AN OVERVIEW OF
STAR Assessments™

A brief summary of STAR Assessments™ from Renaissance Learning™, provider of Accelerated Reader™.

STAR Assessments are our latest generation of skills-based, computer-adaptive assessments of student achievement in reading and maths, with learning progressions developed in collaboration with the National Foundation for Educational Research (NFER). The existing version, already used by over 800,000 students in the UK, produced over 2 million assessments in the 2013/2014 school year.

nfer **Evidence for Excellence in Education**

STAR™ includes three components:

STAR Early Literacy™

For students in reception to year 4

STAR Reading™

For independent readers in years 1-13

STAR Maths™

For students in years 1 - 13

STAR™ Early Literacy

STAR™ Reading

STAR™ Maths

STAR overview

STAR Assessments are built on sound psychometric theory, following years of careful research and development. Teachers and students benefit from the wide range of actionable data that these assessments deliver in minimal testing time. Results are available on reports that educators can run **immediately** after students complete a test. These reports display both criterion-referenced and norm-referenced data, present results in graphical, easy-to-read formats, and can be accessed anywhere and anytime.

Having regular and timely feedback from tests enables teachers to adjust their teaching so they can help students achieve personalised learning goals as well as master the standards set forth in England's new national curriculum. The STAR Assessments were designed for frequent administration and can be used for a variety of purposes. STAR Assessments help teachers make data-driven decisions by providing the following:

Reliability & Validity.

STAR Assessments have been favourably reviewed as reliable, valid and efficient by various independent groups, including The National Foundation for Educational Research (NFER), the US Department of Education's Center on Response to Intervention (the Center) and the National Center on Intensive Intervention (NCII) who have given our programs and assessments high ratings. In review after review including those done by NFER, our STAR assessments have met exemplary standards for reliability and validity, and they are the only assessments to meet the Center's and NCII's highest standards for both screening and progress monitoring. You can view these ratings at www.rti4success.org. STAR also has a significant research base as shown in this table.

Table 1: Research support for STAR Assessments

Assessment	Total research publications	Independent research publications
STAR Early Literacy	21	14
STAR Reading	76	22
STAR Maths	65	21

Efficiency.

Students complete a STAR test on a computer or tablet in as little as 10–20 minutes, leaving more time for learning and skills-based practice. Teachers also gain valuable teaching time because the system administers and automatically scores the tests, and makes actionable information available instantly.

Versatility.

STAR can be used for a number of purposes, including screening, progress monitoring, and standards benchmarking. The skills-based reports help teachers plan instruction.

Comprehensive skills-based reports.

Available immediately after students complete an assessment, the full complement of reports give teachers and parents essential information about students' learning progress and growth over time.

Instructional planning tools.

STAR's new skill-based questions determine students' mastery within skill domains based on the new national curriculum. These skills are charted on the Core Progress™ learning progressions that have been built for the new curriculum in collaboration with the National Foundation for Educational Research (NFER).

Alignment to national standards.

STAR assessments are fully aligned with the new national curriculum, from reception right through to the end of Key Stage 4 so students are assessed in terms of the content they are learning in today's classrooms.
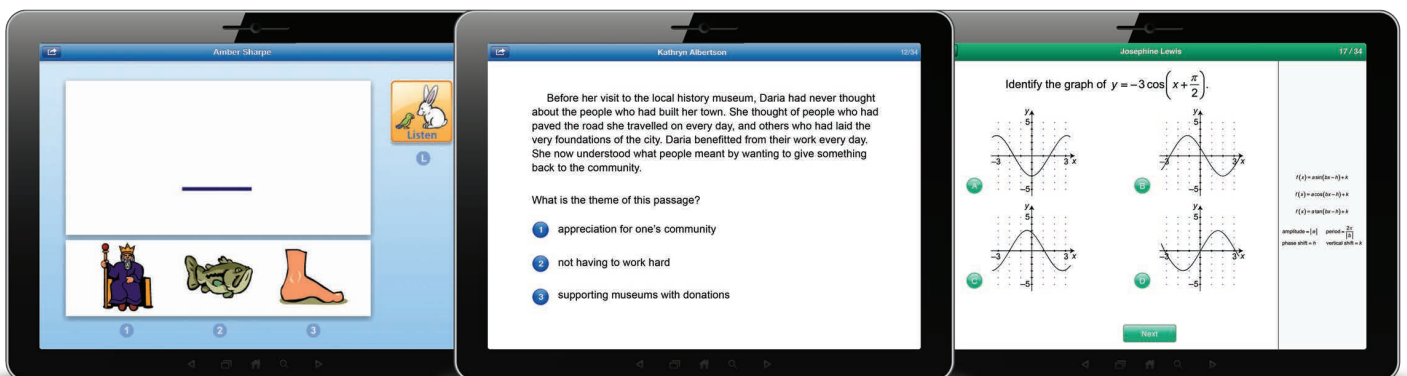
What the STAR Assessments measure

