Scoring Notebook for the

CIFASD Neurobehavioral Test Battery

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Version 2.0

January 25, 2006

CIFASD Scoring Notebook

Table of Contents

* The listed page numbers are for the items on this Table of Contents only. It is suggested that you use these pages along with photocopies of the pages listed in the text from the actual manuals (i.e. norm charts and tables) to gain the most benefit from this scoring notebook. The photocopied pages should follow the pages above (see ScoringNotebookWithNorms.PDF on the website) and be placed in a three-ring binder with tab dividers separating out each test.

CIFASD <u>Test Packet Cover Sheet Instructions</u>

Child's Name: Enter the child's first name and last name initial(s). Ex. Jill V.V.

ID#: Enter your site code and the subject number. Ex. SMS2
(San Diego's site code and a 2 for the second child being tested at this site.)
Please contact Sarah Mattson if you do not know your site's code.

Sex: Circle the appropriate sex of the child.

Ex. MALE ⟨FEMALE⟩

Handedness: Circle the appropriate handedness of the child for writing skills primarily. Ask the child their handedness and observe which hand they hold a pencil with. For mixed handedness you will have to observe the child throughout the session and evaluate after looking at all of the subtests. This should also become clear after completing the Edinburgh Handedness scale. Use this handedness as the dominant hand for skills like the Grooved Pegboard. Note which hand the child uses on each test.

⟨RIGHT⟩   LEFT   MIXED

Grade: Enter the grade that the child is currently enrolled in or the grade they have just completed if the child is being tested during a time when school is out of session.

Ex. 4th ⟨Currently Attending⟩   Just Completed

Calculating the child's age at time of testing: This is to be completed per session if needed. Enter in the date of testing and the child's date of birth in the order labeled (Year then Month then Day). Subtract the date of birth from the date of testing. Ex. All months are assumed to have 30 days for the purpose of this calculation.

<u>Session 1:</u>   Year /Month/ Day
                                 03   ~~10~~ 22   37

Date of Testing: ~~04~~ / ~~11~~ / ~~07~~ (Date of testing = November 7, 2004)

Date of Birth: 94 / 12 / 22 (Child's date of birth = December 22, 1994)

Age at Testing: 09 / 10 / 15 (Child's age = 9 yrs., 10 mos. and 15 days)

Age Calculation Explanation: Since you cannot subtract 22 from 7 you need to borrow a months worth of days (30 days) from the month column so that you now subtract 22 from 37 (7+30) to equal 15 days. Likewise, you will need to borrow a year's worth of months (12) to add to the month column so that you can subtract 12 from 22 (10+12) to equal 10 months. Lastly, you will subtract 1994 from 2003 to establish that the child is 9 years, 10 months and 15 days old.

Medications & Dosage: *It is preferred for CIFASD testing that the child is **not** taking any **stimulant** medications on the day of testing; however, this is not an exclusionary criterion for participation.* Ask the child and then verify with a parent/caretaker the medications and dosages that the child is currently taking and be sure to indicate which the child has taken that day prior to your testing session. Circle whether or not the medications were already taken today. If not all listed were taken yet, circle those that were taken.

Start Time, End Time & Total Time: Write in the time that you start the session and the time that you end the session. Then calculate the total time in both hours and minutes and minutes only. Ex. Total Time = 5 hours 33 minutes = 333 minutes

Session 2: If for some reason all tests could not be completed in one session, please provide the information requested for the second session and be sure to recalculate the child's age for the new date of testing.

Monthly Conversion Chart:
Below is a chart that illustrates the decimal equivalents for the number of months. Each decimal is based on the simple equation of X (where X = the number of months) divided by 12 (the number of months in a year). For example, if the child's age is 9 years, 10 months and 15 days, the child is 9.833. You will need to verify the child's age in the decimal format on the CIFASD Access databases.

MONTH CONVERSION CHART

# of Months	=	Decimal
1	=	0.083
2	=	0.167
3	=	0.250
4	=	0.333
5	=	0.417
6	=	0.500
7	=	0.583
8	=	0.667
9	=	0.750
10	=	0.833
11	=	0.917

CIFASD Global IDs

Please read this thoroughly and pass along this information to ALL personnel at your site working on the CIFASD project. This information applies to ALL components of the CIFASD project. This information was sent in an e-mail to all on the CIFASD Neurobehavioral Core ListServ on 1/18/06.

It is essential that everyone use ONLY Global IDs as the IDs for all CIFASD neurobehavioral testing, 3-D photos, dysmorphology exams and alcohol consumption inventories. The Global ID contains your site code (available on the website) which is a combination of 3 capital letters with no spaces in between (i.e. ABC not abc or A B C) and the number of the subject with no spaces or leading zeros* (i.e. ABC1 not ABC 1 or ABC0001). Each subject is to have only one Global ID unique to them across all components of the CIFASD project.

If you've already uploaded data for any component and you have used more than one global ID for the same subject (i.e. ABC1 and ABC0001), please contact the informatics core (cifasdic@iu.edu).

*There is one exception to this formatting and it is as follows: If you have already uploaded your CIFASD dysmorphology exams to the CIFASD Dysmorphology Access Database and have used Global IDs with leading zeroes (i.e. ABC0001), keep the Global IDs in this format for all other components.

Edinburgh Handedness

Assign a value to each hand per item using the guidelines listed here:
In each column, indicate 0 (never), 1 (sometimes) or 2 (always). If the child never uses the non-preferred hand, enter 2 for the preferred hand and 0 for the non-preferred; if the child sometimes uses the non-preferred hand, enter 1 for the preferred and 0 for the non-preferred; and if the child uses hands interchangeably enter 1 and 1. If the child responds "I don't know" for an item, draw a dash (-) in the columns and do not include this item in the totals.

Use the following equation to calculate the Edinburgh Score:

Edinburgh Score = (R Total – L Total)_____ / (R Total + L Total)_____ = **_____**

So, what does this score mean?

This test is essentially measuring the strength of dominance for the child's most preferred hand. Please remember that preferred does not always equal dominant on this task.

A score of one means the child is 100% **right**-hand dominant (they always use their right and never use their left for all of the items) and a score of negative one means the child is 100% **left-**hand dominant. A score of zero would indicate the child is ambidextrous based on the results of this questionnaire with an equal strength on both hands. **Do NOT modify this equation** for left-handed children. We will be able to recognize those children that prefer their left hand as their score will be negative.

Scores in between indicate the strength of the child's preferred handedness. For example, a sample score of .667 would indicate that this individual preferred their right hand to their left more often than not or a 67% strength of the right hand.

Leiter-R Brief IQ

It should be noted that each response (card) is scored, not just the complete sequence. In other words, partial completion of a sequence is credited for most subtests.

Subtest Raw Scores: Count up the correct score responses (the number of circled card letters) on the response form and list the total on the response blank for that item. Note: For Figure Ground (FG), each card has it's own 1 or 0 score blank as do portions of some of the other subtests. Award full credit for all non-administered items prior to the starting point for this child if the training item/start item receives full credit. Be mindful of the discontinue (stop rule) and remember that for the Leiter-R, it is the number of cumulative responses failed NOT consecutive. Check to be sure the correct starting point, reversal (if needed) and discontinue were followed by the examiner.

Leiter-R Brief IQ: Transfer the raw score totals for each subtest and use the Leiter-R Brief IQ calculation area on the bottom of the Leiter-R RP test packet page (see example below) to calculate the child's Leiter-R Brief IQ. Locate the correct table by finding the child's age and convert the raw score totals for each of the four subtests (FG, FC, SO and RP) to scaled scores by using the tables on pages A-13 to A-27 of the Leiter-R Examiner's Manual. Take the total of the scaled scores for these four subtests and use the table on page D-2 to convert this scaled score total to the appropriate IQ equivalent. Use pages K-1 & K-2 to determine the appropriate percentile rank for the standard score (which is the IQ). Use page E-15 to calculate the confidence interval. (Confidence interval example: If a child is 9 years old and has a Leiter-R Brief IQ score of 88, the confidence interval is 78 to 98.)

Leiter-R Brief IQ: Raw   SS

Figure Ground: _____ _____

Form Completion: _____ _____

Sequential Order: _____ _____

Repeated Patterns: _____ _____

*Brief IQ: SS Total _____   IQ _____ % _____ C.I.@95%_____

The following pages from the Leiter-R manual should be photocopied and placed in the order below following this cover page as they provide the normative data: A-13 to A-27, D-2, K-1 to K-2, E-15 and page 104.

Leiter-R Attention Sustained (AS)

Use the form in the test packet along with the templates and the appropriate Leiter-R Examiner's Manual Appendices referenced to score this task.

