

Stanford-Binet Intelligence Scales,

Gale H. Roid, 2003

FACTS IN BRIEF



Purpose: An individually administered assessment of intelligence and cognitive abilities

Range: 2.0–85+

Time: varies, approximately 5 minutes per subtest

Scores: IQ, SS, PR, AE, CSS (Change-Sensitive Scores)

The **Stanford-Binet Intelligence Scales, Fifth Edition (SB5)** is a contemporary assessment with a rich tradition, which began in 1916 when Lewis Terman completed his American revision of the Binet-Simon Scales (1908). Through various editions, this assessment has become widely known and is acknowledged as the standard for intelligence measurement. The *SB5* is a valuable update to this well-established assessment.

The *SB5* blends many of the important features of earlier editions with significant improvements in psychometric design. It incorporates the use of two routing subtests in the point-scale format of the 1986 edition with the functional-level design of the 1916 to 1960 editions for the remaining subtests. Modern item response theory provides a strong psychometric foundation for the routing, subtest, and functional-level design. By adapting the test to the functional level of the examinee, the routing procedure of the *SB5* increases the precision of measurement by tailoring the difficulty of the items to his or her level of cognitive functioning. The use of a hierarchical model of intelligence with a global *g* factor and several broad factors at a second level is repeated in this edition.

The *SB5* is appropriate for a broad range of two to 85+ years, providing one assessment for all ages. It provides comprehensive coverage of five factors of cognitive ability:

- Fluid Reasoning
- Knowledge
- Quantitative Processing
- Visual-Spatial Processing
- Working Memory

Psychologists will appreciate the new features of the *SB5*:

- Wide variety of items requiring nonverbal performance by examinee - ideal for assessing subjects with limited English, deafness, or communication disorders
- Ability to compare verbal and nonverbal performance - useful in evaluating learning disabilities
- Greater diagnostic and clinical relevance of tasks, such as verbal and nonverbal assessment of working memory
- Includes Full Scale IQ, Verbal and Nonverbal IQ, and Composite Indices spanning five dimensions with a standard score mean of 100, SD 15
- Includes subtest scores with a mean of 10, SD 3
- Extensive high-end items, many adapted from previous Stanford-Binet editions and designed to measure the highest level of gifted performance



- Improved low-end items for better measurement of young children, low-functioning older children, or adults with Mental Retardation
- Enhanced memory tasks provide a comprehensive assessment for adults and the elderly
- Co-normed with measures of visual-motor perception and test-taking behaviour
- Scoreable by hand or with computer software
- Enhanced artwork and manipulatives that are both colourful and child-friendly

Uses

The *SB5* may be used to diagnose a wide variety of developmental disabilities and exceptionalities and may also be useful in:

- Clinical and neuropsychological assessment
- Early childhood assessment
- Psycho-educational evaluations for special education placements
- Adult workers compensation evaluations
- Providing information for interventions such as IFPs, IEPs, career assessment, industrial selection, and adult neuropsychological treatment
- A variety of forensic contexts
- Research on abilities and aptitudes

Administration

Testing begins in Item Book 1 with the routing subtests. The start points for two routing subtests in Item Book 1 are determined by age or estimated ability level; Nonverbal Fluid Reasoning routes to the appropriate difficulty level in Item Book 2 (Nonverbal), while Verbal Knowledge does so for Item Book 3 (Nonverbal). The remaining eight subtests (four nonverbal and four verbal) are then measured in Item Books 2 and 3 (see chart).

