Using Star Early Literacy Scores to Match Books to Early Readers

Renaissance Learning, Inc. offers two computer-adaptive assessments of reading skills: Star Early Literacy and Star Reading Enterprise®.

- ▶ Star Early Literacy, a criterion-referenced assessment for students in grades pre-Kindergarten to 3, measures students' skills in ten content areas essential to reading readiness. Primary-grade teachers can use the data provided by Star Early Literacy to monitor students' reading development and guide planning and instruction.

- ▶ Star Reading Enterprise, a norm-referenced assessment for students in grades 1–12, measures students' reading comprehension. It provides Grade Equivalent (GE) scores as one measure of reading achievement. GEs indicate the normal grade placement of students for whom a particular Scaled Score is typical. For example, a student with a GE score of 1.3 has performed as well on Star Reading Enterprise as a typical first-grade student in the third month of school. For each student assessed, Star Reading Enterprise also provides a Zone of Proximal Development (ZPD) to help teachers match appropriate books to students. A student's ZPD represents the range of book readability levels that is neither too hard nor too easy, and is the level at which optimal learning takes place.

To help teachers match books to early readers, Table 1 (on the next page) displays correspondences between Star Early Literacy Scaled Scores and literacy development classifications on the one hand, and Star Reading Enterprise Scaled Scores, GE scores, and ZPD ranges on the other.

This table was developed by linking (equating) Star Early Literacy and Star Reading Enterprise Rasch ability scores, then converting the linkage results to Scaled Scores of the two assessments.

The linking analysis began by identifying students who took the Enterprise versions of both Star Early Literacy and Star Reading Enterprise concurrently during the 2012–2013 school year. More than 300,000 students who had taken both tests within 15 days of one another formed the concurrent tests data set. The linkage work employed linear equating analyses of a random sample of 25,000 matched pairs of scores from that data set. Star Early Literacy and Star Reading Enterprise measure related constructs, and were highly correlated (r = 0.71) in the concurrent data set.

Star Reading GE scores in Table 1 are based on 2017 norming data for the Enterprise version of the test, and therefore the Scaled Score ranges corresponding to the GE scores have changed somewhat compared to earlier published versions of the table. Star Reading Enterprise ZPD ranges are determined by the GE scores; the correspondence between GE scores and ZPD ranges is unrelated to the new norms, and has not changed.

The primary purpose of Table 1 is to provide a link between Star Early Literacy Scaled Scores and Star Reading Enterprise GE scores, and thus to ZPD ranges, in order to facilitate matching readers to books in Accelerated Reader. It can also be used to identify Star Early Literacy and Star Reading Enterprise Scaled Scores that are approximately equivalent. However, those tests are not the same test, and do measure

somewhat different aspects of reading development. Therefore, Table 1 is meant only as a general guide. It should not be used to make decisions about students' early reading achievement or to calculate actual GE scores.

Table 1: Relating Star Early Literacy Scores to Star Reading Enterprise Scores

Star Early Literacy		Star Reading Enterprise			
Scaled Score Range	Literacy Classification	Scaled Score Range	GE	ZPD Range	Recommended Assessment(s)
300–382	Emergent Reader	NA	NA	NA	Star Early Literacy
383–513		0–54	0.0	0.0–1.0	
514–531		55–57	0.1	0.1–1.1	
532–549		58–60	0.2	0.2–1.2	
550–568		61–63	0.3	0.3–1.3	
569–586		64–66	0.4	0.4–1.4	
587–605		67–69	0.5	0.5–1.5	
606–622		70–71	0.6	0.6–1.6	
623–641		72–74	0.7	0.7–1.7	
642–657		75–77	0.8	0.8–1.8	
658–673		78–80	0.9	0.9–1.9	
674–689	Transitional Reader SEL SS = 675	81–83	1.0	1.0–2.0	
690–703		84–86	1.1	1.1–2.1	
704–717		87–90	1.2	1.2–2.2	
718–730		91–96	1.3	1.3–2.3	
731–742		97–104	1.4	1.4–2.4	
743–753		105–115	1.5	1.5–2.5	Star Early Literacy and Star Reading
754–764		116–134	1.6	1.6–2.6	
765–774		135–150	1.7	1.7–2.7	
775–784	Probable Reader SEL SS = 775	151–165	1.8	1.8–2.8	
785–792		166–179	1.9	1.9–2.9	Star Reading
793–800		180–194	2.0	2.0–3.0	
801–807		195–208	2.1	2.1–3.1	
808–814		209–221	2.2	2.1–3.1	
815–820		222–235	2.3	2.2–3.2	
821–826		236–248	2.4	2.2–3.2	

