Basic Early Literacy Skill	*DIBELS* Indicator
Phonemic Awareness	Phoneme Segmentation Fluency

▶ ***What is phonemic awareness?***

Phonemic awareness is the explicit awareness that spoken words are made up of individual sounds or phonemes. A phoneme is the smallest sound unit into which speech can be divided that makes a difference to the meaning of the word (National Reading Panel, 2000). Phonemic awareness involves the ability to attend to and manipulate these phonemes in spoken words. For example, the knowledge that the word *dog* begins with the sound /d/ is phonemic awareness. The ability to replace the /d/ sound at the beginning of *dog* with the /h/ sound to make the word *hog* is also phonemic awareness. Phonemic awareness is an auditory skill that does not require knowledge of the letters of the alphabet or letter-sound knowledge, thus it is not the same as phonics.

A convergence of research on the acquisition of reading skills has demonstrated that phonemic awareness is highly predictive of success in learning to read (Gillon, 2004; Stahl & Murray, 2006). Additionally, effective instruction in phonemic awareness leads to significant differences in reading achievement (Ehri, 2004; National Reading Panel, 2000). Most reading researchers advocate that phonemic awareness be purposefully and explicitly taught as part of a comprehensive instructional program in reading and writing.

Chapter 7: *DIBELS* **Phoneme Segmentation Fluency (PSF)**

Overview

Basic Early Literacy Skill	Phonemic Awareness
Administration Time	1 minute
Administration Schedule	Middle of kindergarten to beginning of first grade
Score	Number of correct sound segments (different, correct parts of the words) the student says in 1 minute
Wait Rule	If the student does not respond within 3 seconds, say the next word.
Discontinue Rule	Zero correct sound segments in the first five words

What is PSF?

Phoneme Segmentation Fluency (PSF) is a brief, direct measure of phonemic awareness. PSF assesses the student's fluency in segmenting a spoken word into its component parts or sound segments. Using standardized directions, the assessor says a word and asks the student to say the sounds in the word. The assessor underlines each correct sound segment of the word that the student says. *Appendix 1*, page 104, provides a pronunciation guide for how individual sounds are represented on the PSF measure. A correct sound segment is any different, correct part of the word the student says. The total score is the number of correct sound segments that the student says in 1 minute. For example, if the assessor says the word *fish* and the student says /f/ /i/ /sh/, the student has completely and correctly segmented the word into its component sounds and the score is 3 correct sound segments. If the student says /f/ /ish/, the score is 2 correct sound segments.

Partial credit is given for partial segmentation. A student who is developing phonemic awareness may not yet segment words completely into individual sounds but *may* segment parts of words. For example, a student who says the first sound of the word *sun* (/s/) receives 1 point. A student who says the onset and rime (/s/ /un/) receives 2 points and a student who completely and correctly segments all of the individual phonemes in the word (/s/ /u/ /n/) receives 3 points. Note that consonant blends have two or more phonemes that should be produced separately for a student to receive full credit. For example, for the word *trap*, a student who says /tr/ /a/ /p/ receives partial credit of 3 points, and a student who says /t/ /r/ /a/ /p/ receives the full 4 points.

Allowing partial credit in scoring increases the sensitivity of the measure, thus making it possible to measure growth from partial to complete segmentation. Although partial credit is given, the preferred response is for students to completely segment words at the phoneme level by the end of kindergarten.

Materials

- Scoring Booklet
- Pen/pencil
- Clipboard
- Stopwatch

Administration Directions

Follow these directions exactly each time with each student. Say the words in bold italic type verbatim. Begin with the practice activities. The practice activities are designed to introduce the assessment task to the student. They are untimed and include correction procedures. The correction procedures are not used once the testing begins.