Fifth Edition (SB5)

Organization of the Stanford-Binet, Fifth Edition

FACTORS	DOMAINS	
	Nonverbal (NV)	Verbal (V)
FLUID REASONING (FR)	Nonverbal Fluid Reasoning* Activities: Object Series/Matrices (Routing)	Verbal Fluid Reasoning* Activities: Early Reasoning (2–3), Verbal Absurdities (4), Verbal Analogies (5–6)
KNOWLEDGE (KN)	Nonverbal Knowledge Activities: Procedural Knowledge (2–3), Picture Absurdities (4–6)	Verbal Knowledge* Activities: Vocabulary (Routing)
QUANTITATIVE REASONING (QR)	Nonverbal Quantitative Reasoning Activities: Quantitative Reasoning (2–6)	Verbal Quantitative Reasoning Activities: Quantitative Reasoning (2–6)
VISUAL-SPATIAL PROCESSING (VS)	Nonverbal Visual-Spatial Processing Activities: Form Board (1–2), Form Patterns (3–6)	Verbal Visual-Spatial Processing Activities: Position and Direction (2–6)
WORKING MEMORY (WM)	Nonverbal Working Memory Activities: Delayed Response (1), Block Span (2–6)	Verbal Working Memory Activities: Memory for Sentences (2–3), Last Word (4–6)

*Routing Subtests

NOTE: Names of the 10 subtests are in bold. Activities are shown with the levels of test item difficulty at which they appear (in Item Books 2 and 3). Levels do not refer to age.

Scoring and Interpretation

The SB5 can be hand-scored or scored with optional scoring software. At the most granular level of the norm-referenced scores are the 10 subtest scores (scaled scores have a mean of 10, SD=3, score range 1-19). These subtest scores combine to form four types of composite scores: factor index, domain, abbreviated, and full scale (each with scaled score means of 100, SD=15, score range 40-160). Two subtests (one verbal, the other its nonverbal complement) combine to form each factor index. There are two domain scales: Nonverbal IQ (combines the five nonverbal subtests) and Verbal IQ (combines the five verbal subtests). Two routing subtests combine to form the Abbreviated Battery IQ. Finally, the Full Scale IQ combines all 10 subtests.

The Change-Sensitive Scores (CSSs) use item response theory scaling to convert the raw score totals on the composite scales described above into criterion-referenced levels of ability. These scales, as with the norm-referenced scores, have excellent measurement properties. Because the CSSs reference absolute levels of ability, they provide a means to compare changes in an individual's scores over time. Scores range from the two-year-old level (about 430) to the adult level (about 520). All of the SB5 items have been calibrated to this scale, and the difficulty of each item has a location along that scale. The scores will be particularly useful for the evaluation of extreme performance levels. The SB5 also offers age-equivalent scores derived from CSSs, along with a CSS-based abbreviated battery score making use of raw scores from the Nonverbal Reasoning and Verbal Knowledge subtests. Finally, the *Interpretive*

Manual describes a hand-scoring procedure for deriving an Extended Full Scale IQ score that allows for scores below 40 and above 160.

A variety of interpretive frameworks can be applied to the results of this test. Please see the *Examiner's Manual*, *Interpretive Manual*, or the *SB5 Scoring Pro™* for guidance on interpretation.

Technical Qualities

Normative data for the SB5 were gathered from 4,800 individuals between the ages of 2.0 and 85+ years. The normative sample closely matches the 2000 U.S. Census (education level based on 1999 data). Bias reviews were conducted on all items for the following variables: gender, ethnicity, culture, religion, region, and socio-economic status. Additionally, the SB5 was co-normed with the *Bender® Visual-Motor Gestalt Test, Second Edition* (for more information about the *Bender-Gestalt II*, please see page 19.)

Reliabilities for the SB5 are very high. For the FSIQ, NVIQ, and VIQ, reliabilities range from .95 to .98 (average internal consistency composite reliability, across all age groups). Reliabilities for the Factor Indexes range from .90 to .92. For the 10 subtests, reliabilities range from .84 to .89. Concurrent and criterion validity data was obtained using the *SB IV*, *SB L-M*, *WJ III®*, *UNIT®*, *Bender®-Gestalt II*, *WPPSI-R®*, *WAIS®-III*, *WIAT®-II*, and *WISC®-III*. Validity and reliability information is described in more detail in the *Technical Manual*.