Self-corrections are permitted and not counted as errors. Marks clearly targeting an item are counted as correct even if they are slightly off in their placement. Look in the test packet for notes the examiner may have made regarding self-corrections and unclear marks. Only count those answers crossed out within the specified time limit. If the examiner was unable to stop the child after the time limit or they missed the time limit, this should be noted in the test packet. The examiner should have a note as to how many marks should not be considered as they were outside the time limit allowed.

From the Leiter-R Examiner's Manual page 52: Score after all testing is completed. Answers are counted if it is clear the child was indicating a particular answer, even if motor performance on task is not precise. First, count the total number of marks on each page. Next, use scoring templates and count the total number correct. Then, subtract the total correct from the total marks to get total number of errors. Finally, subtract total number of errors from total number correct to get the adjusted correct raw score. NOTE: All three raw scores may be converted to scaled scores.

Use the age appropriate table in the Appendices to convert the child's raw scores to scaled scores. See the test packet (record) form for specific details.

The following pages from the Leiter-R manual should be photocopied and placed in the order below following this cover page as they provide the normative data: B-13 to B-27, C-13 to C-27 and H-3.

Grooved Pegboard Test

Raw Score: Time in seconds to complete the first 2 rows (for children ≤ 8) or all 5 rows (for children ≥ 9). Time for each hand is recorded and scored separately. All children regardless of age are administered all rows. If the time discontinue was met (300 seconds or 5 minutes) use 300 as the child's raw score.

Note: If the time is written in minutes and seconds be sure to transfer it into seconds only. For example, if the total time is written as 1:17, this would convert to 77 seconds. 1 minute = 60 seconds.

Calculating the Z-Score: Use the age and sex appropriate means and standard deviations on the table provided on the next page to calculate the z-score for each hand separately. Use the raw score (see definition above) as the total time for each hand.

Z-Score = Total Time minus the Age Mean divided by the Standard Deviation.

Note: **Do NOT modify this equation**. Negative Z-scores on this task (the child performing in less time than the age mean) demonstrate performance in the Average to Superior range whereas positive z-scores on this task (the child performing in more time than the age mean) demonstrate performance in the Average to Well Below Average range. For example, if a 9 year-old boy has a raw score of 65 seconds on his DH, his Z-score would be -0.974. Even though his score is negative, he is still performing in the High Average range.

Again, it is essential that all sites follow the equation below so that we may combine our data for analysis:
Z-Score = Total Time minus the Age Mean divided by the Standard Deviation.

Example: 10 year-old male
D.H.	77	Non-DH:	96
Age Mean:	83.00		90.00
Age S.D.:	36.50		28.90
Z-Score:	-0.164		0.208

Note: Dominant on the norms table does not mean a default of right hand. Use the Dominant Hand norms for the dominant hand for both right and left-handed children.

Time/Row: Calculate the time per row by subtracting the previous row total time from the current row. For example, if the total time for Row 3 is 34 and the total time for row 2 is 23, then the time per row for row 3 equals 34 minus 23 which is 11. The time per row for row 1 will always be the total time for row 1.

Grooved Pegboard Norms

	Male					Female			
	Dominant		Non-Dominant			Dominant		Non-Dominant	
Age	Mean	SD	Mean	SD		Mean	SD	Mean	SD
5	70.00	33.90	75.00	38.10	2	66.00	32.30	73.00	36.80
6	58.00	26.10	64.00	33.90	ROWS	63.00	31.20	65.00	30.10
7	48.00	24.60	51.00	22.00		53.00	24.80	58.00	19.90
8	38.00	9.02	41.00	14.60		38.00	10.40	47.00	26.80
9	84.00	19.50	92.00	23.80		90.00	54.00	96.00	50.60
10	83.00	36.50	90.00	28.90		84.00	18.10	92.00	24.40
11	76.00	18.10	86.00	31.00	ALL	79.00	17.00	92.00	24.80
12	78.00	24.40	85.00	32.20	ROWS	80.00	19.50	87.00	21.60
13	78.00	40.50	81.00	23.80		81.00	52.60	84.00	42.40
14	79.00	25.20	86.00	44.50		77.00	54.30	78.00	17.60
15-19	66.05	10.40	70.50	11.10		66.05	10.40	70.50	11.10

From Pegs Manual

Pictorial Depression Scale

Raw Score: The tester will circle the number that corresponds to child's response for each pair of statements. Sum both columns separately by adding up the values listed in the circled responses for each column. Check to make sure the tester administered each item by making sure either zero or one are circled for each pair of statements.

PDS Score: Use the following equation to calculate the PDS score. Circle all total scores > 10.

PDS Score = (Total L + Total R) _____ X 2 = _____Total Score

Scoring per Dr. Mary O'Connor: To make the scores comparable to the Child Depression Inventory (CDI; Kovacs, 1992), you will need to add up the number of items and multiply by 2. Any score >10 should be considered significant in a young child, but remember that we have not established age norms for the cutoff point so you only have our study to fall back on for validity. We did find a correlation of .83 with the CDI using a group of hospitalized inpatients who were eight years of age or older. We also found that using a cut off score of > 10, the PDS distinguished between depression and non-depression (based on DSM-IV criteria) in 87% of a sample of child inpatients (O'Connor & Paley, submitted).

Progressive Planning Test (PPT)

Maximum Constrained Condition:

Mean Latency (1st Trials ONLY): Add up the latency times for the **administered 1st trials** ONLY (both successful and unsuccessful) and divide by the total number of cards administered. (Note: It is easy to do this by circling all of the 1st trial latency times in pencil on the test packet form.)

Mean Total Time (Successful Trials ONLY): Calculate the mean total time only for **administered** trials that were **solved**. (Note: It is easy to do this by drawing a box around all of the successful trial total times in pencil on the test packet form.)

Reminder: The variables involving time are only calculated from those cards that the child actually attempted. Cards that were not administered that the child may be receiving points for (ex. Cards 1 and 2) are not considered for these **time** variables.

Total Rules Broken: Sum of the number of Rule 1(Ru1) and Rule 2 (Ru2) violations for all trials. Each rule violation is counted, there is no maximum per trial or card.

Card Trial Scores: If a child solves a card on any of the three trials, circle the score corresponding to that trial in the Score column of the test packet form. If the child fails a card on trial 3 assign a value of zero to that item. **Discontinue** is met after 2 consecutive failed cards (6 consecutive failed trials). Award full credit (5 pts. each) to previous cards 1 and 2 not administered if card 3 was solved on any of the three trials. If a reversal was needed due to a failure of card 3, circle the appropriate scores for cards 1 and 2 as appropriate. Similarly, full credit may be awarded to card 1 if any trial of card 2 is successful.

1st Trial Score (**Bold** Only!): Sum of the circled bolded scores (including the scores for cards not administered). This sum is the total of the point values awarded to those cards in which the child got the initial attempt (1st trial) correct.

Total Score (All Trials): Sum of all circled responses (including the scores for cards not administered).

Additional variables (as of 1/10/06):
-Number of cards (#1 - 12) solved on the 1st trial. * (Max. = 12)
-Number of cards (#1 - 12) solved on any of the three trials allowed per card. * (Max. = 12)
-Number of cards #1 - 4 solved (on any trial). * (Max. = 4)
-Number of cards #5 - 8 solved (on any trial). (Max. = 4)

*All of the above counts follow the assumption that if card 3 is completed successfully on any trial, then cards 1 and 2 are counted as if they were solved on the 1st trial. If a reversal was needed due to a failure of card 3, count the trials for cards 1 and 2 as appropriate given the reversal administration.

Minimum Constrained Condition:

<u>Mean Latency</u>: Calculate the mean latency time for all cards.

<u>Mean Total Time</u>: Calculate the mean total completion time for all successfully completed cards. Do not included failed card attempts in this calculation.

<u>Pass/Fail Total</u>: Sum of pass/fail scores for cards 5 - 10. Even though a child cannot get stuck on the Minimally Constrained Condition, they still may not stack their beads in the proper order.

<u>Total Rules Broken</u>: Sum of the number of Rule 1 (Ru1) violations.

<u>Total X Equations</u>: Sum of all x-equation calculation scores for cards 5 - 10. Max. = 51.

Note: Only 1 trial is allowed per item, but all problems (5 – 10) are administered.

PPT Min. CC Scoring Examples:

If the child had 14 moves on card #5, what would his score be? The line on the Test Packet should read [numbers in brackets are numbers I'd be writing]: X = Number of moves [14] - 6 = [8] Score = 6 - X [8] = [-2]. His score for PPT Min. CC card #5 would be a negative 2 and in calculating his X Equations Total Score for all cards, you would take 2 points away. A child making MORE than the necessary moves (the constant) on the Minimally Constrained Conditions will receive a lower score. The maximum score for the Min. CC cards #5-10 is 51, but the minimum score could possibly be below zero for a child making excessive moves on all cards.