The STAR assessments are designed for use with students from reception to year 13 with the learning progressions covering reception through to the end of Key Stage 4. They measure key skills and concepts in literacy development, reading and maths. Each STAR assessment presents a number of multiple choice items to each student: 27 items in STAR Early Literacy, 34 items in STAR Reading and 24 items in STAR Maths.

STAR Early Literacy

STAR Early Literacy assesses the development of key early literacy and early numeracy skills for students from reception to year 4 as well as English language learners and students who are struggling with early learning skills. It reports criterion-referenced domain scores; STAR Early Literacy also provides an accurate estimate of oral reading fluency.

Each STAR Early Literacy test includes questions in ten key literacy and numeracy domains. The questions incorporate text, graphics, and audio to assess these skills in the most straightforward manner possible. The audio instructions and test items are explicit, clear, and consistent so that students can test independently.

STAR Reading

STAR Reading assesses the reading achievement of independent readers from reception to year 13 who have a sight vocabulary of 100 or more words and provides both criterion-referenced and norm-referenced scores. The STAR Reading item bank includes more than 5,000 carefully calibrated, standards-based items. STAR Reading assesses skills in five broad domains. The STAR Reading item bank's thousands of items assess all the skills in the new reading curriculum from reception right through to the end of Key Stage 4.

STAR Reading is innovative among reading assessments because it estimates a student's oral reading fluency with high reliability and validity through his or her silent reading. STAR reports fluency as an Estimated Oral Reading Fluency (Est. ORF) score, complete with Est. ORF benchmarks. The Est. ORF benchmarks are consistent with the Hasbrouck and Tindal (2006)[1] fluency benchmarks, which are the standard in the field.

STAR Maths

STAR Maths assesses the maths achievement of students in years 1 to 13. It provides both norm-referenced and criterion-referenced scores. Each test includes questions in four broad domains. The STAR Maths item bank includes over 3,400 items that test all the skills in the new maths curriculum from reception right through to the end of Key Stage 4.

	STAR Early Literacy	STAR Reading	STAR Maths
UK standardised score		✓	
Criterion-referenced	✓	✓	✓
Learning Progressions	✓	✓	✓

The efficiency of STAR

All STAR assessments are computer-adaptive tests (CATs) and can be administered on computers or tablets. CATs tailor each testing experience to the individual student, selecting items that not only assess the concepts and skills that are defined in the test blueprint, but that also match the student's performance level.

STAR assessments are, therefore, quick and easy to administer. Students can complete a STAR test in as little as 10–20 minutes.

Teachers find that administering STAR is straightforward and intuitive. There are no software programs to install, no files to copy, and no rostering of students before each assessment event. The assessments run on the Renaissance Place™ platform, a cloud-hosted management program that consolidates all of a customer's Renaissance Learning software. Setup is easy; a student is added once during initial setup, which can be automated by using the Renaissance Data Integrator (RDI). The RDI continuously synchronizes records with the customer's management information system (MIS).

