fuse blows check why before putting in a new one.
Put lights in dark places. See roams are well heated for old people. See that all carpets are safe and will not aidp or trip people up. See that fittings that ara held on to are safe e. g. stair hand-rails or bathroom fittinge for old folk. See that floors are not slippery, and that grease, soap etc. is cleaned up immediately.
See that awikerd projections are removad so that people will not bang into them. See the furniture is safe and is not in the way of peopla moving around.
See that all dangerous medicines and chemicals are kept out of the way of childran and old people. See that every such product is carefully labelled dangerous, or put a rad skull and crossbones on it for those that are too young, or those whose eyes are not too good, to read.
Be very careful with all cooking pans, stoves and sharp knives and forks etc. The kitchen bristles with danger, it is the armoury of the house. Look out especially for boiling water, and oil. Make certain young children and old people cannot knock, or pull, on to themselves boiling liquide or very hot food. Look out for table-cloths in this way too.
Check that the external structure of the house is safe. Make sure chimneys are not likely to crash down. Check the roal timbers and staircases and floors for rot or wood worm.

These ideas are only a few of those that might have been thought of if a full brainstorm session had taken place. How many of these have you thought of? It may be you have many that are not mentioned here at all, or you have some that you think are very important. If you have, remember to tell someome about your ideas.

Most of the ideas on this list are not new ideas, so they cannot be considered as originel. This does not mean that they are not important, but you are looking for original ways to make the home safer.

In the above list perhaps the first idea could be thought the mast original, and the best. It makes one think of all the things in the home, and consider how each one could be dangerous in some way. If one is looking for danger then a lot of the other ideas will come to mind as one looks at things.

The idea of checking the safety of the structure of the house and the fittings is also fairly original. This is not often stressed in 'Safety in the Home' exhibitions and leaflets etc. but a number of accidents do occur due to loose fittings and faulty or rotting structure of the house itself.

PROBLEM TWO: How many different ideas for drawings can you do starting each drawing with a triangle?

Here


Road Sign

prism


Pyramid


Metronome


Rocket
Hammer Arrowhead


Whin sock


Trumpet ice Fear $^{\text {cream }}$


It would be difficult to pick out a best, most original idea from these drawings, because different people like different things. You may like some of these ideas better than others because they remind you of something. Your ideas may be very different or some may be the same as those on this sheet. You choose now which you think is the best and most original of the drawings you have done. When you have done this ask someone else which they think is the best of your ideas; you will rarely find that they agree with you.

MASTER BRAINSTORL SHEET:
PROALEM HRRE: How meny different ways can you think of to make your clothing lest langer?
Here is a list of ideas thought up in about five minutes:
Gat expansive clothes of good quality, that last longer.
Get cheap clothes of good quality (ex-government surplus, sales,
bargains etc.) even though they may not be in fashion.
Get some items in quantity, i.e. many articles the same type
e. g. socks, stockings, head-scarves, handkerchiefs. They will
interchangaable and cheaper in bulk.
Keap clothas clean. Regular brushing, washing, cleaning, etc.
Store the clothes properly. See they are aired, moth-proofed,
and are not crushed.
Dry clothes gently, keep them away from strong heat. Keep them
dry. Do not iet corrosive atmosphere, liquids or gases, get
at them.
Don"t wear any clothes.
Change clothes often, particularly after heavy exercise, as
long as you care for the clothns you have just taken off.
Wear protactive clothing over your normal clothing, e.g.
overails, boiler suit, mackintosh, when doing jobs in wat or dirty places.
Have apecial clothing for different occasions, e. g. sports, dances, school, wet weather, cold weather, hot weather, working
on the farm, hiking, camping, swimming, and only wear these
clothes for the right occasion.
Wear other people's clothes as often as possible.
Repair clothes at the first sign of trouble.
Hake your amn clothes, wherever you can do so.
Consider the conditions in which you are going to wear clothes when you buy them, and buy c.lothes that will do for a number
of purposes.
Stay in bed.
Join a nudiat society.
Check clothes that you don't wear very often to see if they are damp, auffaring from moth damage, e.tc.
Get the right cleaner for a particular type of stain.
Give a note of the particular type of stain on the cloth
when you give it to the cleaners.
Don't lend your clothes to anyone else.
Hear as little as possible and live in heated houses.
These are just a few ideas that occur. You may have many others as well as some of these. If you have an idea that you think is better then any of these then tell someone about it.

A number of the ideas in this list are not original of course, so from our point of vieli of cetting the best original idea they would be dropped from the list. How many ideas do you think are not new?

Some other ideas are not practical even if they are originel. Ideus such as: not wearing any clothes, wear other people's clothes, stay in bed, etc. are not practical or would offend society.

Some of the other ideas may take a lot of time, and money, to make sure your clothes last. Which do think is the best, original idea that you cnild ure now? Perhaps you may agree that the idea of buying clothes that will do for a number of purposes, is a good idea.

Check through your list and see if you have a better original idea.

## CREATIVITY PROGRAMME

REMINDER LEAFIET
You have now worked your way through most of the creativity programme. This reminder leaflet (which you can keep with you) wi.ll help you to remember the important things that you have leamed. You can use this knowledge now that you are doing practical creative work.

The leaflet tells you, in very brief note form, the factors conceming Creative Products, Creative Persons, and Iiethods of Producing Creative Products, that you learned in the first element of this programme; also a brief guide to the 'Brainstorming' method you learned to use in the second element. WHAT IS A CREATIVE PRODUCT? IS YOUR PRODUCT CREATIVE?
A CRIPATIVE PRODUCT IUST do the job intended, and MUST be ORIGINAL................A NEW or an INPROVED product, and IHAY also
be DYNAMIC......................BXCITING, LIVELY, STIRS PIEEINGS,
be COMPLEX....................IITTERESTING, has VARIETY, is INTRICATE,
be INTEGRATED...............ORGANISED, PLANNED, ARHANGED,
show PERSONALITY..............INDIVIDUALITY or FEELINGS OF PRUDUCER, show HASTERY OF SUBJECT......STUDIED THE JOB THE PRODUCT MUST DO, show Mastery of media........STUDIED MATRRIALS \& METHODS OF PRODUCTION, CHANGE THE ENVIRONAENT...CHANGES OR ADDS TO OUR WAY OF LIVING.

WHO IS LIKELY TO BE A CREATIVE PERSON? DO YOU THINK YOU ARE ONF?
A CREATIVE PERSON is likely to:
be QUESTIONING..............CRITICAL, ALWAYS ASKING QUESTIONS,
be ADVENTUROUS...............NOT APRAID OF RIAKING IAISTAKES,
be VERSATILE..................ITKES VARIETY, TRIES DIFFERENT THINGS,
PERSEVERE...................KEEP ON TRYING,
CONTEIRLATE................THINK HARD AND DEHP,
be en INDIVIDUALIST...........GOES HIS OGN WAY, DOES NOT CARE WHAT OJHERS THINK OR SAY,
be HUMOROUS.................SELS THE FUNNY SIDE OF THINGS,
be EHOTIONAL..................NOT AFRAID OF EXPRESSING HEELINGS.
WHAT METHODS ARE USED IO PRODUCE CREATIVE PRODUCTS? WHJCH
METHOD OR IHTHODS DO YOU USE?
It is thought that there are four main stages in the process of creating products.

1. PREPARE THE MIND; collect and record information.
2. THINKING; There are a variety of methods of thinking creatively; e.g. BRAINSTORNING, doodling, combining ideas, building on other ideas, daydreaming.
3. SOLUTION: The answer may come slowly or in a sudden filash of light'.
4. TESTING; The product is tested, sampled etc. to see that it really does the job it is intended to do, and is 'original'.

HOW TO BRAINSTORM.
Brainstorming can be done in groups or on one's own.
You think up as many ideas as you can in a given time.
It does not matter how crazy the ideas are when you think of them.
All the ideas must be recorded (written, typed, taped, e.tc.) as soon as they are thought up.
The ideas are looked at AFTER the brainstorming and the best ideas chosen and used.

## A METHOD OF BRAINSTORMING

A. The best PROBLEMS to brainstorm are those that look as if there could be enswers to them. Choose a 'narrow' problem, such as "How can I save my pocket money?", and not a "broad" problem like "How can I get a million pounds by next week?". Choose problems you think you can solve, and brainstorm the best solution.
B. PREPARE your mind; study the problem, learn all you can about the subject, materials, etc., concemed with the problem.
C. Be relaxed and comfortable. Do not be afraid of thinking up 'crazy' ideas; some of the best ideas have been thought crazy in the past. Speals out as soon as you have an idea; or writa it down, tape it etc. when you are brainstorming on your own.
D. l. NOBODY must criticize in any way during brainstorming. No KILLER PHRASES can be spoken, ( $0 . \mathrm{g}_{\mathrm{g}}$ no one says things like "It won't work.", or "We've never done it before.")
2. FREE WHEEL with your mind. Let one idea lead to anothor to gather speed.
3. The more ideas, the better; try to think quickly.
4. Combine ideas as you brainstorm.
E. Set a time limit to the brainstorm session; usually from twenty to forty minutes long.
F. ALL ideas must be RECORDBD IN SOME WAY; written, taped, typed, drawn, shorthand, etc. It dons not matter how as long as $\Lambda L L$ thr ideas are recorded as soon as they are thought of so that they can be looked at after the brainstorming.