The only time on the Min. CC that a negative number isn't allowed is for the X variable. As noted on the Test Packet form, the following is how to score cards for children who perform LESS moves than the constant: *Constants used in the above scores represent the minimal number of moves involved in solving a specific problem under the minimally constrained condition. If the number of moves is less than the constant in a given problem (this is possible only if the subject used the strategy they learned in the two rules condition), assign a value of 0 to X. In other words, children do not receive bonus points for employing the two rules strategy to solve a problem under the minimally constrained condition.

For example, if on card #7 the child solved it in 8 moves, what would her score be? The Test Packet line for this card should read: X = Number of moves [8] - 10 = [-2] As an X variable is not allowed to be negative, correct this to zero in the next part like so: Score = 10 - X [0] = [10]. Simply put, the maximum score for any card on the Min. CC is the value of the constant.

PPT Maximum Constrained Conditions (2 Rules) Solutions

Card #3: Y2/O3/B3/Y3

Card #4: Y2/02/B3/O3/Y3

Card #5: Y3/O2/Y2/B3/Y3/O3

Card #6: G3/Y2/G2/O3/B3/G3/Y3

Card #7: G3/Y2/O2/G2/B3/G3/O3/Y3

Card #8: G3/Y3/02/Y2/G2/B3/G3/Y3/O3

Card #9: G2/Y3/G3/O2/G2/Y2/B3/Y3/G3/O3

Card #10: R2/G3/R3/Y3/O2/Y2/R2/G2/B3/G3/R3/Y3/O3

Card #11: R2/G2/Y3/G3/R3/O2/R2/G2/Y2/B3/Y3/G3/R3/O3

Card #12: R3/G2/R2/Y3/R3/G3/O2/G2/R2/Y2/B3/Y3/R3/G3/O3

NOTE: There are additional moves that can be made within these solution sequences that do not spoil the child's attempt rendering them stuck. For example, if on card #3 the child's first move is Y3 instead of Y2 this is not necessarily a failure. They still have an opportunity to move it to peg 2 before placing the orange bead. Use caution to make sure the unlisted move the child had made is actually incorrect and not just extra.

When scoring the PPT, be sure to use these solutions to verify that trials the tester circled as solved were completed in the proper order. You can also verify the minimally constrained conditions trails by working from right to left and ensuring that the beads were stacked on peg 3 in the proper order.

Finger Localization

Please place these symbols to the immediate left of the test item where appropriate:

X = Incorrect <u>Final</u> Response [NOTE: Initial errors can also be final errors if only one response is given.]

I = Inversion Error = Responses where the child responded on the correct fingers, but in the reversed order on the <u>final</u> response. (i.e. Target response = 2-3 and child responded 3-2 – so the correct fingers, but the inverted order.)

Use the FL Scoring sheet (see example below) to record totals for each column.

NOTE: Some children receive the L hand first so please make sure you are in the correct column.

<u>KEY</u>: UC=Uncrossed C=Crossed L=Left R=Right T=Total (R&L Combined)

Final Errors (X) = Total number of final responses that were incorrect.

[NOTE: It is possible for # Final Errors to be greater than the # Initial Errors if the child first responds correctly and then changes to an incorrect response.]

Initial Errors = Total number of initial responses on the correct hand that were incorrect.

[NOTE: Initial errors can also be final errors if only one response is given.]

>1 Response = Total number of responses in which the child changed their response.

[NOTE: The max. per item is one as this is not a tally of the number of changes.]

Incorrect Hand (*) = Total number of responses in which the child responded on the wrong hand either on the first or final response. [NOTE: The max. per item is one even if they responded on the wrong hand on 1st and final responses.]

Inversion Errors = Total number inversion error <u>final</u> responses.

A.	UC R	UC L	UC T	C R	C L	C T
# Final Errors (X)						
# Initial Errors						
# >1 Response						
# Incorrect Hand (*)						
B.						
# Final Errors (X)						
# Initial Errors						
# >1 Response						
# Incorrect Hand (*)						
C.						
# Final Errors (X)						
# Initial Errors						
# >1 Response						
# Incorrect Hand (*)						
# Inversion Errors						

Finger Localization (continued)

FL Scoring examples:

FL examples for Condition C Uncrossed Right (I just selected one column randomly for the purpose of these examples.) :
Target/Touched Fingers Uncrossed Right: 3-4
Child's response: 4-3 (1st response) / 3-4 (final response) on the Right hand
Scoring:
Final Errors (X)   = 0
Initial Errors   = 1
>1 Response   = 1
Incorrect Hand (*)= 0
Inversion Errors   = 0 (Inversions are only tallied for final responses that are incorrect.)

Target/Touched Fingers Uncrossed Right: 3-4
Child's response: *4-3 (1st response) on the Left hand
Scoring:
Final Errors (X)   = 1
Initial Errors   = 1
>1 Response   = 0
Incorrect Hand (*)= 1 (Child responded on the incorrect hand at first as indicated by the *. An asterisks should be placed in front of all items in which the child responds initially on the wrong hand. DO NOT record the fingers in which the child responds on the wrong hand as such responses are not to be scored for anything other than # incorrect hand.
Inversion Errors   = 1

Target/Touched Fingers Uncrossed Right: 3-4
Child's response: 2-3 on the Right hand
Scoring:
Final Errors (X)   = 1
Initial Errors   = 1
>1 Response   = 0
Incorrect Hand (*)= 0
Inversion Errors   = 0

Target/Touched Fingers Uncrossed Right: 3-4
Child's response: 3-4 (1st response) / 3-2 (final response) on the Right hand
Scoring:
Final Errors (X)   = 1
Initial Errors   = 0
>1 Response   = 1
Incorrect Hand (*)= 0
Inversion Errors   = 0

D-KEFS Verbal Fluency

Use the CIFASD test packet form, the D-KEFS Record Form and the D-KEFS Examiner's Manual pages 58-73 and 242-255 to score this test.

Circle all words that are errors regardless of type.

Do not include those words that the child says, but then later self corrects. Cross them out with a line on the test packet form.

Raw Scores:

For each letter/category, add up the total number of correct words (total number and for each 15" interval), total number of repetitions and set loss words, and the total number of words (correct and incorrect) the child gave.

For switching, add up the number of correct switches to obtain Total Switching Accuracy. It is helpful to draw a dash (similar to a minus sign) with pencil on the test packet form to indicate correct switches. For example, apple – table.

See the D-KEFS Manual pages for specifics on scoring information (pages 64-71) and use the D-KEFS Verbal Fluency Record Form for scoring calculations (e.g. converting raw scores to scaled scores).

Note: There is a typo in the D-KEFS Examiner's Manual on page 63. On the last variable on this page in figure 4.4 they are demonstrating how to calculate the Percent Switching Accuracy for Category Switching. The Total Responses Condition 3 Only should be 14 not 15 and therefore, the resulting Percent Raw Score is 71.4 and Scaled Score is 8.

Scoring Tips:

Furniture: Cabinet (China, File or just Cabinet), Mattress, and Trunk are all scored as correct.

Boys' Names: If it is unclear as to whether or not the name a child listed is a first or last name, give them the benefit of the doubt unless there is a string of last names.
Ex. If the child says "Keith, Edwards, John", give them the benefit of the doubt that they meant Edward.

D-KEFS Trail Making

Use the CIFASD test packet form, D-KEFS Record Form, child's Response Booklets and the D-KEFS Examiner's Manual pages 46-49 and 221-240 to score this test.

Discontinue Times: For Visual Scanning, Number Sequencing, Letter Sequencing, and Motor Speed, the discontinue time is 150 seconds (2 and a ½ minutes). For Number-Letter Switching the discontinue time is 240 seconds (4 minutes).

Completion Times Scoring: The primary scoring measure for each of the five conditions is the number of seconds that the examinee takes to complete each condition. If the examinee does not complete a particular condition at the end of the time limit, then the time limit is used as the completion time. The raw score (in seconds) for each of Conditons 1-5 is converted to a scaled score. Additional Completion Time Measures are explained on the D-KEFS record form and in the D-KEFS manual (pages 46-47).

Error Analysis Scoring: Count up the total number of omissions and commissions for Condition 1 and the number of set loss, sequencing, and time discontinue errors for Conditions 2 through 5 and record in the appropriate blanks. Convert to cumulative percentile ranks and standards scores as available (D-KEFS manual pgs.221-240).

Condition 1: There are 12 threes on each page of this response booklet.
Omission Error: Whenever an examinee fails to mark a target 3, either after the examinee states that he or she has completed the task or the time limit has elapsed.
CIFASD Note: If there is a mark in the margin/open space but near a 3 and it is obvious the child meant to mark that 3, do not count this as an omission.
Commission Error: Whenever an examinee marks a letter or a number that is not a 3. If an examinee makes a commission error and then self-corrects it (e.g. by scribbling over it), that response is not scored as an error.

