

Supplemental Materials

**Hierarchical Exploratory Factor Analyses of the Woodcock-Johnson IV Full Test Battery: Implications for CHC Application in School
Psychology**

by S. C. Dombrowski et al., 2017, *School Psychology Quarterly*

<http://dx.doi.org/10.1037/spq0000221>

Table A1*Age 9- to 13- WJ-IV Principal Axis Factor with Promax Rotation (Seven Factors)*

Subtest	Pattern (Structure Coefficients)														h^2	u^2
	I	II	III	IV	V	VI	VII									
Letter-Word Identification (Grw)	.79	(.88)	.17	(.61)	.04	(.55)	-.12	(.31)	-.01	(.43)	.05	(.44)	.02	(-.04)	.80	.20
Word Attack (Grw/Glr)	.77	(.76)	-.06	(.45)	-.16	(.36)	.03	(.39)	.26	(.52)	-.03	(.35)	.07	(.00)	.63	.37
Writing Samples (Grw)	.75	(.66)	-.17	(.32)	-.04	(.40)	-.06	(.21)	-.06	(.31)	.27	(.49)	.25	(.22)	.58	.42
Passage Comprehension (Grw/Glr)	.72	(.80)	.19	(.60)	-.05	(.48)	.05	(.38)	-.08	(.42)	.07	(.46)	.18	(.11)	.70	.30
Reading Recall (Grw/Glr)	.63	(.64)	-.11	(.35)	.02	(.43)	-.05	(.24)	-.04	(.32)	.26	(.48)	.12	(.11)	.48	.52
Oral Reading (Grw)	.59	(.78)	.26	(.57)	.15	(.53)	.17	(.48)	-.11	(.33)	-.21	(.19)	-.14	(-.27)	.72	.28
Spelling (Grw)	.58	(.82)	.15	(.61)	.21	(.64)	-.06	(.39)	.12	(.50)	.02	(.43)	-.09	(-.12)	.74	.26
Spelling of Sounds (Ga/Grw)	.52	(.68)	-.19	(.36)	-.05	(.40)	.30	(.60)	.22	(.50)	.10	(.36)	-.20	(-.25)	.64	.36
Editing (Grw)	.47	(.77)	.24	(.65)	.13	(.58)	-.12	(.36)	.15	(.53)	.12	(.47)	-.19	(-.16)	.72	.28
Sound Awareness (Grw/Ga)	.46	(.63)	-.09	(.41)	-.02	(.40)	.28	(.55)	.26	(.55)	-.01	(.36)	.04	(-.02)	.53	.47
General Information (Gc)	-.03	(.43)	.90	(.80)	.05	(.37)	.20	(.40)	-.19	(.33)	-.16	(.24)	.04	(.01)	.69	.31
Picture Vocabulary (Gc)	.00	(.44)	.89	(.85)	-.07	(.33)	-.05	(.27)	.05	(.48)	-.03	(.37)	.08	(.14)	.74	.26
Social Studies (Gc)	-.01	(.46)	.74	(.80)	-.05	(.38)	-.13	(.24)	.02	(.48)	.29	(.56)	-.05	(.09)	.70	.30
Oral Vocabulary (Gc)	.12	(.56)	.71	(.83)	-.02	(.43)	.08	(.41)	.02	(.52)	.05	(.46)	.04	(.08)	.71	.29
Humanities (Gc)	-.12	(.41)	.71	(.77)	-.04	(.35)	.08	(.40)	.11	(.52)	.13	(.44)	-.12	(-.02)	.62	.38
Oral Comprehension (Gc)	.23	(.49)	.60	(.74)	-.16	(.30)	-.02	(.28)	.14	(.54)	-.03	(.42)	.31	(.34)	.67	.33
Reading Vocabulary (Grw/Gc)	.42	(.74)	.52	(.78)	.00	(.50)	.03	(.42)	-.03	(.49)	.05	(.45)	-.03	(-.04)	.74	.26
Science (Gc)	.07	(.43)	.50	(.69)	-.22	(.28)	-.16	(.23)	.20	(.56)	.45	(.64)	-.04	(.14)	.66	.34
Letter-Pattern Matching (Gs)	-.04	(.39)	-.11	(.28)	.81	(.77)	.09	(.31)	-.01	(.29)	.00	(.36)	.09	(.09)	.61	.39
Word Reading Fluency (Grw/Gs)	.13	(.56)	.07	(.45)	.80	(.84)	-.12	(.24)	.03	(.34)	-.07	(.35)	-.03	(-.03)	.72	.28
Number-Pattern Matching (PerSpd)	.19	(.47)	-.25	(.24)	.72	(.75)	-.04	(.22)	.00	(.29)	.12	(.44)	.17	(.18)	.64	.36
Pair Cancellation (Gs)	-.25	(.24)	-.01	(.29)	.72	(.65)	-.05	(.20)	.14	(.33)	.09	(.38)	.01	(.10)	.47	.53
Sentence Reading Fluency (Grw/Gs)	.39	(.71)	.08	(.51)	.65	(.82)	-.02	(.34)	-.04	(.37)	-.13	(.36)	.09	(.02)	.78	.22
Math Fact Fluency (Gq/Gs)	.21	(.60)	.04	(.45)	.63	(.78)	-.05	(.29)	-.07	(.33)	.11	(.45)	-.03	(-.02)	.65	.35
Sentence Writing Fluency (Grw/Gs)	.45	(.69)	-.16	(.37)	.56	(.76)	-.04	(.32)	.04	(.37)	.04	(.42)	.02	(-.01)	.68	.32
Numbers Reversed (Gwm)	-.01	(.39)	.05	(.39)	.23	(.46)	.19	(.43)	.19	(.46)	.14	(.41)	-.07	(-.02)	.35	.65
Sound Blending (Ga)	-.01	(.26)	.12	(.31)	-.14	(.14)	.66	(.66)	.09	(.37)	-.10	(.15)	.01	(-.07)	.47	.53
Visual-Auditory Learning (Glr)	-.01	(.24)	.00	(.25)	.01	(.24)	.63	(.59)	-.05	(.31)	.05	(.29)	.23	(.16)	.40	.60
Visualization (Gv)	.04	(.31)	.04	(.34)	.04	(.32)	.56	(.58)	-.05	(.37)	.09	(.38)	.29	(.24)	.45	.55
Segmentation (Ga)	.21	(.37)	-.18	(.24)	-.21	(.17)	.48	(.59)	.27	(.49)	.14	(.35)	.06	(.03)	.46	.54
Concept Formation (Gf)	-.06	(.32)	.09	(.40)	.06	(.37)	.41	(.54)	.03	(.44)	.31	(.53)	.12	(.17)	.45	.55

Memory for Words (Aud Mem)	-.09	(.28)	-.03	(.36)	.00	(.26)	.23	(.49)	.64	(.69)	-.02	(.32)	-.01	(.05)	.51	.49
Verbal Attention (Gwm)	.15	(.45)	-.04	(.43)	.05	(.38)	-.08	(.34)	.63	(.70)	.09	(.43)	-.07	(.03)	.52	.48
Sentence Repetition (Gwm)	.21	(.45)	.16	(.50)	-.02	(.31)	-.14	(.26)	.63	(.67)	-.14	(.29)	.03	(.09)	.51	.49
Nonword Repetition (Ga)	.23	(.40)	-.04	(.35)	-.04	(.25)	.13	(.39)	.57	(.62)	-.21	(.21)	.14	(.12)	.44	.56
Object-Number Sequencing (Gwm)	-.30	(.23)	.04	(.41)	.34	(.48)	.17	(.44)	.52	(.66)	.05	(.44)	.10	(.20)	.56	.44
Phonological Processing (Ga)	.13	(.51)	.03	(.48)	.02	(.41)	.23	(.57)	.44	(.66)	.10	(.42)	-.16	(-.12)	.56	.44
Rapid Picture Naming (Gs/Glr)	-.12	(.22)	.17	(.40)	.37	(.43)	-.13	(.13)	.38	(.48)	-.13	(.29)	.27	(.34)	.42	.58
Understanding Directions (Gwm)	.14	(.40)	.08	(.45)	.02	(.35)	.09	(.36)	.33	(.57)	.10	(.46)	.23	(.28)	.42	.58
Retrieval Fluency (Glr/Gs)	-.15	(.27)	.24	(.47)	.28	(.44)	-.09	(.20)	.28	(.48)	.12	(.43)	.09	(.21)	.37	.63
Number Series (Gf)	.46	(.67)	-.13	(.42)	.02	(.52)	-.02	(.35)	-.08	(.40)	.72	(.79)	-.12	(.00)	.79	.21
Calculation (Gq/Gs)	.29	(.63)	.02	(.48)	.26	(.64)	.05	(.38)	-.19	(.35)	.58	(.72)	-.10	(-.01)	.72	.28
Number Matrices (Gf)	.00	(.45)	.10	(.47)	.12	(.47)	.08	(.41)	.12	(.48)	.50	(.63)	-.26	(-.11)	.53	.47
Applied Problems (Gq)	.13	(.57)	.31	(.62)	.13	(.56)	.21	(.48)	-.23	(.40)	.50	(.71)	.00	(.08)	.69	.31
Analysis-Synthesis (Gf)	-.20	(.24)	.11	(.39)	.10	(.37)	.44	(.52)	-.07	(.39)	.46	(.61)	.13	(.22)	.53	.47
Picture Recognition (Gv)	.09	(.19)	.02	(.25)	.15	(.27)	.32	(.30)	.04	(.31)	-.17	(.24)	.69	(.61)	.54	.46
Story Recall (Glr)	.07	(.30)	.16	(.41)	-.07	(.26)	.12	(.29)	.08	(.42)	.29	(.52)	.31	(.38)	.40	.60
Eigenvalue	18.30		3.18		2.51		2.17		1.65		1.41		1.36			
Variance (%)	38.94		6.78		5.35		4.62		3.52		3.00		2.89			
Factor 1	1.0															
Factor 2	.57	1.0														
Factor 3	.58	.46	1.0													
Factor 4	.43	.39	.36	1.0												
Factor 5	.45	.56	.39	.49	1.0											
Factor 6	.41	.46	.46	.33	.50	1.0										
Factor 7	-.12	.07	.02	-.12	.14	.26	1.0									

Note. h^2 = Communality coefficient. u^2 = Uniqueness. Pattern coefficients $>.30$ are **bolded** (Carroll, 1993, p. 108; Child, 2006). Note that alignment of subtests with respective CHC stratum I or II factors posited in the WJ-IV Technical Manual is indicated following each subtest name.

