Colorado Universal Preschool: Emergent and Early Literacy Alignment

2024 Recommendations

COLORADO
Department of Early Childhood

Prepared by
RMC Research Corporation

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Prepared for:

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Prepared by:

Jessica Sidler Folsom, Ph.D.
Sarah Hughes
Robin Jarvis, Ph.D.
Verónica Ruiz De Castilla, Ph.D.
Steven Dick, Ph.D.
Samuel Glickman
Kimilee Norman-Goins

RMC Research Corporation
3550 Buschwood Park Dr., Suite 270
Tampa, FL 33618

Marcia Kosanovich, Ph.D.
MK Educational Research & Practice, LLC

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EXECUTIVE SUMMARY

One of the greatest prevention strategies for reading difficulties is early identification, instruction, and intervention, which should begin in preschool through alignment with the Science of Reading (Snow et al., 1998; Foorman, 2020)**.** Preschools should focus on developing emergent literacy skills—phonological awareness, print knowledge, oral language, and vocabulary (National Early Literacy Panel, 2010)—which are pivotal to overall reading development and the precursors to the five foundational elementary reading skills (phonemic awareness, phonics, fluency, vocabulary, comprehension; National Reading Panel, 2000). To meet the emergent literacy needs of developing readers before they begin kindergarten, all Colorado Universal Preschool providers, regardless of setting, must understand the Science of Reading and develop the skills needed to use evidence-based and developmentally appropriate practices aligned with the Science of Reading (Herrera et al., 2021; Kosanivich, 2020).

Colorado is a leader in Science of Reading policy and implementation in Grades K-3 through the Colorado READ Act, which can provide a strong foundation to inform and guide the alignment of the Colorado Universal Preschool program to the Science of Reading. The Science of Reading as it applies to preschool aligns well with Colorado's Early Learning & Development Guidelines, Academic Standards, and the Head Start Early Learning Outcomes. Additionally, Colorado has a strong history of including students with individualized education plans (IEPs), including bilingual instruction in preschool, and supporting exceptional learners through the Colorado Preschool Program. Lessons learned in these areas through the Colorado Preschool Program should be applied to the inclusion of these students and the Science of Reading in the Colorado Universal Preschool program.

Creating and sustaining universal preschool programs are nationwide challenges that involves many considerations, such as funding, oversight, ensuring quality, and removing barriers to building a qualified workforce. Although nearly all states have passed Science of Reading legislation, very few address preschool in a substantial way (Neuman et al., 2023). **There has been minimal true crossover of the Science of Reading into universal preschool program systems.** There is currently no sole source on successful implementation of the Science of Reading for preschool policy in a mixed delivery universal preschool program like Colorado's. No state has implemented every one of the recommendations. **Colorado has a unique opportunity to be a national leader in its effort to align Colorado Universal Preschool with the Science of Reading for preschool.**

The 22 recommendations in this report regarding how to incorporate the Science of Reading into Colorado Universal Preschool are targeted to three audience groups and organized into five categories. The **Strengthening Leadership for Colorado Universal Preschool Alignment** and **Alignment and Coordination recommendations** primarily apply to

state-level policymakers and focus on incorporating the Science of Reading into the Colorado Universal Preschool program and ensuring alignment between the Science of Reading in preschool and the K-12 system. Recommendations in the **Educator Preparation and Support category** focus on ensuring that preschool providers and educators receive the support needed to understand and apply the Science of Reading through a statewide professional development approach, such as through the integration of the Science of Reading into educator preparation programs and collaborations with higher education institutions. The recommendations are targeted to those at the state and local levels interested in workforce preparation and those who support implementation and delivery. Recommendations in the last two categories are primarily for Colorado Universal Preschool providers and educators. The **Instructional Approaches and Student Supports category** is intended to guide Colorado Universal Preschool providers and educators on evidence-based and developmentally appropriate teaching practices aligned with the Science of Reading, while the **Family and Community Engagement recommendations** seek to support providers and educators in improving family and community involvement in preschool language and literacy development.

Along with the 22 recommendations, there are 6 action steps for Colorado to take to align Colorado Universal Preschool with the Science of Reading. All recommendations are intended to be flexible and adaptive to the various challenges of providing a universal preschool program. An action plan to begin to address this process includes the following six steps:

1. **Identify** the key leaders and decision makers to guide the integration of the Science of Reading into the Colorado Universal Preschool program and engage in shared learning.
2. **Review** the 22 recommendations to identify and prioritize the recommendations that resonate and align most closely with the goals and priorities of Colorado Universal Preschool.
3. **Explore** existing data or identify data that needs to be collected to understand current practices and implementation related to the prioritized recommendations.
4. **Analyze** data to understand root causes and identify needs, gaps, and barriers related to the prioritized recommendations.
5. **Use** the data from step four to develop a plan for action that prioritizes short- and long-term goals and action steps to meet the needs around the recommendations.
6. **Implement** the plan and re-evaluate progress towards short- and long-term goals.

INTRODUCTION

> Learning to read is a matter of equity. Ensuring that every child has the opportunity to learn is essential (Connors-Tadros, 2024). The importance of learning to read in preschool cannot be argued.

Decades of research suggest that preschool enrollment improves postsecondary outcomes, including a 5.9 percentage point increase in the likelihood of attending a four-year college (Gray-Lobe et al., 2023). The development of strong language and emergent literacy skills during preschool is also important. Research consistently suggests that emergent early literacy skills predict reading development through adolescence (National Early Literacy Panel, 2010; Suggate et al., 2018). Educators play a critical role in helping young children foster these skills. To do so, preschool educators must be equipped with the knowledge and skills necessary to provide high-quality emergent literacy instruction aligned with the Science of Reading (Beecher et al., 2016).

> "Preschool programs, even those designed specifically as interventions for children at risk of reading difficulties, should be designed to provide optimal support for cognitive, language, and social development, within this broad focus. However, ample attention should be paid to skills that are known to predict future reading achievement, especially those for which a causal role has been demonstrated" (Snow et al., 1998, p. 9).