Conditions 2-5: Check to make sure the child completed the proper connections and that the tester pointed out mistakes as needed. Once an incorrect connection has been made, it is counted as an error even if the examinee catches the error after it's made.

Sequencing Error: When an examinee makes a connection within the correct set of symbols for the condition being administered (numbers or letters) but connects the wrong item within that set (e.g. 8 to 10 or F to H). On Condition 4, a sequencing error is when an examinee **correctly switches** from one set of symbols to the other but connects an item that is out of sequence within the correct set (e.g. 3 to E instead of 3 to D).

Set-Loss Error: When an examinee draws a line connecting an item that belongs to the wrong set of symbols (numbers or letters) for the condition being administered (e.g. 4 to D instead of 4 to 5 or C to 5 instead of C to D). On Condition 4, a set-loss error occurs when the examinee fails to switch from one set of symbols to the other (e.g. 4 to 5 instead of 4 to D).

Time-Discontinue Errors: When an examinee failed to connect one or more items because the time limit for that condition had elapsed. All connections that should have been made but were not because of the expired time limit are counted as time-discontinue errors. Note exception (D-KEFS manual page 48).

Developmental Test of Visual-Motor Integration (VMI)

Child's age: If the child is X-years, Y-months and 15 days old, their age remains at X-years and Y months. If however, the child is X-years, Y-months and 16 or more days old, their age goes up to X-years and Y+1-months. Note: For the CIFASD test battery, the only test in which you will round up the month is the VMI.

Raw Score: Use a ruler and a protractor to score each item according to the criteria listed on pages 28-75. Experienced scorers will find the Summary Scoring Information on pages 76-77 useful as a reminder of the basic scoring criteria. An item is scored a failure/no score (zero) if it fails even one of the criteria listed. Indicate which criterion results in a no score for that item by writing the criteria number next to the zero score for that item on the scoring sheet. For example, writing 0 #2 would indicate that the child received a no score for this item because they did not meet criterion #2 for that item. The total raw score is the total number of forms correctly copied. Give credit to all previous items, even if not administered. Discontinue scoring after three consecutive failures (scoring only).

Important Scoring Considerations:
• A major rule to remember when scoring a form is **if in doubt, score it as meeting a criteria**. Some scorers tend to be too strict. In general, it is better to gain a good developmental sense or gestalt for each form. For example, it is common to encounter an older child who somewhat hastily copies the easier forms, not bothering to dot the i's and cross the t's, because the forms are well within the child's command. An experienced examiner/scorer takes such behavior into account in scoring.
• Do not become obsessed with details. Look at each production as a whole in the context of the scoring criteria and examples. If it still seems too close to call, give it a passing score of one.
• Occasionally, a child makes a second attempt at a form. **Always score the first attempt** of children *below age nine*. If you did not actually see which one was first, it can often be identified by comparing the sizes of dual attempts relative to the sizes of the child's single attempts on other forms.
• Accept productions of children *over age nine* who first sketch with light lines and then complete a form with darker lines.

CIFASD Note about **extra lines**: The question has come up about what to do with extra lines. As long as it isn't a second attempt at a line (which isn't permitted) or a sign of directional confusion (i.e. Form 25), it is best to ignore extra lines.

To convert the Raw score to the Standard Score: Use the even numbered pages in the Manual pages 166-194 making sure that you are using the page with the proper age for the child you are testing.

To find the appropriate Percentile for the Standard Score: Use the 1st and last columns on page 198.

To find the Age Equivalents: Use page 160 of the Manual.

CANTAB

Some sites have slightly different versions of this program. The tests and results are the same, but procedural steps might be slightly different for each site. For instance, the CANTAB at San Diego's site is an older model and does not have some of the export/print options that newer versions contain. These steps were written to correspond with the CANTAB version in Russia (which is not the earliest version). Please contact Jill Vander Velde (vanderv@mail.sdsu.edu) or Kim Ogle (kowens@projects.sdsu.edu) if you have any questions/concerns.

1. If still in the Control Centre, click on "Analyse Results." If you have closed out of the Control Centre, double click on "Results Manager" on the desktop.
2. In the new window that pops up, click on "Open an Existing Results Set." Make sure "C:\My Documents\Default Results Set.can" is highlighted and click "OK." Test scores are brought in automatically (a box will appear showing scores being transferred if a subject was tested and their data has not been brought in yet, otherwise, there will be nothing).
3. If you are maintaining subject information in a separate results set (i.e., "Consortium Results Set.can"), open that results set by clicking on File → Open Results Set..., highlighting the results set of interest, and clicking "Open."
4. Return to the "Default Results Set" window and highlight the subject you want to transfer to the new results set.
5. Click on Edit → Copy, then go to the separate results set window, check to make sure that "Subjects" is highlighted (i.e., ALL subjects' tests are viewable in the right-hand window), and click on Edit → Paste.
6. If not all the subject details were entered prior to testing, highlight the subject's name, go to View → Properties, and click on the "Details" tab. To enter information into a field, click on the field. Then, click on the box at the top (a green ✓ box and a red X box should appear next to it when you can enter data). Enter the appropriate information for that field and click on the green ✓ box. Repeat as necessary until all fields are entered. Close the Properties window. **Note:** If you do not click on the green ✓ box, changes will NOT be saved.

Exporting Data –

7. Highlight either "Subjects" (this will export ALL children within that results set) or a single individual.
8. Click on the "Analysis Wizard..." button.
9. Click "Next." (If you click on the box to not show the dialog box again, you will not have to take this step again.)
10. Make sure "Summary datasheet" is marked and click "Next."
11. Make sure only "Include warnings of failed or non-clinical tests" is checked and click "Next."
12. Make sure "Raw Scores" is checked and click "Next."
13. A new box tells you that you must now choose which measures to include in the summary. Just click on "Next."

14. Where it says "Recommended Measures," change it to "Consortium Battery" (or choose the measures required) and click "Finish." **Note:** The first time you do this, you should create a new collection of measures that will contain ALL variables of interest. To do this, follow these steps (if done, go to Step 15):

    a. Make sure "Recommended Measures" is highlighted under "Collection:."

    b. Delete unwanted measures by highlighting them within the "Selected Metrics:" (right-hand window) and then clicking on the "X" box (located to the right of this window). **Note:** When you highlight a measure, if information about the measure exists, it will appear in the box at the bottom of the screen.

    c. To add a different measure, click on the pop-up window under "Available Metrics:" to locate the appropriate subtest or "(Subject Properties)," then highlight the measure of interest, and click on "Select →."

    d. Measures to include (in this order) are:
        i. CIFASD ID (Site Code + Individual ID, i.e., SMS1).
        ii. Subject name.
        iii. Date of birth (DOB).
        iv. Age.
        v. Sex.
        vi. Handedness.
        vii. Ethnicity.
        viii. NART (same as FSIQ, but _please_ use **this** measure for FSIQ).
        ix. MOT Mean latency.
        x. BLC Percent correct.
        xi. PRM Percent correct.
        xii. SRM Percent correct.
        xiii. SSP Span length.
        xiv. SWM Strategy.
        xv. SWM Total errors.
        xvi. SWM Between errors.
        xvii. SWM Between errors (4 boxes).
        xviii. SWM Between errors (6 boxes).
        xix. SWM Between errors (8 boxes).
        xx. SWM Double errors.
        xxi. SWM Double errors (4 boxes).
        xxii. SWM Double errors (6 boxes).
        xxiii. SWM Double errors (8 boxes).
        xxiv. SWM Within errors.
        xxv. SWM Within errors (4 boxes).
        xxvi. SWM Within errors (6 boxes).
        xxvii. SWM Within errors (8 boxes).

    e. To move measures up and down in the "Selected Metrics:" window, highlight the one to move and use the ↑ and ↓ arrow keys located on the far right until it is in the appropriate position.

    f. Once you have all measures of interest (in order) within the "Selected Metrics:" window, click on "Save As..." (next to the "Collection:" pop-up

menu) and name it appropriately (i.e., "CIFASD Collection" or "Consortium Collection"). **Note:** This allows you to just click on this collection in Step 14 rather than repeat this process again.
g. Click on "Finish."

15. A new window will appear with the data – click on File → Save As... Give the file an appropriate name (i.e., "Russian Raw Scores Wk1") and make sure the "Save as type:" field says "CSV (comma-delimited) (*.csv)" and click "Save" (make sure you know where it saves to – the default is "My Documents" found on the desktop).

16. Repeat steps 7 through 15, but at step 12, click on "Standardised Scores" and then make sure the "Narrow peer group individually for each measure" is checked (you can ignore the warning that may appear). Save this file as appropriate (i.e., "Russian Z Scores Wk1").