## WHEN THE LIST OF IDEAS IS FINISHID:

1. Scrap all ideas that are not new or improvements.
2. Scrap all ideas that are impractical or not desired for some reason (social, financial, political, etc.).
3. Sort the remaining ideas into:
(a) Those that may take tima to develop.
(b) Those that cen be used at once.
4. Choose the best original idea from each of these groups.
5. Use the ideas.

## CREATIVITT PROGRAMME

## ELEMENT THO: "BRAINSTORMING"

UNIT ONE: "HOW TO BRAINSTORM"

## INTRODUCTION

"WHAT IS BRAINSTORMING?"
'bRAINSTORMING' IS A METHOD OF FINDING THE BEST ORIGINAL ANS WER TO A PROBLEM.

To 'brainstorm' you just think of as many answers as possible to a particular problem in a set time. It does not matter how crazy the answers may seem when you think of them. The answers are put down on paper or tape-recorded, and after the 'brainstorming' is over the best original idea is selected from all the ideas written down.

Brainstorming an be used to solve a variety of problems to which there may be more than one answer; for example: How can we avoid wasting paint? How can we look after our paint brushes? How can we get money out of people at Autumn Fair? How on te make a big sculpture out of wire? How can I save my pocket money? How can we get to Mars?

You can see from these examples that the problems can be personal problems or problems of general concern.

Brainstorming can be done in 'groups', where each person thinks up ideas and tells the others in the group; or it can be done on ane's own. Either way it can be an exciting way of solving problems and getting on's own brain working.

## ${ }^{3}$ HOTM TO BRAINSTORM'

SECTION ( $\Lambda$ ) What type of PROBLEM can be 'brainstormed'?
You have some rough idea about this from the examples given in the introduction.

Some problems are easier to solve by brainstorming than others, however. If the problem is stated simply, and looks as if there could be answers to it, then it probably can be brainstormed. It is easier to answer a problem like: "How can we make bread and get it to three thousand people who are six hundred miles away?", than to answer a problem like: "How can we feed all the hungry people in the world?".

The problem must not be so diffioult, or so wide in scope, that the people who are going to 'brainstorm' it connot find a solution of some kind.

So make sure, before you try and brainstorm them, that the problems are the type that you think you may be able to solve.

SECTION (B) Now that you have a problem, the next stage is to PREPARE YOUR MIND so that solutions to the problem are more likely to come into it.

This means that you must learn everything that you can about the subject area of the problem, i.e. you must 'master the subject'. This may inolude studying the history of attempts, if any, to solve this problem in the past. It mould also be useful to learn sanething of the various materials and methods that might be used to solve the problem.

This type of preparation is just as important for one person 'brainstorming' as it is for a group of persons.

SECTION (C) The folloring HINTS FOR BRAINSTORMING make it easior for a group of people to produce good :7eas in quantity.
(1) Everybody should be confortable and relaxed.
(2) As soon as a person has an idea he should speak out at the first gap in tilu talking.
(3) No person in the group should boss the others, or do all the talking; even if one person has more ideas the fewer ideas of the others may be as good or better.
(4) No one should be afraid of 'making a fool of themselves'.
(5) If you have any idea. don't be afraid to speak out; do not apologise in any way for an idea you have.

SECTION (D) THE FOUR BASIC RULES FOR BRATNSTORMING, either in groups or on one's orm.
RULE 1. NOBODY in the group (or yourself if you we on your orm) must question or criticize any idea stated during the 'brainstorm' session. There must be NO CRITICISM at all until the brainstorming is over. This is vital if the brainstorm session is to be productive.
In a large group one person could be appointed to watch out for, and stop at once, any sign of questioning or criticising.

The type of remark that is critioal or questioning of ten starts with what is known as a 'KILLER FFRASE'. Some examples of killer phrases are:
We have never done it that way before....
It won't work.
We have tried that before....
Somebody would have suggested it if it had been any good....
Too modern....
Too old fashioned....
It has been the same for tiventy years so it must be good....
What crazy person thought of that....
I just 'know' that it won't mork.
Let's wait and see.
Nuts
Sounds good but I don't think it will work....
It will mean more work.
Yes, but.
If a nember of a group, or you yourself if you are on your orm, uses a
phrase like this then he must stop using it at once. Any words that stop the flow of ideas must not be usec; such words and phrasos will kill the creative ideas that may come into your mind.

RULE 2. FREIEHEELING with your mind is the best way to think up idens. Ono idea leads to another and the mind can gather speod, like a bike free-wheoling dom a hill, until the ideas come fast, and at times a bit wild.

Don't worry if the ideas seem wild or crazy, just speak them out loud. Some of the best and most original ideas for solving problems have seemed crazy to a lot of people when they were first thought of.

So let your mind wander where it will around the problen, gathering speed as it does so.

RULE 3. The QUANTITY of ideas is important. The more ideas that come, the more likely there is to be a rood new idea among tham.
$\Lambda$ s there is always a time linit to a 'brainstorm sossion', the quicker you can think upideas the better it is.

RULE 4. CONBINE IDEAS as you brainstorm. If you build, improve on, or combine two or more ideas already thought up, you may find this a good way of finding new ideas. Don't be afraid to do this with other people's ideas. Remember that anything goes when you are brainstorming, but try and keep your ideas to those that do answer the problem ir some way.

SECTION (E) The THE LIMIT for a brainstorn session oan be variod. The main concern is that you should not get to o tired. The time limit can be extended as you get more used to this sort of activity.

The normal 'brainstorm session' lasts from 20-40 minutes, according to the number of people in the group and the type of problem to be brainstormed.

SMOTION (F) All ideas must be RE ORDED in some way. This is not oasy as sometimes the ideas come very quicliy, and it is diffinult to write or type quick enough to get them down on paper. If there is angoze in a group who oan do 'shorthnnd' this is very useful. It is essential to make sure there is one person who is recording all the ideas in some way. There is no need to get every word that every person says down; it is enough to get the outline of the idea, in just a few words if possible.

Tape-recording spoken ideas is a good way of recording ideas, provided that only one person speaks at a time and that every person is the same distance away from the microphone.

If you are brainstorming on your own you can record your own ideas quite easily, though if you take too long about it you may interrupt the flow of
ideas.
All ideas must be preserved in some way when you are brainstorming.

The 'BRAINSTORM' is over, and you now have a long list of ideas. This list has to be carefully examined to find the best, original ideas.

The following me thod of judging the ideas is useful:
(1) Scrap all ideas that are not new or improvements.
(2) Scrap those that cannot be used at all for some reason, o.g. they are impractical, far too expensive, or would not be acceptable for sooial reasans.
(3) Sort out those ideas that are left into:
(a) Those that are good but may take a long time to develop.
(b) Those that can be used at once.
(4) Choose the most original idea from those in the lists left in 3 a or 3 b (whichever type of idea you want, i.e. long term or short torm).
(5) Use the idea. It is important that the idea should be used or brainstorming could be a raste of time, unless you are just practising (as you will be doing in the next unit).

## CREATIVITY PROGRAMME

ELEMENT TWO: "BRAINSTORMING"

UNIT THO: "YOU TRY SOME BRADNSTORMING"

## INTRODUCTION

Do you remember what 'brainstorming' is? If you are a bit hazy in your mind about this then read through Unit One of this Element again. If you remember quite well, you will know that 'brainstorming' means thinking up as many original answers as possible, in a set time, to a problem.

If you wish, you an refer to Unit One 'HOW TO BRAINSTORM' whenever you want to, while you are trying the first part of this unit.

In the first part of this unit there are three problems for you to 'brainstorm' on your own, or with a partner. You should take about five minutes for each problem and, when you have finished all three, then ask for a Master Brainstorm Sheet so that you can compare your ideas with those that someone else has thought up. It does not mean that the answers on the Master Sheet will be better than yours, but it will givo you some guide to how many answers can be thought up in the time. You may have an idea that is much better than any on the sheet. If you think you have then tell someone, it may be important.

PART ONE
You 'brainstorm' these three problems now. Take five minutes to do each problem. You will have to write your ideas down, on the sheet provided, for two of the problems and draw your ideas for one of them.

## FROBLEM ONE

How many different ideas can you think of to make it 'safer to live at home'?

## FROBLEM TWO

How many different drawings can you do, starting each drawing with a triangle?

## PROBLEM THREE

How many different ways can you think of to make your clothing last longer?

Now that you h2ve finished these three problems, ask for the Master Brainstorm Sheet and compare it with your ideas. You can see from the Master Sheet why some ideas are considered the best. You may not always agree, and may think that some of your idoas are better.