In 2022, the Colorado Department of Early Childhood (CDEC) was awarded funding to implement activities responsive to the Preschool Development Grant Birth through Five Planning Grant (PDG B–5). Activities undertaken pursuant to the Planning Grant built upon work done in prior iterations of Colorado's PDG B–5 initiative, including the Early Literacy Grant Preschool Expansion project, which fostered literacy instruction alignment between participating preschools and elementary schools. To advance this work, Planning Grant funds supported RMC Research, in collaboration with the CDEC and Colorado Department of Education (CDE), to develop this report and recommendations that promote the alignment of Colorado's new universal preschool program, Colorado Universal Preschool, with the Science of Reading. The target audience for this report is individuals at the state, regional, and provider levels who support students in Colorado Universal Preschool. Thus, the focus is on critical literacy development of children ages 3 to 5.

Whereas the Colorado READ Act focuses on *early literacy* and the Science of Reading in the *early elementary grades* (C.R.S. 22-7-12), the focus of this report is on *emergent literacy* and the Science of Reading for *preschool* (see Key Terms). The Science of Reading for preschool

targets the development of language and emergent literacy skills, which ultimately lead to the early literacy skills necessary for grade-level reading by third grade.

The Colorado Universal Preschool statute supports such alignment, including a goal for the program to "Promote literacy, as developmentally appropriate based on the Science of Reading by providing language development, including speech sounds, vocabulary, grammar, and use, and providing developmentally appropriate instruction to support children's success in early elementary grades when receiving instruction pursuant to the 'Colorado READ Act,' part 12 of article 7 of title 22, in the areas of phonemic awareness; phonics; vocabulary development; reading fluency, including oral skills; and reading comprehension" (C.R.S. 26.5-4-205(3)(a)(III)).

The research base for the Science of Reading is substantial, but there is no unified method to apply it within mixed delivery universal preschool programs (see Key Terms). This is true even though longer-standing state preschool programs nearly all use some kind of mixed delivery. Thus, the recommendations in this report emerge from the available evidence base, state exemplars, and the Colorado context. The resulting recommendations, if implemented, would promote equitable access to high-quality, evidence-based literacy instruction based on the Science of Reading that meets the needs of all learners, including multilingual learners, learners with disabilities, and learners with exceptionalities, regardless of setting.

The path to aligning Colorado Universal Preschool with the Science of Reading is paved by a long history related to both reading and preschool legislation in Colorado (see timeline on page 6). For example, in 1988, the Colorado Preschool Program was established; in 2012, the original legislation for the Colorado READ Act was signed; and in 2022, Colorado Universal Preschool was established and launched in 2023.

The goal of this report is three-fold:

1. Review the research on the Science of Reading for preschool along with evidence-based instructional practices that support all learners;
2. Review policies around the implementation of the Science of Reading for preschool; and
3. Provide an action plan and state-, regional-, and provider-level recommendations for aligning Colorado Universal Preschool with the Science of Reading.

The process of developing this report and its recommendations is fully detailed in the methods section. This is followed by the results section, which summarizes research and policies related to the Science of Reading for preschool. The report concludes with the recommendations and an action plan for aligning Colorado Universal Preschool with the Science of Reading for preschool.

Key Terms

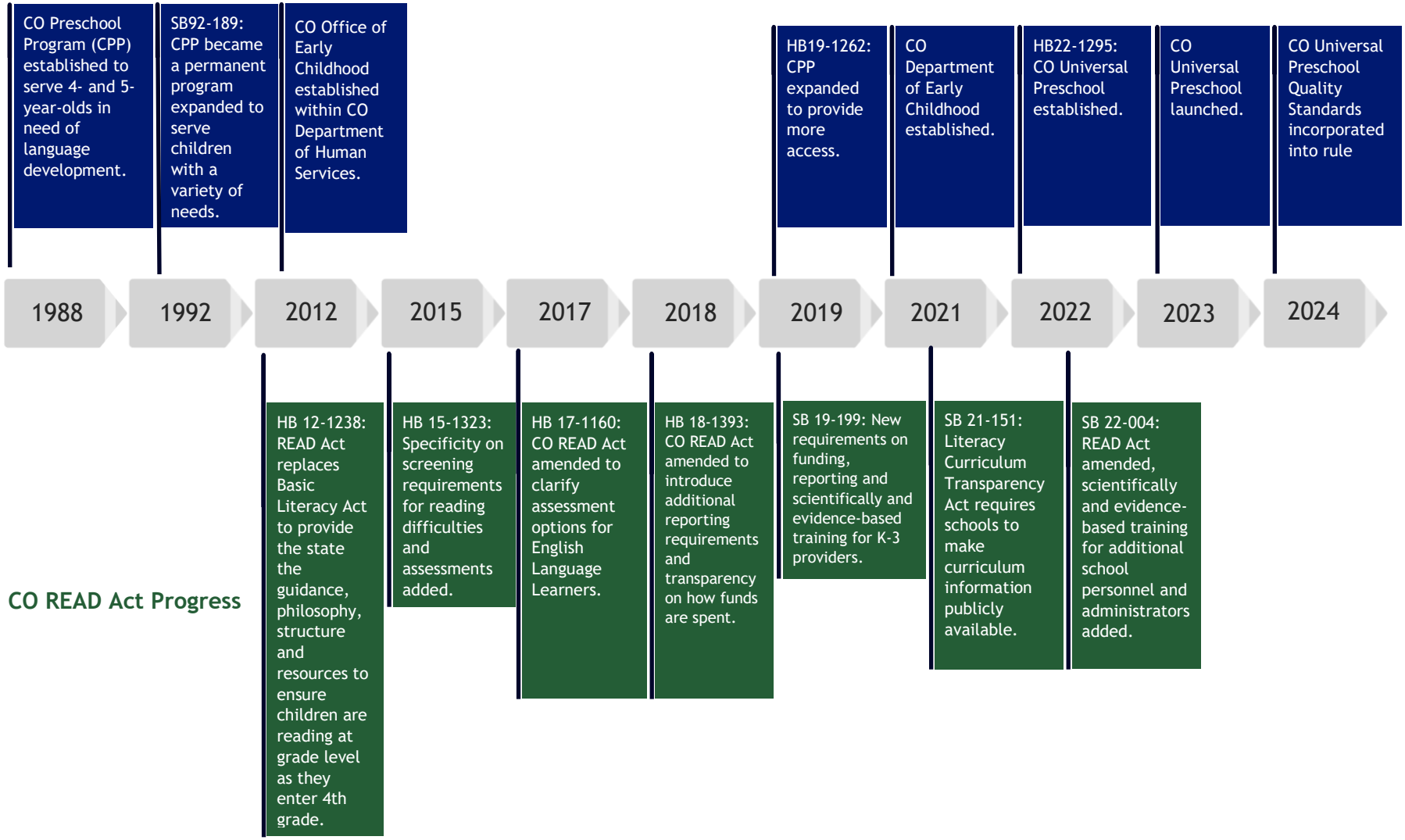
Colorado Universal Preschool is used to identify the program established within the CDEC pursuant to section 26.5-4-204, C.R.S., and includes all participating preschool providers. When discussing universal preschool programming broadly (not specific to Colorado), the term *"universal preschool program"* will be used.

