Revised Australian Edition

CARS Plus

Comprehensive Assessment of Reading Strategies

SUPPORTING RESEARCH

Table of Contents

CARS® Series

The Supporting Research document for Comprehensive Assessment of Reading Strategies (CARS® Series) provides information related to research-proven strategies and features that lead toward meaningful reading assessment for each student.

This document is based on a literature review of academic monographs, journals, and reports by content-area researchers and experts.

The Supporting Research document also covers topics related to best practices of classroom-based assessment that guide classroom instructional decisions.
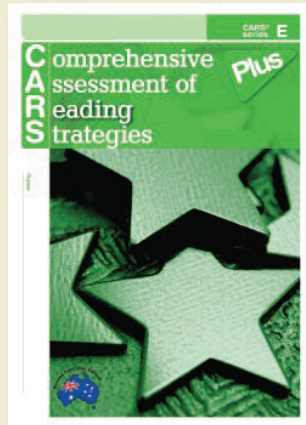
Introduction

CARS Plus Series

Diagnose needs of the class by administering 5 Pretests

Benchmark during instruction to monitor progress, using 5 longer tests

Assess mastery by administering 5 Post Tests

STARS Plus Series

Instruct the class in 1 to 6 strategies, based on students' needs (differentiate instruction using Books P–H)

What are the CARS® and STARS® Series?

Comprehensive Assessment of Reading Strategies (CARS® Series) and Strategies to Achieve Reading Success (STARS® Series) are comprehensive resources that allow teachers to identify and teach essential reading comprehension strategies. As the diagram above indicates, the CARS® Series is the assessment component, and the STARS® Series is the instruction component.
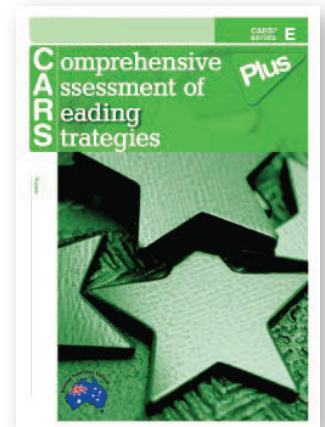
STARS® Series

The STARS® Series is a prescriptive reading series that provides essential instruction of the core reading strategies assessed in the CARS® Series. This ten-level series is designed for students from Foundation to Year 9.
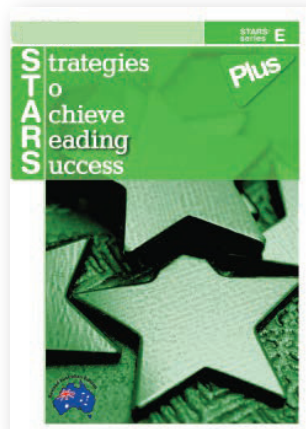
CARS® Series

The CARS® Series provides diagnosis, benchmarks and assessment of students' progress in achieving mastery of core reading strategies. The CARS® Series contains a Pretest, Benchmarks and a Post Test. The Pretest is used for diagnosis. The Benchmarks allow for progress checks during instruction with the STARS® Series. The Post Test is used to assess mastery. This ten-level series is designed for students from Foundation to Year 9. Other major research-based best practices of the CARS® Series include:

- Core reading strategies
- Data-driven instruction
- Metacognition through self-assessment
- Progress monitoring
- Standards-based assessments to guide instruction

Research-based Best Practices

The CARS® Series is founded on research-based strategies and features that are designed to support students as they learn how to read for meaning. Many of the strategies and features are supported by the US National Reading Panel (NICHD, 2000) and are presented in a quick-reference chart that appears on page 11.

Core Reading Strategies

From classroom teachers to the federal government, one of the most important educational goals is to build rooms full of independent, strategic readers. This is no easy task because reading is a complex process that requires students to use multiple thinking skills and processes in order to understand what they are reading (Adams, 1990; Beers, 2003; CCSSO/NGA, 2010; NICHD, 2000).

Researchers have proven that many skills, such as a student's vocabulary level, fluency rate, prior knowledge and mastery of reading strategies, all play integrated and significant roles in the development of independent reading (CCSSO/NGA, 2010; NICHD, 2000). "Mastery of these foundational reading strategies allows students to engage in richer and deeper reading experiences" (Connor & Farr, 2009; Pearson Ed Group, 2010).

From Research to Application:

In this wide arena of reading skill-building, the CARS® Series and STARS® Series focus on students' mastery of core reading strategies that enable students to connect with and understand what they are reading. To support the Pretest, Benchmarks and Post Test in the student book, the teacher guide includes an Understanding the Strategies section providing additional instructional support for students in the form of background-knowledge activation.