Now that you hnve tried 'brainstorming', and can see what is expected of you, try the next part.

Here are three more probloms that you oan try and solve. There are many answers to each, and it may well be that the best and most original answers have not been thought of yet. See how many different and original ideas you can think up to answer enoh problem.

Take about five minutes to 'brainstorm' eroh problem.
Do not refer to Unit One this time; rely on your memory and oxperienoe of 'brainstorming' the first three problems in Part Ono.

Remember that you are only practising 'brainstorming' at present. When you do 'brainstorming' proper, you would only work on one problom at a time, you would propare well for it, and you would brainstorm for longer.

Hero are the throe problems: there are no answers for them until you provide them. Fut your answers on the back of the shoet you did the first answers on.

FROBLEM ONE
How many wnys oan you think of to eam extra pocket money?

## PROBLEM TYO

How many different, now designs can you think of for a bottle for a now sof't drink (i.e. like a lemonade, or coke)?

## PROBLEM THREE

How many ways can you think of for using up wasto paokets, tubes, boxes, oto. made from oardboard or plastio?

Now that you have finished 'bminstorming' these problems, ohoose which you think is the best, original idea from each set of answers. Use the method of judging given at the end of Unit One to help you to do this.

Hand in your 'brainstorm' lists and your final selection whon you hand the Units of this Lement back.

In the third, and final element of the programme on 'oreativity' you will use
BRAINSTCRM SHEET (Answers to problems)

NAME: .................................. (If you use more than one sheet, put your name on each shect.)

CREATIVITY PROGRAMME
ELEMENT ONE: "WHAT IS CREATIVITY?"
UNIT TWO: "WHO IS LIKELY TO BE $\AA$ CREATIVE PERSON?"
ANSWER SHEET (MASTER ANSWER SHIER)

| STORY | IS THIS PERSON LIKELY TO BE CREATIVE? |
| :--- | :--- |
| No. | Virite Yes or No to start with, and than give your |
| reasons for your choice. |  |

No. 1 No john is not adventurous, energetic, contemplative, individualist, humorous, or emotional.

No. 2 YES Sally is questioning, adventurous, versatile, energetic, persevering, humorous, and emotional. Though we are not told so, she sounds as if she is an individualist, and thinks a lot.

No. 3 YES Henry is questioning, adventurous, fairly versatile, persevering, contemplative, energetic, humorous, emotional, and an individualist.

No. 4 NO Jane is not questioning, adventurous, versatile, persevering, contemplative, individualist, humorous, or emotional. She may be energetic but it does not look as if she is very energetic.

No. 5 NO Joe is not versatile, contemplative, individualist, humorous or emotional. It does not look as if he is questioning or venturesome. Ho may be energetic and persevering though.

No. 6
YES Mary is questioning, (ard critical), adventurous, versatile, energetic, persevering: contemplative, em individualist, humorous, and emotional.

## CREATIVITY PROGRAMME

## FLEMENT ONE: "WHAT IS CRETT IVIYY?" <br> UNIT THREE: "TVIT METHODS DO CRHAT TE PEREONS USE TO PRODUCE CREATIVE PRODUCTS?"

## INTRODUCTION

It is not easy to see how creative persons 'think up' the things that they create; but some people have tried to see how they do it.

It has been found that in most cases there appear to be four stages in the method (or process as it is often called) of creating a product.

The four stages do not always happen in the order shown in this book, but this order is the one mast often sou when a person crestes a product.

You must not thinis that 311 c sative products are reated in this way, as we do not know yet all che processes which creative persons use to produce creative products. It is very difficult to see inside a person's mind, so that a lot of our ideas about the 'creative process' are guesswork. Most of the guesses, however, seem to fit into the idea of the four stages of the creative process.

## STAGE ONE: PREPARING THE MIND

The oreative person prapares his mind by collecting information about the subject he is intereated in, and the media (materials etc.) he will use to create the product. He becomes deeply 'infolvea' (i.e. Very interasted) in this collection of information.

Here are a few of the ways in which the creative person colleats infermation:
(a) HR EXPERIMENTS with:

(b) HE USES ALL HIS SENSES and takes in as much as possible.

(c) HE DOES RESEAKCH; he finds out facts about thinge, e.g.


He finds facte and information anywhere and everywhere.
(d) He LOOKS AT MFIER CREATIVE WOBX to stimulate his idear; za thas no paix:...3 3 sculpoure



inventions

games

household goods.
televieion

(e) He ASKS QUEGTCNS from experts and other people who may

(土) He BECORDS all that he leanns. He may do this by:


Remembering it.
(this is not easy to do)


Maicing notes \& sketches

Tape recording it


Recording ail thet he learms, so that he can use ell the infornation ha inas eot. is a most important part of prepariag the mind for creative rincic.
s. rreative arson thinks hard about the problem of the produr is wishes io create. This $\because$ the impurant part of the
 think about the problems are not kasily sean. Creative people have tris iq theut some of the ngthads they use.
Some :... - . fhat creative persons use to help them think are:

(b) DAYDREAMIHG

(c) DODDLING

(d) COMBINING sharp stome
 AXR (a) BUILDITVG


The person thinl: of as many difforent ideas as he can, in as short a tima as posaible. He does not worry if the ideas seem ailly or would not work. Later, he criticizes the ideas and picks out those that might work.

You will laarn mora about this mathod of thinking in the next element of this programe.
Mive crative person lete his mind wander. He lats his thoughts take him where they will in the hopes that a solution to his problam may appear.

This method works sonetimes, but the mind cen wander a long way off the original problem, Howeven the answer to another problem may come while a person is daydreaming, so that it can Ca a useful method if one has plenty of time. Liae crestive person 'doodles'. He may scribble ideas, sketchea, designs, etc. on papar. A musician may run his fingers over the piano. A fashion designer may drape eloth over a model. These crative people are hoping that an idea may come up 'by accident' while they are 'playing about" with things.
The creative parson may find a solution to problams by combining, or putting together, two or more wall know ideas to make something new. For example, the early man put together the idea of the haud stone axe and the club to make the first axe with a handle.

The creative person builds, i. $\mathrm{t}_{\mathrm{e}}$ he adds to or improves on, other ideas (his own or the idass of others) to make a much better product. For example the nodern axe is a great improvement on the axe made by aarly man.

THE CREATIVE PERSOLY CHINES VIRY DEEPIY DURTNG THIS STAGE OF THE CREATIVE PROCESS. HE ASTR QUESTIONS AND CRIIICICES HIS IDEAS AS HE THINKS ASOUT THEM.

STAGE THRISE: THE SOLUMTON
Tre solution answer, idea etc. may come into a creative person's mind suddenly. It may seam as if it comes from out of thin air, but it is usumlly the resuit of the various thinking processes that the creative person has used in preparing his mind and thinline ajout the problam. His mind may be thinking aboat tho problem even if he does not realise it. He may be doing something else when his mind sudderily hits on the right idea:


The arswar to the problem may also come as a result of slow, steady thinking; parhaps taking small steps at a time.

No one is ever quite certain how the grent ideas for very creative procuctf come into the creative persons mind, not even the vary creativa persans themselves.

NOW THE ACTUAL PRODUCT IS PRODUCED.
THB CREATIVE TEREON MAY FRODUCE NHE PRODUCT HIELSELF, E.G. IF IT IS A WORK OF AKT, MUSIC, FOETRY, PLAY, FOOD, SCULPTINRE, BOOK, OR HE HAY HAVE TC RELY ON OTHERS TO YRODUCE IT FOR HIM, E.G. IF THE PRODUCT IS A BUILDTNG, HETHOL OF TRAHSPORT, TAPE RECORDER, A BRIDGE, HOUSBHOLD ARIICLE, IN FACT ANYTHTNG THAT HE CANNOT
TAKE WITH HIS OHT HANDS ALONE.

THE PIPGL STAGE IN THE CREATIVE PROCESS MAY COME AFTER THE PRODUCT IS FINISHED OR IT MAY TAKE PLACE AT THE SAME TIME AS THE PRODUCT IS BEING PRODUCED.

Turn to yage 5 for this final stage.

## STAGE FOUR: TESTING

In this stage the creative person makes certain that the product does the job that he intends it to. In other words, he tests it. If the product does the job and is made as well as he can make it, or as well as others can make it if he cannot make it himself, then he is satisfied.

If it does not work out as he wishes, then he will think about it again. He may improve on his first idea, or he may think up a new idea.

At all stages of making the product he may judge whether it is a 'creative product'. He may use the same type of judgements that you used in Unit one ("What is 'Creative product?"). He may change his mind as he goes along so that he improves the product.

YOU CAN SEE THAT THE FINAL CREATIVE PRODUCT MAY BE PRODUCED QUITE QUICKLY, BUT ALL THE RESEARCH, LEARNIING, ILID THINKING about the product may have taken a very loivg tire.