A **mixed delivery system** is defined as a "system for delivering preschool services through a combination of school- and community-based preschool providers, which include family child care homes, child care centers, and Head Start Agencies, which are funded by a combination of public and private money" (p.172, 26.5-4-203(12), C.R.S.). Colorado Universal Preschool includes the following types of mixed delivery providers: family child care home, child care center, school district licensed to operate as a public preschool provider, a charter school licensed to operate as a public preschool provider, or a Head Start program as described by 26.5-4-203(14), C.R.S.

Due to the diversity of settings and personnel within a mixed delivery system universal preschool programs, the terms "**provider**" and "**educator**" are used instead of "classroom" and "teacher." Classroom and teacher are reserved for referring to the K-12 setting, or when used in a direct quote, or in reference to another state's programming.

In this report, references to the **Science of Reading for preschool** and **emergent literacy** are equivalent to "early language and literacy development and the Science of Reading that is appropriate for early childhood education" as written in C.R.S 26.5-4-205(2)(e). Similarly, unless otherwise noted, references to **early literacy** refer to early elementary grades.

Progress Towards CO Universal Preschool



METHODS

Methods Overview

To develop the recommendations in this report, we first conducted a literature review to gather research and evidence-based practices related to the Science of Reading for preschool. Next, we conducted a policy review that included documentation from national reports and analyses of six influential states. Then, we conducted a crosswalk between the research, policy, and Colorado's legislation, rules, and standards. The information from the literature review, policy review, and crosswalks was compiled to identify critical recommendations to ensure alignment between Colorado Universal Preschool and the Science of Reading. The results of the comprehensive literature review, policy review, and crosswalks can be found in the supplemental document. Details for each step of the process are described next. A timeline for report creation can be found at the end of the methods section.

Literature Review

This report provides an overview of the following topics:

- The Science of Reading, emergent literacy, preschool language and literacy development
- Evidence-based practices in early childhood education
- Application of the Science of Reading with diverse populations, including multilingual learners, learners with disabilities and dyslexia, and learners with exceptionalities

The literature review within this report focuses on seminal and critical reports that include systematic reviews and meta-analyses of research on the Science of Reading and preschool language and literacy that meets the highest level of scientific rigor:

- Preventing Reading Difficulties in Young Children (National Research Council, Snow et al., 1998)
- National Reading Panel Report (National Institute of Child Health and Human Development [NICHD], 2000)
- National Evaluation of Early Reading First: Final Report (Jackson et al., 2007, 2011)
- Developing Early Literacy: Report of the National Early Literacy Panel (NICHD, 2010)
- Effectiveness of Early Literacy Instruction: Summary of 20 Years of Research (Herrera et al., 2021) and Coordinating Emergent Literacy Professional Learning Community (Kosanovich, 2020)

Additional research findings are included to support and provide further detail and context. As much as possible, this additional literature is limited to the last decade.

Policy Review

The policy review and state summaries focus on the most current reports and data available from reputable research and policy organizations known for high-quality dissemination. The specific topics included in the policy review are:

- Preschool to K–3 alignment
- Mixed delivery preschool
- Science of Reading and dyslexia legislation
- Considerations for diverse populations (multilingual learners, learners with disabilities and dyslexia, and learners with exceptionalities)

The review process began with a focus on the following critical reports:

- Reading Reform Across America (Neuman et al., 2023)
- Comprehensive Early Literacy Policy Toolkit (ExcelinEd, 2022b)
- State of Dyslexia (National Center on Improving Literacy, 2023)
- National Survey of Early Care and Education (Datta & David, 2023)
- State of Preschool Yearbook (National Institute for Early Education Research [NIEER], Friedman-Krauss et al., 2023)
- State(s) of Early Intervention and Early Childhood Special Education: Looking at Equity (NIEER, Friedman-Kraus & Barnett, 2023)
- State of the States in Gifted Education (National Association for Gifted Children and the Council of State Directors of Programs for the Gifted, Rinn et al., 2022)
- Supporting Multilingual Learners in State-Funded Preschool (NIEER, Friedman-Kraus et al., 2018)

RMC looked to six states for implementation of mixed delivery preschool and the Science of Reading. Alabama, Kansas, Massachusetts, Michigan, South Carolina, and Wisconsin were selected based on demographic factors, universal preschool program experience, and their commitment to the Science of Reading. Table 1 provides high-level contextual information on the states included in the policy review.

It is important to note that the most current, publicly available data at the time of report writing (fall 2023, see report creation timeline on page 10) was used. In most cases, the most recent data was based on the 2021-22 school year. Colorado Universal Preschool began in the 2023-24 school year; therefore, the data available for Colorado were based on the Colorado Preschool Program (CPP), which was not a universal preschool program and was not a mixed delivery model. Report authors acknowledge that this difference is far beyond a language

difference and is an entirely different approach and system. However, lessons learned during the CPP can be used to inform considerations in Colorado Universal Preschool.

Table 1
Overview of States Included in Policy Review

	AL	KS	MA	MI	SC	WI
Universal preschool program progress	Progress towards a universal preschool program without legislative mandate	State Pre-K, no specific commitment to a universal preschool program	State Pre-K, no specific commitment to a universal preschool program	Governor support for a universal preschool program with some progress towards it	State Pre-K, no specific commitment to a universal preschool program	Universal preschool program
Preschool delivery	Mixed delivery	Mixed delivery	Public schools	Mixed delivery[1]	Mixed delivery	Mixed delivery[2]
Child eligibility	All age-eligible	Individual child or family characteristics	All age-eligible	Individual child or family characteristics	Individual child or family characteristics	All age-eligible
Science of Reading for preschool	Science of Reading laws do not specifically address preschool	Science of Reading laws do not specifically address preschool	Science of Reading laws do not specifically address preschool	Science of Reading laws clearly address preschool	Science of Reading laws clearly address preschool	Science of Reading laws do not specifically address preschool