Table A2*Age 14- to 19- WJ-IV Principal Axis Factor with Promax Rotation (Seven Factors)*

Subtest	Pattern (Structure Coefficients)														h^2	u^2
	I	II	III	IV	V	VI	VII									
Picture Vocabulary (Gc)	.93	(.86)	.07	(.51)	-.03	(.42)	-.03	(.53)	.01	(.43)	-.13	(.45)	.12	(.11)	.76	.24
General Information (Gc)	.90	(.80)	-.03	(.46)	.05	(.42)	-.20	(.42)	.12	(.44)	-.07	(.43)	.01	(.01)	.67	.33
Social Studies (Gc)	.77	(.83)	-.07	(.49)	-.03	(.46)	.02	(.56)	-.08	(.42)	.26	(.63)	-.03	(.03)	.73	.27
Humanities (Gc)	.74	(.81)	-.13	(.45)	-.05	(.41)	.11	(.59)	.07	(.49)	.10	(.54)	-.07	(.00)	.67	.33
Oral Vocabulary (Gc)	.72	(.85)	.09	(.60)	.00	(.50)	.00	(.59)	.08	(.53)	.06	(.58)	.00	(.03)	.74	.26
Oral Comprehension (Gc)	.70	(.78)	.16	(.52)	-.14	(.36)	.19	(.60)	-.07	(.42)	-.05	(.48)	.19	(.18)	.67	.33
Reading Vocabulary (Grw/Gc)	.63	(.84)	.39	(.75)	.00	(.52)	-.08	(.55)	.03	(.48)	.02	(.56)	-.02	(-.07)	.79	.21
Science (Gc)	.56	(.76)	.05	(.52)	-.19	(.38)	.18	(.61)	-.09	(.43)	.35	(.65)	.01	(.07)	.67	.33
Letter-Word Identification (Grw)	.22	(.67)	.74	(.88)	.05	(.55)	.04	(.54)	-.04	(.41)	-.05	(.50)	-.02	(-.12)	.81	.19
Reading Recall (Grw/Grl)	-.14	(.34)	.71	(.64)	.02	(.39)	-.11	(.30)	-.06	(.28)	.22	(.48)	.26	(.18)	.51	.49
Writing Samples (Grw)	-.10	(.43)	.68	(.69)	-.03	(.42)	-.01	(.43)	.03	(.40)	.22	(.54)	.22	(.17)	.56	.44
Word Attack (Grw/Glr)	-.02	(.53)	.66	(.74)	-.15	(.37)	.30	(.60)	.14	(.51)	-.06	(.45)	.04	(-.01)	.64	.36
Passage Comprehension (Grw/Glr)	.24	(.67)	.63	(.80)	.01	(.53)	-.08	(.52)	.11	(.52)	.06	(.58)	.13	(.07)	.73	.27
Oral Reading (Grw)	.22	(.60)	.59	(.78)	.15	(.52)	-.13	(.42)	.22	(.47)	-.14	(.40)	-.16	(-.23)	.69	.31
Spelling (Grw)	.20	(.68)	.49	(.80)	.18	(.62)	.18	(.61)	-.05	(.43)	.01	(.54)	-.12	(-.15)	.74	.26
Editing (Grw)	.24	(.70)	.37	(.76)	.09	(.58)	.27	(.64)	-.16	(.39)	.18	(.60)	-.20	(-.20)	.75	.25
Sound Awareness (Grw/Ga)	-.03	(.50)	.36	(.59)	-.01	(.43)	.20	(.58)	.30	(.59)	.04	(.50)	.05	(.08)	.51	.49
Word Reading Fluency (Grw/Gs)	.12	(.46)	.11	(.51)	.86	(.83)	-.09	(.36)	-.10	(.25)	-.12	(.39)	-.03	(-.04)	.72	.28
Letter-Pattern Matching (Gs)	-.16	(.33)	.01	(.38)	.76	(.76)	.02	(.41)	.14	(.41)	.00	(.45)	.12	(.18)	.61	.39
Pair Cancellation (Gs)	.02	(.37)	-.27	(.26)	.70	(.69)	.08	(.41)	.15	(.39)	.04	(.41)	-.09	(.02)	.52	.48
Number-Pattern Matching (PerSpd)	-.22	(.32)	.15	(.45)	.70	(.74)	.08	(.39)	-.12	(.26)	.16	(.48)	.06	(.10)	.58	.42
Sentence Reading Fluency (Grw/Gs)	.12	(.55)	.39	(.68)	.67	(.81)	-.09	(.44)	-.05	(.36)	-.12	(.47)	.11	(.05)	.76	.24
Math Fact Fluency (Gq/Gs)	-.01	(.46)	.15	(.53)	.59	(.74)	-.07	(.39)	-.15	(.28)	.30	(.59)	-.03	(.01)	.62	.38
Sentence Writing Fluency (Grw/Gs)	-.14	(.43)	.44	(.66)	.56	(.73)	.01	(.43)	-.06	(.33)	.05	(.49)	.01	(-.02)	.65	.35
Rapid Picture Naming (Gs/Glr)	.13	(.33)	-.12	(.17)	.37	(.43)	.33	(.45)	.00	(.29)	-.23	(.24)	.31	(.35)	.38	.62
Retrieval Fluency (Glr/Gs)	.29	(.49)	-.20	(.25)	.32	(.50)	.23	(.50)	.00	(.36)	.01	(.42)	.15	(.23)	.40	.60
Verbal Attention (Gwm)	-.01	(.50)	.03	(.44)	.01	(.42)	.77	(.75)	-.16	(.38)	.13	(.49)	-.08	(.02)	.59	.41
Memory for Words (Aud Mem)	-.03	(.41)	-.11	(.28)	.02	(.34)	.69	(.70)	.15	(.50)	-.04	(.39)	.08	(.19)	.52	.48
Sentence Repetition (Gwm)	.19	(.54)	.18	(.46)	-.04	(.35)	.68	(.70)	-.15	(.35)	-.16	(.35)	.09	(.10)	.54	.46
Nonword Repetition (Ga)	-.09	(.36)	.17	(.37)	-.08	(.27)	.65	(.64)	.13	(.45)	-.15	(.30)	.10	(.15)	.45	.55
Object-Number Sequencing (Gwm)	.02	(.47)	-.26	(.26)	.29	(.55)	.49	(.68)	.09	(.51)	.17	(.56)	.14	(.30)	.60	.40

Understanding Directions (Gwm)	-.04	(.43)	.15	(.40)	-.02	(.38)	.42	(.61)	.00	(.43)	.18	(.52)	.25	(.32)	.46	.54
Numbers Reversed (Gwm)	.00	(.47)	.01	(.42)	.14	(.48)	.28	(.57)	.15	(.50)	.23	(.55)	-.04	(.06)	.42	.58
Sound Blending (Ga)	.13	(.44)	-.02	(.34)	-.05	(.29)	.05	(.47)	.69	(.71)	-.05	(.37)	-.08	(.02)	.52	.48
Visual-Auditory Learning (Glr)	.11	(.35)	.03	(.26)	.02	(.27)	-.19	(.31)	.62	(.62)	.00	(.36)	.21	(.28)	.43	.57
Segmentation (Ga)	-.12	(.38)	.20	(.42)	-.13	(.28)	.17	(.53)	.61	(.71)	.04	(.43)	.06	(.14)	.54	.46
Spelling of Sounds (Ga/Grw)	-.20	(.47)	.42	(.68)	.04	(.48)	.14	(.58)	.51	(.70)	.08	(.52)	-.18	(-.14)	.71	.29
Concept Formation (Gf)	.09	(.47)	.00	(.36)	.03	(.40)	-.07	(.46)	.38	(.61)	.35	(.61)	.17	(.28)	.51	.49
Visualization (Gv)	.00	(.40)	.12	(.37)	.00	(.36)	-.04	(.43)	.38	(.57)	.26	(.54)	.23	(.31)	.45	.55
Phonological Processing (Ga)	.18	(.62)	.05	(.53)	.07	(.49)	.29	(.67)	.37	(.67)	.02	(.52)	-.17	(-.08)	.63	.37
Number Series (Gf)	-.12	(.50)	.34	(.65)	-.05	(.50)	-.02	(.48)	-.08	(.41)	.84	(.85)	-.08	(.01)	.80	.20
Calculation (Gq/Gs)	.06	(.59)	.20	(.64)	.19	(.63)	-.16	(.47)	.01	(.47)	.70	(.83)	-.12	(-.03)	.79	.21
Applied Problems (Gq)	.32	(.70)	.07	(.58)	.09	(.58)	-.17	(.51)	.10	(.54)	.59	(.81)	-.05	(.05)	.76	.24
Number Matrices (Gf)	.16	(.57)	-.09	(.45)	.05	(.48)	.11	(.54)	.06	(.47)	.58	(.71)	-.22	(-.08)	.59	.41
Analysis-Synthesis (Gf)	.08	(.43)	-.19	(.24)	.06	(.40)	-.01	(.44)	.26	(.53)	.50	(.64)	.17	(.33)	.52	.48
Picture Recognition (Gv)	.03	(.20)	.16	(.13)	.06	(.20)	.11	(.29)	.08	(.28)	-.16	(.21)	.70	(.68)	.53	.47
Story Recall (Glr)	.16	(.44)	.11	(.33)	-.10	(.30)	.09	(.44)	-.03	(.36)	.36	(.56)	.37	(.43)	.46	.54
Eigenvalue	19.96		2.78		2.47		1.89		1.65		1.42		1.29			
Variance (%)	42.48		5.92		5.26		4.02		3.51		3.03		2.75			
Factor 1	1.0															
Factor 2	.60	1.0														
Factor 3	.53	.54	1.0													
Factor 4	.64	.52	.51	1.0												
Factor 5	.52	.43	.42	.60	1.0											
Factor 6	.60	.53	.56	.58	.54	1.0										
Factor 7	.02	-.14	.05	.13	.15	.18	1.0									

Note. h^2 = Communality coefficient. u^2 = Uniqueness. Pattern coefficients $>.30$ are **bolded** (Carroll, 1993, p. 108; Child, 2006). Note that alignment of subtests with respective CHC stratum I or II factors posited in the WJ-IV Technical Manual is indicated following each subtest name.