Core Reading Strategies

Book P

- Finding the Big Idea
- Finding Details
- Putting Things in Order
- Understanding What Happens and Why
- Making a Guess
- Figuring Things Out

Book AA

- Finding the Big Idea
- Finding Details
- Putting Things in Order
- Understanding What Happens and Why
- Making a Guess
- Figuring Things Out

Book B-C

- Finding Main Idea
- Recalling Facts and Details
- Understanding Sequence
- Recognising Cause and Effect
- Comparing and Contrasting
- Making Predictions
- Finding Word Meaning in Context
- Drawing Conclusions and Making Inferences
- Distinguishing Between Fact and Opinion
- Identifying Author's Purpose
- Interpreting Figurative Language
- Distinguishing Between Real and Make-believe

Book D-H

- Finding Main Idea
- Recalling Facts and Details
- Understanding Sequence
- Recognising Cause and Effect
- Comparing and Contrasting
- Making Predictions
- Finding Word Meaning in Context
- Drawing Conclusions and Making Inferences
- Distinguishing Between Fact and Opinion
- Identifying Author's Purpose
- Interpreting Figurative Language
- Summarising

Introduction

> " Researchers and educators have long known that effective diagnosis of students' skills and diffi culties is fundamental to the successful teaching of reading . . . diagnostic assessments provide deeper information to help educators judge which skills to target and what the nature of instruction should be.
>
> *(Morsy, Kieffer & Snow, 2010)*

Data-driven Instruction

Data-driven instruction is an approach that benefits every student. Instructional decisions are based on the systematic collection of data that reflects students' understanding.

Researchers recommend that data that drives instruction should come from multiple sources. The CARS® Series provides multiple sources of data to guide instruction through a Pretest, Benchmarks, a Post Test and Teacher Assessments.

Pretest, Benchmarks and Post Test:

Data-driven instruction is based on the data resulting from diagnosing, benchmarking and assessing students' performance on a learning task (Education Commission of the States, 1992; IRA, 2010; Trimble, Gay, & Matthews, 2005). From these results, teachers may tailor their instruction to meet each student's needs. The CARS®Series is specifically constructed to provide teachers with the data they need to create effective and customised lesson plans using the STARS® Series.

Along with the effectiveness of data-driven instruction, researchers also recommend specific criteria for effective classroom assessment. These recommendations are listed below along with how the CARS® Series meets these recommendations.

Experts Recommend	The CARS® Series Delivers
"Classroom teachers and reading/ literacy specialists should play a central role in conducting language and literacy assessments and in using assessment results to plan instruction and monitor student performance." (IRA, 2010)	**Teacher Guide: Teacher Assessments 1–3 and the Class Performance Chart** Teachers complete each evaluation tool at the conclusion of each assessment period.
"Assessments, tools, and techniques should provide useful and timely information about desired language and literacy goals." (IRA, 2010)	**Student Book: Student Self-Assessments Teacher Guide: Teacher Assessments** Both evaluation tools are designed to be completed quickly and accurately without disturbing classroom routines.
"Assessment as a component of RTI should be consistent with the Standards for the Assessment of Reading and Writing." (IRA & NCTE, 2010)	**Throughout the Series:** The entire series meets the recommendations of the revised standards for the assessment of reading. Specifically, the CARS® Series offers multiple perspectives and sources of data through its Pretest, Benchmarks and Post Test. • The primary goal of the CARS® Series is to inform and improve instruction. • The teacher is the primary agent for administering the assessments. Family members become involved in the assessment process by reviewing student's portfolio of work.
"The primary purpose of assessment is to improve teaching and learning." (IRA & NCTE, 2010)	**Throughout the Series:** The Pretest, Benchmarks and Post Test are used for the purpose of guiding instruction to meet each student's instructional needs through the STARS® Series.

Teacher Assessments:

The Teacher Assessments may be completed during and at the end of the program as an overview of each student's performance.

The Teacher Assessments provide teachers with a tool for diagnosing areas of strength or areas where improvement is needed with the core reading strategies.

Teachers are also able to use this information to construct a visual aid – a bar graph – so that levels of mastery can be easily compared. Teachers then communicate in writing the results of assessments so that an instructional plan can be completed. Teachers may also use the Class Performance Chart to track the overall assessment results of the students in their classroom.

The CARS® Series also offers teachers an easy to- apply schedule in which to administer the assessments and record students' performances.

From Research to Application:

The CARS® Series is a diagnostic, progress monitoring and assessment tool that helps teachers focus their reading instruction to meet each student's needs. These classroom-based assessments meet the recommendations of several reading organisations and educational experts.