Source: Authors' analysis; Friedman-Krauss et al., 2023; Neuman et al., 2023

Standards Crosswalk

A crosswalk was developed with three key documents: Colorado's Early Learning & Development Guidelines, the Preschool and Kindergarten Academic Standards, and the Head Start Early Learning Outcomes Framework. This crosswalk demonstrates how each document aligns with the following critical elements:

- Core components of the Science of Reading for preschool: oral language, vocabulary, phonological awareness, print knowledge, and reading readiness
- Evidence-based instructional content: instruction focused on developing both code- and meaning-focused skills
- Developmentally appropriate, evidence-based instructional practices: fostering literacy development in print-rich environments, offering explicit and purposeful

[1]The intermediate school district distributes funds to districts and local providers in community-based settings.
[2]Public Schools may subcontract and collaborate with community providers.

instruction, and implementing sequential, developmentally appropriate learning, as well as inclusive and culturally responsive practices

Recommendations

The final recommendations were produced by finding common themes across the literature and policy reviews as well as exemplars of states' implementation efforts. A framework of broad considerations was developed based on these themes. It is important to note that although this report focuses on the Science of Reading for preschool, much of the current information on policy and implementation is targeted at early elementary grades. Therefore, each of the broad recommendations was determined by asking: *How does, or might, this relate to a mixed delivery universal preschool program?* Thus, some of the recommendations provided in this report are presumptions based on what is known about the Science of Reading, evidence-based practices, effective implementation, and the context of Colorado Universal Preschool. The recommendations are organized around the following themes derived from research and policy:

- Strengthening Leadership for Colorado Universal Preschool Alignment,
- Alignment and Coordination,
- Educator Preparation and Support,
- Instructional Approaches and Student Support, and
- Family and Community Engagement.

Recommendations Crosswalk

The final recommendations were cross-walked against:

- Colorado READ Act, which establishes the guiding philosophy, structure, and resources to get children reading at grade level by the time they enter the fourth grade;
- House Bill 22-1295 and Colorado Revised Statutes 26.5, which establishes Colorado Universal Preschool; and
- Code of Colorado Regulations 8 CCR 1404-1, which provides Colorado Universal Preschool rules and regulations.

The intent of this crosswalk is to show the connections between each of the 22 recommendations and Colorado-specific language in legislation, rules, and standards that conceptually relate. Because the recommendations are specific to the Science of Reading for preschool, it was unlikely to find direct matches or alignment with current legislation, rules, and standards, as Colorado has not yet incorporated the Science of Reading in this setting. The intent of this report is to find ways to promote the Science of Reading for preschool within Colorado Universal Preschool.

Expert Partner Input

Throughout the process, internal and external experts on the Science of Reading, policy, and mixed delivery preschool were consulted for direction and input. RMC met regularly with teams from the CDE and CDEC to provide updates, ask questions, and address any concerns. Early drafts of the report were shared with multiple Colorado partners for review and feedback. RMC received valuable feedback from Early Milestones Colorado, Early Years Forward, and CDEC staff. Valuable feedback was also received from the Early Childhood Leadership Commission Program Quality, Alignment, and Access Subcommittee.

Report Creation Timeline

RESULTS OVERVIEW

This section of the report provides a high-level overview of the results from the literature and policy reviews. It begins with an overview of research on the Science of Reading for preschool with an emphasis on what is known about how reading develops and the critical skills that develop in preschool. Next is an overview of research on evidence-based practices for teaching emergent literacy skills in preschool. This is followed by research and considerations for special populations, such as multilingual learners, learners with disabilities, and learners with exceptionalities. The comprehensive literature review that informed this report can be found in Chapter 1 of the supplemental document.

The literature review is followed by an overview of Science of Reading policies and their implementation in preschool. This section begins with an overview of universal preschool programs and Science of Reading policies in preschool. Because there is little cross-over between universal preschool policies and Science of Reading policies, we identify preschool policies with potential connections to the Science of Reading. Next in this section we provide specific examples of how the states included in the review are addressing the Science of Reading for preschool. This is followed by specific examples of how states are addressing the needs of special populations such as multilingual learners, learners with disabilities, and learners with exceptionalities. The section ends with an overview of how states support preschool educators in ways that might also support emergent literacy development. The comprehensive policy review (Chapters 2 and 3), including data tables (Chapter 6), that informed this report can be found in the supplemental document.

Following the policy review is an overview of how the Science of Reading is addressed in Colorado's preschool standards and guidelines. The review of Colorado's standards and guidelines (Chapter 4), including data tables (Chapter 6), can be found in the supplemental document.

All the information from the literature review, policy review, and crosswalks was used to then inform the recommendations. A detailed analysis of how the recommendations were developed can be found in Chapter 5 of the supplemental document.

The Science of Reading for Preschool

The foundation of this report is understanding the Science of Reading. The Science of Reading refers to the body of knowledge concerning literacy development and best practices for reading instruction based on research and brain science (Petscher et al., 2020). It encompasses all ages and stages of development; learning to read begins at birth when children build their oral language skills. Learning to read is a process that builds over time, with each new skill adding to the one before. Keep in mind, though, that literacy is not just a skill; it is also an experience of care from a trusted adult. For young children, a love of books and the magic they offer is intrinsically tied to the caring routines and interactions they experience with trusted adults.

> "As early as infancy, young children become aware of sounds in spoken words (phonemic awareness) and build their oral language skills through interactions with supportive adults and friends through multiple experiences, such as listening to books and storytelling, singing, and imaginative play. In preschool, families, educators, and caregivers promote learning to read by building oral language skills, developing awareness and familiarity with print and letters, and beginning to write their names. These activities provide preschool children with exposure to letters and sounds in a playful manner that encourages reading, writing, and comprehension as they enter the early elementary grades" (National Association of State Leaders in Early Education, Connors-Tadros, 2024, p. 2).

It is crucial to understand that although language and literacy are highly connected, they are quite different. Human brains are naturally wired to listen and speak, so in the absence of certain disabilities or developmental delays, language learning will happen naturally without specific instruction or intervention. However, human brains are not naturally wired to read and write, and in the absence of instruction and intervention, a child will not learn to read (Moats & Tolman, 2009).

Neither reading nor writing are naturally occurring abilities.

Human brains are not naturally equipped for reading or writing; these skills require systematic and explicit instruction.

