

# The Clinical Evaluation of Language Fundamentals, Fourth Edition (CELF-4)

## A Review

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The Clinical Evaluation of Language Fundamentals, fourth edition (CELF-4; Semel, Wiig, & Secord, 2003) by Eleanor Semel, Elisabeth H. Wiig, and Wayne A. Secord is the third revision of the CELF, originally published in 1980. The purpose of the CELF-4 is to screen for and diagnose language disorders in children and young adults. It can also be used for follow-up evaluation. It addresses the language concerns of students aged 5 to 21 years.

The CELF-4 was designed to reflect the clinical decision-making process beginning with making a diagnosis and determining the severity of a language disorder, identifying relative strengths and weaknesses, making recommendations regarding accommodations and intervention, and measuring the efficacy of intervention.

## Administration

This is an individually administered assessment tool made up of 18 subtests organized into four levels of testing that address language content, structure, and use. Specific groups of subtests may be administered by the examiner to gain information about different aspects of a language disorder.

The first level of testing measures general language ability, determines the presence or absence of a language disorder, and assesses appropriateness of service by quantifying performance. The four subtests at this level make up the Core Language Score (CLS), the foundational score from which any or all of three pathways may be taken to provide more in-depth information. Subsequent levels of testing examine (a) the nature of the language disorder, (b) behaviors associated with the language disorder, and (c) the effect of the language disorder on classroom functioning. Each of these requires the administration of additional subtests.

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Testing at Level 2 describes in greater detail the nature of the language disorder, including receptive and expressive language ability, content, structure, and memory. Item analysis at this level may also be used to describe functional impairment and identify conditions that would maximize the student's likelihood of improving his or her performance.

Level 3 evaluates phonological awareness, automaticity of speech, naming skills, and working memory, areas implicated in language disorders. Level 4 provides a description of how an existing language disorder may be affecting classroom performance through completion of the Observational Rating Scale and a pragmatic profile. The Observational Rating Scale highlights settings where language difficulties are most problematic. It can be completed by the diagnostician, a teacher, parent, or caregiver. The student may also be able to complete the scale himself or herself. The pragmatic profile can be completed by anyone familiar with the student and the expectations for communication placed on that student in various settings.

## **Subtests and Scales**

The CELF-4 comprises the subtests and scales as described in Table 1.

## **Physical Description**

The CELF-4 includes two spiral-bound stimulus books, each with an easel and tabbed dividers to allow for fast and easy location of the various subtests. Color coding of the dividers corresponds to coding on the recording forms. Subtests that do not require a stimulus book are also color coded for easy recognition. Starting and stopping points and ceiling rules are listed at the beginning of each subtest in the stimulus books. The Concepts and Following Directions subtest stimulus sheet is laminated and may be used as an alternative to reading directions from the stimulus book. Examiners are offered the option of placing the laminated sheet beside the recording form when administering this subtest to facilitate administration and scoring.

There are two record forms: one for ages 5 to 8, the second for ages 9 to 21. The recording forms give information regarding demonstration items, trial items, and test items and provide places to record and summarize the test results for the student. The summary pages on the record forms are perforated to allow clinicians to store summary scoring information separately from specific subtest information.

## **Time to Administer**

The Core Language Score, consisting of four subtests, is estimated to require 30 to 45 minutes to administer. Time estimates are not given for the administration of additional subtests.

**Table 1**  
**Subtests and Scales of the Clinical Evaluation of**  
**Language Fundamentals, Fourth Edition (CELF-4)**

Subtests and Scales	Descriptions
Concepts and Following Directions	Measures auditory comprehension and recall of utterances of increasing length and complexity
Word Structure	Assesses morphology and pronoun use
Recalling Sentences	A sentence imitation task
Formulated Sentences	The student is given a word or words and must generate spoken sentences in reference to a picture cue
Word Classes (Receptive and Expressive)	These subtests measure the student's comprehension of relationships between words
Word Definitions	A measure of word meanings
Sentence Structure	A measure of auditory comprehension
Sentence Assembly	A measure of verbal expression
Semantic Relationships	Assesses comprehension of complex language relationships
Expressive Vocabulary	Vocabulary
Understanding Spoken Paragraphs	A measure of auditory comprehension, memory, and logic
Number Repetition – Forward	A measure of attention and memory
Number Repetition – Backward	A measure of attention and memory
Familiar Sequences (1 & 2)	Assess retrieval of well-learned information
Rapid Automatic Naming	Assesses naming speed
Word Associations	Assesses semantic knowledge
Phonological Awareness	Assesses phonological knowledge
Pragmatics Profile	Assesses comprehension of social rules
Observational Rating Scale	Assesses the impact of language functioning across situations

### **Additional Materials Required**

A stopwatch or timepiece with a second hand is needed to time responses for four of the subtests. No other materials beyond the stimulus books and recording forms are required.

The CELF-4 Scoring Assistant software may be purchased as an adjunct to the assessment to assist in the analysis of testing and to generate a report. Online assistance is also available to users. Examples of the output from the Scoring Assistant software are available for viewing on the Web at <http://harcourtassessment.com/hai/Images/resource/samprpts/CELF-4%20Scoring%20Assistant.pdf>.

