

## Firefly Performance Bands and Instructional Supports

Firefly Performance Bands are a component of reporting that helps support classroom instruction by providing information about student strengths and areas for improvement. The performance bands classify a student's earned overall scaled score and reporting category scaled scores into bands that correspond to content that is applicable to the student's demonstrated level of mastery. This brief provides a summary of how Performance Bands were developed, how educators can interpret student performance relative to the Performance Bands, and how educators can interpret Instructional Supports.

### Development of Performance Bands

Performance bands were defined using the average conditional standard error of measurement (CSEM) at the cut scores. Each performance level classification (i.e., *Support Needed, Near Target, Prepared*) was divided into two bands, which resulted in a total of six performance bands. Table 1 provides a description of each performance band, which is the same across all subjects and grade levels.

**Table 1. Definition of Firefly Performance Bands.**

Band	Level Alignment	Description of Performance Band
1	Support Needed	Split the Performance Level of <i>Support Needed</i> based on CSEM at the <i>Near Target</i> cut score. Student scores in this band are <b>greater than</b> 2 CSEM of the on-grade <i>Near Target</i> cut score.
2	Support Needed	Split the Performance Level of <i>Support Needed</i> based on CSEM at the <i>Near Target</i> cut score. Student scores in this band are <b>within</b> 2 CSEM of the on-grade <i>Near Target</i> cut score.
3	Near Target	Split the Performance Level of <i>Near Target</i> into two equal bands. Student scores in this band are in the <b>lower half</b> of the <i>Near Target</i> scaled score range.
4	Near Target	Split the Performance Level of <i>Near Target</i> into two equal bands. Student scores in this band are in the <b>upper half</b> of the <i>Near Target</i> scaled score range.
5	Prepared	Split the Performance Level of <i>Prepared</i> based on CSEM at the <i>Prepared</i> cut score. Student scores in this band are <b>within</b> 2 CSEM of the on-grade <i>Prepared</i> cut score.
6	Prepared	Split the Performance Level of <i>Prepared</i> based on CSEM at the <i>Prepared</i> cut score. Student scores in this band are <b>greater than</b> 2 CSEM of the on-grade <i>Prepared</i> cut score.

*Note. CSEM is the conditional standard error of measurement. The CSEM varies across the scaled score range with lower values in the center of the scale.*

Although the description of the performance bands is the same across all subjects and grade levels, the scaled score ranges for each performance band differ by subject and grade. Table 2 displays the scaled score ranges for each Performance Band by subject and grade level. Bands 3 and 4 tend to represent the narrowest scaled score range, whereas

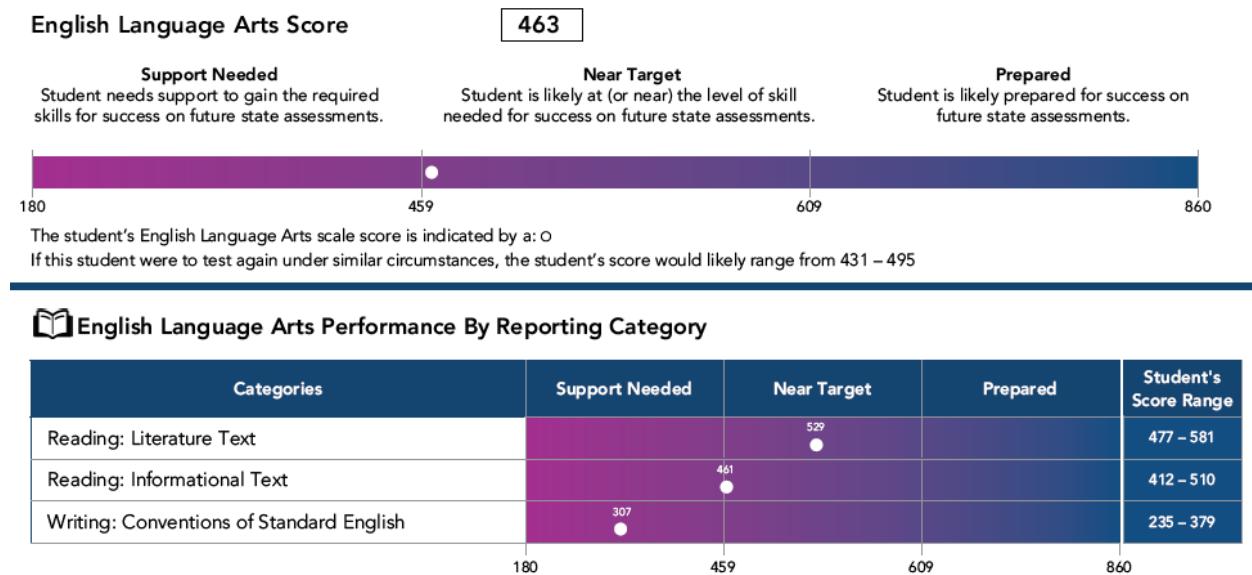
Bands 1 and 6 represent the widest range of scaled scores. Students classified into Band 1 earned a low scaled score, which is more than 2 CSEM below the *Near Target* cut score. If they tested again without additional instruction, there is a 95% chance they would score in *Support Needed* again. On the other hand, students classified into Band 6 earned a high scaled score, which is more than 2 CSEM above the *Prepared* cut score. If they tested again without additional instruction, there is a 95% chance they would score in *Prepared* again.