Printed Reports –

17. To create a printed report with the Z-scores or raw scores, highlight a single subject's name and click on the "Analysis Wizard..." button.

18. Click "Next." (If you click on the box to not show the dialog box again, you will not have to take this step again.)

19. Make sure "Summary report" (to get report with Z-scores) is checked and click "Next."

20. Check/uncheck boxes so that only "Include warnings of failed or non-clinical tests." and "Include basis of comparison for standard scores." are checked. Also, make sure to check "Narrow peer group individually for each measure." Click on "Next."

21. A new box tells you that you must now choose which measures to include in the summary. Just click on "Next."

22. Where it says "Recommended Measures," change it to "Consortium Battery" (or whatever you named the collection in Step 14.f.) and click "Finish."

23. When the report appears on the screen, click on "Print..." In the new "Print" window, make sure the printer is correct, that you print "All" pages (located under "Print Range"), then click on "OK."

24. To create a printed report of the raw data, repeat steps 17 to 22, except at step 19, make sure "Detailed Report" is checked and click "Next." Make sure both "Summary" and "Trial by Trial" are checked, then click "Finish."

25. When you close both the "Summary Report" and the "Detailed Report" you do not need to save the file. The file will just take up space and you can always repeat the above steps (17-23) to recreate them. Plus, a hard copy has just been printed up and stored in the subject's file. Just click on "Close."

Important Notes –

A. After exporting/printing, double-check the printouts to make sure that all variables/subtests desired are present (as appropriate – see Step 14. d.).

B. For the "Detailed Report," make sure that all subtests are in administration order (Motor Screening, Big/Little Circle, Pattern Recognition Memory, Spatial Recognition Memory, Spatial Span, and Spatial Working Memory) and staple

together. **Note:** Some older versions print this report such that the subtests do not always start on a new page. Do not worry about stapling in administration order if this is the case.

C.   For the "Detailed Report," do not worry if other "Subject Properties" appear at the top of each subtest, besides the ones listed above (in Step 14. d.). For this particular report, ALL possible "Subject Properties" are listed.

D.   Place both the "Summary Report" and "Detailed Report" into the subject's file.

E.   The subtest "Spatial Span" may be marked as "Test not complete" on both the "Summary Report" and the "Detailed Report." <u>THIS IS OK.</u> The subject just did not reach and complete 9 boxes (the maximum number of boxes a subject can receive on this subtest), but the data is valid and can still be used/scored.

Troubleshooting –

A.   *Print out shifts to right for each subtest:*
   1. Make sure you are in the "Results Manager".
   2. Click on Tools → Options...
   3. Under the "General" tab, uncheck the box near the bottom that reads: "Attempt to work around browser printing problems (recommended)." Note: **<u>DO NOT</u>** uncheck this box if you are not having problems with the print out shifting to the right.

B.   *Error message about Internet Explorer backgrounds:*
   1. If an error message pops up when you print that tells you that the backgrounds for Internet Explorer are not turned on, click on "Cancel." Note: The computer will still print the report, whether you have the "print backgrounds" on or not.
   2. Contact Jill or Kim at the e-mail address at the top of the page to let them know you are receiving this message. They will advice you what to do.

C.   *Extra pages print up:*
   2. Do not worry about extra pages printing up. At the present time, we do not know how to stop this from happening.
   3. Contact Jill or Kim at the e-mail address at the top of the page and they will contact you as soon as this issue is solved. Sorry for any inconvenience this may cause.

D.   *Print out does not print colors appropriately:*
   1. Make sure you are in "Results Manager."
   2. Click on Tools → Options...
   3. Under the "Reports" tab, under "Colour," change to "Monochrome," and click on "OK." Reports will now print in black and white.

E.   *When click on "All" in Print window, not all subtests print:*
   1. Currently, there is no way to fix this. When you are in the "Print" window, just print up those subtests that did not print, by choosing their "Page Number" and only printing that page.
   2. Contact Jill or Kim at the e-mail address at the top of the page and they will contact you as soon as this issue is solved. Sorry for any inconvenience this may cause.

Virtual Water Maze

<u>Locating Data</u>:

1. Go to your 'NIVN Morris Water Task' folder and click open. You can do a search for this folder on your computer if you are not sure where it is located. More than likely it is in your C:\Program Files unless you specifically saved it somewhere else.

2. Once in this folder, open the folder entitled 'Data'. You should now see now see a series of folders with the subject IDs you entered (i.e. SMS13). REMINDER: Please try and use the site code and subject number when labeling the children for all CIFASD tests. If you are not sure of your site code, please contact myself or Sarah. (NOTE: This 'Data' folder is the one you should be backing up on a regular basis as it contains all subject output.)

3. Select the folder of the subject you have just completed testing. Once this folder is open, you will see two different types of files (Bitmap Images and Text Files). There should be Bitmap Images labeled with as such PATH_X_Y where the X is the block number and the Y is the trial number. There will be 8 blocks with each one having 4 trials with the exception of block 6 where there is only one trial. Therefore, you will have a total of 29 Bitmap Images. As for text files, there will be a total of 30 and all but one will be labeled RAW_X_Y (with the X & Y variables meaning the same thing as above). The unique text file is labeled SUM_SubjectID where the SubjectID is the same as the folder name for this subject. This unique file is the one you will be using to print this subject's data output.

<u>Printing the Data</u>:

(Follow the steps to locating data above for the subject you are interested in printing.)
1. Select the data file labeled SUM_SubjectID and open this file.

2. Under the FILE toolbar, select PAGE SETUP.

3. Under ORIENTATION, select 'Landscape' and click OK. (NOTE: This ensures that the data will print on one page as opposed to two and does not wrap the data which would decrease the readability.)

4. Under the FILE toolbar, select PRINT.

5. Select your printer and hit PRINT.

6. You should now have a printout of a spreadsheet containing this subject's data. Make sure this printout contains your subject's ID# and file it in the subject's file.

NES3

Locating Data:
Do a search for a Microsoft Access (.mdb) file entitled 'NES3'. More than likely it is located in a folder in your C drive entitled 'NES3'. If you have problems locating this file, please let us know. (NOTE: This .mdb file is the one you should be backing up on a regular basis as it contains all subject data for the NES3 tasks.)

Scoring and Printing:
Use the 'NES3 CPT Data.xls' file (located on CIFASD website) to organize, save and print your NES3 CPT data.

Visual Discrimination Reversal Learning

Locating Data:
1. Go to your 'ReversalLearning' folder and click open. You can do a search for this folder on your computer if you are not sure where it is located. More than likely it is in your C:\Program Files unless you specifically saved it somewhere else.
2. Once in this folder, open the folder entitled 'Data'. (NOTE: This 'Data' folder is the one you should be backing up on a regular basis as it contains all subject output.)
Printing:
(Follow the steps to locating data above for the subject you are interested in printing.)
1. Select the data file labeled SubjectID_sumdata.txt and open this file.
2. Under the File menu, select Print.

Hand Scoring Old RevLearn Data

The below details how to hand score every variable for the RevLearn using the subject's raw data file. All RevLearn subjects run before 4/22/05, will need to be hand scored to correct the Number of Reversals variable ONLY. All other variables on the summary data output are correct and do not need to be hand scored, but we are leaving all steps for reference below. An e-mail was sent to contact Dr. Mattson for the newest version of the RevLearn progam on 4/22/05 to the CIFASD NB Core ListServ. Versions of the RevLearn program created after 4/22/05 all have the corrected calculation for this variable. The older versions of the program did not calculate this variable correctly and defaulted to giving all subjects a score of 3 on this variable.

1. To score Trials to Criterion (TTC), Commissions (COM), and Omissions (OM), open the subject's raw .txt file.
2. The trials to criterion per phase will come from the second column (labeled "TRL") in the raw data file, which is the running count of trials for the current phase. Just take the greatest number for each phase than add all those up to get "Total Trials." (NOTE: for the summary, Phase 1 is actually "PHASE" -1 in the raw data file, and goes up from there, i.e., Phase 2 = "PHASE" 0, Phase 3 = "PHASE" 1, etc.)
3. For commissions, if there's a response (1 in "RESP" column) and it's incorrect (INC in "EVAL" column) it's a commission error. Add up the total number of commissions per phase and than add all those up to get "Total Commission Errors."
4. For omissions, if there's no response (0 in "RESP" column) and it's incorrect (INC in "EVAL" column) it's an omission error. Add up the total number of omissions per phase and then add all those up to get "Total Omission Errors."
5. Use one of the two systems below to get the "Number of Reversals":
   A. In the subject's raw file:
      I. Determine how many phases subject completed in 30 trials after the end of phase 2 (listed as "PHASE" 1 in raw file). The maximum possible is 3.
   B. Open the subject's summary file. Determine **_ONE_** of the following:
      I. If the sum of the TTCs for phases 3, 4 & 5 is ≤ 30, this variable is 3.
      II. If the sum of the TTCs for phases 3 & 4 is ≤ 30, this variable is 2.
      III. If the total for phase 3 is ≤ 30, this variable is 1.
      IV. If the total for phase 3 is > 30, this variable is 0.
      If the # of reversals score is wrong in the summary file, delete the old number and replace it with the new number (do not delete any tabs or spaces, just the score itself). Make sure to save the changes before closing the file.