The Science of Reading is based on at least five decades of research conducted around the world in multiple languages to understand how reading and writing develop. It is consistent across languages, disability status, and exceptionalities. Much of the Science of Reading and evidence-based practices come from research on preventing and intervening in reading difficulties.

One of the greatest prevention strategies for reading difficulty is early identification, instruction, and intervention. This knowledge base informs the instruction and intervention needed to ensure equitable access to written language. The focus in preschool is on developing oral language and emergent literacy skills, which research has shown is pivotal to overall reading development.

At the preschool level, the focus is not specifically on teaching reading. The focus is on developing the emergent literacy skills that lead to reading.

Emergent Literacy

is the basic building block for learning to read and write. It begins developing in early infancy and early childhood through participation with adults in meaningful activities involving talking, sounds, and print.

Early Literacy[3]

includes everything a child knows about reading and writing before they can read. These skills include print motivation, print awareness, letter knowledge, vocabulary, phonological awareness, and narrative skills.

Reading

involves deriving meaning from print. Many skills are involved in fluently decoding words and attaching meaning to words. The foundational skills are *phonological/phonemic awareness, phonics, fluency, vocabulary, and comprehension.*

The foundational skills of emergent and early literacy in preschool are oral language, vocabulary, phonological awareness, and print knowledge.

Figure sources: Baker et al. (2017); Colorado Libraries for Early Literacy (2023); and Kosanovich et al. (2020).

The first comprehensive synthesis of research on reading development was the National Research Council's report *Preventing Reading Difficulties in Young Children* (Snow et al., 1998). This report explored empirical research on reading development and provided evidence-based strategies and practices for educators and policymakers to identify and address potential reading difficulties in early childhood. In 2000, the *National Reading Panel* (*NRP*) report was published. The experimental research reviewed in the report led to a body of evidence-based skills essential for all readers: phonemic awareness, phonics, fluency, vocabulary, and comprehension. It is one of the most referred-to sources on the Science of Reading and has led to significant legislation, such as the Colorado READ Act.

While the *NRP* report focused primarily on kindergarten to third grade students, a subsequent report, the *National Early Literacy Panel* (*NELP*; 2010) report, focused on emergent literacy skill development in birth through five-year-olds and included the best available evidence of early predictors and instructional practices. The *NELP* report identified six variables—

[3]Definition from research literature on the Science of Reading and may include early literacy skills developed before kindergarten. In the Colorado READ Act, early literacy refers to K-3 reading.

precursor skills, or emergent literacy skills that predicted later literacy: alphabet knowledge, phonological awareness, rapid automatic naming of letters or digits, rapid automatic naming of objects or colors, writing letters or name writing, and phonological memory.

The *NELP* report also highlighted five additional emergent literacy skills correlated with later literacy skills: print knowledge, concepts about print, reading readiness, oral language, and visual processing. It is important to note that these additional five emergent literacy skills are less consistently predictive than the first six; these variables do not always continue to predict literacy outcomes once other variables, such as alphabet knowledge or phonological awareness, are statistically controlled for. It is these 11 variables that set the foundation for young children to develop the essential skills identified in the *NRP* that form the foundation of successful reading with comprehension. An analysis of the alignment between the *NELP* variables and *NRP* essential skills that form the basis of the Science of Reading can be found in Table S1.1 of the supplemental document.

What is known about reading development, instruction, and intervention is appropriate for all students, including multilingual learners, learners with disabilities, learners with exceptionalities, and learners that fall into the intersection of multiple categories.

Reading is complex, and learning to read is complex (Connors-Tadros, 2024). At the basic level, reading can be understood as an equation, known as the Simple View, of decoding multiplied by language comprehension to equal reading comprehension (Gough & Tunmer, 1986). For reading comprehension to occur, one must have the ability to decode and comprehend language.

Reading comprehension can also be understood as **code-focused** and **meaning-focused** skills. Code-focused skills are those that help the reader go from text to words; meaning-focused skills are those that help the reader go from words to meaning. Skilled readers must have both sets of skills.

There are five foundational skills of reading at the elementary level, which can be categorized as **code-focused** (phonological/phonemic awareness, alphabet knowledge/phonics, and sometimes fluency) or **meaning-focused** (vocabulary, comprehension, and sometimes fluency). In preschool, the goal is to develop emergent literacy skills that are precursors to the five foundational elementary reading skills. The combination of these emergent and early literacy skills makes up a child's reading readiness—their readiness to learn to read.

Research has identified the key emergent literacy skills from ages three to five years old. From preschool to kindergarten, the following developmental continuum is expected for optimal literacy development (see Table 2; Kelley, 2021; Snow, 2006).

Table 2
Emergent literacy skills for 3-, 4-, and 5-year-olds look different.

3-year-old	4-year-old	5-year-old
Listens when read to	Recites alphabet	Recognizes text features, including titles and authors
Knows how to hold books upright and turn pages	Recognizes many letters	Names and writes most letters
Understands most pictures in books	Makes connections between stories and life	Engages with stories through questioning and connections
Distinguishes print from pictures	Produces rhymes or alliterations	Recognizes and spells simple words
Recognizes some letters	Pretend writes or draws to communicate ideas	Uses invented spelling to communicate ideas in writing

Research further suggests four critical foundational skills for preschool-aged students: oral language, vocabulary, phonological awareness, and print knowledge. Those skills can also be categorized as **code-focused** (phonological awareness and print knowledge) or **meaning-focused** (oral language and vocabulary). Table 3 provides a definition for each of the critical foundational skills for preschool-aged students along with the related reading skill that skilled readers have mastered.

Table 3
Foundational skills in preschool are related to later reading skills.

Foundational Skill	Definition	Related Reading Skill
Code-Focused		
Phonological awareness	The ability to detect, manipulate, or analyze the auditory aspects of spoken language (including the ability to distinguish or segment words, syllables, or phonemes) independent of text or meaning.	Phonological/Phonemic awareness
Print knowledge	Knowledge of the names and sounds associated with printed letters, print conventions, and beginning writing.	Phonics/Alphabetic knowledge Fluency
Meaning-Focused		
Oral language	The ability to produce or comprehend spoken language, including vocabulary and grammar. This also includes narrative skills.	Vocabulary Comprehension Fluency
Vocabulary	Knowing what words mean (receptive) and how to say and use them correctly (expressive).	Vocabulary Comprehension

Table sources: Burchinal et al. (2022); National Institute of Child Health and Human Development (2010); Herrera et al. (2021); Kosanovich et al. (2020); National Reading Panel (2000); and Snow et al. (1998)

Evidence-Based Practices

This next section addresses how what is known about the Science of Reading for preschool has informed evidence-based practices. The Science of Reading helps us understand the instruction preschool students must receive to develop into proficient readers. Evidence-based practices aligned with the Science of Reading incorporate both code-focused and meaning-focused instruction and activities. **Regardless of the preschool setting, these practices can be incorporated into daily routines.** Table 4 describes evidence-based reading instruction for code- and meaning-focused skills.