Table A3*WJ IV Sources of Variance According to a Schmid-Leiman Orthogonalization (7 Factor) Ages 9 to 13*

Subtest	Second-Order Factor		First-Order Factors														h^2	u^2
	g	S^2	F1	S^2	F2	S^2	F3	S^2	F4	S^2	F5	S^2	F6	S^2	F7	S^2		
Letter-Word Identification (Grw)	.69	.47	.54	.29	.12	.01	.03	.00	-.10	.01	-.01	.00	.04	.00	.02	.00	.80	.20
Word Attack (Grw/Glr)	.60	.36	.53	.28	-.04	.00	-.12	.01	.02	.00	.18	.03	-.02	.00	.07	.01	.70	.30
Writing Samples (Grw)	.51	.26	.52	.27	-.11	.01	-.03	.00	-.05	.00	-.05	.00	.21	.04	.25	.06	.64	.36
Passage Comprehension (Grw/Glr)	.67	.44	.49	.24	.13	.02	-.03	.00	.04	.00	-.06	.00	.05	.00	.18	.03	.74	.26
Reading Recall (Grw/Glr)	.51	.26	.43	.19	-.08	.01	.02	.00	-.04	.00	-.03	.00	.20	.04	.12	.01	.51	.49
Oral Reading (Grw)	.60	.36	.40	.16	.18	.03	.11	.01	.14	.02	-.08	.01	-.16	.02	-.14	.02	.64	.36
Spelling (Grw)	.72	.51	.39	.16	.10	.01	.16	.02	-.05	.00	.08	.01	.02	.00	-.09	.01	.72	.28
Spelling of Sounds (Ga/Grw)	.59	.34	.36	.13	-.13	.02	-.03	.00	.25	.06	.15	.02	.07	.01	-.20	.04	.62	.38
Editing (Grw)	.71	.51	.32	.10	.16	.03	.10	.01	-.10	.01	.11	.01	.09	.01	-.19	.04	.72	.28
Sound Awareness (Grw/Ga)	.59	.35	.32	.10	-.06	.00	-.02	.00	.23	.05	.18	.03	.00	.00	.04	.00	.54	.46
General Information (Gc)	.55	.30	-.02	.00	.60	.36	.04	.00	.17	.03	-.14	.02	-.13	.02	.04	.00	.73	.27
Picture Vocabulary (Gc)	.60	.36	.00	.00	.60	.36	-.05	.00	-.04	.00	.03	.00	-.03	.00	.08	.01	.73	.27
Social Studies (Gc)	.63	.39	.00	.00	.50	.25	-.04	.00	-.11	.01	.01	.00	.23	.05	-.05	.00	.71	.29
Oral Vocabulary (Gc)	.68	.47	.08	.01	.48	.23	-.02	.00	.06	.00	.01	.00	.04	.00	.04	.00	.71	.29
Humanities (Gc)	.61	.37	-.08	.01	.48	.23	-.03	.00	.07	.00	.08	.01	.10	.01	-.12	.01	.64	.36
Oral Comprehension (Gc)	.60	.36	.16	.02	.41	.16	-.12	.01	-.01	.00	.10	.01	-.02	.00	.31	.10	.67	.33
Reading Vocabulary (Grw/Gc)	.72	.52	.29	.08	.35	.12	.00	.00	.02	.00	-.02	.00	.04	.00	-.03	.00	.73	.27
Science (Gc)	.61	.37	.05	.00	.34	.11	-.17	.03	-.13	.02	.14	.02	.35	.12	-.04	.00	.67	.33
Letter-Pattern Matching (Gs)	.48	.23	-.03	.00	-.08	.01	.61	.37	.07	.01	.00	.00	.00	.00	.09	.01	.62	.38
Word Reading Fluency (Grw/Gs)	.58	.34	.09	.01	.05	.00	.60	.36	-.10	.01	.02	.00	-.06	.00	-.03	.00	.72	.28
Number-Pattern Matching (PerSpd)	.49	.24	.13	.02	-.17	.03	.54	.29	-.03	.00	.00	.00	.09	.01	.17	.03	.62	.38
Pair Cancellation (Gs)	.42	.18	-.17	.03	-.01	.00	.54	.29	-.04	.00	.10	.01	.07	.01	.01	.00	.51	.49
Sentence Reading Fluency (Grw/Gs)	.65	.42	.27	.07	.05	.00	.49	.24	-.02	.00	-.03	.00	-.10	.01	.09	.01	.75	.25
Math Fact Fluency (Gq/Gs)	.60	.36	.15	.02	.03	.00	.47	.22	-.04	.00	-.05	.00	.09	.01	-.03	.00	.62	.38
Sentence Writing Fluency (Grw/Gs)	.61	.37	.31	.09	-.11	.01	.42	.17	-.04	.00	.03	.00	.03	.00	.02	.00	.65	.35
Numbers Reversed (Gwm)	.51	.26	-.01	.00	.04	.00	.17	.03	.15	.02	.13	.02	.11	.01	-.07	.00	.35	.65
Sound Blending (Ga)	.37	.14	-.01	.00	.08	.01	-.11	.01	.54	.29	.06	.00	-.07	.01	.01	.00	.46	.54
Visual-Auditory Learning (Glr)	.37	.14	-.01	.00	.00	.00	.01	.00	.51	.26	-.03	.00	.04	.00	.23	.05	.45	.55
Visualization (Gv)	.45	.20	.03	.00	.03	.00	.03	.00	.46	.21	-.03	.00	.07	.00	.29	.08	.50	.50
Segmentation (Ga)	.44	.19	.15	.02	-.12	.01	-.16	.03	.39	.16	.19	.04	.11	.01	.06	.00	.46	.54
Concept Formation (Gf)	.52	.27	-.04	.00	.06	.00	.04	.00	.34	.11	.02	.00	.24	.06	.12	.01	.46	.54

Memory for Words (Aud Mem)	.49	.24	-.06	.00	-.02	.00	.00	.00	.19	.04	.45	.20	-.01	.00	-.01	.00	.48	.52
Verbal Attention (Gwm)	.58	.33	.10	.01	-.02	.00	.03	.00	-.06	.00	.44	.20	.07	.01	-.07	.00	.55	.45
Sentence Repetition (Gwm)	.54	.29	.14	.02	.11	.01	-.01	.00	-.11	.01	.44	.19	-.11	.01	.03	.00	.54	.46
Nonword Repetition (Ga)	.47	.22	.16	.03	-.03	.00	-.03	.00	.10	.01	.40	.16	-.16	.03	.14	.02	.46	.54
Object-Number Sequencing (Gwm)	.54	.29	-.21	.04	.02	.00	.26	.07	.14	.02	.36	.13	.04	.00	.10	.01	.56	.44
Phonological Processing (Ga)	.63	.39	.09	.01	.02	.00	.02	.00	.19	.04	.31	.09	.07	.01	-.16	.03	.56	.44
Rapid Picture Naming (Gs/Glr)	.42	.18	-.08	.01	.12	.01	.28	.08	-.11	.01	.27	.07	-.10	.01	.27	.07	.44	.56
Understanding Directions (Gwm)	.54	.29	.09	.01	.05	.00	.01	.00	.08	.01	.23	.05	.08	.01	.23	.05	.42	.58
Retrieval Fluency (Glr/Gs)	.48	.23	-.10	.01	.16	.03	.21	.04	-.07	.01	.20	.04	.09	.01	.09	.01	.37	.63
Number Series (Gf)	.64	.41	.31	.10	-.09	.01	.02	.00	-.02	.00	-.05	.00	.56	.31	-.12	.01	.85	.15
Calculation (Gq/Gs)	.65	.42	.20	.04	.01	.00	.19	.04	.04	.00	-.13	.02	.45	.20	-.10	.01	.73	.27
Number Matrices (Gf)	.59	.34	.00	.00	.07	.00	.09	.01	.06	.00	.09	.01	.39	.15	-.25	.06	.58	.42
Applied Problems (Gq)	.68	.46	.09	.01	.21	.04	.10	.01	.17	.03	-.16	.03	.38	.15	.00	.00	.72	.28
Analysis-Synthesis (Gf)	.49	.24	-.14	.02	.07	.01	.07	.01	.36	.13	-.05	.00	.35	.12	.13	.02	.55	.45
Picture Recognition (Gv)	.32	.10	.06	.00	.01	.00	.11	.01	.26	.07	.03	.00	-.13	.02	.69	.48	.68	.32
Story Recall (Glr)	.46	.21	.05	.00	.11	.01	-.05	.00	.10	.01	.05	.00	.23	.05	.30	.09	.38	.62
Common Variance (%)		53.1		9.3		7.7		8.4		6.0		5.1		5.4		5.0	60.1	39.9
Total Variance (%)		31.9		5.6		4.6		5.1		3.6		3.1		3.2		3.0		

Note. g = general intelligence factor S^2 = variance explained, h^2 = communality, u^2 = uniqueness, Loadings $\geq .30$ are **bolded** (Carroll, 1993, p. 108; Child, 2006). Note that alignment of subtests with respective CHC stratum I or II factors posited in the WJ-IV Technical Manual is indicated following each subtest name.

