



The Gilboa Functional Test (GIFT)- Manual

The GIFT was developed by Prof. Yafit Gilboa from the school of Occupational Therapy, The Hebrew University of Jerusalem, Israel

Occupational therapists are invited to use it free of charge

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<p>Background</p>	<p>Fine motor and graphomotor skills are essential for children’s healthy development, as well as for successful participation in everyday activities (Chien et al., 2009). In light of the importance of later successful integration into the educational system (Roebbers et al.,2014), identification of problems during preschool appears to be crucial as the first step towards intervention.</p> <p>Consequently, the information provided by a sound assessment tool is of great importance (Chien et al., 2009). The Gilboa functional test (GIFT) is a specially developed norm-referenced screening instrument for use with children 3–7 years old designed to be used by pediatric occupational therapists.</p>
<p>Source</p>	<p>Yafit Gilboa, OT PhD.</p> <p>School of Occupational Therapy, The Hebrew University of Jerusalem, Israel</p> <p>Yafit.gilboa@mail.huji.ac.il</p>
<p>Reference</p>	<p>Gilboa, Y. (2017). Development and initial validation of the Gilboa functional test (GIFT): A unique measure for preschool graphomotor screening. <i>British journal of occupational therapy</i>, 80(11), 660-667.</p> <p>Turjeman, E & Gilboa Y. (In press). The relationship between graphomotor abilities and executive function in preschool children. <i>The Israeli Journal of Occupational Therapy</i>. (In Hebrew)</p>
<p>Purpose</p>	<p>The GIFT is a norm-referenced measure for preschool graphomotor screening.</p>
<p>Type of Client</p>	<p>Preschool children, 3–7 years old</p>

<p>Clinical Utility</p> <p>Format</p> <p>Administration Procedure</p> <p>Completion time</p>	<p>The GIFT consists of four forms adapted for the following age groups (years:months): 3–3:11, 4–4:11, 5–5:11 and 6-7</p> <p>The GIFT includes seven fine motor/graphomotor skill items, which are rated by numeric evaluation. These items together cover a representative range of fine motor/graphomotor skills that all children may exhibit at preschool.</p> <p>They include: copying basic geometric figures; colouring within lines; cutting with scissors; drawing a person, writing the child’s first name, writing the alphabet letters and numbers and writing words.</p> <p>The GIFT can be administered by an occupational therapist individually or in small groups.</p> <p>The administration of the GIFT took approximately 20 minutes;</p>
<p>Scoring Procedure</p>	<p>Each item was broken down into multiple components, with specific criteria for scoring.</p> <p>The examiner assesses body function components (grey lines) and the activities’ level of production in the tasks (white lines).</p> <p>A final score was computed by summing up all five test items. Within the proposed rating scale, a higher score indicates better performance; the maximum possible total raw scores were 20, 35 and 50 for each age groups respectively.</p> <p>Diagnostic results were classified into ‘normal’ (>1 SD below the mean) ‘follow-up’ (<1 SD below the mean) and</p>

	<p>development delay (<2 SD below the mean).</p> <p>There is also space for qualitative comments to provide more information to the therapist for focused follow-up.</p>
<p>Reliability</p> <p>Inter-rater reliability</p> <p>Test–retest</p>	<p>Based on the Pearson correlation, the final inter-rater reliability score was 0.95.</p> <p>With respect to test–retest, the total scores between the two repeated assessments exhibited a strong level of correlation</p> <p>($r=0.94$, $P<0.01$).</p>
<p>Validity</p> <p>Content validity</p> <p>Concurrent validity</p> <p>Discriminant validity</p>	<p>Pediatric occupational Therapists ($n=33$) reviewed the GIFT as a whole as well as the individual items comprising it, and rated each for its relevance to graphomotor screening for each particular age group. The degree of relevance was rated on a -5point Likert-type scale. The content validity for each item (Polit and Beck, 2006) was determined by taking the number of experts giving a rating of 4 or 5, divided by the total number of experts (range 74–97%, mean 90%).</p> <p>Significant correlations were found between the total scores of the GIFT and those obtained with the VMI and MC subtests of the Beery (Beery et al., 2010), the total score and all the subscales of the DCDQ’07/LDCDQ (Wilson et al., 2009; Rihtman et al., 2011) and the MD subscale of the MABC (Henderson and Sugdin, 1992).</p> <p>A significant difference in total GIFT scores was found between children from mainstream preschools and children from special education preschools ($t=3.99$, $P<0.001$).</p>