Table 4
Evidence-based preschool reading instruction is both code-focused and meaning-focused.

Code-Focused Instruction
Includes explicit lessons on the structure of spoken words and includes phonological and phonemic awareness using embedded throughout the day and taught along a continuum.
Builds children's knowledge of sounds and letters, including frequent regular spelling-sound relationships and understanding of how sounds are represented alphabetically.
Engages children through exploratory writing to learn the nature of the alphabetic writing system.
Meaning-Focused Instruction
Builds interest and motivation to read for a variety of purposes and includes comprehension instruction to obtain meaning from print.
Includes print referencing during dialogic reading (interactive reading) and uses shared book reading to develop children's language, knowledge of print features (print knowledge), and knowledge of the world.
Builds children's vocabulary and oral language and features explicit instruction for specific words with an intentional scope and sequence for lessons.
Includes multi-turn conversations, peer-to-peer language interactions, and embedded brief language interactions.
Includes opportunities to build a network of words, uses decontextualized language, and expands on what students say.

Table sources: Burchinal et al. (2022); National Institute of Child Health and Human Development (2010); Herrera et al. (2021); Kosanovich et al. (2020); National Reading Panel (2000); and Snow et al. (1998).

Beyond the "what" of instruction, it is important to consider the "how." Evidence-based practices can and should be embedded into developmentally appropriate routines and follow a developmental continuum (see Table 5). These instructional practices can be incorporated into any Colorado Universal Preschool setting. Again, evidence-based practices for literacy development are appropriate for all students, including multilingual learners, learners with disabilities, learners with exceptionalities, and learners who fall into multiple categories.

Table 5
Emergent literacy instruction should be provided in developmentally appropriate, evidence-based practices.

Evidence-Based Instructional Practices
Explicit and Purposeful Emergent Literacy Skill Instruction Emphasizes the significance of intentional instruction and learning experiences, which are carefully designed to meet specific learning goals and objectives related to foundational literacy skills: phonological awareness, print knowledge, oral language, and vocabulary. This includes continuously assessing children's progress and making instructional adjustments accordingly. For example: ▶ Small-group explicit instruction ▶ Explicit instruction is overtly teaching each step and making the learning goal obvious to the children, making the skill or concept obvious to the child ▶ Differentiated instruction matches instruction to each child's unique needs and abilities
Sequential and Developmentally Appropriate Learning Focuses on the scope and sequence of instructional programming, systematic instruction that includes explicit teaching and opportunities to practice and develop fluency with emergent literacy skills, and providing experiences that help children reach challenging yet achievable goals. For example: ▶ Play-based interactions with educator guidance and scaffolding ▶ Systematic instruction that is carefully thought out, builds on prior learning, and moves from simple to complex ▶ Scope and sequence show the full range of content to be taught and the order ▶ Scaffolded instruction provides feedback to help children demonstrate a skill or concept when they could not otherwise have done so on their own
Literacy Development and Print-Rich Environments Centers on providing opportunities to practice emergent literacy skills (phonological awareness, print knowledge, oral language, and vocabulary) and engaging with print through various strategies. For example: ▶ Providing print-rich environments with ample access to a wide range of text levels, from "baby books" to elementary, on a wide range of topics, including narrative and expository text structures ▶ Engaging in high-quality book reading, such as dialogic reading ▶ Incorporating emergent literacy skills into play to develop critical foundational literacy skills
Inclusive and Culturally Responsive Practices Stresses recognizing and valuing everyone's background and experiences, including the use of high-quality books that reflect children's identities, home languages, and cultures. For example: ▶ Parent and home programs ▶ Connections to home cultures

Table sources: Burchinal et al. (2022); National Institute of Child Health and Human Development (2010); Herrera et al. (2021); Kosanovich et al. (2020); National Reading Panel (2000); and Snow et al. (1998).

Supporting Educators' Implementation of Evidence-Based Practices

The research from the *NRP* report was highly influential in federal reading initiatives such as Reading First and Early Reading First, which came from No Child Left Behind (Lane, 2014). Early Reading First provided grants to districts and organizations that deliver services to prepare 3–4-year-old children to enter kindergarten with the necessary language and cognitive skills for further literacy development. Although the national evaluation of Early Reading First only found a positive impact on children's print and letter knowledge and not on phonological awareness or oral language, it did underscore the importance of effective professional development (Jackson et al., 2011). Specifically, professional development should be continuous, intensive, and focused on providers, emphasizing evidence-based practices that support literacy development in preschoolers. In the U.S. Department of Education guidance for Early Reading First, mentoring and coaching were listed as examples of professional development methods based on scientifically-based reading research.

A best-evidence meta-analysis of language- and literacy-focused professional development confirmed that multi-component professional development with intensive coaching is a viable method of improving language and literacy processes and structures in preschool (Markussen-Brown, 2017). An additional meta-analysis professional development revealed stronger effects when there was more professional development and included coaching (Brunsek et al., 2020). Specific to coaching early childhood educators, a systematic review produced guidelines to help understand the application of coaching and scaling up coaching-focused professional development in early childhood settings (Yang, 2022). For a detailed framework of effective professional development for preschool providers, see the Conceptual Framework for Early Childhood Professional Development from the National Association for the Education of Young Children (1993).

Additional Considerations for Special Populations

While all the previously described strategies and practices are appropriate for all students, there are additional considerations for special populations. It is important for all preschool providers, regardless of setting, to understand they will serve a diverse population. Consistent expectations must be maintained for all learners, including those who are multilingual, have disabilities, or exhibit exceptionalities. These expectations should be standards-aligned, developmentally appropriate, and equitable. Therefore, it is important to understand the unique considerations for these populations beyond what has already been described.