Questionnaires

ASEBA Questionnaires: Use the computer scoring program that was provided to you to score the CBCL, YSR and TRF forms for each child. Be sure to use the child's CIFASD Global ID as the child's ID. If more than one score is circled and it is not clear which the respondent intended, input the higher of the two into the scoring program.

SCT Scale (Barkley Slug): Add up the total of each column with 1 point being given for each check mark. Place this total at the bottom of each column. The overall score will be the total of the 'often' and 'very often' columns. Please place this total in the lower right hand corner of the page and circle it. This is the raw score that will go in to the database.

Parent/Teacher DBD Rating Scale: Use the 'DBD Scoring Tool CIFASD' (located on the CIFASD website) to score this questionnaire. Directions provided on the first Excel workbook tab.

Re-Checking System

Each file is to be scored by the examiner/tester and one other person (the re-checker). The tester is to score the file within 3 days of the testing session. The re-checker will score the file independently of the tester within 5 days of the tester's scoring.

The purpose of the re-checker is to carefully score the file as if they were the tester by using the re-checker form to calculate the child's scores on their own. While the re-checker will rely on information collected by the tester in the test packet, it is essential that they score the file ignoring the calculations and scoring judgments made by the tester. For example, the re-checker will need to rely on the words listed by the tester that the child responded with on D-KEFS Verbal Fluency, but the re-checker should decide on their own whether or not each word meets the scoring criteria and if not, which type of error it falls into. Other examples of things that the re-checker should score independently: the child's age (using the date of testing and date of birth provided by the tester), the Leiter-R FG raw score (by adding up the number of correct responses and coming up with the raw score NOT just simply transferring the raw score the tester calculated and looking up the scaled score), or verifying that the time listed for Grooved Pegs was converted properly into seconds. Reminder: These were just a few examples to demonstrate that anything the re-checker can score, they should do so independently (including raw scores).

The tester will complete the re-checker form (located on the following pages) test by test and score the entire file. Once they are finished, they will compare their scores to that of the tester and highlight any and all differences. They should also leave comments to the tester as needed to help explain the difference to the tester if the difference isn't obvious.

Within 4 days of the re-checkers scoring, the tester will look at the re-checker sheet highlights and comments and finalize the file by correcting any obvious mistakes and making judgments on those items with differences. It is essential that the tester communicate with the re-checker regarding any differences that are unclear on the re-checker form.

After the file's scores are finalized, they are ready to be entered into the CIFASD Neurobehavioral Access Database. Data should be submitted to the informatics core weekly.

There are certain tests that require a lot of the examiner and it is strongly suggested that you videotape each child's testing session so that you can review the tapes later if necessary. The tester may also request that the re-checker review a portion of the tape if the child has done something unique that that tester feels the re-checker should view as well. There are blanks on the re-checker form for the tester to request the re-checker to review the videotape for the following tests: PPT, FL and D-KEFS VF. The tester should note which portion of the test they are requesting the re-checker to review in that area of the re-checker form. Tape review request for other tests may be made by the tester as well in the margin near that test.

CIFASD Neurobehavioral Core Battery - Re-checker System

Subject CIFASD #: _____

Checked by: _____ Date Checked: _____

Child's age at testing: Day 1:_____/_____/_____ Day 2:_____/_____/_____

_____/_____/_____   _____/_____/_____

_____/_____/_____   _____/_____/_____

Edinburgh Handedness:
Edinburgh Score = (R Total – L Total)_____ / (R Total + L Total)_____ = _____

Leiter-R Brief IQ: Raw   SS

Figure Ground: _____   _____

Form Completion: _____   _____

Sequential Order: _____   _____

Repeated Patterns: _____   _____

*Brief IQ: SS Total _____   IQ _____   % _____ C.I.@95%_____

Leiter-R Attention Sustained:
* Use the attached form to score the Leiter-R A.S.

Grooved Peg Board:
D.H._____ _____   Non-DH: _____ _____
Age Mean: _____   _____
Age S.D.: _____   _____
Z-Score: _____   _____

Pictorial Depression Scale:

Total L _____Total R _____ (Total L + Total R) _____ X 2 = _____Total Score

Progressive Planning Test: Request to Review Tape (by Tester): Y   N
Date of Video Review (if requested): _____

Max. Const. Cond.	**Min. Const. Cond.**
Mean Latency (1st Trial): _____	Mean Latency: _____
Mean Total Time (Successful Trials): _____	Mean Total Time: _____
Total Rules Broken: _____	Pass/Fail Total: _____
1st Trial Score (**Bold** Only!): _____	Total Rules Broken: _____
Total Score (All Trials): _____	Total X Equations: _____

Additional PPT Variables (added 1/10/06):

Number of cards (#1-12) solved on the 1st trial):   _____

Number of cards (#1-12) solved (on any trial):   _____

Number of cards #1 - 4 solved (on any trial):   _____

Number of cards #5-8 solved (on any trial):   _____

Finger Localization: Request to Review Tape (by Tester): Y   N
Date of Video Review (if requested): _____

A.	UC R	UC L	UC T	C R	C L	C T
# Final Errors (X)						
# Initial Errors						
# >1 Response						
# Incorrect Hand (*)						
B.						
# Final Errors (X)						
# Initial Errors						
# >1 Response						
# Incorrect Hand (*)						
C.						
# Final Errors (X)						
# Initial Errors						
# >1 Response						
# Incorrect Hand (*)						
# Inversion Errors						

D-KEFS Verbal Fluency: Request to Review Tape (by Tester): Y   N
                                   Date of Video Review (if requested): _____
*Use the attached form to transfer raw scores into scaled scores for the D-KEFS VF test. Complete the entire form including the optional measures.

Use the space below for raw scoring comments.
F: Animals:

A: Boy's Names:

S: Fruits/Furniture:

D-KEFS Trail Making:
*Use the attached form to transfer raw scores into scaled scores for the D-KEFS Trails test. Complete the entire form including the optional measures.

Use the space below for raw scoring:

		Error Type:		
Condition	Time	Omissions	Commissions	
Visual Scanning (1):	_____	_____	_____	
		Sequence	Set Loss	Time D/C
Number Sequencing (2):	_____	_____	_____	_____
Letter Sequencing (3):	_____	_____	_____	_____
Number-Letter Switching (4):	_____	_____	_____	_____
Motor Speed (5):	_____			_____

VMI -5: * Use the attached form to score the VMI.

Leiter-R Attention Sustained Subtest – Booklet C
(The Drawing Game)

Item	Time (min.)	Description/Cues	Total Marks	–	Number Correct	=	Number Errors
Part 1 AS T9	2:00	**Child's approach to Part 1:** Training – Not Scored	Rows		Columns		Random
AS9	**0:30**	**Scored** [32]*	_____		_____		_____
Part 2 AS T10	0:30	**Child's approach to Part 2:** Training – Not Scored	Rows		Columns		Random
A**S10**	**0:30**	**Scored** [64]	_____		_____		_____
Part 3 AS T11	0:30	**Child's approach to Part 3:** Training – Not Scored	Rows		Columns		Random
AS11	**1:00**	**Scored** [69]	_____		_____		_____
Part 4** AS T12	0:30	**Child's approach to Part 4:** Training – Not Scored	Rows		Columns		Random
AS12	**1:00**	**Scored** [52]	_____		_____		_____

Total Number (Parts 1-4) **Correct** [217] & **Errors Raw Scores**: _____   _____
(Use Appendix C)

Total Number (Parts 1-4) **Correct** & **Errors Scaled Scores**: _____ ▼ _____

*Note: Numbers in [**brackets**] indicate the maximum possible of correct responses for this item.

AS Adjusted Raw Score = Total # Correct _____ – Total # Errors _____ = _____
If the adjusted AS raw score value is less than zero enter NEG.   (Use Appendix B)

AS Adjusted Scaled Score: ▼_____

****Quadrant scores for AS12** (Use Appendix H):

Raw: UL = _____   LL = _____   UR = _____   LR = _____

Cum.%: UL = _____   LL = _____   UR = _____   LR = _____

Notes on Child's Approach: The author's of the manual have indicated (pg. 118) that noting the process by which the child accomplishes this task (i.e. focused vs. disorganized) may be an important clinical observation. Please note the manner in which the child completed the majority of items for each individual part of the Attention Sustained subtest and any other observations you feel will be helpful. For example, Part 2: Child's approach was in columns from top to bottom always starting in the left upper corner of the page.