A pathting, a piece of sculpture, a poem, a pop song, a NEW FOOD DISH, A PLAY, ETC. MAY BE MADE VERY QUICKLY, BUT THE SKILL, INONLEDGE, AND THOUGHT NEEDED TO PRODUCE IT MAY HAVE TAKEN HATY YEARS TO ACQUIRE.

In the next Element you are going to look at one of the creative processes in more detail. This will be the process called BRisinstorming. Look back to page three to remind yourself what this process is. It is a process that anyone can learn to do, and it may help your mind to be more creative.

CREATIVITY WGRAMAE.
ELEMETT ONE: "MHAT IS CREATIVITY?"

UNIT TWO: "WWO IS LIKELY TO BE A CREATIVE PERSON?"

Read through this section just like you would $\Omega$ normel book, and then enswer questions that are at the end.

## INTRODUCTION

This unit shows examples of some of the ways that craative persons think and behave. Nine ways only are shown, but thase are thought to be the most important.

If a person thinks and behaves in these ways he is Likely to be a creative person. It does not mean that he is or will ba a croative person. Other things may stop him being creative. E.g. he may not be clever enough; a person must be intelligent to create worthwhils products.

Now look at the nine pages of exomples and study the pictures and wording carefully.

You mey like to decide if you are like or unlike the persons in the exemples as you go along.

If you think that you are like the persons shown, then you are liknly to be creative yourself. If you do not think that you are likely to be creative, do not worry. Not many persons are likely to be creative and, of those that are likely to be, only a few are very creative.

Now turn to pago 1.
where?


What would happen if? How would it be if?


When was this first..? Why is it done this way and not.-?

## HE CRITICIZES

It would bo better if you...


This is not nev; why don't you...?
It would improve it if you....

The Creative Person is critical. He says what ha thinks about the work of others, and is critical of his own work. He is critical in ways that would lead to improvements if his ideas were used.

If I did that it would be better bacause...
No, I don't think
that will work; I'll
try it this way...

The Creative Person is adventurous. He is not afraid of 'having a go' at thinge. He does not mind if he makes mistakes. He doesn't care if he makes a fool of himself.

"Oh! I must have a go at that."

"Here goes."


A creative person is likely to be VBRSATILX
PAGE 3 The Creative Person likes variety. He may do many different things. He also may find many different ways of doing something. For example, he may cook an egg in many different ways:

or he may put paint on a picture in different ways:


The Creative Person may do many different things:


coll act things


take photographs and films.



play music


He may be able to do a fer things well, and one or two very wall.

The Creative Person is energetic. He works hard at whatexer he is doing, whather it is his job or his play.


He works very hard at the way that he earns his living; whether it needs muscle power, brain powar, or both.

baker


He also works hard at his play; i. e. what he does in his own time when he is not earning his living.

A creative person is likely to PERSEVBRE
PAGE 5
4. Creative Parson perseveres. He keepa trying to do somethimg he wants to do until he succeeds. He may try the same thing over and over, or he may try different mays of doing the same thing until he succeeds.

For example, if he wanted to climb a wall hemight....

keep on climbling..., even if he fell off... a few times,...

until...
he succeeded;
or he might try differant ways of climbing to some place;..

up tha wall... up a drain... up a rope... or up a ladder, until he finda the beat way.

He KBEPS ON TRYING, he is PERSEYERTNG. Ho does not let anything beat him.

A Creative Person contemplates. He thinks deeply about things. He concentrates hard on the problem he has in mind. He may often look as if he is 'daydreaming'.


These people are contemplating. They are thinking hard. It may look as if they are just lazing. It is difficult to tell just by looking at them if they are thinking or being lazy. We can only know this if they tell us what they were thinking, or if they produce a creative product as a result of their contemplating. Remember CONTENPLATING means thinking hard and deep about the problem.

A creative person is likely to be an INDIVIDUALIST PAGE 7
A Creative Person is an individualist. He does not wish to be like others; he does not 'conform'. He sticks to his own point $0: f$ view and does not behave like others of his own age and group, tlaough he may do sometimes.

He does not mind being unpopular if he is doing what he believes in.


This person is an
'individualist.' She wears what she wants to. She does not care if other people think she is silly.

These people conform. Trey like to 'fit in' wilt h others. They like to wear the same.


These people have all a similar type of transport. They conform. They like tc have the same things as others.

This person is an 'individualist'. She prefers to make her own choice of food. She would eat what she liked and not what others thought she should eat.
These people eat the same type of food. They conform. They would eat the same type of
food as mast people, even
if they did not like it.
This person is an 'individualist'. He prefers something a bit different. In this case a vintage car. He could prefer a helicopter. He would be different because he follows his own ideas.


A creative person is likely to be HUMOROUS.
PAGE 8


The Craative Person is humorous. He has a good sense of humsur and sees the funny side of most things. He may not always laugh at the same things that othei people laugh at, and some people may not think that all the things that he laughs at are funny.
(Remember that people do not always laugh because something is funny. Most people often laugh to 'let off steam' in some Way when they feel tense. For axample, people laugh at a person who slips on a banana skin because they are first of all worried that he may be hurt, and then they laugh because they are glad that he is not hurt. If the person was badly hurt they would not laugh. )

Creative persons often see funny things where other people do not. They often like verbal jokes (spoken or written), like puns, limericks, and tongle twisters.

A Creative Person is emotional; he of ten shows his feelings strongly about things. He is not afraid of being emotional.


He may express his 'emotions' in many ways. For example, frowning, crying, or laughing.


His whole body may express what he feels. E.g. sadness, anger, or excitement.

He often expresses his emotions in speech, and may use strong language, like swear words, on such occasions.


He uses words that express emotions; words such as hate, love, sad, miserable, or happy. He often uss words that express extremes of feeling; words like, Fab, super, wonderful, rotten, gorgeous, horrible, or beastly.

The creative person is often concerned about the feelings of other people. He is sympathetic and considerate of other persons feelings.

You have looked at examples of the ways that creative persons often think and behave.

You now know that a person who is LIKELY TO BE CREATIVE:
(1) is QUESTIONING, and critical,
(2) is ADVENTUROUS, not afraid of making mistakes,
(3) is VERSATILE, likes variety,
(4) is ENERGEIIC, at work and play,
(5) PERSEVERES, keeps trying until he succeeds,
(6) CONTEMPLATES, thinks hard and deeply about things,
(7) is an INDIVIDUALIST, lives his own life and does not care what others think,
(8) is HUMOROUS, sees the funny side of things, and
(9) is EMOTIONAL, not afraid of expressing his feelings.

On the next few pages are short stories or descriptions of people.

Read through these stories in order, and, on the sheet that you have been given, write down the answer to the question that comes at the end of each story. You have to decide whether the persons in the stories are likely to be creative or not, and why you think the people are, or are not, likely to be creative.

You may turn back to any of the pages in this book to help you to decide.

Now turn to the first story or description on page 11.

S'PORY NO. 1
John is sitting near to Bill and Harry. He is dressed exactly the same as they are. They are rather bored. John is just throwing stones into the water in a pond. He is not thinking about anything. He is not even looking at the ripples the stones are making in the water.

Bill and Harry make a joke, but John does not laugh. Harry suggests c.limbing a tree; John says that he cannot do it, even though he has never tried, and that he has no energy.

DO YOU THINK THAT JOHN IS IIKELY TO BE A CREATIVE PERSON? Firite your answer on your answer sheet.

STORY NO. 2.
Sally is always getting into trouble. She is lively and intelligent. She is often 'having a go' at things. She tried to ride Michael's bike the other day and fell off it three times into the mud before she got the hang of riding it. Sally tore her dress and made it very dirty. She cut her hand as well, but she just laughed as she was so excited at being able to ride a bike.

Her mother was cross when Sally got home. Sally was sorry that she had made such a mess of her dress, and caused so much trouble to her mother. She cried but she cheered up quickly.

Sally does many things. She climbs trees, swims, goes on hikes, camps, collects beetles, keeps a diary, takes photographs. and plays tennis well. She can cook well too.

Sally is always asking questions at school, and some teachers are not very fond of her because of this.

DO YOU THINK THAT SALLY IS LIKELY TO BE. A CREATIVE PERSON? write your answer on the answer sheet.

## STORY No. 3

Henty is a boy who does not join in with 'the gang'. He sits on his own at school when he can. When at home he wears different types of clothes to those that the gang all wear.

He goes off on his own and reads books in the library. He is often down at the garage and the blacksmiths, where he asks Ints of questions, and begs for pieces of metal, old cog wheels, nuts and bolts, etc. He has a large Meccano set and invents meny gadgets which are driven by a steam engine that he built for himself, using odd bits and pieces.

Henry tried to make an aeroplane once; he crashed it trying to fly it off a hill. He was hurt a bit, and everybody thought that he was crazy. He says that he is going to make another aeroplane one day though.

He laughs at some of the things that people say, but he often laughs when nobody can tell what he is laughing at. He is rather moody and can get very cross and angry.

