

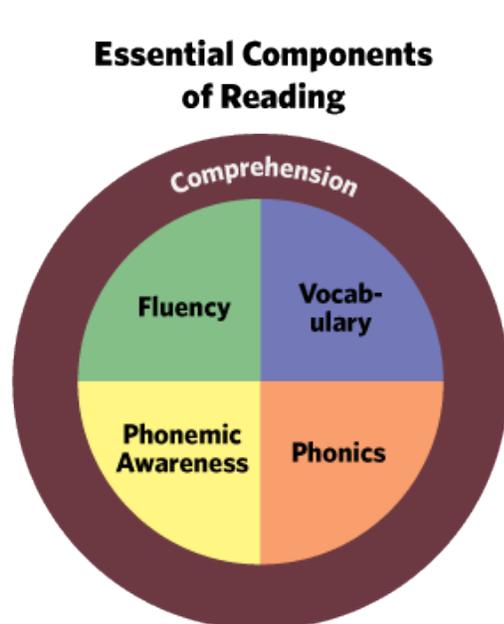
## Science of Reading and Associated Policies

There is a science to learning to read. And while it is not rocket science, it requires a shift in thinking, training, and implementation. Several states and municipalities have made this shift and are great examples of positive change.

The best example is Mississippi, (you read that right) who implemented scientifically proven reading instruction in 2013. [The National Assessment of Education Progress \(NAEP\)](#) measures proficiency in multiple subjects for 4<sup>th</sup>, 8<sup>th</sup>, and 12<sup>th</sup> graders. From 2013-2019 Mississippi's 4<sup>th</sup> Grade Reading Proficiency scores jumped 10 points. In that same time period, Georgia's scores remained flat.

**Only one-third of Georgia 4<sup>th</sup> graders read proficiently**, meaning they can read and then make inferences from material. Being able to comprehend text is critical because this enables students to read to learn, a skill set that sets them up for life success. Students who cannot read proficiently at their grade level by the end of third-grade are [four times more likely](#) than their proficient counterparts to drop out of high school and are more likely to experience long-term [behavioral and mental health issues](#). Later in life, a worker cannot up-skill if they cannot read to learn.

Below we summarize the science of reading and the legislation that is leading the way. Just this year, North Carolina passed similar legislation, and Fulton County, GA decided to use their recovery funds to implement similar techniques.



### The Science of Reading

The science of reading tells us that reading is made up of five key parts: fluency, vocabulary, phonemic awareness, phonics, and comprehension.

- Fluency is the ability to read with speed, accuracy, and proper expression.
- Vocabulary is the ability to understand meaning behind words.
- Phonemic awareness is the ability to identify and manipulate individual sounds (phonemes) in spoken words.
- Phonics is the relations between letters (and letter combinations) and their corresponding sounds.
- Comprehension is the complex cognitive process readers use to understand what they have read and is tied strongly to the other aspects of reading.

Consistent, rigorous application of each of these elements proportionally to each other is what creates strong readers.

The simple view of reading helps further break down the science of reading. The simple view states: *Decoding Ability (Letter Sounds) x Language Comprehension = Reading Comprehension*. It is important to note that it is not the sum of decoding and language comprehension, but rather the product, showing that both must be present in order for reading comprehension to occur.

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$$\text{Decoding Ability} \times \text{Language Comprehension} = \text{Reading Comprehension}$$

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## Key Program Elements

While each implementation is different, the basic components of an evidence-based literacy program are as follows:

Main Goal of program: to ensure all kids are reading *proficiently* by third grade.

### Steps to create a program:

Step 1: Define the Science of Reading and Reading Proficiency.

Step 2: State Board of Education and Dept of Education develops: instruction standards that align with the Science of Reading, model literacy program implementation plans, literacy assessments, teacher certification standards, and uniform reporting metrics.

Step 3: Individual School Boards assess their curriculums and teacher professional development and develop new literacy instruction and implementation plans.

Step 4: DOE reviews individual school board plans for appropriateness. Release of associated funds is contingent on compliance.