	<p>Children learning in the general education system had significantly higher total scores relative to the children learning in special education.</p>
<p>Background References</p>	<p>Beery KE, Buktenica NA and Beery NA (2010) <i>The Beery-Buktenica Developmental Test of Visual Motor Integration, 6th ed.</i> Bloomington, MN: NCS Pearson.</p> <p>Chien CW, Brown T and McDonald R (2009) A framework of children's hand skills for assessment and intervention. <i>Child: Care, Health and Development</i> 35(6): 873–884.</p> <p>Henderson S and Sugdin D (1992) <i>The Movement Assessment Battery for Children.</i> London: The Psychological Corporation.</p> <p>Polit DF and Beck CT. (2006). The content validity index: Are you sure you know what's being reported? Critique and recommendations. <i>Research in Nursing and Health</i> 29(5): 489–497.</p> <p>Rihtman T, Wilson BN and Parush S (2011) Development of the little developmental coordination disorder questionnaire for preschoolers and preliminary evidence of its psychometric properties in Israel. <i>Research in Developmental Disabilities</i> 32(4): 1378–1387.</p> <p>Wilson BN, Crawford SG, Green D, et al. (2009) Psychometric properties of the revised developmental coordination disorder questionnaire. <i>Physical and Occupational Therapy in Pediatrics.</i> 29(2): 182–202.</p>

GIFT Score Page/ rating scale – Ages 3-4

Pupil's Name _____ Age _____ Date _____

1. Copying basic geometric forms (pencil) – vertical line, horizontal line, circle, plus sign
(shapes 1-4):

Instruction: “Copy each shape into the empty square next to it.”

	1	0	Notes:
Dominant hand	right or left	not clear	_____
Grasp of pencil	normal	abnormal	_____
Function of non-dominant hand	full	partial	_____

Precision (number of recognizable graphic reproductions) ___/4

Total score in copying geometric forms ___/7

2. Coloring basic geometric forms (thick marker) – rectangle (shape no. 1):

Instruction: “Color the box.”

	1	0	Notes:
Dominant hand	right or left	not clear	_____
Grasp of pencil	normal	abnormal	_____
Function of non-dominant hand	full	partial	_____

Precision of borders exact not exact _____

Filled-in area full not full _____

Total score in coloring ___/5

3. Cutting (scissors) – straight line (shape no.1):

Instruction: “Cut the paper on the line.”

	1	0	Notes:
Dominant hand	right or left	not clear	_____
Functional prehension of scissors	normal	abnormal	_____
Strategies for holding the paper with non-dominant hand	efficient	inefficient	_____

Accuracy of action exact not exact _____

Effectiveness of action normal with difficulty _____

Total score in cutting ___/5

4. Drawing a person (pencil and blank A4 page)

Instruction: “Draw a person.”

Total score – number of body parts drawn ___/3

Final Score: ____/20

4. Drawing a person (pencil and blank A4 page)

Instruction: “Draw a person.”

Total score – number of body parts drawn ___/8

5. Copying their first name (pencil and blank A4 page)

Write the child’s first name at the top of the page.

Instruction: “Copy your first name.”

	1	0
Accuracy	copied in normal order	omitted letters, confused the order, wrote from right to left
Readability	writing is readable	writing not readable
Organization	normal (letter size, spaces between the letters)	defective

Total score in copying name ___/3

Final Score: ____/35

GIFT Score Page/ rating scale – Ages 5-6

Pupil's Name _____ Age _____ Date _____

1. Copying basic geometric forms (pencil) – vertical line, horizontal line, circle, plus sign, square, 2 diagonal lines, an "X", triangle (shapes 1-9):

Instruction: “Copy each shape into the empty square next to it.”

	1	0	Notes:
Dominant hand	right or left	not clear	_____
Grasp of pencil	normal	abnormal	_____
Function of non-dominant hand	full	partial	_____
Precision (number of recognizable graphic reproductions)			____/9
Total score in copying geometric forms			____/12

2. Coloring basic geometric forms (thick marker) – triangle and heart (shapes no. 2-3):

Instruction: “Color the triangle and the heart.”

	1	0	Notes:
Dominant hand	right or left	not clear	_____
Grasp of pencil	normal	abnormal	_____
Function of non-dominant hand	full	partial	_____
Precision of triangle borders		exact	not exact
Filled-in area of triangle		full	not full
Precision of heart borders		exact	not exact
Filled-in area of heart		full	not full
Total score in coloring			____/7

3. Cutting (scissors) – square and circle (shapes no.2-3):

Instruction: “Cut out the square, and after that cut out the circle.”

	1	0	Notes:
Dominant hand	right or left	not clear	_____
Functional prehension of scissors	normal	abnormal	_____
Strategies for holding the paper with non-dominant hand	efficient	inefficient	_____
Accuracy of action (square)		exact	not exact
Effectiveness of action (square)		normal	with difficulty
Accuracy of action (circle)		exact	not exact
Effectiveness of action (circle)		normal	with difficulty
Total score in cutting			____/7

4. Drawing a person (pencil and blank A4 page)

Instruction: “Draw a person.”