Henry often sits in class looking out of the window with a 'far away look' in his eyes, till the teacher shouts "Come on daydreamer; come back to earth." Henry's books are full of drawings of strange machines. He likes making telescopes too, to look at the stars, but he made about a dozen before he was satisficd with one.

He plays a few games like Badminton and Chess, and he likes shooting when he gets the chance. Henry works very hard at everything that the does.

DO YOU THINK THAT HENRY IS LIKELY IO BE A CREATIVE PERSON? Write your answer on the answer sheet.

## STORY NO. 4

Jane is very intelligent. She is usually top of the class in English, Maths, French, Science, Religious Instruction, and Needework; she is near the top in most other subjects. Her teachers are very pleased with her work and behaviour. She does everything she is asked to do and learns what she is told to.

She rarely tries out anything for herself however and does not ask many questions. She dons the work set, and very little more.

Jane dresses the same as the other girls, and is quite popular. She dons not express her feelings often and does not laugh much. She rarely shows that she likes, or dislikes, people.

Jane has very few interests outside school; but she does everything that she is asked to do at home, such as cooking, weeding, cleaning, washing up, or mending. She never daydreams and she is neat and tidy. If she finds that she cannot do anything she gives up trying. She does not play many games out of doors, as she says that she cannot do them; she is good at netball though.

DO YOU THINK THAT JANE IS LIKELY TO BE CREATIVE?
Write your answer on the answer sheet.

Joe is a good footballer. He is not very bright in most s hool subjects. He is a popular member of the 'gang' he goes around with. He does like to talk about football when he is not playing it. Ho collects pictures and stories about his favourite teams and players; he tries to play like them and dress like them when he is on the field. He dresses like the rest of his geief of friends when he is off the field.

Like the others he eats sweets, crisps and chews gum. He never just sits and thinks, and cannot bear being on his own

He does not lose his temper or laugh a great deal, and rarely expresses his feelings exeept when he plays football. Joe does enjoy his football.

DO YOU THINK THAT JOE IS LIKELY TO BE A CREATIVE PERSON? Write your answer on the answer sheet.

## STORY NO. 6

Nobody likes $\begin{aligned} & \text { lary very much. She is critical of her fellow }\end{aligned}$ pupils, and tries to tell them what they should wear and do, etce. They think that sho is rather bossy. She is always dressing in something different from what the others are wearing. Mary designs and makes her own clothes.

Shc laughs a lot, but can bo very sulky at times. She does not care what other people think about her.

She plays the guitar and sings at concerts. She often sings songs that she has written herself.

She works herd at those things that she wents to do; she spends hours on her oim, and writes stories and poems that she sets to music. Sho likes to sing them to her fellov pupils at school. They like her songs and they do listen to her then.

Mary is a noisy girl and a bit rude at home if her parents interrupt her ideas when she is thinking hard.

She has a lot of interests, but they are different from those of most girls of her agc. She likes making pictures out of scraps of materials of all kinds, such as cloth, string, papor, wax, socds, shells, and leaves. She also collects matchbox labels, shoots with $\varepsilon$ bow and arrow, plays a trombone, and docs judo and rock climbing

DO YOU THINK THAT MARY IS LIKELY TO BE CREATIVE? irite your answer on the enswer sheet.

Now that you have wrriten the answers on the answer sheet, ajk for the MASTER ANSWER SHEET to check your answers with.

If your answers are not the same as those on the master shent, then rad through the examples and stories again to see where you disagreed.

If your answers are the same then you are a fair judge of who is likely to be a creative person'.

Remember, and this is important, that not all people who arn 'likely to be creative are creative.

W do not yet know yet all the ways of thinking and behaving that make prople very creative. We have to judge if a person really is creative by seeing if the things that he produces are creative.

In the next unit, UNIT THREE, you will learn a few of the methods, or processes, that creative persons use to create 'creative products..

CREATIVITY PROGRAMME
ELEMENT ONE: "WHAT IS CRBATIVITY?"
UNIT TWO: HWHO IS LIKELY TO BE A CREATIVE PERSON?" ANSWER SHEEST

| STORY <br> NO. | IS THIS PERSON IIKELY TO BE CREATIVIT? <br> Write Yes or No to start with, and then giwe your <br> reasons for your choice. |
| :--- | :--- |
| No.1 |  |
| No. 2 |  |
| No. 3 |  |
| No. 4 |  |
| No. 5 |  |

## CREATIVITY PROGRANME

## ELEMENT THREE: "BRAINSTORM A PAINTING"

## INTRODUCTION

You have learned how to 'brainstorm' problems and find good, original solutions to them.

You will now have a chance to use 'brainstorming' to solve the problem of producing a painting that can be considered a 'creative product'.

Before you start, remember what you have learned from element one about 'what is a creative product', 'who is likely to be a creative person', and 'what methods are used by creative persons to produce creative products'. Remember that 'brainstorming' is only one method used in the process of creation, but it can be a very useful method.

Remind yourself that the creative product must be 'original' and it should also be Dynamic, Complex, Integrated, show Personality, change the Environment, and show Mastery of Subject and Media.

If the painting you produce now, as a result of 'brainstorm' methods, shors all of these 'factors', then it is likely to be considered a 'very creative product'.

## BRAINSTORM A PAINTING

The problem is to produce a 'painting' that expresses an emotioi.
You have a choice of three emotions to try and show to other people in your painting. The three emotions are:
(a) Misery,
(b) Joy,
or
(c) Fear

You choose one of these and try the following method of 'brainstorming ' $o$ try and solve the problem of how to express the emotion in a painting. Romember all you learned about 'brainstorming' in the last element; if you wish, you may ask to see this element again to help you remember before you start 'brainstorming' the painting.

There are two main ways of tackling this problem by briinstorming. The first is to think about the emotion itself and think up ideas that you think express it (i, $\theta$. ideas that oan be painted). The second method is to start with marks made with paint, crayon, ink, eto, and docide which of these you think expresses the emotion. You can then combine the best ideas from both of these methods to get the most original painting.

Now, you oan start to brainstorm the painting.
First, choose which omotion $\bar{Y} 0$ wich to express in your painting, and then 'brainstorm' the problem of expressing this emotion, by following the instructions on the next page.
(1) Take 20 minutes for this part.
'Brainstorm' a list of ideas that will express the omotion (i.ed put over the meaning of the word to someone else). Write these ideas down on paper. Just a fow words for each 1』ea.
(2) Take 20 minutes for this part.

Make marks, splashes, lines, etc. with paint, wax crayons, ink, etc. on pioces of paper. Experinent as much as you want with the 'media' you might use to produce your painting.
(3) Take 20 minutes for this part also.
(a) Look carefully at the list you heve written and choose the best, 'original' idea you have. Write this idea down, a little more detailed this time than in the first list.
(b) Look at the marks you have made, with the colours, etc. on the pieces of paper. Choose those colours, shapes, eto. that you think express the emotion in the most original way. Make a record in some way of these colours, shapes, eto. that you have ohosen. You can either write or, better still, usc the same methods you made the marks with to start with.

You have now finished the 'brainstorn' part of creating the painting.

Produce your painting in about 60 minutes (you may take langer if you wish, provided there is enough time). You should do this as soon after your 'brainstorm session' as you oan.

Look at your best, original idea you have written down and combins this with the colours and shapes you have chosen as expressing the emoin. Think a little about corbining the idea and the colours, shapes, etc.

While you are doing the painting you may have further ideas that you think are improvements to your original idea. If you do have ideas like this then use them. Your aim is to produce a 'creative product' using all the methods for producing and judging 'creative producta' that you have learned.

Whenever you are producing a work of art, or trying to solve a problem that has more than one answer - whether at home or at school, or at work try and remember what you heve learned in this programme to help you find a solution that is 'creative'.

The more 'crentive' you are, the fuller and more enjoyable your life will be.

NOW START YOUR PAINTING:

CREATIVITY RROGRAMME. APPENDIX

## HINTS FOR IMPROVING YOUR CREATIVE POWER.

1. Be receptive. Use your senses. Listen, look, etc.; be aware of everything. You never know what may be of use to you.
2. Involve yourself in your work. If you are thinking and working hard the work will seem so important that you will not be distracted by other things.
3. Look at your own work critically. Ask yourself questions about the things you are thinking about and तoing.
4. If you have an idea that you think is worth something try and tell others abour it. Use some permanent means of communication (putting it over), e.g. writing, music or some other art form.
5. Question things that are taken for granted by most people. Find out why the $y$ are taken for granted; it may be that they should not be. Think for yourself whether things cculd be done in different ways. You may find a better way.
6. Explore idcas with teachers and other informed people. They do not know everything remember, and may learn something from your ideas, as you may learn from their ideas.
7. There are some things that may stop you from developing your 'creative power'. Some of these 'enemies of creativity' are: (a) IGNORANCE. If you do not know something, try and find the answer.
(b) FEAR OF LOOKING FOOLISH. Do not be afraid. We all learn by making mistakes.
(c) LACK OF CONFIDENCE IN YOUR ABILITIES. DOn't say that you can't do something. Try it. Most people can do something that others can't. The more things that you try out, the more confident you will be when you try to do them again. Don't be beaten by things; accept challenge.
8. If you believe that what you have done is the right thing for you, stick to your belief; don't be pushed around to believe what others want you to believe, BUT! be ready to tell people wHy you think that you are right.
9. Beware when people tell you something is 'absolutely true'. Remember that, not so long ago, there were people who said man would never fly in the air, let alone reach the moon, and they thought that this was true.

