

# Florida Center for Reading Research

## Fluency Formula

### What is Fluency Formula?

*Fluency Formula* is a reading fluency program designed to supplement the fluency component in a school's core reading program. The goal of *Fluency Formula* is to help all students in grades 1-6 develop fluency at the different levels of reading from identification of letters to reading connected text. Daily lessons of 10-15 minutes are designed to target a specific skill necessary for fluent and effortless reading. A standard routine each week incorporates teacher-led whole-class and small group instruction, independent practice, and assessment.

There is a consistent lesson format for all grade levels in *Fluency Formula*. On Day 1, the teacher models fluent reading with a selection from the Teacher's Read-Aloud Anthology and models a fluency focus skill for that lesson (e.g., dialogue, punctuation, metaphors, text clues). Questions at the end of the read-aloud are intended to check the student's listening comprehension. For independent practice, the students read a short passage and answer phonics, vocabulary, and comprehension questions in the Fluency Workbook. The students are encouraged to read this text at least three times throughout the week. On Day 2, the teacher models the fluency skill during small group by reading and discussing a portion of the text from the Fluency Library Book. Using this book, the students read with partners then listen to the book on CD at the listening center. While the activities on the first two days are for all students, on the 3<sup>rd</sup> and 4<sup>th</sup> days there are intervention lessons designed for students with below grade-level reading fluency. On Day 3, the teacher uses side one of the Fluency Activity Card to model a fluency skill during the reading of a poem, play, fiction, or nonfiction text. Using the other side of the card, the teacher introduces a phonics skill that is an integral part of the text on side one. The text and the phonics skills are practiced independently or with a partner to develop fluency. On Day 4, the students apply the phonics skill to reading word lists using the Fluency FlipChart. Building sight word fluency is also part of this lesson; students pronounce the word after the teacher, chorally spell it, and read it in a sentence. These words become part of a cumulative review of previously taught sight words. The last day of the week is intended for informal and formal assessment of students. Informally, teachers listen to partners reading aloud from one of the three texts read that week. There are several options for conducting formal assessments. To assess foundational skills, there is an Alphabet Recognition Test, a Sight Word Assessment, a Nonsense Word Fluency test, and a reference to phonemic awareness assessment using DIBELS (Dynamic Indicators of Basic Early Literacy Skills). Oral Reading Fluency is measured in words read correctly per minute (WCPM) on three grade-level Benchmark Passages. The result from this assessment indicates the student's proficiency at reading grade-level text and assists the teacher in setting fluency goals and grouping students. There are Progress Monitoring Passages for each grade level to assess ongoing progress.



Materials for *Fluency Formula* are well organized and easy to use. Each grade level includes a detailed Professional Guide that includes the Daily Lessons, Word Speed Drills, Phrase-Cued Text Drills, a Read-Aloud Anthology, and several articles on the importance of fluency development. Other materials include a Fluency Flipchart, an Assessment Book with Student Timers, a Reading Chart, and a Professional Development book to increase the teacher's knowledge of effective fluency strategies. Student materials include a Fluency Library of grade-level books with corresponding Audio CD's, a Workbook, Activity Cards, and Leveled Passage Reproducibles for independent reading practice.

### How is Fluency Formula aligned with Current Reading Research?

Florida's Reading First program names fluency as one of the five essential components of successful reading instruction. *Fluency Formula* incorporates fluency activities into the five-day lesson plan, but its treatment of this component on the first two days often lacks explicit instructional strategies such as supported application of a new skill, guided reading practice, and text that is selected according to the student's independent or instructional reading level. The fluency instruction that is consistent with current reading research includes teachers modeling fluent reading, students repeatedly reading text with audio support, partner reading, and foundational skill lessons in phonics.

*Fluency Formula* includes an Assessment System that enables the teacher to assess and determine individual oral reading fluency levels; however, all students are expected to read the same Workbook Passages and grade-level Fluency Reader. Neither the teacher nor the reading partner have guidelines for modeling the workbook passages, pre-teaching potentially difficult vocabulary, or providing prompts and corrective feedback during student practice. Since the text is not selected according to the student's reading level, the text difficulty may interfere with the student's ability to gain fluency from the reading experience. These elements in *Fluency Formula* may be problematic for the struggling reader.

According to the Report of the National Reading Panel and the Meta-Analysis by Therrien (2004), an effective fluency intervention lesson should contain these essential components: passages read aloud to an adult, corrective feedback on reading errors, passages reread to reach a set performance criteria, and practice reading text at the student's independent reading level. *Fluency Formula* provides two intervention lessons each week for students reading below grade-level. Using the activity cards and flipcharts, the teacher reads the text orally, modeling a dimension of fluent reading. A choral reading of the text follows with the teacher remarking on the student's accuracy, speed, and expression. Additionally, teachers provide instruction on sight words and letter sounds progressing from simple to more complex concepts. The sight words and the words containing the new phonics element are integrated into the week's story. However, the activities are presented after the students read the text that is linked to the skill. Only in the Grade 6 Guide, are the skills taught before the text reading. Students who struggle with the word recognition task would benefit from this instruction prior to reading the text.

Professional development is embedded into the structure of the program with introductory articles on fluency and research notes throughout the Professional Guide. Additional professional development is available separately through Scholastic Red's online course for Building Fluency, Grades K-2.