Step 5: Local schools implement new literacy instruction plans.

### A Model Literacy Instruction Plan Includes:

- Literacy assessments for all children in K through 3<sup>rd</sup> grade (already needed per the 2019 Dyslexia Law SB-48)
- Elimination of social promotion for students who are not at level (with some exceptions)
- Creation of new continuing education certifications for teachers and administrators
- Creation of “literacy coaches” to support teachers and students
- Establishment of an “individual literacy action plan” for students reading below level, involving the student, teacher, administration, and parents.
- Interventions for students can also include:
  - Reading camps for out-of-school instruction
  - Blended third-fourth grade classes for students who did not pass into fourth grade – to keep them on-level in other subjects and accelerate reading remediation
  - Public-private partnerships to identify mentors, tutors, and community help

### Cost Saving Measures:

The Georgia Department of Education can do the following to create economies of scale to reduce individual expenditures by individual school systems.

- Establish and procure uniform assessment tools (digital assessments exist)
- Develop resources (digital and hard copy) for students and parents
- Establish reading camps or other outside school interventions to be offered online, at libraries, or at TCSGs

### Definitions of literacy vs low literacy vs illiteracy

There are many definitions of literacy. The established definition from multiple online dictionaries and the NAEP definitions are mapped in the table below.

	Definition	Corresponding NAEP	Percentage of Georgia 4 <sup>th</sup> graders in 2019.
Illiterate	Inability to read and write		
Low literacy / At Grade Level (basic)	Ability to read and write between the 5 <sup>th</sup> and 8 <sup>th</sup> grade level of difficulty. Low levels of reading comprehension (ability to apply and utilize what is read).	At grade level (basic) – understand the words, answer simple questions, get through the written material in a certain amount of time	31%
Literate / Proficient	Ability to read, write, and <b><u>comprehend.</u></b>	Proficient – make reasonable inferences from the material.	32%

## Example Programs and Policies

### Mississippi Reading Legislation

Sponsored by Senator Gray Tollison, the [Mississippi Literacy Based Promotion Act \(LBPA\)](#) is an education bill that works to ensure kids are taught to read according to evidence-based science. The act focuses on identifying students enrolled in K-3 who need additional reading supports in reading. By targeting students early on, interventions are more likely to prove successful and result in on-target reading levels by 3<sup>rd</sup> grade. These interventions are built upon the science of reading, as laid out by the National Reading Panel (and supported by numerous peer reviewed studies). In 2016, [the law was amended](#) to include individual reading plans for students identified with a reading deficiency, and a higher cut score was established for third-grade promotion. The act includes:

- Statewide training to support teachers with scientifically based reading instruction and intervention.
- Reading coaches to provide job-embedded training and support for teachers.

- Early identification of K-3 students who have a reading deficiency. Parent notification and regular communication with parents of students identified with a reading deficiency.
- Individual reading plans, created in collaboration with the parent, prescribing the immediate specialized instruction and supports that will be provided to the student identified with a reading deficiency.
- Retention for third graders who do not meet the cut score for promotion.
- Good cause exemptions from retention to recognize the needs of some students. Specific intervention services for retained third-grade students, including resources to support parents with literacy activities at home.

Since Mississippi enacted the Literacy Based Promotion Act in 2013 the state’s fourth-grade National assessment of educational progress [reading scores have substantially improved](#). In 2013, 21 percent of fourth graders were proficient in reading, and by 2019, 31 percent of fourth graders were reading proficiently: a 10-percentage point increase. Mississippi also decreased the percentage of fourth graders scoring below basic by 12 percentage points, going from 47 percent scoring below basic to 35 percent. Furthermore, Mississippi is second in the nation in learning gains.

There is evidence also of student improvement on Mississippi’s statewide third-grade Mississippi Academic Assessment Program for English Language Arts assessment since the enactment of the LBPA. Over the past three years, there has been steady improvement in the pass rate on the reading portion of the third-grade Mississippi Academic Assessment Program for English Language Arts assessment, going from 87 percent passing to 93 percent—a 6 percentage point increase as illustrated in the following chart. Also, there has been drastic improvement in overall student performance on the third grade MAAP ELA assessment.