No 'truth' is ever final; men are always exploring, thinking, and finding new truths. Never be satisfied with anything.
10. The more creative you are, the more exciting your life is likely to become.

# UNIT ONE: "WHAT IS A CREATIVE PRODUCT?" 

## EXAMPLE BOOKLET <br> D

Here are some examples to help you decide if the products you are examining are ORIGINAL.

The development of the telephone is shown here, but most products have developed in the same way; including buildinge, transpart, clothing, furniture, etc.

THE DEVELOPMENT OF THE TELEPHONE from an early mass produced one to a very recent one. Only a few examples of the many designs produced over the years are show here.


1. Early mass produced phone.

## A NEW PRODUCT


2. 1930's improved phone.
AN IMPROVEMENT TO AN EARHIER PRODUET.

3. 1950's Improved phone.

AN IMPROVEMENT TO AN EARLIEE PRODUCIS.

4. A moderm copy of the aefily telephone.
THIS IS A COPY

5. 1968 Improved telephone. AN IMPROVEMENT TO AN EARLIER PRODUCT

Numbers 1, 2, 3, \& 5 telephones are ORIGINAL. They are aither NEW or AN IMPROVEAENT TO AN RARLIER PRODUCT. Number 4 telephone is AN EXACT COPY of an aarlier product; it is NOT ORIGINAL.

You will notice that the only NEW telephone on this page is the early mass produced number 1 . The rest are all improrements or a copy. This does not mean that an IMPROVEMENT may not be ORIGINAJ. An improvemest may look better, or work better, or both. It may be easier and cheaper to make. The producer has to have original thoughts to make improvements.

Here are examples of two buildings.


This is an ordinary type of building.
It is rathar dull and boring. You would not wish to look at it for very long.
It does not stir one's feelings much.
It is NOT DYNAMIC.

Here are examples of two designs. They could be for curtain fabric or walipaper.


This design is a very simple arrangement of stripes.
There is little variety in this product, and it is not rery interesting to look at.

It could not be called COMPLEX.


This design is much more complicated. It is intricate and interesting to look at. There is plenty of variety in the arrangement af the atripha and the spaces in betwean.

This design could be called COMPLEEX

Liany products are much more complex than thite of course. such products as radios, TV sets, cars, aircraft, typawritare, washing machines, sewing machines, and tape racorders are vary complax. You cannot always see how complex they are though as most of the parts may be hidden. You have to judge a product by what you can eae, taste, feal or haar atc. (according to what the produot is) and not always on what may be hidden.

Integrated products are those that are arranged or planned. Here are examples of two ways of arranging or organising parts.


In this plan of a village the houses are anywhere. They are haphazard and do not relate to each other or to the road. This is NOT INTEGRATED.


Here are some marbles.
They are scattered and not organised or arranged at all. They do not relate to each other in any obvious way. They are NOT INTEGRATED.


In this plan of a village the houses are organised, planned, or arranged in relation to each other and to the road. This village is INTEGRATIM.


Here the marbles have been arranged, planned, or organised into the form of a letter B. The parts now relate to each other and to the whole letter. The marbles are now INPEGRATED into one whole product.

The many different parts that make up any product must must appear to be INTEGRATED; organised into a whole product. You know that a football or netball team must be organiser. to play well. This is another example of INTEGRATION.


Here is a painting produced by the artist Picase0.
This can be sean to show the PRRSONALITY of the producer. No one else could have produced a painting in exactly this atyle.

This is a jrawing produced by a mechanical method.
iny person could heve done this if he used the same machins.


It is not always easy to see if a product shows PERSORALITY. only the products of great artists, writers, poets, cooks, designers, etc. can be recognised at once as their creations. Hany products however, do show some signs of the personality of the producer. This factor is nat obvious in mast of the usual products that we buy and use in the home. If jou think that suoh a product does show PERSONALIIY, then score it that way and argue about it later. Here are some examples of producte that have CHANGER OUR WAY OF IIFB.


The Wheel


Aireraft


Electricity


Radio


Car


Televiaion


Atomic Power ************************

Here are examples of products that ADD TO OUR WAY OF LIFE. They make our life more interesting, enjoyable, comfortable, etc.




Ornamental products

play, and fashion)

ALI THESE PRODUCTS CHANGE THE ENVIRONMENT IN SONE WAY. Producta that do not do this rarely appear in large numbers.

CREATIVITY PROGRAMME
ELEMENT ONE: "WHAT IS CREATIVITY?" UNIT ONE: "MHAT IS A CREATIVE PRODUCT?"
SCORIE SHEET



## CREATIVITY PROGRAIME

ELEMENT ONE: "WIAAT IS CREATIVITY?"
UNIT ONE: "WHAT IS A CREATIVE PRODUCT??"
Open this envelope and place the contents in front of you.
This unit is intended to help you judge whether any 'product' (i.e. anything produced, created, made, thought up, etc. by human bsines) is creative or not.

This unit is made up of the following items:
A. Illustrations of products (or actual products) and cards giving information about them that may be useful to help you judge whether the products are creative or not.
B. A 'programme book' that you will work through for each product.
C. A score sheet on which you give each product scorns according to your judgement.
D. An 'example booklet' that you may refer to for help when you are working through the programme book.
E. A 'master score sheet' for you to compare with jour judgements. This wi.l.t be hended to you when you have finished your judeing.

Place your 'programme book' B on the tabln in front of you. Place your 'exemple booklet $D$ ' just above it on tha table. Place your score shent to the right of your progranme book. On this sheet you will see a space for writing the Number and Name or Title of the product; also nine columns in which you will write your scores opposite the product you are exemining. There are three other colums that you will be told about when you work through the programme book.

Place your 'product cards' in a pile above the score sheet, with Product Number One at the top.

HOW OPEN YOUR PROGRAIME BOOK B AND FOLLOW THE INSTRUCTIONS. NOTE: You will notice when you use the programme book that it is not like a normal book. You do not always turn to the next page. You may have to skip a page or turn back. Just follow the directions and you will be correct.

## UNIT ONE:

## "WHAT IS A CREATIVE PRODUCT?"

PROGRAIME BOOK B

## INTRODUCTION

When you 'Examine a Product' (Examine- means: look at, listen to, taste, touch, test it, etc. according to what the product is) read carefully the words on the product card telling you about the product.

The words on the product card tell you the following things:
(a) What the Product is for, i.e. what job it is intended to do.
(b) If the 'producer' (i.e. the perecn who thought up the product) has considered everything he needs to know about the job the product has to do, i. e. if he has mastered his 'subject' area.
(c) If the mroducer has used methods of production, and materials, in the best way possible to produce the product, i.e. if he has mastered the 'media' (materials, tools, methods of working).
(d) If the product isf the same as other products that have done this job in the past, is an improvement on past products, or is a new product.

NOW EXAMINE PRODUCT NUNBER 1, and read the words on the product card.

Write the Number and Name or Titie of your product in the first empty space on your score sheet.

Now that you have read the words on the product card you must decide if the product you are examining DOES THE JOB it is intended to do.

If you think that it DOES THE JOB put a score of l. in the column headed 'DOES JOB INTENDED' on your score sheet, and turn to page 2.

If you think that it does NOT do the job put a score of 0 in the 'DOES JOB INTENDED' column; then discard this product (i.e. put this product card face down to the right of the main product card pack), and examine the next product.

Now that you have decided that this product does the job that it is intended to do, you must judge whether it is 'CREATIVE' or not.

To be CREATIVE it is ESSENTIAL that the product is ORIGINAL, as well as doing the job intended.

An ORIGINAI product is either:
(a) NEW, nothing like it has been produced before, it is novel, unusual, different, etc.,
or it is
(b) An IMPROVEMENT TO AN EARLIER PRODUCT; it is a development; it may look better, work better, sound better, taste better, smell better, according to the type of product.

Is the product you are examining ORIGINAL?
Look at the examples on page l. of your Example Booklet D to help you decide this.
If you think that the product IS ORIGINAL, turn to page 4. If you think the product IS NOT ORIGINAL, turn to page 3.

You think that the product IS NOT ORIGINAL. You think that it is very likn an earlier product; perhaps even an exact copy of something don befors.

Are you sure? How can you tell if any products have beek madn like this in this past? The product card has helped you in this case; but if you do not have a product card the only way that you can tell if anything like this has been produced before is to study products of the past that do a similar job. This is why the study of 'history' is so important. It stops the repetition (i.e. repeating) of ideas that have been thought of before. The creator of new products can then carry on from the last idea. 'History is a Short Cut to Progress'.