Table A4*WJ IV Sources of Variance According to a Schmid-Leiman Orthogonalization (7 Factor) Ages 14 to 19*

Subtest	Second-Order Factor		First-Order Factors														h^2	u^2
	g	S^2	F1	S^2	F2	S^2	F3	S^2	F4	S^2	F5	S^2	F6	S^2	F7	S^2		
Picture Vocabulary (Gc)	.66	.43	.56	.32	.05	.00	-.02	.00	-.02	.00	.01	.00	-.08	.01	.12	.01	.77	.23
General Information (Gc)	.61	.37	.54	.30	-.02	.00	.04	.00	-.12	.01	.09	.01	-.05	.00	.01	.00	.69	.31
Social Studies (Gc)	.70	.49	.46	.22	-.05	.00	-.02	.00	.01	.00	-.06	.00	.17	.03	-.03	.00	.74	.26
Humanities (Gc)	.68	.46	.45	.20	-.09	.01	-.03	.00	.07	.00	.05	.00	.06	.00	-.07	.00	.68	.32
Oral Vocabulary (Gc)	.74	.55	.44	.19	.07	.00	.00	.00	.00	.00	.06	.00	.04	.00	.00	.00	.75	.25
Oral Comprehension (Gc)	.65	.43	.42	.18	.12	.01	-.10	.01	.12	.01	-.05	.00	-.03	.00	.19	.04	.68	.32
Reading Vocabulary (Grw/Gc)	.74	.55	.38	.14	.28	.08	.00	.00	-.05	.00	.02	.00	.01	.00	-.02	.00	.77	.23
Science (Gc)	.69	.48	.34	.11	.03	.00	-.14	.02	.11	.01	-.07	.00	.22	.05	.01	.00	.68	.32
Letter-Word Identification (Grw)	.69	.48	.13	.02	.53	.28	.04	.00	.02	.00	-.03	.00	-.03	.00	-.02	.00	.78	.22
Reading Recall (Grw/Grl)	.47	.22	-.09	.01	.51	.26	.02	.00	-.07	.00	-.04	.00	.14	.02	.26	.07	.58	.42
Writing Samples (Grw)	.57	.32	-.06	.00	.48	.23	-.02	.00	-.01	.00	.02	.00	.14	.02	.22	.05	.63	.37
Word Attack (Grw/Glr)	.63	.39	-.01	.00	.47	.22	-.11	.01	.19	.03	.11	.01	-.04	.00	.04	.00	.67	.33
Passage Comprehension (Grw/Glr)	.71	.51	.14	.02	.45	.20	.01	.00	-.05	.00	.08	.01	.04	.00	.13	.02	.76	.24
Oral Reading (Grw)	.61	.37	.13	.02	.42	.18	.11	.01	-.08	.01	.16	.03	-.09	.01	-.16	.02	.65	.35
Spelling (Grw)	.72	.52	.12	.01	.35	.12	.13	.02	.11	.01	-.04	.00	.01	.00	-.12	.01	.70	.30
Editing (Grw)	.73	.54	.14	.02	.27	.07	.07	.00	.17	.03	-.12	.01	.11	.01	-.20	.04	.73	.27
Sound Awareness (Grw/Ga)	.63	.39	-.02	.00	.26	.07	-.01	.00	.13	.02	.22	.05	.03	.00	.05	.00	.53	.47
Word Reading Fluency (Grw/Gs)	.53	.29	.07	.01	.08	.01	.63	.39	-.06	.00	-.07	.01	-.07	.01	-.03	.00	.70	.30
Letter-Pattern Matching (Gs)	.52	.27	-.10	.01	.01	.00	.56	.31	.01	.00	.10	.01	.00	.00	.12	.01	.61	.39
Pair Cancellation (Gs)	.49	.24	.01	.00	-.19	.04	.51	.26	.05	.00	.11	.01	.02	.00	-.09	.01	.56	.44
Number-Pattern Matching (PerSpd)	.51	.26	-.13	.02	.10	.01	.51	.26	.05	.00	-.09	.01	.10	.01	.06	.00	.57	.43
Sentence Reading Fluency (Grw/Gs)	.64	.40	.07	.01	.28	.08	.49	.24	-.06	.00	-.03	.00	-.08	.01	.11	.01	.74	.26
Math Fact Fluency (Gq/Gs)	.58	.34	.00	.00	.11	.01	.43	.18	-.04	.00	-.11	.01	.19	.04	-.03	.00	.59	.41
Sentence Writing Fluency (Grw/Gs)	.59	.34	-.09	.01	.32	.10	.41	.16	.01	.00	-.04	.00	.03	.00	.01	.00	.62	.38
Rapid Picture Naming (Gs/Glr)	.38	.15	.08	.01	-.09	.01	.27	.07	.21	.04	.00	.00	-.14	.02	.31	.09	.39	.61
Retrieval Fluency (Glr/Gs)	.51	.26	.18	.03	-.14	.02	.24	.06	.14	.02	.00	.00	.01	.00	.15	.02	.41	.59
Verbal Attention (Gwm)	.61	.37	-.01	.00	.02	.00	.01	.00	.47	.22	-.11	.01	.08	.01	-.08	.01	.62	.38
Memory for Words (Aud Mem)	.53	.29	-.02	.00	-.08	.01	.01	.00	.42	.18	.11	.01	-.02	.00	.08	.01	.49	.51
Sentence Repetition (Gwm)	.56	.32	.11	.01	.13	.02	-.03	.00	.42	.18	-.11	.01	-.10	.01	.09	.01	.55	.45
Nonword Repetition (Ga)	.48	.23	-.05	.00	.12	.01	-.06	.00	.40	.16	.10	.01	-.10	.01	.10	.01	.44	.56
Object-Number Sequencing (Gwm)	.61	.38	.01	.00	-.19	.04	.21	.05	.30	.09	.06	.00	.11	.01	.14	.02	.58	.42

Understanding Directions (Gwm)	.56	.31	-.02	.00	.11	.01	-.01	.00	.26	.07	.00	.00	.11	.01	.25	.06	.47	.53
Numbers Reversed (Gwm)	.60	.35	.00	.00	.01	.00	.10	.01	.18	.03	.11	.01	.14	.02	-.04	.00	.43	.57
Sound Blending (Ga)	.51	.26	.08	.01	-.01	.00	-.03	.00	.03	.00	.50	.25	-.03	.00	-.08	.01	.53	.47
Visual-Auditory Learning (Glr)	.42	.17	.07	.00	.02	.00	.02	.00	-.12	.01	.46	.21	.00	.00	.21	.04	.45	.55
Segmentation (Ga)	.53	.28	-.07	.01	.14	.02	-.09	.01	.11	.01	.45	.20	.02	.00	.06	.00	.53	.47
Spelling of Sounds (Ga/Grw)	.66	.43	-.12	.02	.30	.09	.03	.00	.09	.01	.37	.14	.05	.00	-.18	.03	.72	.28
Concept Formation (Gf)	.58	.34	.06	.00	.00	.00	.02	.00	-.04	.00	.28	.08	.22	.05	.17	.03	.50	.50
Visualization (Gv)	.53	.28	.00	.00	.09	.01	.00	.00	-.03	.00	.28	.08	.16	.03	.23	.05	.44	.56
Phonological Processing (Ga)	.70	.49	.11	.01	.04	.00	.05	.00	.18	.03	.27	.07	.01	.00	-.17	.03	.63	.37
Number Series (Gf)	.68	.46	-.07	.01	.24	.06	-.04	.00	-.01	.00	-.06	.00	.53	.28	-.08	.01	.82	.18
Calculation (Gq/Gs)	.72	.52	.03	.00	.14	.02	.14	.02	-.10	.01	.01	.00	.44	.19	-.12	.01	.78	.22
Applied Problems (Gq)	.75	.56	.20	.04	.05	.00	.07	.00	-.10	.01	.07	.01	.37	.14	-.05	.00	.77	.23
Number Matrices (Gf)	.65	.43	.10	.01	-.06	.00	.03	.00	.07	.00	.04	.00	.37	.14	-.22	.05	.63	.37
Analysis-Synthesis (Gf)	.54	.29	.05	.00	-.14	.02	.05	.00	-.01	.00	.19	.04	.32	.10	.17	.03	.48	.52
Picture Recognition (Gv)	.26	.07	.02	.00	.12	.01	.04	.00	.07	.00	.06	.00	-.10	.01	.70	.49	.59	.41
Story Recall (Glr)	.50	.25	.10	.01	.08	.01	-.08	.01	.06	.00	-.02	.00	.23	.05	.37	.14	.47	.53
Common Variance (%)		59.2		6.8		8.1		7.3		4.3		4.6		4.5		5.1	61.5	38.5
Total Variance (%)		36.4		4.2		5.0		4.5		2.7		2.8		2.8		3.1		

Note. g = general intelligence factor S^2 = variance explained, h^2 = communality, u^2 = uniqueness, Loadings $\geq .30$ are **bolded** (Carroll, 1993, p. 108; Child, 2006). Note that alignment of subtests with respective CHC stratum I or II factors posited in the WJ-IV Technical Manual is indicated following each subtest name.

Table A5*Age 9- to 13- WJ-IV Principal Axis Factor with Promax Rotation (Eight Factors)*