To take a STAR assessment, students simply log in to the system on a PC or iPad®. Once students are finished, the system automatically scores the test. The data is centralized, and all software and content are updated automatically. As such, teachers can access a student's test records at any time should the student move to a different school. After students complete their tests, teachers log into the system from any supported device to run and access the reports.

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[1] Hasbrouck, J. & Tindal, G.A. (2006). Oral reading fluency norms: A valuable assessment tool for reading teachers. The Reading Teacher, 59(7), pp. 636–644.

The versatility of STAR

Due to the robust and comprehensive nature of STAR's scores and reports, teachers can use these assessments and the data that result to answer many questions related to their students, including what they are learning and what instruction they may need next. Unlike a single-use assessment that has limited utility, STAR is a tool that can be used throughout the school year to provide important information about students. Sample reports are provided as an attachment to this document.

Universal Screening.

STAR can be used for screening purposes as often as three times per year (autumn, winter, and spring). Universal screening, during which STAR assessments are administered to every student, helps teachers plan and deliver the most appropriate instruction by giving them reliable data and information about each student. The reports have been designed so that it is easy for teachers to use them to set priorities for instruction and intervention.

Screening reports also show teachers which students are succeeding with core instruction and which may need intervention. The reports can also display student performance in relation to intervention benchmarks. To determine a student's specific skill deficits, teachers can run the Student Diagnostic Report, which displays a student's proficiency score for each of the skills assessed. If the reports indicate that a student is working below year level, teachers can set intervention goals and then monitor that student's progress toward these targets. Teachers can run the Instructional Planning Report to see a list of specific skills that students should work on to improve comprehension.

Progress Monitoring.

Once teachers identify students in need of intervention, they can also use STAR to set and track student progress toward individual goals. The Goal-Setting Wizard in the system lets teachers enter individualised targets and interventions so that reports present STAR results in terms of those targets and interventions. With STAR assessments, teachers can measure achievement as often as weekly. The Student Progress Monitoring Report then displays the data in an easy-to-read fashion. The purpose of this report is to help teachers determine if a student is responding to an intervention.

Mastery of Standards.

STAR assessments assess skills that are aligned with the new national curriculum and that are in our new Core Progress learning progressions. Therefore, educators can use STAR to estimate the level of mastery of specific curriculum skills for a student, class, or school network such as an Academy chain.

STAR includes diagnostic reports that track mastery of UK standards by year and domain. The UK Standards Report identifies the difficulty of the standards, as identified during our alignment study, and reports students' estimated mastery of them.

Diagnostic Information to Support Differentiated Instruction.

Because teachers can administer the STAR assessments many times per year, the assessments provide in-depth diagnostic information on students' strengths, weaknesses, and needs for intervention. STAR is statistically linked to empirically validated learning progressions for reading and maths, which span reception to the end of Key Stage 4. Immediately after students test, teachers navigate to STAR's online Reading Dashboard to access diagnostic information. STAR Reading and STAR Early Literacy identify students' strengths and weaknesses in vocabulary, comprehension, and overall reading achievement. STAR Maths data gives teachers the information they need to identify strengths and weaknesses in a student's overall maths achievement.

Predict Student Performance.

Renaissance Learning has linked the STAR Reading and STAR Maths tests to the national curriculum with support from NFER (The National Foundation for Educational Research). The Performance Reports provide a prediction of students' performance on the test at the student, class, school, and school network levels. This family of reports shows student proficiency and a growth trajectory in relation to the new national curriculum. If STAR is administered early in the year, educators can use the assessment data to determine which students may be at risk of not meeting proficiency on the national test. Teachers can also use that information to make instructional adjustments to better ensure students will do well on the national test.

Measure Growth.

Because STAR assessments have been designed for frequent administration, they are ideal for measuring student growth. Each STAR assessment reports growth via absolute growth measures and normed growth measures. Teachers can use STAR as an absolute growth measure by monitoring changes in students' STAR scaled scores, which show the gains a student has made over a specific period of time. Weekly growth norms calculate a trajectory of progress toward a specific performance target, which is especially helpful with those students who are struggling to achieve academic success. Students' growth is measured from one STAR testing window to the next.

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