TEACHER ASSESSMENT 1

Complete this page after the student has completed a series of five tests.
Please tick the appropriate box. ☐ Pretests 1–5 ☐ Post Tests 1–5

Student's Name: _____ Date: _____
Teacher's Name: _____

Assessing the Strategies

Students answer a question about each strategy once in each lesson, or a total of five times. Use the student's completed Answer Form to fill in the chart below. First, record the total number of correct responses for each strategy. Then record the percentage of correct responses for each strategy.

Strategy		Number of Correct Responses	Per cent Correct
Finding Main Idea	(MI)	_____ out of 5	– _____ %
Recalling Facts and Details	(FD)	_____ out of 5	– _____ %
Understanding Sequence	(US)	_____ out of 5	– _____ %
Recognising Cause and Effect	(CE)	_____ out of 5	– _____ %
Comparing and Contrasting	(CC)	_____ out of 5	– _____ %
Making Predictions	(MP)	_____ out of 5	– _____ %
Finding Word Meaning in Context	(WM)	_____ out of 5	– _____ %
Drawing Conclusions and Making Inferences	(CI)	_____ out of 5	– _____ %
Distinguishing Between Fact and Opinion	(FO)	_____ out of 5	– _____ %
Identifying Author's Purpose	(AP)	_____ out of 5	– _____ %
Interpreting Figurative Language	(FL)	_____ out of 5	– _____ %
Summarising	(SM)	_____ out of 5	– _____ %

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Teachers may quickly and easily monitor students' progress.

> More proficient readers monitor the extent to which they are experiencing success with a text *(Connor & Farr, 2009)*

Self-assessment 1

Student's Name: _____ Date: _____

Teacher's Name: _____

Rate your work on Pretests 1–5. Circle your answer.

         great   good   could be better

Think about your work on Pretests 1–5. Then complete the chart below.

	Yes	Sometimes	No
1. I understood the reading passages.			
2. I understood all of the questions			
3. I had no trouble choosing the answers.			
4. I did not have to look back at the passage to answer many of the questions.			
5. I found it easy to choose an answer to the questions.			

Complete each sentence.
I could have done a better job on the Pretests if
_____
_____
_____
_____

I will work on improving
_____
_____
_____
_____

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Self-assessments help students reflect upon their reading strategy comprehension.

Metacognition Through Self-assessments

Metacognition in reading is proven to be an effective instructional technique (Baker & Brown, 2002; Connor & Farr, 2009). Students use thinking processes to become aware and mindful of how well they are understanding what they are reading.

> *"Good readers often will reflect on what they have just read, perhaps evaluating the credibility of the material. . . . Monitoring also occurs at the conclusion of a reading. Thus, good readers can be aware of whether their understanding of the text is consistent with all the ideas expressed in it" (Pressley, 2002).*

Good readers apply metacognitive thinking automatically and intrinsically. Struggling readers need explicit, concrete tools to help them learn to think metacognitively.

From Research to Application:

The CARS® Series employs explicit metacognitive questioning in the form of student self-assessment. The self-questioning in each student assessment provides an awareness of the student's knowledge about a concept or strategy. Students must sort, organise and consolidate their thoughts about their reading performance through self-evaluation and monitoring.

Progress Monitoring

Progress monitoring is a process that uses frequent repeated testing of the same skills and concepts. Frequent formative testing allows teachers to make quick judgements about the effectiveness of their instruction (NCSPM, 2010; RIPM, 2010).

Progress monitoring has been implemented and studied in classrooms for the past 30 years under various terminology. Throughout its course, progress monitoring has proven to be one of the most effective instructional models for student achievement (Fuchs & Fuchs, 2002).

Researchers have shown that when progress monitoring is implemented, students learn more and become more aware of their performance, and teachers improve their decision-making about instructional goals and how to achieve them.

Further, integrating progress monitoring into a classroom routine can be fairly seamless. As a research brief (Safer & Fleischman, 2005) summarises, "Student progress monitoring fits well into the routine of the classroom. The probes [assessments] can be administered quickly, and the results are immediately understandable and easy to communicate."

All of these facets of progress monitoring are integrated in the CARS® Series. From the Pretest, Benchmarks and Post Test, the same reading strategies are assessed. These quick assessments then guide teachers in the use of the STARS® Series, which focuses on the instruction of core reading strategies.

Students actively evaluate and monitor their reading performance.

Multiple points of access to students' mastery of reading strategies are provided in the CARS® Series.