Total score – number of body parts drawn ___/12

5. Writing their first name (pencil and blank A4 page)

Instruction: “Write your first name on the page.”

	1	0
Accuracy	written in normal spelling order	omitted letters, confused the order, wrote from right to left
Readability & Organization	Readable, and normal organization (size of letters, spaces between letters)	Unreadable, and defective organization

Total score in writing name ___/2

Final Score: ____/40

Expansion for ages 5-6

6. Writing the abc (pencil and blank A4 page)

Instruction: "Write all the alphabet letters"

0	1	2	3	4	5
Non-letters, Severe errors, no readable letters		Some of the letters are readable, omitted letters		All the letters are readable	

Total score in writing the abc ___/5

7. Writing numbers from 1-10 (pencil and blank A4 page)

Instruction: "Write all the numbers from 1 to 10"

0	1	2	3	4	5
unreadable numbers, Severe errors		Some of the numbers are readable, omitted numbers		All the numbers are readable	

Total score in writing the numbers ___/5

Final (E) Score: ____/50

Expansion for ages 6-7

8. Phonetic writing – (pencil and A4 lined paper) *clarification – the child must be asked to write the words on their own, not to copy.

Examiner instruction: Every word should be read out loud after the child has finished writing the previous one.

Instruction: “Write the following words: Dog, Panda, Shark, Elephant”.

	2	1	0
	Full and correct representation of all letters according to order, correct organization and legibility	Partial representation of letters, mild order confusion, partial organisation, and legibility	Random usage of letters, no organisation, writing from right to left, inadequate organisation and legibility
Dog			
Panda			
Shark			
Elephant			

Total score in phonetic writing ___/5



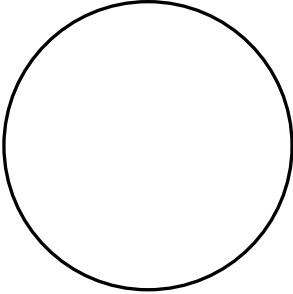
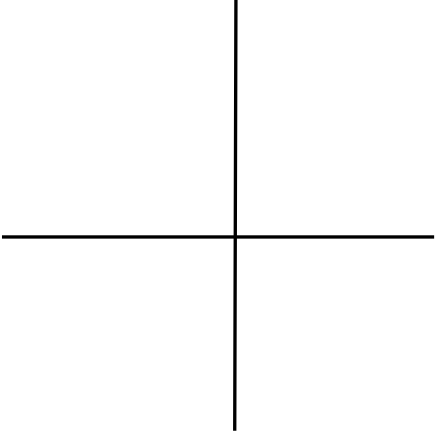
Final Score: ____/50

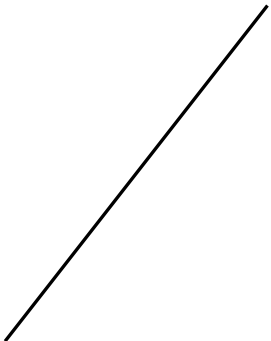
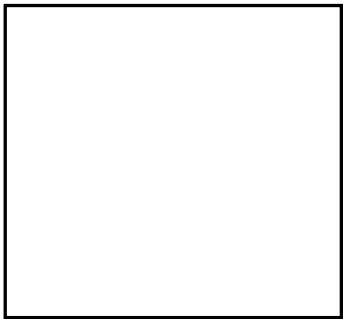
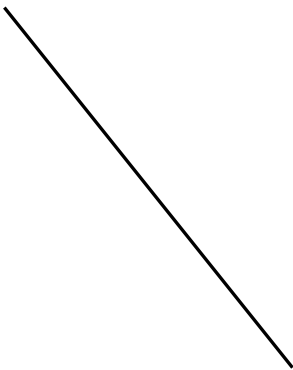
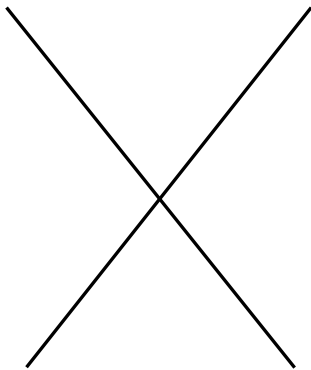
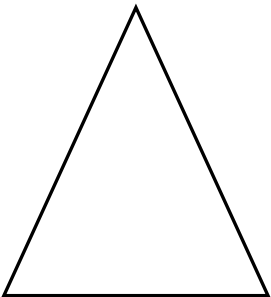
Scoring interpretation (N=936)