Table 1: Relating Star Early Literacy Scores to Star Reading Enterprise Scores

Star Early Literacy		Star Reading Enterprise			
Scaled Score Range	Literacy Classification	Scaled Score Range	GE	ZPD Range	Recommended Assessment(s)
827–831	Probable Reader (continued)	249–260	2.5	2.3–3.3	Star Reading (continued)
832–836		261–274	2.6	2.4–3.4	
837–840		275–285	2.7	2.4–3.4	
841–844		286–298	2.8	2.5–3.5	
845–848		299–314	2.9	2.5–3.5	
849–852		315–326	3.0	2.6–3.6	
853–855		327–340	3.1	2.6–3.7	
856–857		341–351	3.2	2.7–3.8	
858–860		352–364	3.3	2.7–3.8	
861–863		365–375	3.4	2.8–3.9	
864–865		376–388	3.5	2.8–4.0	
866–867		389–400	3.6	2.8–4.1	
868–869		401–415	3.7	2.9–4.2	
870–870		416–428	3.8	2.9–4.3	
871–900		429–443	3.9	3.0–4.4	

Table 2 has a similar function to Table 1, using the Unified scale instead of the Enterprise scale. The Unified scale was developed to report scores for Star Early Literacy and Star Reading on a single scale, thus facilitating comparison of the achievement of children taking these two different tests. The Unified Scale score ranges from 0 to approximately 1400; Star Early Literacy scores range from 200–1100 and Star Reading (and Star Math) range from 600–1400.

Table 2: Relating Star Early Literacy Unified Scale Scores to Star Reading GE Scores and ZPD Ranges

Star Early Literacy		Star Reading		
Unified Scaled Score Range	SEL Literacy Classification	GE	ZPD Range	Recommended Assessment(s)
NA	Emergent Reader	NA	NA	Star Early Literacy
600–698		0.0	0.0–1.0	
699–708		0.1	0.1–1.1	
709–718		0.2	0.2–1.2	
719–728		0.3	0.3–1.3	

Table 2: Relating Star Early Literacy Unified Scale Scores to Star Reading GE Scores and ZPD Ranges

Star Early Literacy		Star Reading		Recommended Assessment(s)
Unified Scaled Score Range	SEL Literacy Classification	GE	ZPD Range	
729–738	Emergent Reader (continued)	0.4	0.4–1.4	Star Early Literacy (continued)
739–748		0.5	0.5–1.5	
749–757		0.6	0.6–1.6	
758–767		0.7	0.7–1.7	
768–776		0.8	0.8–1.8	
777–785		0.9	0.9–1.9	
786–794	Transitional Reader SS = 786	1.0	1.0–2.0	
795–802		1.1	1.1–2.1	
803–811		1.2	1.2–2.2	
812–819		1.3	1.3–2.3	
820–827		1.4	1.4–2.4	
828–835		1.5	1.5–2.5	Star Early Literacy and Star Reading
836–843		1.6	1.6–2.6	
844–851		1.7	1.7–2.7	
852–859	Probable Reader SS = 852	1.8	1.8–2.8	
860–866		1.9	1.9–2.9	Star Reading
867–874		2.0	2.0–3.0	
875–881		2.1	2.1–3.1	
882–888		2.2	2.1–3.1	
889–895		2.3	2.2–3.2	
896–902		2.4	2.2–3.2	
903–908		2.5	2.3–3.3	
909–915		2.6	2.4–3.4	
916–921		2.7	2.4–3.4	
922–927		2.8	2.5–3.5	
928–934		2.9	2.5–3.5	
935–940		3.0	2.6–3.6	
941–946		3.1	2.6–3.7	
947–951		3.2	2.7–3.8	
952–957		3.3	2.7–3.8	
958–963		3.4	2.8–3.9	
964–968		3.5	2.8–4.0	
969–973		3.6	2.8–4.1	
974–978		3.7	2.9–4.2	
979–983		3.8	2.9–4.3	
984–988		3.9	3.0–4.4	

In addition to providing approximate GE scores and ZPDs, these tables help determine whether a student previously tested with Star Early Literacy could complete a Star Reading Enterprise test.

The 2001 Star Early Literacy Validation Study data indicate that a student with a Star Early Literacy Scaled Score of 852 Unified (775 Enterprise) or higher is likely able to complete a Star Reading Enterprise test without getting frustrated. However, teachers should consider both the Scaled Score and their knowledge of the student's reading proficiency when selecting a reading assessment. Moreover, although a student may be capable of taking a Star Reading Enterprise assessment, teachers may want to continue using Star Early Literacy with the student to diagnose strengths and weaknesses in literacy skills and to plan reading instruction. For additional guidance, see "K–3 Guidance for Star Early Literacy and Star Reading" at https://docs.renaissance.com/R62574.

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See Every Student.