D–KEFS Verbal Fluency Test: Summary of Scores

Primary Measures

Condition 1: Letter Fluency Total Correct

☐ → ☐
Raw Score   Scaled Score

Condition 2: Category Fluency Total Correct

☐ → ☐
Raw Score   Scaled Score

Condition 3: Category Switching Total Correct Responses

☐ → ☐
Raw Score   Scaled Score

Condition 3: Category Switching Total Switching Accuracy

☐ → ☐
Raw Score   Scaled Score
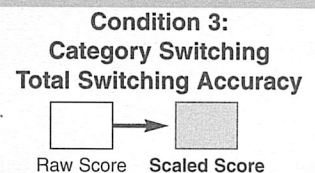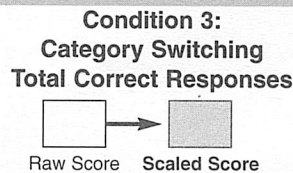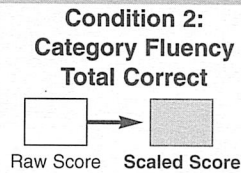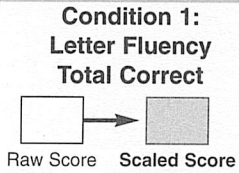
Primary Contrast Measures

Letter Fluency vs. Category Fluency*

Letter Fluency: Total Correct		Category Fluency: Total Correct		Scaled-Score Difference		Contrast Scaled Score*
☐	−	☐	=	☐	→	☐
Scaled Score		Scaled Score				

Category Switching vs. Category Fluency*

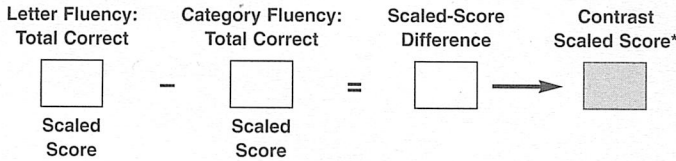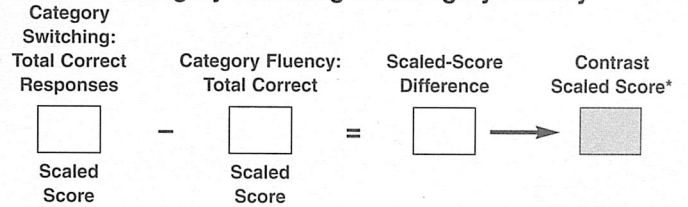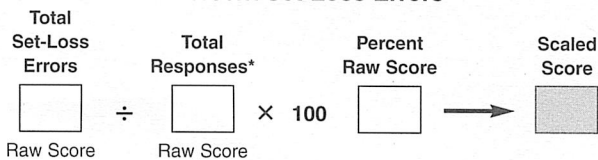| Category Switching: Total Correct Responses		Category Fluency: Total Correct		Scaled-Score Difference		Contrast Scaled Score*
☐	−	☐	=	☐	→	☐
Scaled Score		Scaled Score				

* A low or high contrast scaled score may reflect different cognitive problems; see examiner's manual.

Optional Measures: Conditions 1–3 Combined

	Condition 1: Letter Fluency Raw Score		Condition 2: Category Fluency Raw Score		Condition 3: Category Switching Raw Score		Total Raw Score	Scaled Score
First Interval (1"–15"): Total Correct	☐	+	☐	+	☐	=	☐	☐
Second Interval (16"–30"): Total Correct	☐	+	☐	+	☐	=	☐	☐
Third Interval (31"–45"): Total Correct	☐	+	☐	+	☐	=	☐	☐
Fourth Interval (46"–60"): Total Correct	☐	+	☐	+	☐	=	☐	☐
Set-Loss Errors	☐	+	☐	+	☐	=	☐	☐
Repetition Errors	☐	+	☐	+	☐	=	☐	☐
Total Responses (Correct + Incorrect)*	☐	+	☐	+	☐	=	☐	

* *Note*: Some repetition errors are coded also as set-loss errors; each double-coded error counts as only one response for the total responses measure.

Percent Set-Loss Errors

Total Set-Loss Errors		Total Responses*			Percent Raw Score		Scaled Score
☐	÷	☐	× 100		☐	→	☐
Raw Score		Raw Score					

Percent Repetition Errors
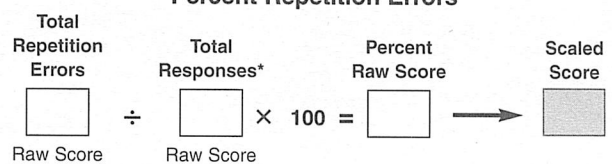
Total Repetition Errors		Total Responses*			Percent Raw Score		Scaled Score
☐	÷	☐	× 100 =		☐	→	☐
Raw Score		Raw Score					

Category Switching: Percent Switching Accuracy (Condition 3 Only)

$$\left[\frac{\text{Total Switching Accuracy } \square + 1}{\text{Total Responses Condition 3 Only* } \square} \right] \times 100 = \square \rightarrow \square$$

Total Switching Accuracy: Raw Score   Total Responses Condition 3 Only*: Raw Score   Percent Raw Score   Scaled Score