In partnership with Mississippi legislature, the [Mississippi Department of Education has laid out detailed guidelines for the implementation of the LBPA](#). Currently the program includes extensive guidelines and support materials for teachers, school administrators, school districts, and families. Models and benchmarks are given to teachers and education professionals to aid in achieving literacy gains. The implementation guidelines also include approved, evidence-based methodologies and technologies for school districts to use in their efforts to increase literacy. Teachers are trained in literacy through Language Essentials for Teachers of Reading and Spelling (LETRS), in addition to regional literacy resources through the MDOE.

## 2021 NC Excellence in Public Schools Act

This year North Carolina passed [SB-328 the Excellence Public Schools Act of 2021](#). The bill includes the following:

- Defines the Science of Reading and Reading Proficiency.
- Establishes a timeline for state agencies to create standards, for local school boards to comply, and for implementation to occur. It links release of funding to compliance.
- Defines metrics to assess student, teacher, and district progress.

- Defines what instruction teachers need to receive and from whom. Defines credible third party teacher training programs. Changes the standards for teachers' licensure to align with what literacy proficient teaching.
- Defines how to assess the students in their progress (including the ability to use digital assessment methods)
  - If students are not proficient, they need an Individual Reading Plan and must be held back
- Mandates state agencies create "digital supplemental resources" for all children and parents.
- Mandates creation of "reading camps" at the local scale.
- Encourages public / private partnerships.

## 2021 Fulton County Schools Plan: Every Child Reads

Currently, Fulton County Schools plans to utilize funds from the American Rescue Plan (federal covid relief) to invest \$90 million into their new literacy program, "Every Child Reads." Like the Mississippi and NC Acts, the program is based upon the science of reading (as outlined by the National Reading Panel). It will focus on training teachers and administrators on teaching reading from an evidence-based approach and places designated reading coaches and paraprofessionals in every elementary school in the district. The district plans to use the Language Essentials for Teachers of Reading and Spelling (LETRS) program for professional development.

## 2019 SB-48: The Dyslexia Bill

In 2019 Georgia passed [SB48](#). This bill requires that:

- Local school systems must screen all kindergarten students and certain grade 1-3 students for dyslexia by the 2024-25s school year.
- The creation of a dyslexia teacher training and endorsement.
- The create a dyslexia information handbook.

[A recent update from the GA Department of Education](#) stated that the handbook is already done, pilot programs are in place, and there are professional learning opportunities around dyslexia and the Science of Reading.

The GA DOE is already thinking about the Science of Reading and dyslexia screening. It has already created resources for teachers. SB48 is a great first step in improving literacy for all Georgians. Additionally, dyslexic children learn best via the Science of Reading methods; therefore, implementing the curriculum for the Science of Reading will add resources for all.

## Possible Funding Methods

- The upfront costs of creation of standards, programs, assessments, and reporting system could be paid for via Federal COVID-relief funds and proposed 2022 Federal Budget.

- To cover ongoing costs:
  - The state should provide resources to achieve economies of scale for assessments, training, remediation, and information.
  - Teacher continuing education should already be covered by school budgets
  - [Georgia Budget and Policy Institute has recommended additional ways to raise revenue](#), including increasing the tobacco tax and eliminating tax loopholes.
  - Increase the percentage of lottery funds directed to school systems.
  - Extra taxes or fees from:
    - Plastic bags: half to education, half to recycling.
    - Sugary foods and drinks.
    - Surcharge on luxury items (Rolexes for Reading!)
    - Sporting events, concerts, and other entertainment.