▶ *We are going to say the sounds in words. Listen to me say all the sounds in the word "fan." /f/ /a/ /n/. Listen to another word,* (pause) *"jump." /j/ /u/ /m/ /p/. Your turn. Say all the sounds in "soap."*

Correct response /s/ /oa/ /p/	*Very good saying all the sounds in "soap."*	▶ (Begin testing.)

| Incorrect response anything other than /s/ /oa/ /p/ | *I said "soap," so you say /s/ /oa/ /p/. Your turn. Say all the sounds in "soap."* | ▶ | Correct response | *Good.* | (Begin testing.) |
| | | ▶ | Incorrect response | *Okay.* | (Begin testing.) |

▶ Begin testing. *I am going to say more words. I will say the word, and you say all the sounds in the word.* (Say the first word from the list in the scoring booklet.)

1. Say the first word and start your stopwatch.

2. During the testing:

   - Present the words to the student one at a time by reading across the row.

   - As the student responds, underline each correct sound segment the student says. A sound segment is defined as each different, correct part of the word. Leave omitted sounds blank. Circle repeated words.

   - As soon as the student finishes saying the sounds of the word, say the next word promptly and clearly. If the student indicates that he/she did not hear the word, you may repeat it.

   - Continue to say words one at a time and score the student's responses for 1 minute.

   - At the end of **1 minute**, put a bracket after the last sound segment the student said. Stop presenting words and do not score any student responses after 1 minute. If the student is in the middle of a response at the end of 1 minute, you may allow the student to finish his/her response, but place the bracket where the minute ended and do not count any sound segments after the end of the minute.

If the student completes the assessment before 1 minute, stop testing and record the student's score. Scores are not prorated.

3. Immediately after testing:

    • Reset the stopwatch for the next measure.

    • Mark PSF Response Patterns and make a note in the scoring booklet about any patterns in student responses that were not captured by the marking procedures.

4. At a later time (shortly after the testing but when you are no longer with the student) compute the final score:

    • Add the number of correct sound segments (i.e., underlined parts of words) for each row and record the number in the space provided at the right side of each row.

    • Add the number of correct sound segments from all rows and record the total number on the Total line of the PSF scoring page.

    • Record the score on the cover page.

Scoring Rules

The student receives 1 point for each different, correct sound segment produced in 1 minute.

1. Underline each correct sound segment the student says. A correct sound segment is any correct *part* of the word. To be correct, the sound segment must be a correct part of the word in its entirety. For example, /m/ /ma/ /a/ /an/ /n/ are all correct parts of the word *man*. /mae/ is not a correct part of the word *man* even though it contains /m/. Blended sounds or partial segmentation should be underlined exactly as the student said the sounds, and given 1 point per underline.

2. Mark a slash (**/**) through any incorrect sound segment. Score the entire sound segment as correct or incorrect.

3. Circle the word if the student repeats the word without saying any sound segments.

4. Leave blank any sounds the student omits.

5. Write "sc" over any corrected sound segments that had previously been slashed if the student self-corrects an error within 3 seconds.

Discontinue Rule

Discontinue administering PSF if the student has not said any correct sound segments in the first 5 words. Record a score of 0 for the total number of correct sound segments on the Total line on the scoring page and in the PSF score box on the cover page of the student booklet.

Wait Rule

Wait 3 seconds for the student to respond. If the student does not respond within 3 seconds, say the next word.

Reminders

If the student spells the word, say **Say the <u>sounds</u> in the word.** *This reminder may be given only once.*

If the student repeats the word, say **Remember to say all the sounds in the word.** *This reminder may be given only once.*

Notes:

1. Schwa sounds (/u/) added to consonants are not counted as errors. Some phonemes cannot be pronounced correctly in isolation without a vowel, and some early learning of sounds includes the schwa.
2. Students may elongate the individual sounds and get credit if you judge that they have awareness of each individual sound in the word (e.g., they have held each sound for approximately 1 second).
3. Students are not penalized for differences in pronunciation due to dialect, articulation delays or impairments, or speaking a first language other than English.