**Table 2. Performance Band Scaled Score Ranges.**

Firefly Test	<i>Support Needed</i>	<i>Support Needed</i>	<i>Near Target</i>	<i>Near Target</i>	<i>Prepared</i>	<i>Prepared</i>
	Band 1	Band 2	Band 3	Band 4	Band 5	Band 6
<b>ELA Gr. 3</b>	180-394	395-458	459-533	534-608	609-672	673-860
<b>ELA Gr. 4</b>	200-453	454-517	518-593	594-668	669-732	733-880
<b>ELA Gr. 5</b>	220-498	499-562	563-637	638-712	713-776	777-900
<b>ELA Gr. 6</b>	240-534	535-600	601-676	677-751	752-817	818-920
<b>ELA Gr. 7</b>	260-560	561-624	625-700	701-775	776-839	840-940
<b>ELA Gr. 8</b>	280-583	584-647	648-722	723-797	798-861	862-960
<b>HS Literature</b>	300-592	593-662	663-738	739-813	814-883	884-980
<b>Math Gr. 3</b>	180-442	443-492	493-538	539-583	584-633	634-860
<b>Math Gr. 4</b>	200-491	492-541	542-587	588-632	633-682	683-880
<b>Math Gr. 5</b>	220-520	521-568	569-614	615-659	660-707	708-900
<b>Math Gr. 6</b>	240-554	555-604	605-650	651-696	697-746	747-920
<b>Math Gr. 7</b>	260-590	591-638	639-684	685-729	730-777	778-940
<b>Math Gr. 8</b>	280-611	612-659	660-705	706-751	752-799	800-960
<b>HS Algebra I</b>	300-619	620-667	668-713	714-758	759-806	807-980

The performance bands can be applied to both overall scaled scores as well as reporting category subscores. For example, Figure 1 shows a sample student who earned an overall scaled score of 463 (Band 3) in ELA Grade 3. This student earned scaled subscores for both Reading Literature Text and Reading Literature Text in Band 3, but a lower scaled subscore for Writing in Band 1.

**Figure 1. Sample ELA Grade 3 Individual Student Score Report.**



## Instructional Supports

The Instructional Supports provide two distinct pieces of information: eligible content standard(s) and a description of specific skills that educators can use for targeted instruction. The eligible content standard is presented as a link to documented instructional supports and strategies. The description of specific skills uses key verbs and concepts within each eligible content standard presented. Moreover, the description leverages Webb's Depth of Knowledge, which is commonly used across the commonwealth. Both pieces of information are intended to help focus instruction on core concepts to support development in and mastery of the skills ingrained in each standard.

For example, the text for ELA Grade 3 eligible content standard A-C.2.1.1 is “Explain the point of view from which a story is narrated, including the difference between first- and third-person narrations.” In Band 1, the skills-based description is “Identify the point of view of a basic passage.” In Band 2, the description is slightly more involved: “Identify the point of a moderately complex passage, distinguishing first-person narration from close third person.” In Band 3, the description refers to higher-level thinking: “Explain the point of view of a moderately complex passage and explain how the point of view affects how events are described.” While the Instructional Support document for this eligible content standard is the same for each band, the skills-based description builds in complexity and involves higher-level thinking as the bands increase. The description, then, helps pinpoint specific skills that the student can work on to improve their understanding and mastery of the eligible content standard.

The Instructional Support documents were not designed to be comprehensive curricular outlines but rather reference materials for reorienting or reinforcing instruction throughout the year, especially for students in the *Support Needed* (Bands 1 and 2) and *Near Target* (Bands 3 and 4) ranges.

It is also important to use evidence gathered from classroom instruction, observations, and assessments when interpreting information presented in the Instructional Supports dashboard. Firefly Progress Indicators was designed to provide a snapshot of student's mastery of skills and knowledge based on the eligible content assessed on the end-of-year or end-of-course summative tests. Firefly provides one piece of information that should be taken into account with many other pieces of data that educators collect throughout the school year. In the Instructional Supports dashboard, educators are presented with skills-based descriptions based on the earned performance band. However, educators can also select a different performance band (i.e., 1 higher or 2 higher) to understand the way in which skills are scaffolded across bands.