Subtest	Pattern (Structure Coefficients)																<i>h</i> ²	<i>u</i> ²
	I	II	III	IV	V	VI	VII	VIII										
Writing Samples (Grw)	.84	(.72)	-.10	(.34)	.05	(.40)	-.20	(.30)	.05	(.24)	.08	(.45)	.19	(.17)	.25	(.11)	.63	.37
Letter-Word Identification (Grw)	.79	(.88)	.19	(.61)	.05	(.55)	-.03	(.50)	-.03	(.30)	-.04	(.49)	-.01	(-.02)	-.03	(-.20)	.80	.20
Word Attack (Grw/Glr)	.75	(.75)	-.04	(.46)	-.14	(.37)	.23	(.56)	.13	(.43)	-.11	(.39)	.05	(.04)	-.01	(-.11)	.63	.37
Passage Comprehension (Grw/Glr)	.73	(.81)	.22	(.60)	-.02	(.48)	-.11	(.47)	.08	(.37)	-.01	(.50)	.15	(.15)	-.01	(-.15)	.71	.29
Reading Recall (Grw/Glr)	.64	(.66)	-.11	(.35)	-.01	(.42)	.02	(.37)	-.09	(.21)	.21	(.49)	.10	(.11)	.04	(-.07)	.48	.52
Spelling (Grw)	.53	(.81)	.12	(.60)	.14	(.64)	.18	(.60)	-.05	(.35)	.03	(.54)	-.09	(-.06)	-.14	(-.30)	.75	.25
Oral Reading (Grw)	.50	(.72)	.20	(.54)	.06	(.53)	-.01	(.45)	.13	(.39)	-.09	(.38)	-.09	(-.09)	-.41	(-.54)	.74	.26
Spelling of Sounds (Ga/Grw)	.48	(.65)	-.19	(.36)	-.05	(.41)	.14	(.54)	.40	(.61)	.11	(.48)	-.15	(-.11)	-.11	(-.23)	.63	.37
Editing (Grw)	.45	(.77)	.24	(.65)	.09	(.58)	.16	(.59)	-.04	(.35)	.10	(.55)	-.19	(-.13)	-.07	(-.22)	.72	.28
Sounds Awareness (Grw/Ga)	.43	(.61)	-.09	(.42)	-.01	(.41)	.21	(.57)	.32	(.57)	.00	(.45)	.05	(.09)	-.05	(-.15)	.53	.47
Picture Vocabulary (Gc)	.00	(.45)	.91	(.86)	-.05	(.34)	.02	(.50)	-.05	(.29)	-.06	(.38)	.05	(.14)	.01	(-.05)	.74	.26
General Information (Gc)	-.08	(.40)	.85	(.78)	-.01	(.37)	-.11	(.41)	.06	(.33)	-.03	(.37)	.07	(.15)	-.29	(-.35)	.70	.30
Social Studies (Gc)	.03	(.50)	.78	(.81)	-.02	(.39)	-.06	(.48)	-.09	(.27)	.22	(.54)	-.08	(.04)	.13	(.05)	.70	.30
Humanities (Gc)	-.12	(.41)	.74	(.77)	-.01	(.36)	.01	(.52)	.14	(.43)	.12	(.48)	-.11	(.02)	.02	(-.05)	.63	.37
Oral Vocabulary (Gc)	.10	(.56)	.71	(.83)	-.03	(.44)	.02	(.56)	.04	(.40)	.07	(.52)	.04	(.14)	-.06	(-.14)	.70	.30
Oral Comprehension (Gc)	.25	(.51)	.64	(.75)	-.11	(.31)	.11	(.53)	-.03	(.32)	-.11	(.39)	.26	(.32)	.12	(.07)	.67	.33
Science (Gc)	.11	(.49)	.56	(.71)	-.18	(.28)	.12	(.53)	-.09	(.30)	.33	(.57)	-.08	(.05)	.26	(.21)	.67	.33
Reading Vocabulary (Grw/Gc)	.43	(.74)	.56	(.78)	.04	(.51)	-.12	(.53)	.13	(.43)	-.02	(.51)	-.05	(.01)	-.02	(-.17)	.75	.25
Letter-Pattern Matching (Gs)	-.01	(.40)	-.11	(.27)	.84	(.77)	-.09	(.34)	.08	(.24)	.04	(.43)	.09	(.15)	.05	(-.16)	.61	.39
Word Reading Fluency (Grw/Gs)	.15	(.57)	.07	(.44)	.81	(.84)	-.04	(.41)	-.06	(.19)	-.08	(.43)	-.05	(.00)	.01	(-.23)	.73	.27
Number-Pattern Matching (PerSpd)	.26	(.51)	-.21	(.25)	.79	(.76)	-.14	(.31)	.01	(.19)	.05	(.46)	.14	(.18)	.21	(-.02)	.68	.32
Pair Cancellation (Gs)	-.20	(.27)	.02	(.29)	.78	(.66)	-.01	(.33)	.03	(.19)	.07	(.39)	-.02	(.09)	.20	(.02)	.50	.50
Sentence Reading Fluency (Grw/Gs)	.36	(.70)	.04	(.50)	.59	(.82)	.03	(.48)	-.09	(.24)	-.06	(.48)	.09	(.11)	-.16	(-.37)	.78	.22
Math Fact Fluency (Gq/Gs)	.18	(.60)	-.01	(.43)	.53	(.77)	.05	(.44)	-.18	(.18)	.22	(.57)	-.01	(.05)	-.15	(-.32)	.67	.33
Sentence Writing Fluency (Grw/Gs)	.43	(.69)	-.19	(.37)	.50	(.75)	.09	(.47)	-.08	(.24)	.08	(.52)	.02	(.04)	-.07	(-.27)	.68	.32
Retrieval Fluency (Glr/Gs)	-.07	(.32)	.34	(.50)	.45	(.47)	.01	(.42)	.11	(.30)	-.06	(.36)	.02	(.13)	.40	(.26)	.48	.52
Rapid Picture Naming (Gs/Glr)	-.09	(.26)	.21	(.41)	.43	(.45)	.30	(.46)	-.09	(.19)	-.20	(.25)	.21	(.28)	.25	(.14)	.42	.58
Nonword Repetition (Ga)	.15	(.37)	-.09	(.36)	-.15	(.26)	.75	(.67)	.02	(.41)	-.12	(.28)	.16	(.20)	-.12	(-.12)	.50	.50
Sentence Repetition (Gwm)	.15	(.45)	.14	(.51)	-.09	(.33)	.74	(.71)	-.14	(.32)	-.13	(.31)	.02	(.08)	.00	(-.04)	.55	.45
Verbal Attention (Gwm)	.10	(.46)	-.05	(.44)	-.03	(.39)	.72	(.73)	-.08	(.38)	.12	(.46)	-.07	(.03)	.05	(.01)	.55	.45
Memory for Words (Aud Mem)	-.12	(.27)	-.01	(.38)	.02	(.29)	.55	(.66)	.30	(.57)	.00	(.36)	.00	(.12)	.11	(.07)	.50	.50

Object-Number Sequencing (Gwm)	-.33	(.24)	.02	(.42)	.30	(.49)	.55	(.67)	.07	(.44)	.15	(.49)	.11	(.26)	.07	(.01)	.57	.43
Understanding Directions (Gwm)	.10	(.41)	.04	(.45)	-.08	(.35)	.50	(.61)	-.10	(.33)	.19	(.49)	.24	(.32)	-.01	(-.02)	.47	.53
Sound Blending (Ga)	-.03	(.21)	.14	(.32)	-.05	(.16)	-.11	(.35)	.73	(.70)	-.05	(.26)	.06	(.14)	-.09	(-.14)	.51	.49
Segmentation (Ga)	.26	(.37)	-.12	(.26)	-.07	(.19)	-.02	(.43)	.69	(.71)	.05	(.37)	.06	(.14)	.20	(.12)	.57	.43
Phonological Processing (Ga)	.15	(.52)	.11	(.50)	.17	(.44)	.13	(.62)	.54	(.70)	-.04	(.46)	-.19	(-.08)	.22	(.07)	.67	.33
Visual-Auditory Learning (Glr)	-.03	(.21)	-.02	(.26)	.01	(.24)	-.05	(.33)	.45	(.53)	.19	(.40)	.28	(.36)	-.12	(-.14)	.40	.60
Number Series (Gf)	.47	(.71)	-.12	(.43)	-.04	(.50)	-.02	(.45)	-.09	(.29)	.71	(.81)	-.10	(-.01)	.08	(-.02)	.80	.20
Applied Problems (Gq)	.11	(.58)	.27	(.62)	.03	(.54)	-.11	(.47)	-.03	(.36)	.64	(.80)	.05	(.18)	-.11	(-.20)	.72	.28
Calculations (Gq/Gs)	.30	(.66)	.00	(.47)	.18	(.62)	-.12	(.42)	-.08	(.28)	.64	(.79)	-.07	(.03)	-.01	(-.15)	.73	.27
Analysis-Synthesis (Gf)	-.18	(.26)	.11	(.40)	.10	(.37)	-.11	(.38)	.27	(.47)	.55	(.65)	.17	(.32)	.09	(.04)	.53	.47
Number Matrices (Gf)	-.01	(.47)	.10	(.47)	.07	(.46)	.12	(.50)	.05	(.39)	.55	(.68)	-.22	(-.08)	.04	(-.05)	.53	.47
Concept Formation (Gf)	-.09	(.32)	.05	(.41)	-.02	(.36)	.11	(.47)	.18	(.47)	.47	(.62)	.18	(.30)	-.06	(-.09)	.47	.53
Story Recall (Glr)	.10	(.34)	.17	(.43)	-.07	(.26)	.10	(.41)	-.02	(.28)	.29	(.49)	.29	(.38)	.16	(.14)	.40	.60
Numbers Reversed (Gwm)	-.05	(.38)	.02	(.39)	.16	(.46)	.24	(.51)	.10	(.39)	.26	(.50)	-.03	(.08)	-.08	(-.16)	.36	.64
Picture Recognition (Gv)	.10	(.20)	.02	(.26)	.16	(.28)	.10	(.32)	.07	(.25)	-.10	(.25)	.66	(.68)	.06	(.03)	.54	.46
Visualization (Gv)	.00	(.29)	-.01	(.33)	-.04	(.31)	.08	(.42)	.26	(.48)	.30	(.50)	.36	(.44)	-.18	(-.20)	.48	.52
Eigenvalue	18.30		3.18		2.51		2.17		1.65		1.41		1.36		1.17			
Variance (%)	38.94		6.78		5.35		4.62		3.52		3.00		2.89		2.50			
Factor 1	1.0																	
Factor 2	.57	1.0																
Factor 3	.58	.47	1.0															
Factor 4	.54	.61	.51	1.0														
Factor 5	.35	.40	.29	.58	1.0													
Factor 6	.55	.52	.55	.54	.44	1.0												
Factor 7	-.02	.12	.09	.13	.13	.18	1.0											
Factor 8	-.18	-.09	-.26	-.05	-.09	-.06	.06	1.0										

Note. h^2 = Communality coefficient. u^2 = Uniqueness. Pattern coefficients $>.30$ are **bolded** (Carroll, 1993, p. 108; Child, 2006). Note that alignment of subtests with respective CHC stratum I or II factors posited in the WJ-IV Technical Manual is indicated following each subtest name.