Examples of Scoring Rules

The following are examples of how to score responses on PSF. The examples do not encompass all possible responses. If in doubt about how to score a student response, refer to the scoring rules above. Please pay attention to the notes included with the examples as they provide scoring explanations and indicate variations and nuances related to the scoring.

Scoring Rule 1: Underline each correct sound segment a student says. Correct sound segments are different, correct parts of the word. Blended sounds or partially correct segments should be underlined exactly as the student said them, and 1 point given per underline.

Examples:

Words	Student response	How to score		Score
flag	/f/.../l/.../a/.../g/	flag <u>/f/</u> <u>/l/</u> <u>/a/</u> <u>/g/</u>		4 /4
sit	/s/.../i/.../t/	sit <u>/s/</u> <u>/i/</u> <u>/t/</u>		3 /3

Note: The student completely segments the words at the individual phoneme level.

Words	Student response	How to score

		Score
flag /f/ /l/ /a/ /g/		1 /4
flag /f/ /l/ /a/ /g/		2 /4
sit /s/ /i/ /t/		2 /3

flag	/f/	flag <u>/f/</u> /l/ /a/ /g/ = 1 /4
flag	/fla/.../g/	flag <u>/f/</u> <u>/l/</u> <u>/a/</u> <u>/g/</u> = 2 /4
sit	/s/.../it/	sit <u>/s/</u> <u>/i/</u> /t/ = 2 /3

Note: The student says only some of the sounds in the word or combines sounds. The student does not receive credit for sound segments that are not said.

		Score
flag /f/ /l/ /a/ /g/		2 /4
sit /s/ /i/ /t/		3 /3
flag /f/ /l/ /a/ /g/		4 /4

flag	/fla/.../ag/	flag <u>/f/</u> /l/ <u>/a/</u> /g/ = 2 /4
sit	/si/.../i/.../it/	sit <u>/s/</u> <u>/i/</u> /t/ = 3 /3
flag	/f/.../l/.../la/.../a/.../g/	flag <u>/f/</u> <u>/l/</u> /a/ /g/ = 4 /4

Note: If the student repeats a sound in adjacent segments, the student receives credit as long as each segment is a different, correct part of the word. The student cannot receive more points for a word than the maximum number of phonemes in the word. This is an uncommon response pattern, and not as desirable as /f/ /l/ /a/ /g/.

Words	Student response	How to score

			Score
flag	/f/.../l/.../a/.../g/.../s/	flag /f/ /l/ /a/ /g/	**4** /4
sit	/s/.../p/.../i/.../t/	sit /s/ /i/ /t/	**3** /3
sit	/sp/.../i/.../t/	sit /s̶p̶/ /i/ /t/	**2** /3

Note: Added sounds are disregarded in scoring if they are separated from the other sounds in the word. If a student consistently adds sounds to words, make a note and follow up to determine why this is happening.

			Score
flag	/fu/.../lu/.../a/.../gu/	flag /f/ /l/ /a/ /g/	**4** /4
sit	/su/.../i/.../tu/	sit /s/ /i/ /t/	**3** /3

Note: Schwa sounds (/u/) added to a sound are not counted as errors. If a student consistently adds the schwa sound, make a note.

			Score
flag	fffflllllaaaag	flag /f/ /l/ /a/ /g/	**4** /4
sit	ssssiiiit	sit /s/ /i/ /t/	**3** /3

Note: The student receives full credit for elongating sounds, if that is how he/she is being taught to segment sounds in words, and the assessor judges that the student demonstrates awareness of each individual sound in the word.

Words	Student response	How to score		
				Score
flag	/f/.../w/.../a/.../g/	flag /f/ /l/ /a/ /g/	4 /4	
this	/d/.../i/.../s/	this /TH/ /i/ /s/	3 /3	

Note: There is no penalty for articulation errors or dialect differences when assessing a student. For example, a student with an articulation delay who consistently says /w/ for /l/ would not be penalized for this pronunciation. A student who speaks a dialect and consistently says /d/ for /TH/ would not be penalized for this pronunciation. Many other examples of articulation errors and dialect differences are possible.