## Research Support for Fluency Formula

A beginning level of evidence suggests that *Fluency Formula* has positive effects on oral reading fluency for students of low reading ability and no effect on reading comprehension. A number of studies have been conducted on *Fluency Formula*. However, only one of these studies with an experimental design met the FCRR standards for research designed to examine program effectiveness (see [http://www.fcrr.org/FCRRReports/PDF/Research\\_Criteria.pdf](http://www.fcrr.org/FCRRReports/PDF/Research_Criteria.pdf)). This study, summarized below, examined the effect of *Fluency Formula* on reading (Sivin-Kachala & Bialo, 2005).

During the 2003-2004 school year, an independent third party conducted an evaluation with twelve second grade classrooms in two suburban school districts to examine the effectiveness of the *Fluency Formula* program (Sivin-Kachala & Bialo, 2005). Intact classes of students were matched on student ability, ethnic composition, and teacher characteristics (academic credentials and teaching experience) then randomly assigned at the classroom level to the *Fluency Formula* treatment group and the control group. The six experimental treatment classes used the school's standard reading/language arts program and the *Fluency Formula* program for an equivalent amount of instructional time as the six control classes that used the school's reading/language arts program. Pre- and posttest assessments of the students' oral fluency skills were measured by the Edformation Oral Fluency Assessment (OFA) Benchmark Passages, one of the measures used to assess oral fluency in the *Fluency Formula* program. The results of this assessment, as reported in raw scores (words correct per minute), were limited to the 128 students who scored at or below the 75<sup>th</sup> percentile on the pretest. In the data analysis at the student level, the results from pre- to posttest indicated that within the initial low ability group (all students who scored below the 50<sup>th</sup> percentile on pretest), the experimental group had significantly higher scores in oral fluency relative to the control group ( $p < .001$ ) with a large effect size of .81. Within the higher ability group (students who scored above the 50<sup>th</sup> percentile and below the 75<sup>th</sup> percentile), there were no significant differences between the treatment and the control groups. While these results appear to represent a preliminary positive evaluation of the efficacy of *Fluency Formula*, limitations of the research design could have lead to an overestimation of the program's impact. Random assignment at the class level combined with statistical analysis at the student level could not eliminate the possibility that differences between the two groups were due in part to teacher differences or other aspects of the classrooms unrelated to the *Fluency Formula* program. Another potential limitation in interpreting the results of this study is the use of the Edformation Oral Fluency Assessment since it is an integral part of the program used with the treatment group. There is the possibility that this group could have experienced a practice effect on the test leading to inflated scores. As a result, it is impossible to attribute the positive effects solely to the implementation of the *Fluency Formula* program.

In the same study, the Woodcock-Johnson III Passage Comprehension test was also used to examine the effectiveness of the *Fluency Formula* program. In this analysis, the pretest to posttest results for the students in the control group resulted in a slightly larger increase in scores as compared to the students in the treatment group. It should be noted that there was a trend that this program was potentially negative on reading comprehension ( $p = .054$ ) and this was educationally important ( $ES = .29$ ) using our criteria of .25 as educationally significant. Overall, they found

that both groups demonstrated a significant increase in comprehension from pretest to posttest.

## Conclusion

In sum, the *Fluency Formula* program provides practice in oral reading fluency and the use of these materials is consistent with research suggesting that students who struggle with reading fluency benefit from repeated reading practice. We conclude that there is an initial level of research on the use of *Fluency Formula* to support fluency development, particularly for students with low ability in oral reading. Additional well-designed studies, using random assignment, matched units for assignment and analysis, and equivalent scores on pretests between the experimental and control groups should be useful in determining the efficacy of this program. Furthermore, although the primary focus of *Fluency Formula* is to develop oral reading fluency, future studies could examine its effects on other aspects of reading.

### Strengths of *Fluency Formula*:

- Small group intervention lessons include activities that target the foundational skills of reading.
- Audio CD's provide two speeds for listening to each story.
- Fluency Library contains fiction and non-fiction books of high interest to students.

### Weaknesses of *Fluency Formula*:

- Lessons lack explicit instructional strategies.
- Potentially difficult words are not pretaught which may contribute to difficulties with fluent word identification.

## Which Florida districts have schools that implement Fluency Formula?

Broward	754-321-2600	Palm Beach	561-434-8200
Charlotte	941-255-0808	Pasco	813-794-2651
Gulf	850-229-8256	Pinellas	727-588-6011
Hamilton	386-792-1228	Polk	863-534-0521
Hillsborough	813-272-4050	Putnam	386-329-0510
Lake	352-253-6510	Santa Rosa	850-983-5010
Miami-Dade	305-995-1430	Union	386-496-2045
Monroe	305-293-1400	Volusia	386-734-7190
Okaloosa	850-833-3109		

## For More Information

<http://teacher.scholastic.com/products/fluencyformula/index.htm>

## References

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Lead Reviewer: Mary VanSciver, M.S.  
Date Posted: March, 2007  
Research Updated: January, 2008

Important Note: FCRR Reports are prepared in response to requests from Florida school districts for review of specific reading programs. The reports are intended to be a source of information about programs that will help teachers, principals, and district personnel in their choice of materials that can be used by skilled teachers to provide effective instruction. Whether or not a program has been reviewed does **not** constitute endorsement or lack of endorsement by the FCRR.

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