Table A6*WJ IV Sources of Variance According to a Schmid-Leiman Orthogonalization (8 Factor) Ages 9 to 13*

Subtest	Second-Order Factor								First-Order Factors								h^2	u^2		
	g	S^2	F1	S^2	F2	S^2	F3	S^2	F4	S^2	F5	S^2	F6	S^2	F7	S^2			F8	S^2
Writing Samples (Grw)	.49	.24	.57	.32	-.07	.00	.04	.00	-.12	.01	.04	.00	.05	.00	.19	.04	.25	.06	.69	.31
Letter-Word Identification (Grw)	.69	.47	.54	.29	.13	.02	.03	.00	-.02	.00	-.03	.00	-.03	.00	-.01	.00	-.03	.00	.78	.22
Word Attack (Grw/Glr)	.61	.37	.51	.26	-.03	.00	-.10	.01	.14	.02	.11	.01	-.07	.01	.05	.00	-.01	.00	.68	.32
Passage Comprehension (Grw/Glr)	.66	.43	.50	.25	.15	.02	-.02	.00	-.07	.00	.06	.00	.00	.00	.15	.02	-.01	.00	.73	.27
Reading Recall (Grw/Glr)	.52	.27	.43	.19	-.07	.01	-.01	.00	.01	.00	-.07	.01	.15	.02	.10	.01	.04	.00	.50	.50
Spelling (Grw)	.73	.53	.36	.13	.09	.01	.10	.01	.11	.01	-.04	.00	.02	.00	-.09	.01	-.14	.02	.72	.28
Oral Reading (Grw)	.62	.38	.34	.12	.14	.02	.04	.00	.00	.00	.11	.01	-.06	.00	-.09	.01	-.40	.16	.70	.30
Spelling of Sounds (Ga/Grw)	.60	.36	.33	.11	-.13	.02	-.03	.00	.09	.01	.33	.11	.07	.01	-.15	.02	-.11	.01	.64	.36
Editing (Grw)	.72	.52	.30	.09	.16	.03	.07	.00	.10	.01	-.04	.00	.06	.00	-.19	.03	-.07	.00	.69	.31
Sounds Awareness (Grw/Ga)	.61	.37	.29	.08	-.06	.00	-.01	.00	.13	.02	.26	.07	.00	.00	.05	.00	-.05	.00	.54	.46
Picture Vocabulary (Gc)	.58	.34	.00	.00	.62	.39	-.04	.00	.01	.00	-.04	.00	-.04	.00	.05	.00	.01	.00	.73	.27
General Information (Gc)	.54	.29	-.06	.00	.58	.34	-.01	.00	-.06	.00	.05	.00	-.02	.00	.07	.01	-.29	.08	.73	.27
Social Studies (Gc)	.61	.37	.02	.00	.53	.28	-.02	.00	-.03	.00	-.07	.01	.15	.02	-.08	.01	.13	.02	.71	.29
Humanities (Gc)	.60	.36	-.08	.01	.50	.25	-.01	.00	.01	.00	.11	.01	.08	.01	-.11	.01	.02	.00	.65	.35
Oral Vocabulary (Gc)	.68	.46	.07	.00	.49	.24	-.02	.00	.01	.00	.03	.00	.05	.00	.04	.00	-.06	.00	.71	.29
Oral Comprehension (Gc)	.59	.34	.17	.03	.44	.19	-.08	.01	.06	.00	-.02	.00	-.07	.01	.26	.07	.12	.01	.66	.34
Science (Gc)	.59	.35	.07	.01	.38	.14	-.13	.02	.07	.01	-.07	.01	.22	.05	-.08	.01	.26	.07	.65	.35
Reading Vocabulary (Grw/Gc)	.71	.50	.29	.08	.38	.14	.03	.00	-.07	.01	.11	.01	-.01	.00	-.05	.00	-.02	.00	.75	.25
Letter-Pattern Matching (Gs)	.49	.24	-.01	.00	-.07	.01	.61	.37	-.06	.00	.06	.00	.02	.00	.09	.01	.05	.00	.63	.37
Word Reading Fluency (Grw/Gs)	.59	.35	.10	.01	.05	.00	.59	.34	-.03	.00	-.05	.00	-.05	.00	-.05	.00	.01	.00	.71	.29
Number-Pattern Matching (PerSpd)	.50	.25	.17	.03	-.14	.02	.58	.33	-.09	.01	.01	.00	.03	.00	.13	.02	.21	.04	.70	.30
Pair Cancellation (Gs)	.43	.18	-.14	.02	.02	.00	.57	.32	-.01	.00	.02	.00	.04	.00	-.02	.00	.20	.04	.57	.43
Sentence Reading Fluency (Grw/Gs)	.67	.45	.24	.06	.03	.00	.42	.18	.02	.00	-.08	.01	-.04	.00	.09	.01	-.16	.03	.73	.27
Math Fact Fluency (Gq/Gs)	.62	.38	.12	.02	-.01	.00	.39	.15	.03	.00	-.15	.02	.15	.02	-.01	.00	-.14	.02	.61	.39
Sentence Writing Fluency (Grw/Gs)	.63	.39	.29	.09	-.13	.02	.36	.13	.05	.00	-.06	.00	.05	.00	.02	.00	-.07	.01	.64	.36
Retrieval Fluency (Glr/Gs)	.47	.22	-.05	.00	.24	.06	.33	.11	.01	.00	.09	.01	-.04	.00	.02	.00	.40	.16	.55	.45
Rapid Picture Naming (Gs/Glr)	.42	.18	-.06	.00	.15	.02	.31	.10	.18	.03	-.07	.00	-.14	.02	.20	.04	.24	.06	.46	.54
Nonword Repetition (Ga)	.50	.25	.10	.01	-.06	.00	-.11	.01	.46	.21	.02	.00	-.08	.01	.16	.02	-.12	.01	.53	.47
Sentence Repetition (Gwm)	.56	.31	.10	.01	.09	.01	-.07	.00	.45	.21	-.12	.01	-.09	.01	.02	.00	.00	.00	.57	.43
Verbal Attention (Gwm)	.60	.36	.07	.00	-.04	.00	-.02	.00	.44	.19	-.06	.00	.08	.01	-.07	.00	.05	.00	.58	.42
Memory for Words (Aud Mem)	.51	.26	-.08	.01	-.01	.00	.02	.00	.34	.11	.25	.06	.00	.00	.00	.00	.11	.01	.45	.55
Object-Number Sequencing (Gwm)	.56	.32	-.22	.05	.01	.00	.22	.05	.34	.11	.06	.00	.10	.01	.11	.01	.07	.01	.56	.44

Understanding Directions (Gwm)	.56	.32	.07	.00	.03	.00	-.06	.00	.31	.09	-.08	.01	.13	.02	.24	.06	-.01	.00	.50	.50
Sound Blending (Ga)	.36	.13	-.02	.00	.10	.01	-.04	.00	-.07	.00	.60	.36	-.03	.00	.06	.00	-.09	.01	.52	.48
Segmentation (Ga)	.43	.19	.17	.03	-.09	.01	-.05	.00	-.01	.00	.56	.32	.03	.00	.06	.00	.19	.04	.59	.41
Phonological Processing (Ga)	.63	.39	.10	.01	.07	.01	.13	.02	.08	.01	.45	.20	-.02	.00	-.19	.04	.21	.05	.71	.29
Visual-Auditory Learning (Glr)	.38	.14	-.02	.00	-.02	.00	.00	.00	-.03	.00	.37	.14	.13	.02	.28	.08	-.11	.01	.39	.61
Number Series (Gf)	.66	.43	.32	.10	-.08	.01	-.03	.00	-.01	.00	-.08	.01	.48	.23	-.10	.01	.08	.01	.79	.21
Applied Problems (Gq)	.69	.48	.08	.01	.19	.03	.02	.00	-.07	.00	-.03	.00	.43	.19	.05	.00	-.11	.01	.73	.27
Calculations (Gq/Gs)	.66	.44	.20	.04	.00	.00	.13	.02	-.08	.01	-.06	.00	.43	.18	-.07	.00	-.01	.00	.70	.30
Analysis-Synthesis (Gf)	.50	.25	-.12	.01	.08	.01	.07	.01	-.07	.00	.22	.05	.37	.14	.17	.03	.09	.01	.50	.50
Number Matrices (Gf)	.60	.36	.00	.00	.07	.00	.05	.00	.07	.00	.04	.00	.37	.14	-.22	.05	.04	.00	.56	.44
Concept Formation (Gf)	.54	.29	-.06	.00	.04	.00	-.01	.00	.06	.00	.15	.02	.32	.10	.18	.03	-.06	.00	.46	.54
Story Recall (Glr)	.46	.21	.07	.00	.12	.01	-.05	.00	.06	.00	-.02	.00	.20	.04	.29	.08	.16	.02	.38	.62
Numbers Reversed (Gwm)	.54	.29	-.03	.00	.02	.00	.12	.01	.15	.02	.08	.01	.17	.03	-.03	.00	-.08	.01	.37	.63
Picture Recognition (Gv)	.33	.11	.07	.00	.01	.00	.11	.01	.06	.00	.06	.00	-.07	.00	.65	.42	.06	.00	.56	.44
Visualization (Gv)	.47	.22	.00	.00	-.01	.00	-.03	.00	.05	.00	.22	.05	.20	.04	.35	.12	-.18	.03	.47	.53
Common Variance (%)		53.3		8.7		8.1		7.8		4.0		5.4		4.7		4.5		3.6	61.2	38.8
Total Variance (%)		32.7		5.3		4.9		4.8		2.4		3.3		2.9		2.8		2.2		

Note. g = general intelligence factor S^2 = variance explained, h^2 = communality, u^2 = uniqueness, Loadings $\geq .30$ are **bolded** (Carroll, 1993, p. 108; Child, 2006). Note that alignment of subtests with respective CHC stratum I or II factors posited in the WJ-IV Technical Manual is indicated following each subtest name.