## Key Takeaways

- With federal COVID relief dollars currently inundating the state, additional funding can be redirected to establishing the infrastructure and teacher training needed for a literacy bill.
- Models for literacy programs already exist in Georgia. These programs (such as “Every Child Reads” in Fulton County and the 2019 GA SB-48 “statewide dyslexia screening mandate”) provide jumping off points for any potential literacy bills.
- There are many passionate and active allies in this area willing to fight for this cause.
- The science of reading, as laid out by the National Reading Panel, provides an evidence-based methodology for teaching reading.
- The 3<sup>rd</sup> grade reading level is the single best indicator of later education success.
- The Mississippi Literacy Based Promotion Act has resulted in significant gains.
- Guidelines for implementation of any literacy program enacted must be clear, concise, and reference the science of reading explicitly.
- Collaboration and communication between the Georgia Department of Education, state legislature, and local school districts must be clear to ensure effective implementation.

## Key Citations and Readings

Literacy Based Promotion Act, 2013 Legislative Session (MS SB 2347):

<https://legiscan.com/MS/text/SB2347/2013>

Literacy Based Promotion Act, 2016 Legislative Session (MS SB 2157):

<https://legiscan.com/MS/text/SB2157/id/1390375>

Excellent Public Schools Act of 2021, 2021 Legislative Session (NC SB 387):

<https://www.ncleg.gov/Sessions/2021/Bills/Senate/PDF/S387v4.pdf>

Fulton County Schools “Every Child Reads” Literacy Plan:

[https://go.boarddocs.com/ga/fcss/Board.nsf/files/C2YPCY63FB7A/\\$file/FCSBridge\\_BoardMeeting\\_5-13-21.pdf](https://go.boarddocs.com/ga/fcss/Board.nsf/files/C2YPCY63FB7A/$file/FCSBridge_BoardMeeting_5-13-21.pdf)

Mississippi Department of Education report detailing specifics of LBPA implementation

strategies: [https://www.mdek12.org/sites/default/files/Offices/MDE/OAE/OEER/Literacy/LBPA/SECC\\_MDE\\_Strong\\_Readers\\_Strong\\_Leaders\\_Report\\_final\\_22916.pdf](https://www.mdek12.org/sites/default/files/Offices/MDE/OAE/OEER/Literacy/LBPA/SECC_MDE_Strong_Readers_Strong_Leaders_Report_final_22916.pdf)

2014 Mississippi Code for Literacy Based Promotion Act:

<https://law.justia.com/codes/mississippi/2014/title-37/chapter-177/>

Mississippi Department of Education 2017 Mississippi Comprehensive Literacy Plan:

[https://www.mdek12.org/sites/default/files/mclp-7-16-2017\\_final-\(1\).pdf](https://www.mdek12.org/sites/default/files/mclp-7-16-2017_final-(1).pdf)

Reading on Grade Level in Third Grade: How is it Related to High School Performance and College

Enrollment: <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.715.5162&rep=rep1&type=pdf> -> This study by the University of Chicago analyzes education outcomes against the third grade reading level.

Double Jeopardy: How Third-Grade Reading Skills and Poverty Influence High School Graduation:

<https://files.eric.ed.gov/fulltext/ED518818.pdf> -> This study shows how poverty relates to third grade reading levels and high school graduation rates, and explores the greater issue of generational illiteracy and poverty.

Third-Grade Reading Policies. Reading/Literacy: Preschool to Third Grade:

<https://files.eric.ed.gov/fulltext/ED560984.pdf> -> This paper identifies intervention and support programs and policy for pre-k – 3<sup>rd</sup> grade readers in states across the United States.

*Literacy Based Promotion Act Research and Overview:* <https://files.eric.ed.gov/fulltext/ED613758.pdf> ->

This paper gives an in depth overview on the effects the LBPA has had on Mississippi education outcomes.

National Reading Panel Report - Teaching Children To Read: An Evidence-Based Assessment of the Scientific Research Literature on Reading and Its Implications for Reading Instruction:

<https://www.nichd.nih.gov/sites/default/files/publications/pubs/nrp/Documents/report.pdf>

Mississippi Department of Education 2022 Budget Request:

[https://www.mdek12.org/sites/default/files/mde-k12\\_fy\\_22\\_budget\\_request-senate\\_appr\\_education\\_subcommrev.pdf](https://www.mdek12.org/sites/default/files/mde-k12_fy_22_budget_request-senate_appr_education_subcommrev.pdf)