Test Format	Age group	Range	M (SD)	<u>Suspected delay</u> <M-1SD	Developmental delay <M-2SD
3-4 (N=169)	3.0-3.5 N=73	1-20	10.64 (4.83)	6-3	2<
	3.6-3.11 N=86	0-20	14.59 (3.81)	11-7	6<
4-5 (N=280)	4.0-4.5 N=101	8-35	25.10 (6.17)	19-13	12<
	4.6-4.11 N=168	12-35	27.77 (5.23)	23-17	16<
5-6 5-5:11 (N=205)	5.0-5.5 N=93	10-40	29.54 (5.28)	24-19	18<
	5.6-6.0 N=101	9-40	33.56 (6.01)	28-22	21<
5-6 Extended (N=147)	5.0-5.5 N=67	13-49	35.37 (6.67)	29-22	21<
	5.6-6.0 N=80	14-50	38.08 (7.75)	30-23	22<
6-7 (N=120)	6.0-6.5 N=53	17-48	38.11 (6.55)	32-25	24<
	6.6-7.0 N=67	18-50	42.21 (5.65)	37-30	29<

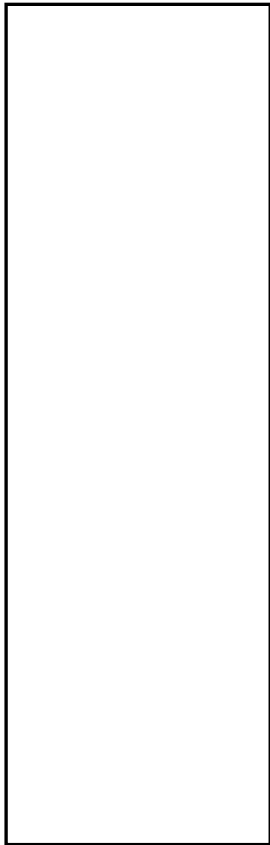
Copying basic geometric forms

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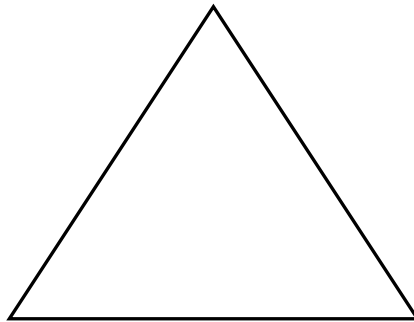
1 	2 	3 	4 

5 	6 	7 	8 	9 
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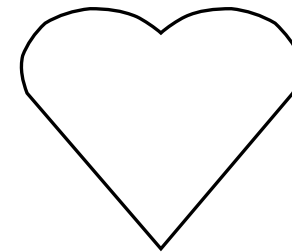
1



2



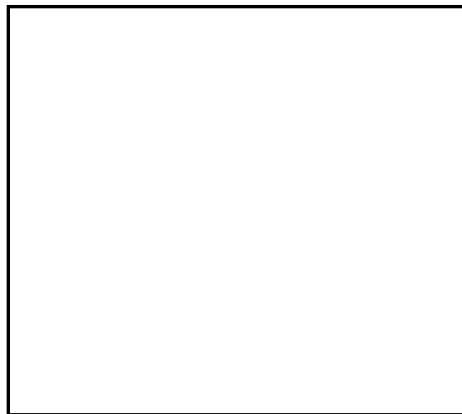
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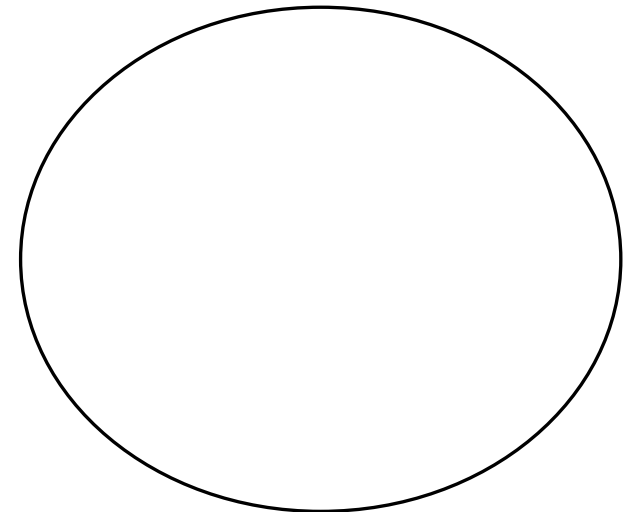
Cutting

1

2



3



Drawing a person:

Copying/ Writing their first name

Writing the abc

Writing numbers from 1-10