Table A7*Age 14- to 19- WJ-IV Principal Axis Factor with Promax Rotation (Eight Factors)*

Subtest	Pattern (Structure Coefficients)															<i>h</i> ²	<i>u</i> ²	
	I	II	III	IV	V	VI	VII	VII I										
Picture Vocabulary (Gc)	.95	(.86)	.04	(.51)	-.04	(.43)	-.03	(.55)	.00	(.43)	-.12	(.44)	.12	(.12)	.02	(.10)	.76	.24
General Information (Gc)	.91	(.81)	-.14	(.41)	.01	(.44)	-.10	(.46)	.10	(.42)	-.05	(.44)	.03	(.07)	.19	(.26)	.70	.30
Social Studies (Gc)	.80	(.84)	-.01	(.52)	-.01	(.46)	-.08	(.55)	-.07	(.43)	.25	(.61)	-.04	(.00)	-.15	(-.04)	.74	.26
Humanities (Gc)	.75	(.81)	-.14	(.45)	-.06	(.43)	.11	(.60)	.07	(.49)	.11	(.53)	-.07	(.01)	.00	(.05)	.67	.33
Oral Comprehension (Gc)	.74	(.79)	.23	(.57)	-.11	(.38)	.07	(.59)	-.06	(.43)	-.06	(.46)	.18	(.14)	-.17	(-.09)	.70	.30
Oral Vocabulary (Gc)	.73	(.86)	.06	(.59)	.00	(.52)	.00	(.61)	.08	(.52)	.07	(.58)	.00	(.04)	.04	(.13)	.74	.26
Reading Vocabulary (Grw/Gc)	.64	(.84)	.34	(.73)	.01	(.55)	-.08	(.58)	.03	(.47)	.02	(.56)	-.02	(-.04)	.11	(.23)	.79	.21
Science (Gc)	.59	(.76)	.13	(.56)	-.16	(.39)	.07	(.60)	-.07	(.45)	.34	(.64)	-.01	(.02)	-.18	(-.10)	.69	.31
Writing Samples (Grw)	-.08	(.44)	.77	(.73)	.03	(.44)	-.16	(.43)	.05	(.40)	.20	(.53)	.21	(.15)	-.11	(.03)	.61	.39
Letter-Word Identification (Grw)	.25	(.68)	.74	(.88)	.10	(.58)	-.04	(.56)	-.01	(.41)	-.07	(.49)	-.03	(-.12)	.06	(.20)	.82	.18
Word Attack (Gr/Glr)	.00	(.54)	.71	(.79)	-.11	(.40)	.17	(.61)	.18	(.52)	-.09	(.42)	.02	(-.05)	-.05	(.00)	.68	.32
Reading Recall (Grw/Glr)	-.14	(.34)	.65	(.61)	.02	(.42)	-.05	(.35)	-.09	(.25)	.22	(.48)	.26	(.21)	.15	(.27)	.51	.49
Passage Comprehension (Grw/Glr)	.26	(.68)	.64	(.81)	.05	(.56)	-.15	(.55)	.12	(.51)	.05	(.57)	.12	(.08)	.04	(.17)	.74	.26
Spelling (Grw)	.20	(.69)	.40	(.77)	.17	(.65)	.22	(.65)	-.05	(.42)	.01	(.54)	-.11	(-.12)	.17	(.27)	.74	.26
Sound Awareness (Grw/Ga)	-.02	(.51)	.34	(.60)	-.01	(.45)	.20	(.60)	.30	(.59)	.05	(.50)	.06	(.09)	.06	(.09)	.51	.49
Word Reading Fluency (Grw/Gs)	.12	(.47)	.04	(.46)	.88	(.83)	-.07	(.40)	-.10	(.24)	-.10	(.40)	-.03	(.00)	.04	(.27)	.72	.28
Letter-Pattern Matching (Gs)	-.17	(.34)	.00	(.37)	.79	(.75)	.00	(.44)	.13	(.40)	.02	(.45)	.12	(.20)	-.07	(.11)	.61	.39
Pair Cancellation (Gs)	.03	(.38)	-.19	(.29)	.79	(.68)	-.09	(.40)	.19	(.40)	.03	(.40)	-.11	(-.01)	-.26	(-.10)	.57	.43
Number-Pattern Matching (PerSpd)	-.21	(.32)	.22	(.47)	.78	(.74)	-.06	(.40)	-.10	(.26)	.14	(.47)	.05	(.07)	-.23	(.00)	.63	.37
Sentence Reading Fluency (Grw/Gs)	.11	(.56)	.28	(.62)	.67	(.83)	-.02	(.51)	-.07	(.33)	-.11	(.48)	.11	(.12)	.15	(.36)	.77	.23
Math Fact Fluency (Gq/Gs)	-.02	(.46)	.06	(.49)	.58	(.75)	.02	(.45)	-.17	(.25)	.31	(.60)	-.02	(.06)	.09	(.29)	.63	.37
Sentence Writing Fluency (Grw/Gs)	-.15	(.43)	.35	(.62)	.56	(.75)	.07	(.49)	-.07	(.31)	.06	(.50)	.01	(.03)	.13	(.31)	.65	.35
Rapid Picture Naming (Gs/Glr)	.15	(.34)	-.03	(.22)	.43	(.42)	.18	(.42)	.02	(.32)	-.24	(.22)	.29	(.29)	-.33	(-.23)	.41	.59
Retrieval Fluency (Glr/Gs)	.32	(.50)	-.10	(.30)	.40	(.49)	.06	(.48)	.02	(.38)	.00	(.39)	.14	(.18)	-.33	(-.21)	.45	.55
Verbal Attention (Gwm)	-.01	(.51)	.00	(.47)	-.02	(.43)	.80	(.76)	-.15	(.39)	.13	(.48)	-.08	(-.01)	-.04	(-.05)	.59	.41
Nonword Repetition (Ga)	-.11	(.37)	.07	(.37)	-.14	(.29)	.78	(.67)	.12	(.46)	-.14	(.30)	.12	(.16)	.12	(.05)	.49	.51
Sentence Repetition (Gwm)	.19	(.55)	.13	(.48)	-.07	(.37)	.72	(.71)	-.15	(.36)	-.16	(.33)	.09	(.08)	-.01	(-.01)	.55	.45
Memory for Words (Aud Mem)	-.03	(.42)	-.12	(.31)	-.01	(.35)	.71	(.69)	.15	(.52)	-.03	(.38)	.08	(.17)	-.07	(-.12)	.52	.48
Object-Number Sequencing (Gwm)	.01	(.48)	-.30	(.28)	.26	(.54)	.55	(.69)	.06	(.51)	.19	(.55)	.15	(.29)	-.07	(-.04)	.62	.38
Understanding Directions (Gwm)	-.04	(.43)	.14	(.42)	-.04	(.38)	.46	(.61)	-.02	(.43)	.18	(.51)	.25	(.30)	-.05	(-.02)	.47	.53

Numbers Reversed (Gwm)	-.01	(.48)	-.02	(.43)	.12	(.48)	.32	(.59)	.14	(.49)	.24	(.54)	-.04	(.07)	.02	(.06)	.43	.57
Editing (Grw)	.24	(.71)	.30	(.74)	.08	(.60)	.32	(.68)	-.16	(.38)	.17	(.60)	-.20	(-.18)	.13	(.22)	.76	.24
Sound Blending (Ga)	.13	(.45)	-.04	(.34)	-.05	(.30)	.04	(.47)	.69	(.71)	-.03	(.37)	-.07	(.04)	.08	(.03)	.52	.48
Segmentation (Ga)	-.11	(.39)	.30	(.48)	-.08	(.29)	.00	(.50)	.66	(.74)	.03	(.41)	.05	(.10)	-.14	(-.16)	.60	.40
Visual-Auditory Learning (Glr)	.10	(.35)	-.01	(.24)	.00	(.28)	-.14	(.33)	.60	(.60)	.03	(.37)	.23	(.32)	.11	(.11)	.44	.56
Spelling of Sounds (Ga/Grw)	-.20	(.48)	.40	(.68)	.06	(.50)	.10	(.60)	.53	(.70)	.08	(.52)	-.18	(-.12)	.10	(.12)	.71	.29
Phonological Processing (Ga)	.20	(.63)	.10	(.57)	.12	(.50)	.15	(.66)	.41	(.69)	.01	(.50)	-.19	(-.11)	-.11	(-.09)	.66	.34
Visualization (Gv)	-.02	(.40)	.03	(.34)	-.06	(.37)	.09	(.46)	.34	(.56)	.29	(.55)	.26	(.37)	.17	(.19)	.49	.51
Number Series (Gf)	-.11	(.51)	.39	(.67)	-.03	(.51)	-.06	(.50)	-.08	(.40)	.82	(.85)	-.08	(-.01)	-.05	(.08)	.81	.19
Calculation (Gq/Gs)	.06	(.60)	.18	(.62)	.19	(.65)	-.14	(.51)	.00	(.45)	.69	(.84)	-.11	(.00)	.05	(.21)	.79	.21
Applied Problems (Gq)	.32	(.71)	.02	(.56)	.07	(.59)	-.10	(.55)	.08	(.52)	.60	(.82)	-.04	(.08)	.10	(.22)	.76	.24
Number Matrices (Gf)	.17	(.58)	-.08	(.46)	.04	(.49)	.11	(.55)	.06	(.47)	.57	(.71)	-.22	(-.08)	-.02	(.05)	.59	.41
Analysis-Synthesis (Gf)	.08	(.43)	-.15	(.26)	.06	(.39)	-.02	(.44)	.24	(.52)	.50	(.64)	.18	(.32)	-.11	(-.05)	.52	.48
Concept Formation (Gf)	.08	(.47)	-.03	(.35)	.01	(.41)	-.02	(.47)	.36	(.60)	.36	(.62)	.18	(.31)	.04	(.08)	.52	.48
Picture Recognition (Gv)	.03	(.20)	.19	(.15)	.06	(.20)	.11	(.29)	.05	(.28)	-.14	(.20)	.70	(.66)	-.14	(-.08)	.53	.47
Story Recall (Glr)	.16	(.44)	.10	(.34)	-.14	(.31)	.16	(.45)	-.07	(.35)	.37	(.56)	.38	(.43)	-.02	(.04)	.48	.52
Oral Reading (Grw)	.20	(.61)	.38	(.70)	.09	(.57)	.06	(.50)	.21	(.44)	-.13	(.42)	-.14	(-.13)	.48	(.54)	.78	.22
Eigenvalue	19.96		2.78		2.47		1.89		1.65		1.42		1.29		1.03			
Variance (%)	42.48		5.29		5.26		4.02		3.51		3.03		2.75		2.20			
Factor 1	1.0																	
Factor 2	.62	1.0																
Factor 3	.55	.55	1.0															
Factor 4	.67	.60	.57	1.0														
Factor 5	.52	.45	.41	.62	1.0													
Factor 6	.59	.53	.58	.58	.52	1.0												
Factor 7	.03	-.12	.08	.09	.15	.18	1.0											
Factor 8	.10	.13	.25	-.03	-.05	.12	.06	1.0										

Note. h^2 = Communality coefficient. u^2 = Uniqueness. Pattern coefficients $>.30$ are **bolded** (Carroll, 1993, p. 108; Child, 2006). Note that alignment of subtests with respective CHC stratum I or II factors posited in the WJ-IV Technical Manual is indicated following each subtest name.