Scoring Rule 2: Mark a slash (/) through any incorrect sound segment. Score the entire sound segment as correct or incorrect.

Examples:

Words	Student response	How to score		
				Score
flag	/f/.../l/.../a/.../p/	flag /f/ /l/ /a/ /g̸/	3 /4	
sit	/s/.../if/.../t/	sit /s/ /i̸/ /t/	2 /3	

Note: The sound segment is judged in its entirety to be correct or incorrect. For example, if the word is *sit* and the student says /s/.../if/.../t/, mark a slash through the /i/ because there is no /if/ sound in the word *sit*.

Scoring Rule 3: Circle the word if the student repeats the word without providing any sound segments.

Examples:

Words	Student response	How to score
		Score
flag	flag	flag (/f/ /l/ /a/ /g/) ⟶ 0 /4
sit	sit	sit (/s/ /i/ /t/) ⟶ 0 /3
flag	/f/..flag	flag (/f̲/ /l/ /a/ /g/) ⟶ 1 /4

Note: If the student says a sound segment and then repeats the entire word, underline the corresponding sound(s) and circle the word. The student receives credit for any correct sound segments.

Scoring Rule 4: Leave blank any omitted sounds.

Examples:

Words	Student response	How to score
		Score
flag	/f/.../l/.../g/	flag /f̲/ /l̲/ /a/ /g̲/ ⟶ 3 /4
sit	/s/.../t/	sit /s̲/ /i/ /t̲/ ⟶ 2 /3

Scoring Rule 5: Write "sc" over any corrected sound segments that had previously been slashed if the student self-corrects an error within 3 seconds.

Examples:

Words	Student response	How to score	
			Score
flag	eff…ell… /f/.../l/.../a/.../g/	flag sc sc /f̸/ /l̸/ /a/ /g/	**4** /4
sit	/s/.../a/...I mean... /i/.../t/	sit sc /s/ /i̸/ /t/	**3** /3
flag	/fl/... /f/.../l/.../a/.../g/	flag /f/ /l/ /a/ /g/	**4** /4

See Appendix 2, pages 107 and 108, for Practice Scoring Sheet and Answer Key.

Model PSF Scoring Sheet

The following is an example of a completed scoring sheet. The scoring rules and scoring calculation are shown. This scoring sheet serves as a model and can be used during training and practice to support accurate administration and scoring of *DIBELS*.

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				Score
boat /b/ /oa/ /t/	log /l/ /o/ /g/	stuff /s/ /t/ /u/ /f/	judge /j/ /u/ /j/	10 /13
black /b/ /l/ /a/ /k/	cane sc /k/ /ai/ /n/	verbs /v/ /ir/ /b/ /z/	near /n/ /ea/ /r/	11 /14
run /r/ /u/ /n/	seeds /s/ /ea/ /d/ /z/	have /h/ /a/ /v/	much /m/ /u/ /ch/	10 /13
clue /k/ /l/ /oo/	wet /w/ /e/ /t/	met /m/ /e/ /t/	new /n/ /oo/	9 /11
hill /h/ /i/ /l/	groups /g/ /r/ /oo/ /p/ /s/	knife /n/ /ie/ /f/	bill /b/ /i/ /l/	6 /14
shake /sh/ /ai/ /k/	plane /p/ /l/ /ai/ /n/	own /oa/ /n/	ball /b/ /o/ /l/	/12

Total: _____46_____

PSF Response Patterns:

- ☐ Repeats word
- ☐ Makes random errors
- ☐ Says initial sound only
- ☐ Says onset rime
- ☐ Does not segment blends
- ☐ Adds sounds
- ☐ Makes consistent errors on specific sound(s)
- ☒ Other   *some difficulty on vowel sounds and ending sounds*