The three document images show assessment forms:

TEACHER ASSESSMENT 2

Complete this page after the student has completed a series of five tests.
Please tick the appropriate box. ☐ Pretests 1–5 ☐ Post Tests 1–5
Student's Name: _____ Date: _____
Teacher's Name: _____

Comparing Levels of Mastery

Use the chart on Teacher Assessment 1 to complete the graph below. For each reading strategy, shade the number correct to form a bar. A completed bar graph compares a student's level of mastery for each reading strategy.

MI = Finding Main Idea
FD = Recalling Facts and Details
US = Understanding Sequence
CE = Recognising Cause and...
CC = Comparing and Contrast...
MP = Making Predictions

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TEACHER ASSESSMENT 3

Complete this page after the student has completed a series of 5 tests.
Please tick the appropriate box. ☐ Pretests 1–5 ☐ Post Tests 1–5
Student's Name: _____ Date: _____
Teacher's Name: _____

Analysis of Reading Strategies

Use the information displayed on the bar graph(s) to complete the following.

Strategies where the student shows strength: _____

Strategies where the student needs improvement: _____

Action Plan: _____

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CLASS PERFORMANCE CHART

Please tick the appropriate box. ☐ Pretests 1–5 ☐ Post Tests 1–5

Next to each student's name, record the number of correct responses (out of 5) for each strategy. Then total the responses to determine the overall number of correct responses (out of 60) for each student.

Reading Strategies

Student	MI	FD	US	CE	CC	MP	WM	CI	FO	AP	FL	SM	Total

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Teacher Assessments and the Class Performance Chart allow teachers to easily check students' progress.

From Research to Application:

The CARS® Series is structured to provide frequent classroom-based formative testing of students' progress toward mastering the core reading strategies.

- The Pretest helps teachers set students' learning goals.

- The Benchmarks provide frequent assessment tools that help teachers monitor students' progress on mastering reading skills. These Benchmarks are to be administered during the STARS® Series instructional program. There are five opportunities to benchmark students' progress on mastering the core reading strategies.

- The Post Test assesses the completion of the students' learning goals.

Teacher Assessments may be reproduced multiple times to meet a teacher's needs. The Class Performance Chart provides an overview of reading strategy mastery by a whole class.

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Each item on the answer form is labelled, indicating which reading strategy is mastered or needs strengthening.

Test-taking practice is a value-added feature of the CARS® Series.

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Quick-Reference Chart of Best Practices

This series uses . . .	Example	Research says . . .
Core Reading Strategies These are the fundamental reading strategies that bring thinking skills and reading together, allowing students to understand what they are reading.	**Throughout the series**	"Great readers make sense of text. . . . Readers need to make sense of what they read and they do so by mobilizing literacy processes simultaneously." (Frey, Fisher & Berkin, 2009)
Best Practices: Strategies and Features These are teaching strategies and instructional features that guarantee effective research-based instruction..	**Throughout the series**	Parris and Block (2007) state that effective teachers address diverse needs of students through: individualized instruction; frequent assessment and feedback; flexible grouping strategies that attend to individual needs within the context of groups.
Metacognition Students set learning goals and then self-evaluate for clarity and accuracy of their performance. They think about what strategies or skills need to be activated or improved to achieve their next milestone or final goal.	**Student Book:** **Student Self-assessments**	"Strategic reading reflects metacognition and motivation because readers need to know the strategies and to be willing to use them." (Kolic- Vehovec & Bajsanski, 2006)
Progress-Monitoring A strategy that allows teachers to check on students' progress toward mastery of a strategy or skill.	**Student Book:** **Pretest, Parts 1–5** **Benchmarks 1–5** **Post Test, Parts 1–5**	"Research has demonstrated that when teachers use student progress monitoring, students learn more, teacher decision making improves, and students become more aware of their own performance." (Safer & Fleischman, 2005)
Standards-based Assessments This feature is closely tied to learning standards and provides decision-making guidance for each student.	**Student Book:** **Pretest, Parts 1–5** **Benchmarks 1–5** **Post Test, Parts 1–5**	"In the […] search for ways of raising academic achievement, there seems to be wide-spread agreement that a 'standards-based' education system is the key to improvement." (Briars & Resnick, 2000)

Summary

Comprehensive Assessment of Reading Strategies Series is an effective tool that provides teachers with immediate feedback on students' reading strengths and weaknesses. This information allows

- teachers to focus their instructional goals to gain maximum student learning.
- students to actively engage with their learning progress through metacognitive self-assessments.
- students to reflect upon their reading performance and the acquisition of reading strategies.

Teachers can be assured of student engagement because the CARS® Series delivers quick assessment results regarding individual student performances and enables students to take an active role in monitoring their own learning.

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