Table A8*WJ IV Sources of Variance According to a Schmid-Leiman Orthogonalization (8 Factor) Ages 14 to 19*

Subtest	Second-Order Factor		First-Order Factors																h^2	u^2
	g	S^2	F1	S^2	F2	S^2	F3	S^2	F4	S^2	F5	S^2	F6	S^2	F7	S^2	F8	S^2		
Picture Vocabulary (Gc)	.66	.43	.57	.32	.03	.00	-.03	.00	-.02	.00	.00	.00	-.08	.01	.12	.01	.02	.00	.77	.23
General Information (Gc)	.60	.36	.55	.30	-.09	.01	.01	.00	-.06	.00	.07	.01	-.03	.00	.03	.00	.19	.04	.72	.28
Social Studies (Gc)	.69	.47	.48	.23	.00	.00	.00	.00	-.05	.00	-.05	.00	.16	.03	-.04	.00	-.15	.02	.76	.24
Humanities (Gc)	.67	.45	.45	.20	-.10	.01	-.04	.00	.07	.00	.05	.00	.07	.01	-.07	.00	.00	.00	.68	.32
Oral Comprehension (Gc)	.65	.43	.44	.20	.16	.02	-.08	.01	.04	.00	-.05	.00	-.04	.00	.18	.03	-.17	.03	.72	.28
Oral Vocabulary (Gc)	.74	.55	.44	.19	.04	.00	.00	.00	.00	.00	.06	.00	.05	.00	.00	.00	.04	.00	.75	.25
Reading Vocabulary (Grw/Gc)	.75	.56	.38	.15	.23	.05	.01	.00	-.04	.00	.02	.00	.01	.00	-.02	.00	.11	.01	.77	.23
Science (Gc)	.69	.47	.35	.13	.09	.01	-.11	.01	.04	.00	-.06	.00	.22	.05	-.01	.00	-.18	.03	.70	.30
Writing Samples (Grw)	.57	.33	-.05	.00	.53	.28	.02	.00	-.09	.01	.03	.00	.13	.02	.21	.05	-.10	.01	.69	.31
Letter-Word Identification (Grw)	.71	.51	.15	.02	.50	.25	.07	.00	-.03	.00	-.01	.00	-.05	.00	-.03	.00	.06	.00	.79	.21
Word Attack (Grw/Glr)	.64	.41	.00	.00	.49	.24	-.07	.01	.10	.01	.14	.02	-.06	.00	.02	.00	-.05	.00	.69	.31
Reading Recall (Grw/Glr)	.48	.23	-.09	.01	.45	.20	.01	.00	-.03	.00	-.06	.00	.14	.02	.26	.07	.14	.02	.55	.45
Passage Comprehension (Grw/Glr)	.72	.52	.16	.02	.44	.19	.03	.00	-.08	.01	.09	.01	.04	.00	.12	.01	.04	.00	.76	.24
Spelling (Grw)	.74	.55	.12	.01	.28	.08	.12	.01	.13	.02	-.04	.00	.01	.00	-.11	.01	.16	.03	.71	.29
Sound Awareness (Grw/Ga)	.63	.40	-.01	.00	.23	.05	-.01	.00	.11	.01	.23	.05	.03	.00	.06	.00	.06	.00	.53	.47
Word Reading Fluency (Grw/Gs)	.55	.30	.07	.00	.03	.00	.62	.38	-.04	.00	-.08	.01	-.07	.00	-.03	.00	.04	.00	.70	.30
Letter-Pattern Matching (Gs)	.53	.28	-.10	.01	.00	.00	.56	.31	.00	.00	.10	.01	.01	.00	.12	.01	-.07	.01	.63	.37
Pair Cancellation (Gs)	.49	.24	.02	.00	-.13	.02	.55	.31	-.05	.00	.14	.02	.02	.00	-.11	.01	-.26	.07	.66	.34
Number-Pattern Matching (PerSpd)	.51	.26	-.13	.02	.15	.02	.55	.30	-.04	.00	-.08	.01	.09	.01	.05	.00	-.23	.05	.67	.33
Sentence Reading Fluency (Grw/Gs)	.66	.43	.07	.00	.19	.04	.47	.22	-.01	.00	-.05	.00	-.07	.01	.11	.01	.15	.02	.74	.26
Math Fact Fluency (Gq/Gs)	.60	.35	-.01	.00	.04	.00	.41	.17	.01	.00	-.13	.02	.21	.04	-.02	.00	.09	.01	.59	.41
Sentence Writing Fluency (Grw/Gs)	.61	.37	-.09	.01	.24	.06	.40	.16	.04	.00	-.05	.00	.04	.00	.01	.00	.13	.02	.61	.39
Rapid Picture Naming (Gs/Glr)	.38	.15	.09	.01	-.02	.00	.30	.09	.10	.01	.01	.00	-.15	.02	.29	.09	-.33	.11	.47	.53
Retrieval Fluency (Glr/Gs)	.50	.25	.19	.04	-.07	.00	.28	.08	.04	.00	.01	.00	.00	.00	.14	.02	-.33	.11	.50	.50
Verbal Attention (Gwm)	.63	.39	-.01	.00	.00	.00	-.01	.00	.45	.21	-.11	.01	.08	.01	-.08	.01	-.04	.00	.62	.38
Nonword Repetition (Ga)	.50	.25	-.07	.00	.05	.00	-.10	.01	.44	.19	.09	.01	-.09	.01	.12	.01	.12	.01	.50	.50
Sentence Repetition (Gwm)	.58	.34	.11	.01	.09	.01	-.05	.00	.41	.16	-.11	.01	-.11	.01	.09	.01	-.01	.00	.56	.44
Memory for Words (Aud Mem)	.54	.29	-.02	.00	-.09	.01	.00	.00	.40	.16	.12	.01	-.02	.00	.08	.01	-.07	.00	.48	.52
Object-Number Sequencing (Gwm)	.62	.38	.01	.00	-.21	.04	.18	.03	.31	.10	.05	.00	.12	.02	.15	.02	-.07	.01	.60	.40
Understanding Directions (Gwm)	.57	.32	-.03	.00	.10	.01	-.03	.00	.26	.07	-.01	.00	.12	.01	.25	.06	-.05	.00	.48	.52
Numbers Reversed (Gwm)	.60	.36	.00	.00	-.02	.00	.08	.01	.18	.03	.11	.01	.15	.02	-.04	.00	.02	.00	.43	.57

Editing (Grw)	.75	.56	.15	.02	.20	.04	.06	.00	.18	.03	-.12	.01	.11	.01	-.20	.04	.13	.02	.74	.26
Sound Blending (Ga)	.50	.25	.08	.01	-.03	.00	-.04	.00	.02	.00	.52	.27	-.02	.00	-.07	.01	.08	.01	.54	.46
Segmentation (Ga)	.52	.27	-.06	.00	.21	.04	-.06	.00	.00	.00	.50	.25	.02	.00	.05	.00	-.14	.02	.59	.41
Visual-Auditory Learning (Glr)	.41	.17	.06	.00	-.01	.00	.00	.00	-.08	.01	.45	.20	.02	.00	.23	.05	.11	.01	.44	.56
Spelling of Sounds (Ga/Grw)	.66	.44	-.12	.01	.28	.08	.04	.00	.05	.00	.40	.16	.05	.00	-.18	.03	.10	.01	.74	.26
Phonological Processing (Ga)	.69	.48	.12	.01	.07	.00	.08	.01	.09	.01	.31	.10	.01	.00	-.18	.03	-.11	.01	.66	.34
Visualization (Gv)	.53	.28	-.01	.00	.02	.00	-.04	.00	.05	.00	.26	.07	.19	.04	.26	.07	.17	.03	.48	.52
Number Series (Gf)	.68	.46	-.07	.00	.27	.07	-.02	.00	-.04	.00	-.06	.00	.54	.29	-.08	.01	-.05	.00	.84	.16
Calculation (Gq/Gs)	.72	.52	.04	.00	.12	.02	.13	.02	-.08	.01	.00	.00	.45	.20	-.11	.01	.05	.00	.78	.22
Applied Problems (Gq)	.74	.55	.19	.04	.02	.00	.05	.00	-.06	.00	.06	.00	.39	.15	-.04	.00	.10	.01	.76	.24
Number Matrices (Gf)	.65	.42	.10	.01	-.05	.00	.03	.00	.06	.00	.05	.00	.38	.14	-.22	.05	-.02	.00	.63	.37
Analysis-Synthesis (Gf)	.53	.28	.05	.00	-.10	.01	.04	.00	-.01	.00	.18	.03	.33	.11	.18	.03	-.11	.01	.48	.52
Concept Formation (Gf)	.57	.32	.05	.00	-.02	.00	.01	.00	-.01	.00	.27	.07	.24	.06	.18	.03	.04	.00	.49	.51
Picture Recognition (Gv)	.27	.07	.02	.00	.13	.02	.04	.00	.06	.00	.04	.00	-.10	.01	.69	.48	-.14	.02	.60	.40
Story Recall (Glr)	.50	.25	.10	.01	.07	.00	-.10	.01	.09	.01	-.05	.00	.24	.06	.38	.14	-.02	.00	.48	.52
Oral Reading (Grw)	.64	.41	.12	.01	.26	.07	.06	.00	.03	.00	.15	.02	-.09	.01	-.14	.02	.48	.23	.77	.23
Common Variance (%)		58.1		6.8		6.6		7.2		3.6		4.7		4.6		4.9		3.4	63.5	36.5
Total Variance (%)		36.9		4.3		4.2		4.6		2.3		3.0		3.0		3.1		2.1		

Note. g = general intelligence factor S^2 = variance explained, h^2 = communality, u^2 = uniqueness, Loadings $\geq .30$ are **bolded** (Carroll, 1993, p. 108; Child, 2006). Note that alignment of subtests with respective CHC stratum I or II factors posited in the WJ-IV Technical Manual is indicated following each subtest name.