If you wish to think again you may turn back to PAGE 2.
If you still think that this product IS NOT ORIGINAL score 0 in the ORIGINAL column on your score shont, discard this product card, and examine the next product. Turn to PAGE 1.

You think that the product IS ORIGINAL. You think that it is NEW or AN IMIPROVENENT TO AN EARLIER PRODUCT.

Are you sure? How can you te.ll if any products have been made like this in the past? The product card has helped you in this case; but if you do not have a product card the on.ly way that you can tall if anything like this has bocn produced before is to study products of the past that do a similar job. This is why the study of 'history' is so important. It stops the repetition (i.e. repeating) of ideas that have been thought of before. The creator of new products can then carry on from the last idea. 'History is a Short Cut to Progress'.

If you wish to think again you may turn back to PAGE 2.
If you still think that this product is ORIGINAL you must now decide if it is NEW or AN IMPROVIEMENT ON AN EARLIER PRODUCT. You can use the examples on PAGE 1. of your example booklet $D$ to help you docide.
If you think that this product is NEW turn to page 5. If you think that this product is AN IMPROVEMENT to an earlier product turn to page 6.

## PAGE 5.

You think that this product is NEW; it is unusual, nothing like it has been produced before.

Write a score of 2 in the ORIGINAL column on your scorn shent.
You have decided that the product is ORIGINAL (an original, NEW product), and this 'factor', as it is called (remember this word), is an essential factor if a product is to be considered as 'croative'.

Now follow seven more factors to help you decide if a product is more creative or less creative.

$$
\text { Turn to page } 7 \text {. }
$$

You think that this product is AN IMPROVEMENT ON AN LARLIER PRODUCT; it looks better and/or works better etc. than other products that did the job before.
Write a score of 1 in the ORIGINAL column on your score sheet.
You have decided that the product is ORIGINAL ( an original IRIFROVBIENT ON AN EARLIER PHODUCT) and this 'factor' as it is called (romomber this word), is an essential factor is a product is to be considered as being 'creative'.
Now follow seven more factors to help you decide if a product is more creative or less creative

$$
\text { Turn to page } 7 .
$$

A DYNAMIC product is exciting, lively, moving, atc. It stirs oners feelings or emotions in some way.

Is this product DYNARIIC?
Look at page 2 in example booklet $D$ to help you decide this.

If your answer is YES; turn to pagn 8. If your answar is NO; turn to page 9.

YES. You think theit this product is DYNAMIC; you feel thet it is exciting, and it stirs your feelings in some way.

If you wish to think again turn back to pagn 7.
If you still think that this product is DYNAliC, writa a score of 1 for this product in the DYNAIIC column on your score sheet.

$$
\text { Now turn to page } 10 .
$$

NO. You think that this product is NOT DYNAMIC. You think that it is dull, boring, and it doss not stir your feelings or emotions at ail.

If you wish to think again you may turn back to page 7 .

If you still think that this product is HOT DYTAMIC write a score of 0 for this product in the DYNAFIIC column on your score sheet.

$$
\text { Now turn to page } 10 .
$$

A COMPLEX product is intricate, complicated, interesting, has variaty, etc.; it may be difficult to understand at first.

Look at page 3 in your example booklet to help you understand this factor.

Is this product COMPLEX?

If your answer is YES; turn to page 11. If your answer is NO; turn to page 12.

YES. You think that this product is COMPLEX. You think that it is interesting, complicated, intricate, has variety atc.

If you wish to think again you may turn back to page . 20. Score 1 for this product in the COMPLEX column on your score sheet if you still think that this product is COMPLEX. Turn to page 13.

## PAGE 12.

NO. You do not think that this product is COMPIEX. You think that it is too simple, it is uninternsting, plain, and lacks variety.

If you wish to change your mind you way turn back to page 10.

If you still think this product is not COMPLEX, score 0 for it in the COMPIEX column on your score sheet.

Turn to page 13.

An INTEGRATED mroduct is organised, planned, arranged, etc. The various parts relate to each other; i.e. they look as if thoy belong together.

Jook at page 4 in your example booklet $D$ to help you understand this factor.

Is the product you are examining INTEGRATED?
If you think that it is integrated, turn to page 14. If you think that it is not integrated, turn to page 25.

YES. You think that this product is INTEGRATED. You think it is organised, arranged, or planned well, and the parts relate to each other.

If you wish to thinls again turn back to page 13.

If you still think that this product is INReGRATED, score 1. for it in the INMEGRATED column on your scorn sheot.

$$
\text { Now turn to page } 16 .
$$

## PAGE 15.

NO. You think that this product is NOT INTEGRATED. You think that it is haphazard, badly arranged, not planned, perhaps not organised at all; the parts do not relate to each other.

If you wish to think again you may tum beck to page 13.

If you still think that this product is NOT INTEGRATED, scorn O for it in the INTEGRATED column on your score sheet.

Turn to page 16.

A product that has PERSONALITY has some signs of the personality, individuality, feelings etc. of the producer.

Look at page 5 in your exampla booklet $D$ to halp you understand this. It is not easy to see this factor in all products; in fect it may not be possible to see it at all with some products.

Do you think that this product shows PERSONALITY?

If your answer is YES, turn to page 17. If your answer is NO, turn to page 18.

YES. You think that this product shows PERSONALITY. You think that it shows some signs of the individuality, personclity, character, or feelings of the producer.

If you wish to think again turn back to page 16.
Score $l$ for this product, if you still think that it shows PERSONALITY, in the PERSONALITY column on your score sheet.

$$
\text { Now turn to page } 19 .
$$

NO. You do not think that this product shows much PERSONALITY. It looks as if anyone might have produced it; perhaps even a machine. It lacks charactor, individuality, and fenling.

If you wish to think again you may turn back to page 16.

Score 0 for this product, if you still fecl that it lacks PERSONALITY, in the PERSONALITY column on your score sheet.

$$
\text { Now turn to page } 19 .
$$

A product which shows MASTERY OF SUBJECT shows that the producer hes studied all the things concerned with the job that the product hes to do. He has also studied all types of the product that did this job in the past, if any have baen made to do this job before, so that he will not repeat or copy an earlier product.

It is not eesy to see this factor by examining the product itself. You need to know a certain amount about the subject yourself before you can judge if someone has mastered tha subject.

The notes on the product card may help you to decide if the producer of this product has MASTERED HIS SUBJECT.

Does this product show MASTERY OF SUBJECT?
If your answer is YES, turn to page 20. If your answer is NO, turn to page 21.

YES. You think that this product does show MASTERY OF SUBJECT. The producer has studied the job that the product is intended to do; he has a good knowledge of his 'subject' area.

If you wish to think again you mey turn back to page 19.
If you still think that the product shows MASTERY OF SUBJECT, score 1 for it in the MAS'RERY OF SUBJECT column on your scors shoet.

$$
\text { Turn to page } 22
$$

NO. You do NOT think that the producer of this product shows MASTIRY OF SUBJECT. He has not bothered to study the job the product is intended to do, nor has ho studied products made earlier thet did the same or similar job.

If you wish to think again you may turn back to page 19.

If you still think the producer has NOT mastered his subject, score 0 for this product in the MASTIRY OF SUBJECT column on your scorn sheet.

$$
\text { Turm to page } 22 .
$$

A product which shows $\operatorname{Hi\Lambda STERY}$ OF MEDIA shows thet the producer has considered corefulliy the following:
(a) All the difforent MATRRIALS the jroduct could be madn of, and
(b). All the difforent HETHODS by which the product con ba made. The product will then be made as well ne it can be, should work woll, and last as long is intinnded.

It is not always aesy to sec this mastery of materials and mathods cif production (i.e. mastory of media) by axamining the product itiself. The notes on the product errd may help you decide if this product who.vs Misipery OF MEDIA.

Does this product show PiASTRRY OF MEDIA?
If your answer is YES, turn to paga 23. If your enswer is NO, turn to page 24.

YES. You think that this product shows MASTERY OF MEDIA. The producer has considered the best materiols and methods for producing the product.

If you wish to think again you may turn back to page 22.

If you sti.ll think the product shows MASTERY OF MidIA, scorc I for this product in the MASTERY OF MEDIA column on your score shent.

$$
\text { Turn to page } 25 .
$$

## PAGE 24.

NO. You think that the producer of this product does not show MASTERY OF MEDIA. He has not bothered to think about the materials the product is made from, nor has he thought hard about the best methods of making the product. It is not likely to do the job well, and may not last long.

If you wish to think again you mey turn back to page 22.

If you still think that the producer has not masterod his media' score 0 for this product in the MASTERY OF MEDIA column on your score sheet.

$$
\text { Turm to page } 25 .
$$

## CREATIVI FACTOR (8) CHANGES THE ENVIRON ITTT

A product which CHANGES THE ENVIRONMENT changes or adds to tha way that prople liva.