### **Training/Skills Required to Administer the CELF-4**

The authors of the CELF-4 indicate that anyone trained in the administration and interpretation of individually administered standardized tests may use this tool.

They suggest that appropriate examiners might include but are not limited to speech-language pathologists, school psychologists, and special educators. An interactive training CD is available to assist examiners in obtaining proficiency with the CELF-4.

## **Standardization and Norm Development**

Standard scores, referred to as scaled scores, are provided for each subtest. Summations of the scaled scores of specific groups of subtests can also be calculated. These are called index scores and are norm referenced. Test age equivalents are available for all subtests and indices except the subtest Understanding Spoken Paragraphs and the corresponding indices of Receptive Language and Language Content.

Norms data for the CELF-4 were collected in 2002, derived from a sample in excess of 4,500 U.S. residents aged 5 to 21 years. There were 200 students examined at each age from 5 to 16 years and 50 students for each age from 17 to 21 years. A single ethnic category included students who were identified as Native American, Eskimo, Aleut, Asian, or Pacific Islander. In addition, the following four clinical populations were also examined: children with language disorders, mental retardation, autism, and hearing impairments.

The CELF-4 was standardized in the United Kingdom and in Australia and made available in 2006 as the Clinical Evaluation of Language Fundamentals, fourth edition UK (CELF-4<sup>UK</sup>) and the Clinical Evaluation of Language Fundamentals, fourth edition, Australian standardized edition (CELF-4 Australian), respectively. The CELF-4 Spanish was also published in 2006.

The examiner's manual includes discussions of populations that may warrant alterations to testing. This includes issues around cultural diversity, dialectical variations, and students with sensory, cognitive, and/or motor impairments. Suggestions are made for nonstandardized administration and alternate scoring options, recognizing that norm-referenced scores may be invalidated under these conditions.

## **Reliability and Validity**

Measures of test-retest reliability and stability, internal consistency, and inter-scoring reliability are provided in the examiner's manual. Standard error of measurement and confidence intervals based on critical values at 68%, 90%, and 95% are provided. Critical values for .15 and .05 levels of significance are given by age group.

The examiner's manual provides evidence of validity based on internal structure, factor analysis, and response process.

## **The CELF-4 Screening Test**

The CELF-4 Screening Test by Eleanor Semel, Elisabeth H. Wiig, and Wayne A. Secord (2004) is designed for students ages 5:0 to 21:11 to identify individuals for whom a more thorough investigation of language skills is warranted. It includes 47 items: Students ages 5 to 8 years complete Items 1 through 28, and students ages 9 to 21 years complete Items 14 through 47. The authors estimate that the screening test requires 15 minutes to complete. The CELF-4 Screening Test includes the examiner's manual, a spiral-bound easel style stimulus book, and a record form. The same form is used for all ages. No other materials are required.

## **The CELF-Preschool, Second Edition**

The CELF-Preschool, second edition (CELF Preschool-2; Wiig, Secord, & Semel, 2004) assesses language ability in children ages 3 to 6 years. The goals of the CELF Preschool-2 are similar to the CELF-4 in that it identifies and diagnoses language deficits in children, and it may also be used for purposes of follow-up. Like the CELF-4, it has four levels of assessment with respect to language disorders, including (a) identification of a language disorder, (b) description of the disorder, (c) assessing the effect of the disorder on classroom functioning, and (d) pragmatics. The CELF Preschool-2 overlaps with the CELF-4 for ages 5 and 6.

The CELF Preschool-2 includes the examiner's manual, two stimulus books, and a record form. Like the CELF-4, the Concepts and Following Directions subtest stimulus sheet is laminated and may be used as an alternative to the stimulus book.

## **Summary Evaluation**

The CELF-4 is a comprehensive assessment tool for the evaluation of language in school-age populations. The spiral-bound examiner's manual contains all of the directions needed to administer, score, and interpret the test. The manual also includes a discussion and guidelines regarding dialectical and cultural concerns.

The format of the recording forms provides directions for administering each subtest, materials needed, and rules for repetition and discontinuation as well as the demonstration and trial items for each subtest. The color coding and organization of the forms according to age, with only the subtests appropriate to the age group listed on the form, facilitates smooth transitions between subtests and allows for relatively rapid administration and scoring. The summary page at the beginning of the recording form provides a concise synopsis of the results, useful when preparing the report and in discussion with other team members.

The addition of the fourth level of assessment with the observational rating scale and pragmatic profile is helpful, addressing the concern of authentic assessment.

One of the goals of this latest revision of the CELF was to improve the application of this assessment with respect to different cultures. A discussion of cultural diversity in the examiner's manual focuses on African American and Spanish influences on English production. There will however be limitations in the use of this test with Canadian students, in particular for example with respect to students who are French Canadian, Aboriginal, or First Nations. For Canadian clinicians, awareness of the sample that the norms are based on should be cause for caution in interpretation of the results with some students.

The CELF-4, like its predecessors, appears to be a comprehensive, user-friendly tool to assist in the evaluation of language concerns in school-age and preschool populations.

## References

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