Cognitive Assessments

Stanford-Binet Intelligence Scales, Fifth Edition (SB5)

Optional Resources

SB5 Scoring Pro™

The *SB5 Scoring Pro* is a Windows®-based software program that replicates the process of hand-scoring – users enter background information, age, and raw scores. This program provides consistency in raw score conversion, an extended score report, a graphical report, and a brief, narrative summary report with guidelines and suggestions based on well-established principles of assessment. The report can be exported and then imported to a word processing file for editing as necessary.

Interpretive Manual

The *Interpretive Manual* provides detailed guidelines for the effective interpretation of the Fifth Edition of the *Stanford-Binet* for a number of applications, including its use by psychologists active in school, clinical, and counselling settings. Case studies, profile analyses, and SB5 Scoring Pro reports provide concrete examples of interpretation. This manual also introduces an Extended IQ (EXIQ) scale that supports the calculation of Full Scale IQ scores substantially lower than 40 or higher than 160.

SB5 University Training Resources

The **SB5 University Training Resources** contains a CD-ROM with a PowerPoint presentation, along with PDF documents for Tips for Examiners, Frequently Asked Questions, selected Assessment Service Bulletins, and other resources. This package is designed for use by university professors and training professionals to help teach others the use of the SB5.

Additional Web Resources

Available from assess.nelson.com

Assessment Service Bulletins

ASB #1: History of the Stanford-Binet Intelligence Scales: Content and Psychometrics

ASB #2: Accommodations on the Stanford-Binet Intelligence Scales, Fifth Edition

ASB #3: Use of the SB5 in the Assessment of High Abilities

ASB #4: Special Composite Scores for the SB5

Frequently Asked Questions about the SB5

Kits and Components

ITEM	PRICE	CODE
SB5 Complete Kit (no software)	V2 \$1545.00	1050051
<small>(Includes 3 Item Books; Examiner's Manual; Technical Manual; 25 Test Records; child card; layout card; plastic storage case containing a form board, 10 form board pieces, 9 green blocks, 12 counting rods, 30 sorting chips, spoon, pencil, 3 plastic cups, and the following toys: cat, bird, duck, ball, car, and shoe, all in an attractive Carrying Case)</small>		
SB5 Complete Kit with SB5 Scoring Pro Package	V2 \$1826.00	9-20582
SB5 Test Records (Pkg. 25)	V1 \$ 115.00	9-20562
Interpretive Manual	V2 \$ 163.75	9-20573
SB5 Scoring Pro (optional)	V2 \$ 345.00	9-20593
SB5 University Training CD	V2 \$ 63.85	9-20590
SB5 Examiner Manual 2005	V2 \$ 192.40	9-20538

MINIMUM SYSTEM REQUIREMENTS

Windows®: 98 / NT4.0 / ME / 2000 / XP, Pentium 200 MHz processor, 64 MB RAM (96 MB recommended), CD-ROM or DVD drive, SVGA monitor (.NET-compatible video card), 100 MB free hard disk space

Early SB5 Kits

For examiners who work with younger subjects, the Early SB5 is a powerful subset of the regular SB5 kit. With norms for Ages 2 through 7-3, the Early SB5 has two Item Books (vs. three), the same manipulatives, and a streamlined administration process (the high-end items of the regular SB5 are absent from the Early SB5).

ITEM	PRICE	CODE
Early SB5 Kit (no technical manual)	V2 \$585.00	1050053
Early SB5 Kit including Early SB5 Scoring Pro	V2 \$820.00	9-20670
Early SB5 Record Forms (pkg. 25)	V1 \$ 90.00	9-20664
Early SB5 Scoring Pro Software	V2 \$212.75	9-20669
Early SB5 Examiner Manual	\$ 83.25	9-20662
SB5 Technical Manual	\$192.40	9-20572