Such products as the wheel, the stemengine, the printing press, the telephone, radio, frozen foods, etc. have changed the way we live sinen the days of the cave man. Music, fashion in clothos, painting, plays, novels, gamos and sports, omaments, hobbies, etce have added to our way of life. Even products to do with war: bow and arrow, slings, guns, tanks, aircraft, bottleships, etc. have changed the way we live. The invention of the atomic bomb and atomic power has changed, and is changing, tac way we live now.
Look at page 6 in your example booklot $D$ to help you deciãe if this product has changed or added to our way of living.

Dons this product CHANGE THE ENVIRONMENT?
If your answer is YES, turn to page 26. If your answer is NO, turn to pace 27.

YTS. You think that this product dons CHANGE THE ENVIRONMENT. It changes or adds to the way that people live.

If you wish to think again you may turn back to page 25.

If you s.till think that this product CHANGES THE ENVIRONMENT, score 1 for this product in the CHANGES ENVIRONHTN column on ysir score shent.

Turn to page 28.

## PAGE 27.

NO. You do not think that this product CHANGES RHE ENVIRONMINT. It does not change or add much to the way that poonla live.

If you wish to think again you may turn back to page 25.

If you still think that this product DOES NOT CHANGE PHE ENVIRONIENT, score 0 for tho product in the CHANGES ENVIRONI. $\overline{\text { IT }}$ column on your score sheet.

Turn to page 28.

You have examined tho product and given it a scorn of 12 for doing the job intended. You heve given it other scorns when dociding whether it is crontive or not, for eight 'creative factors'.
look at your score sheet and add along the line the scoras for this product in the nine columns you hova scored. Put this ndded scorn in thn TOTAL SCORE column on your scorn shent.

Put a 0 if there is no score, i.c. for any product that you heve discerded on page 1. of this progremme book.

Diseard the product you have just finished examining, and pick up the next product cerd and examine the next product.

TURN BACK TO PAGE ONE OF THIS PROGRAMIAE BOOK AS SOON $\Lambda$ S YOU PICK UP THE NEXT PRODUCT.

IF THERE $\Lambda R E$ NO PRODUCT CARDS $\Lambda N D$ PRODUCTS LEFT, TURN TO PAGE 29.

Now that you have examined nach product and completed the TOTAL SCORE Column for exch product, give each product a 'judgement', as shown bolow, according to the total score that the product has.


Now ask for tho MASTER SCORE SHEET. When you have got it
to page 30 . turn to page 30.

Look at the MASTER SCORE SHEET and compare it with your score sheat.

For each judgement (and total score) that is the same as the MASTER SCORE SHEET score ONE POINT in the POINTS COLUNN on your score shent.

Now add up the number of points that you have in the Points column on your score shoct. If you have the some number of points as the number of products that you have examined, it means that you agree with the MASTER SCORER, i.e. as to what is creative.

If you have less points then the number of products, try to sec where you disagree with the M MSTER SCORER, and think hard WHY you disagree. Do not be afraid to disaeree. You can have your own opinions; you may bo right, but you must say WHY you disagree and give the reasons, if asked.

You have nov: judged products as Usnlass, Usoful, and Lnss Creative, Creative, or Very Creative, using SOME of the fectors that ere thought to show whether a product is craativa or not.

You now know that 'creative products' must first of all DO THE JOB INTENDED, and thon:
(.l) are ORIGINAL (this factor is assential)
(2) are DYNAMIC
(3) are COMPLEX
(4) are INTEGRATED
(5) show PERSONALITY
(6) show MASTERY OF SUBJECT
(7) show MASTRRY OF MEDIA
(8) CHaNGES THE ENVIRONMENT

You now know whet a CREATIVE PRODUCT is.
I hope that you will look at a products created, made, produced, invented, thought up, etc. by mankind and try and judge them in this way. You should also judge any work that you produce yourself, using the same methods of judging. Anything that you do produce r.g. paintings, music, cooking, models, clothas, stories, pooms, collections, fumiture, idens, can all be judged in the way that you have just learned.

In the next Unit (UNIT TWO) you will learn whet sort of PERSON is likely to be 'croative'.

Now hand back the MASTER SCORE SHEET and hend in your own scorn sheet. Put your PRODUCT CABDS in a pile, close up your example boolnt $D$, closn up you progremme book $B$, and PUT THEM ALL BACK IN THE LNVELOPE.

You have worked hard, I hopo you have enjoyed it.


## A BATTERY OPEKATED RADIO

## PRODUC'S CARD No. 1

This product is intended to produce sound to be listened to. It does this very well.

The producer has learnt all about radio design and previous radio sets.
lie has considered the best materials and methods of making radios, using the latest ways of doing it.

Niany radios have been made before this one, but this product is an improvement in may ways.


## MODERN HEXAGONAL HOUSE

## PROIUC'T CARD NO. 2

This product is $\varepsilon$ building to be lived in.

The designer has studied the needs of the type of people who wish to live in a modern house.

He has studied the materials and methods of construction carefully.

No buildings have been made like. this in the past.


A vatch made in 1968

## PRODUCT CARD NO. 3

This product is intended to tell the user what the time is.
It is quite easy to read the time on this dial.

It works well as the producer has looked at other watches of the same type, and has learned how to make reliable timekeepers.
He has studied the watches of the past. We know this becsuse this watch is a COFY of watches made about one hundred yeara ago. they have become popular today, and that is why the makers have made this type of watch again. Do remember however that the design is copied from the first watch of this type


## A 6 GaLLOM ILASIIC WATER CARIRIFR OR IRANSPORTSER.

## PRODUCT CARD NO. 4

This product is intended to make it easy to carry liquids around, e.g. to camy water on a camp sitie.
The producor has studied the needs of people and the facts about carrying liquids.
He has considered the best and lightest materials and the best methods of making it simply and cheaply.
Nothing quite like this has been made before.


## PRODUCT CARD NO. 5

This product is intanded to be looked at.
The producer has studied the art oI craating paintings to be looked a.t.

He has considered the methods and materials used to make this type of painting.
No other paintings look like this one. It is new and the only one of its kind in the world.

PAINIING BY J. $\operatorname{liIRO}$ (a colour picture of this is on the table if you wish to see it in colour)


POAM SPONGE
(You can see this sponge on the table)

## PRODUCT CARD No. 6

This product is designed to soak up liquid when cleaning things, people, animals etc.

The producer has considered the needs of various people who might use this product. A number of them have used naturel sponges in the past but they are very expensive now.

He has considared various materials but thoe that are used are not very good. This aponge will not last long and ia not all that good. Batter materials and methods of making sponges are now known.

Other man-made sponges were made before, but this is an improvement on those.


## BABY CARPIAGE OF 2850 (an early pram)

## PRODUCT CARD No. 7

This product is intended to wheel babies around, so that they did not have to be carried.

The producer had considered the needs of the babies and the people who wad to pull the product.

He had thought about the materials and the methods by which the 'baby carriage' could be made.

A simple cart had been used before by some people in 1820, but this vas a great improvement on anything else.


AN ELEPHANT FENCE.
I' IS MADE FROM THIN BALLOON STICKS AHD STRING. (You cen see

## PRODUCT CARD NO. 8

This product has been designed to stop the elephants from eating the young trees and shrubs.

The producer has not studied elephants at all; he cannot know that they are big and strong.

He has not thought much about the methods and materials either.

He has not studied other fences that have been built in the past that do keep out elephants.
a piece of this fence on the table)


A WAX CANDLE
(you can see an actual candle on the table)

## PRODUCT CARD NO. 9

This product is intended to produce light.

The producer had studied the needs of the people for whom the product is intended, and had looked at the earlier types of lighting, and saw they neaded a cheap easily stored light that would always work.

He has considered the best methods and matarials to do this. Though he thought of this idaa many years ago, this product is still used all over the world. It is made by dipping string in wax. Other lighte were in use before this, but it was a great improvement on lights of the same type, e.g. rushes dipped in oil.


RAFT MAIL BY CHILDREN.
ODDS AND ENDS OF VARIOUS TYPES
HAVE EESN USED IO CONSIJUCT IT.

## PRODUCT CARD NO. 10

This product is intended to float and carry people. It does do this; just about.

The producers have only a rough iaea about craft that float on water. They have not studied the subject of rafts and boats thoroughly. This raft would probably tip over in a wind or rough water.
They have not use the best materials and methods of raft making.
Though it is like some other rafts it is not an exact copy, and it is an improvement on some early rafts.


[^0]:    

[^1]:    1970：3rd Year Form 2：TTCT（Totals）：ART WORKS 1 \＆ 2 TABLE 9 APPENDIX PART TNVO

[^2]:    22 Subjects: 11 Iiales, 11 Females
    TABLE 12
    APPEMDIX PART Trio

[^3]:     UNIT ONE：＂MHAT IS A CREATIVE PRODUCTP＂
    

[^4]:    sotema, 氏y

    - On yIVd

[^5]:    स〒सHS mions