* *Note*: Some repetition errors are coded also as set-loss errors; each double-coded error counts as only one response for the total responses measure.
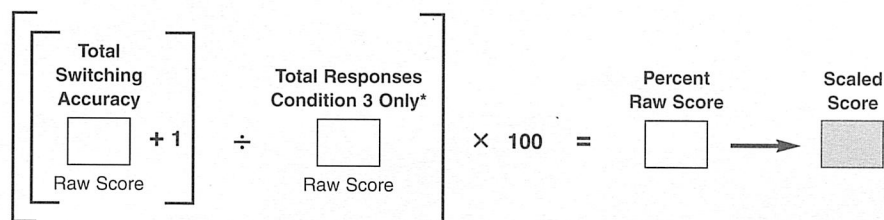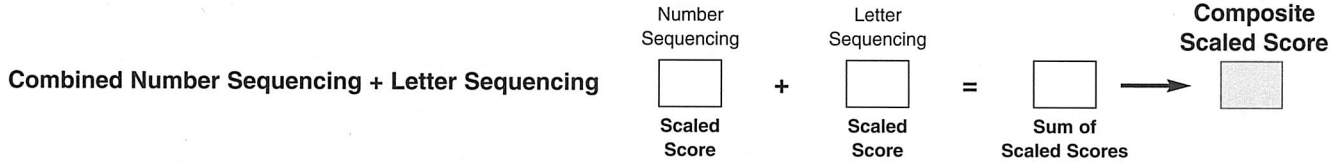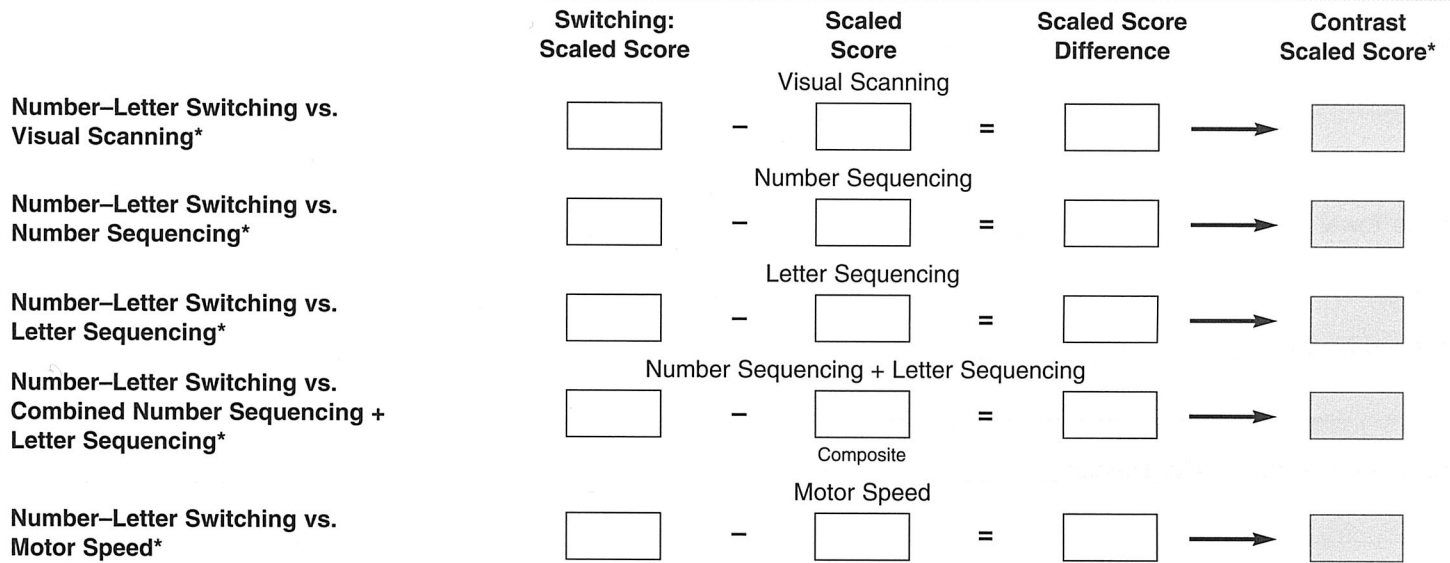
D–KEFS Trail Making Test: Summary of Scores
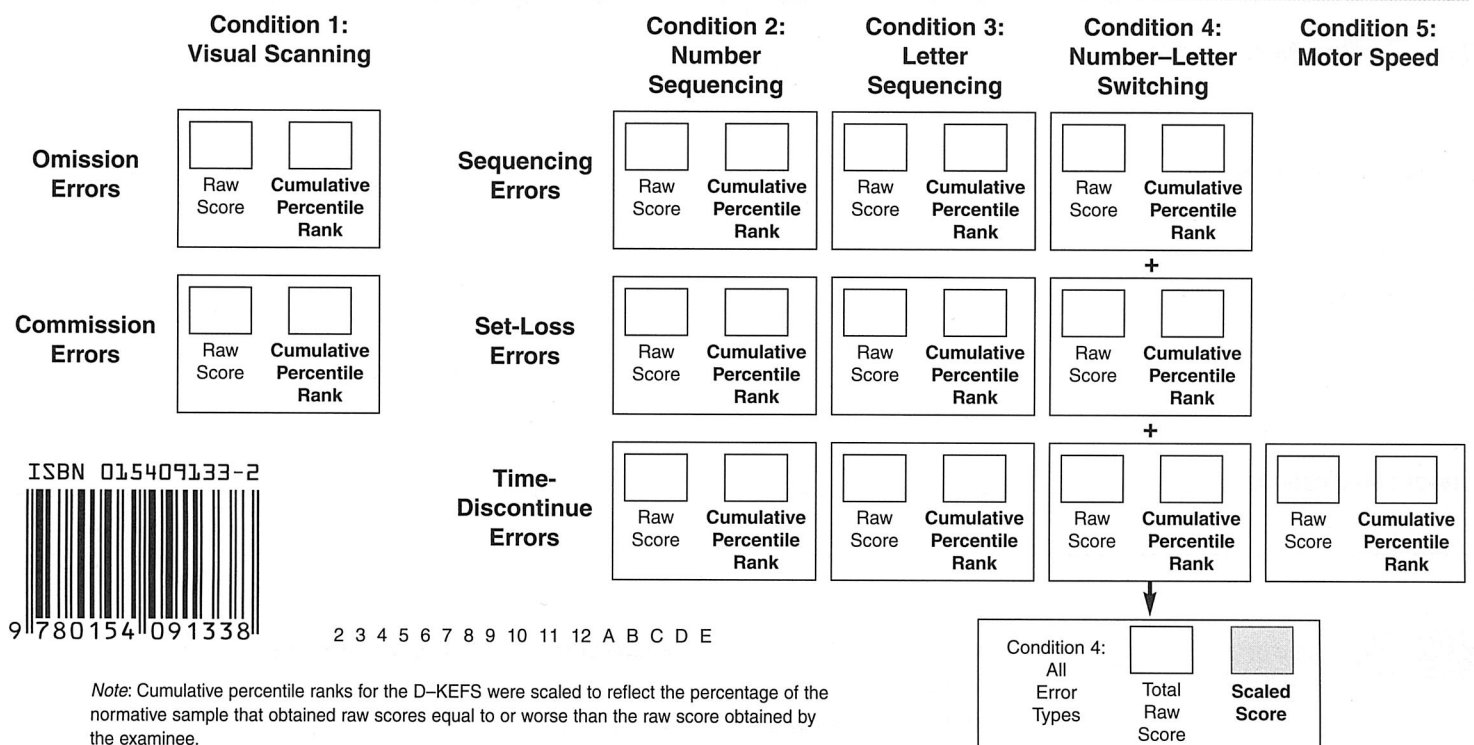
Primary Measures: Completion Times

Condition 1: Visual Scanning	Condition 2: Number Sequencing	Condition 3: Letter Sequencing	Condition 4: Number–Letter Switching	Condition 5: Motor Speed
Raw Score → **Scaled Score**	Raw Score → **Scaled Score**	Raw Score → **Scaled Score**	Raw Score → **Scaled Score**	Raw Score → **Scaled Score**
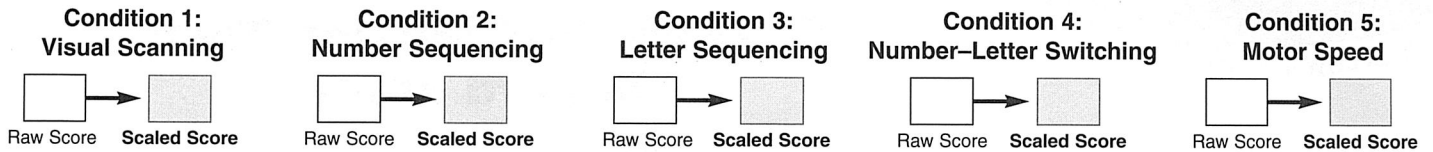
Primary Combined Measure: Completion Times

Combined Number Sequencing + Letter Sequencing

Number Sequencing [ ] **Scaled Score** + Letter Sequencing [ ] **Scaled Score** = [ ] Sum of Scaled Scores → **Composite Scaled Score** [ ]

Primary Contrast Measures: Completion Times

	Switching: Scaled Score		Scaled Score		Scaled Score Difference		Contrast Scaled Score*

Number–Letter Switching vs. Visual Scanning*
[ ] − Visual Scanning [ ] = [ ] → [ ]

Number–Letter Switching vs. Number Sequencing*
[ ] − Number Sequencing [ ] = [ ] → [ ]

Number–Letter Switching vs. Letter Sequencing*
[ ] − Letter Sequencing [ ] = [ ] → [ ]

Number–Letter Switching vs. Combined Number Sequencing + Letter Sequencing*
[ ] − Number Sequencing + Letter Sequencing [ ] Composite = [ ] → [ ]

Number–Letter Switching vs. Motor Speed*
[ ] − Motor Speed [ ] = [ ] → [ ]

* A low or high contrast scaled score may reflect different cognitive problems; see examiner's manual.

Optional Measures: Error Analysis

	Condition 1: Visual Scanning	Condition 2: Number Sequencing	Condition 3: Letter Sequencing	Condition 4: Number–Letter Switching	Condition 5: Motor Speed

Omission Errors
Raw Score | **Cumulative Percentile Rank**

Commission Errors
Raw Score | **Cumulative Percentile Rank**

Sequencing Errors
Condition 2: Raw Score | **Cumulative Percentile Rank**
Condition 3: Raw Score | **Cumulative Percentile Rank**
Condition 4: Raw Score | **Cumulative Percentile Rank**

+

Set-Loss Errors
Condition 2: Raw Score | **Cumulative Percentile Rank**
Condition 3: Raw Score | **Cumulative Percentile Rank**
Condition 4: Raw Score | **Cumulative Percentile Rank**

+

Time-Discontinue Errors
Condition 2: Raw Score | **Cumulative Percentile Rank**
Condition 3: Raw Score | **Cumulative Percentile Rank**
Condition 4: Raw Score | **Cumulative Percentile Rank**
Condition 5: Raw Score | **Cumulative Percentile Rank**

Condition 4: All Error Types | Total Raw Score [ ] | **Scaled Score** [ ]

2 3 4 5 6 7 8 9 10 11 12 A B C D E

Note: Cumulative percentile ranks for the D–KEFS were scaled to reflect the percentage of the normative sample that obtained raw scores equal to or worse than the raw score obtained by the examinee.

VMI-5 SCORING SHEET

Item:	Score (1/0)	Item:	Score (1/0)
**1.	_____	16.	_____
**2.	_____	17.	_____
**3.	_____	18.	_____
*4.	_____	19.	_____
*5.	_____	20.	_____
*6.	_____	21.	_____
7.	_____	22.	_____
8.	_____	23.	_____
9.	_____	24.	_____
10.	_____	25.	_____
11.	_____	26.	_____
12.	_____	27.	_____
13.	_____	28.	_____
14.	_____	29.	_____
15.	_____	30.	_____

Items only given when necessary (otherwise full credit is awarded for #1-6):

** Marking and Scribbling Items

* Imitation Items

Total Score

_____

Std. Score

_____

Percentile

_____

Age Equiv.

_____