Multilingual Learners

10.5%

of Colorado public school students are multilingual learners[4]

Science of Reading and Multilingual Learners

The Science of Reading and evidence-based practices are effective for both monolingual and multilingual learners. The **focus is on developing multilingualism and multiliteracy**—being able to speak and read in both school and home languages. **Developing oral language in home and school languages** is especially important. **A wide variety of materials** should be available for students to read in all school and home languages. Materials should be culturally and linguistically responsive.

Access to dual-language instruction is encouraged to build foundational literacy skills and positive literacy outcomes in both languages. Instructional practices that **connect the home language and English** benefit language and literacy development. Therefore, it is important to foster a **strong home-school-community connection**.

[4]Source: National Center for Education Statistics (2023)

> "All reviews of research on effective instructional strategies for promoting language and literacy development in ELLs [English language learners] also point to the importance of incorporating ELLs' home languages, where feasible and useful, into instruction; this is particularly true when it comes to pre- and early literacy" (Genesee, 2016, p. 35).

Akin to the seminal work of the *NRP* and the *NELP* is the seminal work of the National Literacy Panel on Language-Minority Children and Youth (August & Shanahan, 2006). Like the *NRP*, this report focused on school-aged children. Nonetheless, the findings are important for preschool children as well. Namely, research indicates that the key components of reading instruction—phonological awareness, phonics, fluency, vocabulary, and comprehension—are applicable to multilingual learners, yet oral proficiency in English is also critical. Additionally, proficiency in the first language and home language experiences positively impact English literacy development, while individual differences and inadequate assessments present ongoing challenges.

> "Not all teachers can teach in all languages, but all teachers can learn specific strategies that support the maintenance of all languages" (National Academies of Sciences, Engineering, and Medicine, 2017, p. 199).

In March 2023, The Reading League and the National Committee for Effective Literacy, two preeminent organizations dedicated to literacy and multilingual learners, held a joint summit discussing the literacy needs of emergent multilingual learners. The conclusions made at that summit were based on decades of research on the reading development of mono- and multilingual learners. Together, they issued a joint statement regarding the implementation of the Science of Reading for multilingual learners (The Reading League, 2023). Broadly, the statement indicated that the Science of Reading and evidence-based instructional practices are appropriate for both monolingual and multilingual learners. There are consistent themes across the literature on supporting multilingual learners (see Table 6).

Table 6
Additional considerations for multilingual learners.

Evidence-Based Practices for Multilingual Learners
Supporting and Maintaining Home Languages in Early Education Acknowledge and support the importance of developing and maintaining the home languages while facilitating English language development in the preschool environment.
Cultural Inclusivity Create an inclusive environment in preschool that supports diverse cultural and linguistic backgrounds, valuing home languages, culture, and bilingualism to foster emergent literacy.
Language Development Emphasize explicit and intentional language instruction focusing on vocabulary, grammar, and oral language development crucial for emergent literacy. Explicit instruction includes modeling, practice opportunities, and scaffolding to support language development.
Tailored and Individualized Instruction Provide individualized instruction that respects and reflects the experiences of young multilingual learners. This includes the use of visuals and realia to make new language, concepts, or skills easier to learn.
Integrated Literacy Approach Support the development of language and print knowledge in all languages. Integrate literacy development into activities using high-quality, culturally responsive materials that foster cross-linguistic connections and metalinguistic awareness.
Comprehension and Meaning-Making Prioritize comprehension, meaning-making, and proper expression in reading over speed and accuracy to support emergent literacy in preschoolers.
Early Childhood Collaborative Learning Encourage interactive activities, group work, and pair work to facilitate collaborative language learning.

Sources: Council of the Great City Schools (2023); Genesee (2016); Herrera et al. (2022); National Academies of Sciences, Engineering, and Medicine (2017)

Learners With Disabilities

Colorado children aged 3 through 5 with an identified disability:[5]

6%

Most common identified disabilities in Colorado children aged 3 through 5:[6]

- 45% developmental delays
- 43% speech or language impairment
- 7% autism
- 5% other disabilities

Science of Reading and Learners With Disabilities

Much of the foundational knowledge on the Science of Reading was formed around the notion of preventing later reading difficulties or reading disabilities. The Science of Reading and evidence-based instructional practices are appropriate for learners with disabilities. **Emphasis should be placed on oral language skills, phonological/phonemic awareness, and letter knowledge.**

Identification of disabilities and eligibility for preschool special education is guided by the Individuals with Disabilities Education Act (IDEA) Part B. Special education is not a place; it is a service. Inclusive education is encouraged for children with disabilities. **Instruction should be embedded in the routines of the preschool setting, focusing on individualized goals, and incorporated into natural moments.** Including students with disabilities in the general education setting does not negatively impact peers' development. It supports positive attitudes and perceptions of peers with disabilities.

Early intervention is a resilience factor against later reading difficulties or disabilities; therefore, screening is a critical step in identifying students who may need additional support. These supports vary in scale, from providing additional information and support to parents, to additional scaffolding and instruction by the preschool instructor, to referrals for formal evaluation and potential early childhood special education or other related services. Even if screening over-identifies students requiring additional support, there is a greater risk associated with not providing such support due to the under-identification of students in need of additional services.

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[5] U.S. Department of Education, Office of Special Education and Rehabilitative Services, Office of Special Education Programs (2023)

[6] U.S. Department of Education, Office of Special Education and Rehabilitative Services, Office of Special Education Programs (2022)

The identification of reading disabilities typically does not occur in preschool. Accurately predicting reading disabilities is difficult because of the need to balance individual developmental differences and exposure to instruction with known risk factors and diagnostic criteria.

Although identifying and predicting reading difficulties is challenging, particularly with multilingual learners and learners from low socioeconomic backgrounds, screening for issues with emergent literacy skills is still recommended. Screening based on known risk factors may include:

- Specific language impairments.
- Family history of dyslexia.
- Early struggles with letter-sound correspondence, the ability to automatically retrieve the name of objects, letters, or colors.
- Deficits in oral language comprehension and receptive and expressive vocabulary.

Learners With Exceptionalities

Colorado school-aged children with an identified exceptionality[7]

7.4%

Colorado school-aged learners with an identified exceptionality are also

- Multilingual – 5.1%
- Twice exceptional – 8.4%

Science of Reading and Learners With Exceptionalities

Learners with exceptionalities, sometimes referred to as "gifted" students, are those with exceptional abilities or potential, including multilingual students and students with disabilities (including difficulties with language and literacy). These children are **from all socioeconomic, racial, ethnic, and cultural populations**. Historically, minorities and students of lower socioeconomic status have been underrepresented. Therefore, it is important for all preschool educators to understand the early signs of exceptionality and provide adequate support to prevent underachievement and promote hidden talents.

