



## Data Collection Worksheet

**Please Note:** The Data Collection Worksheet (DCW) is a tool to aid integration of a PhenX protocol into a study. The PhenX DCW is not designed to be a data collection instrument. Investigators will need to decide the best way to collect data for the PhenX protocol in their study. Variables captured in the DCW, along with variable names and unique PhenX variable identifiers, are included in the PhenX Data Dictionary (DD) files.

### Summary of the “Sounds-in-Words” Section of the Goldman-Fristoe Test of Articulation, Third Edition (GFTA™-3)

The “Sounds-in-Words” section of the Goldman-Fristoe Test of Articulation, Third Edition (GFTA™-3), uses pictures to elicit articulation of single words when the respondent is prompted by a visual and/or verbal cue. The “Sounds-in-Sentences” section is a sentence imitation task based on one story for younger children (ages 4:0 through 6:11) and a different one for ages 7:0 through 21:11. All consonants and the “r-colored” vowels are tested for accuracy, as quantified with a standard score. Other vowel errors can be observed but do not count toward the standard score.

**Scoring Instructions:** For both subtests (“Sounds-in-Words,” “Sounds-in-Sentences”), a phoneme inventory is constructed. The phoneme tables contain fields for word-initial, word-medial, and word-final positions. Separately for each subtest, the raw number of sounds in error is converted into a standard score and percentile. Norms are available separately for males and females.

Note that this test is designed to measure articulation accuracy of consonants and the r-colored vowels. It does not adequately characterize signs of motor speech disorders such as apraxia of speech or dysarthria. If concerns regarding motor speech disorders arise after obtaining a low GFTA-3 score, follow-up testing can be done using a motor speech exam or specially developed standardized tests. When administering the GFTA-3, some hints of motor speech disorders can be observed and used toward follow-up testing. Indicators for dysarthria are the following speech sound errors: pronouncing a “t” or “d” sound more like “n” and a “p” or “b” sound more like “m.” This shows weakness or stiffness in the articulatory muscles, as the person is not able to build enough air pressure inside the mouth to produce the popping sound. Indicators for apraxia of speech include lots of vowel errors, inconsistent productions of the same word, a consonant inventory that is far too small given the person’s age, and consonant deletions or saying the “h” sound instead of a consonant.

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Protocol source: <https://www.phenxtoolkit.org/protocols/view/200701>