Support for exceptional learners focuses on **understanding their interests, preferences for learning, and expression style**. Some research supports advanced placement into kindergarten.

There are several characteristics and traits that are often associated with learners with exceptionalities in preschool. Specific to this report, the most notable characteristics are related to language and learning and are highlighted in Table 7 (Bayraktar, 2017; Chamberlin et al., 2007). However, it is important to note that not all learners with exceptionalities exhibit the same characteristics, and early language development varies among individuals. Additionally, it is crucial to provide specific support in language and emergent literacy skills to help learners with exceptionalities reach their full potential, as these skills are indicative of their future success.

[7] Colorado Department of Education Office of Gifted Education (2021)

Educators can support this development through activities that encourage rich language use, story completion, and communication with children in a manner that promotes expressive and complex language.

Table 7
Preschool educators should be aware of the following signs of exceptionality.

Signs of exceptionality	
Advanced Language Skills	▶ Accelerated language development (e.g., speaking, listening) ▶ Enjoyment of self-expression, especially in discussions ▶ Large vocabulary and understanding of abstract concepts ▶ Early reading and writing abilities
Cognitive Abilities and Learning Traits	▶ Interest in word games, challenging activities, and problem-solving ▶ Fascination with a variety of books, atlases, encyclopedias, calendars, clocks, and puzzles ▶ Extraordinary memory, rapid learning, attention span, and observation skills ▶ Inquisitive nature, asking many questions

Source: Bayraktar (2017); Chamberlin et al. (2007)

The Science of Reading Policy and Implementation in Preschool

States implementing a universal preschool program[8]

10

States with a universal preschool program and Science of Reading legislation that includes preschool[9]

2

Given the complexities of the Science of Reading and the child-level individual differences that impact learning to read, it may seem daunting or far-removed to consider how preschool policies can impact Grade 3 reading success. However, given what is known about the Science of Reading and evidence-based practices, there is research to guide policy. A top recommendation is to accelerate language development for all 3- and 4-year-olds (Foorman, 2020). Policy levers include organizing state education agencies, districts, and schools to focus on literacy, educator preparation, and prekindergarten. However, Foorman also acknowledges that preschool reforms may be the most challenging.

> "Investment in prekindergarten may entail a legislative appropriation, closer structural ties between the state education agency and the department serving young children, and development of early learning standards. Providing all teachers of three- and four-year-olds with free professional development—whether in public prekindergarten, Head Start, or private centers, is an efficient and equitable way to build knowledge of evidence-based practices. Providers of prekindergarten services can be held accountable by gathering data on kindergarten readiness and mapping it back to provider" (Foorman, 2020, p. 4).

Creating and Sustaining Universal Preschool Programs

There has been considerable advancement in creating universal preschool programs. Currently, 10 states have universal preschool program legislation (Friedman-Krauss et al., 2023). Mixed delivery preschool is the standard in early childhood education. It is complex

[8]Florida, Iowa, Oklahoma, Vermont, West Virginia, Wisconsin, and DC are fully implementing universal preschool programs. Georgia, Illinois, Maine, and New York have universal preschool program policies, but they are not fully implemented. Source: Friedman-Krauss et al. (2023). Note that at the time of Friedman-Krauss et al.'s publication (2023), Colorado had not yet begun Colorado Universal Preschool. Colorado Universal Preschool started in the 2023/24 school year.

[9]Source: Authors' analysis.

and includes coordination of various settings such as state-/district-run public schools, Head Start, early childhood special education, private schools, child care centers, private providers, and family child care providers.

Creating and sustaining universal preschool programs is a nationwide challenge. It involves the following considerations: funding streams, regulatory oversight, ensuring quality preschool education, removing barriers to becoming a qualified preschool provider, and meeting the need for child care. Unlike K–12 systems, preschool providers may also be child care providers, which means they are expected to be available when families need them, including those with non-traditional schedules.

Creating and Sustaining Science of Reading Policies in Preschool

Across the nation, the Science of Reading has been an increasingly popular area of policy reform. Some 46 states (and the District of Columbia) have passed legislation related to the Science of Reading; 31 of these mention preschool in the same piece of legislation (Neuman et al., 2023). Yet, this does not translate to true integration of the Science of Reading in preschool policy or implementation. Most states address the Science of Reading in preschool from an alignment of standards approach. This entails assessing the vertical alignment between preschool early learning guidelines and K–3 standards.

There has been little true cross-over or direct implementation of the Science of Reading in a universal preschool program system. In our analysis of the 10 states with universal preschool programs, only 2 extensively include preschool in their Science of Reading legislation.

A Note on Our Approach

The information presented here provides a high-level overview of the Science of Reading policy and implementation in preschool. These results are relevant to the Science of Reading for preschool in a universal, mixed delivery system. In considering these results, it is important to note the following three assumptions:

First, the analysis includes information from policy implementation of the Science of Reading at large, not just in preschool. Lessons learned from elementary legislation and policy can inform considerations for the Science of Reading for preschool.

Second, the analysis was not limited to only universal preschool programs; any state-funded preschool program was investigated. Lessons learned from any publicly funded preschool programming can inform considerations for universal preschool programs.

Third, the most current data available at the time (fall 2023) was used for this report. In most cases, the data reflects the 2021-22 school year, which was before Colorado Universal Preschool was implemented; some findings may reflect the Colorado Preschool Program

(CPP). This difference is far beyond a language difference and is an entirely different approach and system. However, lessons learned during the CPP can be used to inform considerations in Colorado Universal Preschool.

Most states have legislation or policy around the Science of Reading and/or dyslexia with the predominant focus on elementary students. Yet, lessons learned from elementary legislation and policy can be used to inform considerations for the Science of Reading for preschool. Therefore, we did not limit the policy scan to preschool.

Most states also have some type of state-funded preschool in addition to Head Start and early childhood special education. Few states have true universal preschool program legislation or policies. Our belief is that information gathered from any publicly funded preschool programming applies to universal preschool programs. Thus, this information is included in our policy scan.

States vary in how they support their preschool programs, specifically their educators and students (Friedman-Krauss et al., 2023). All states, in their mixed delivery systems, have designated administration and oversight within the state education agency; some are within the Department of Education, and others are their own entity. Further, they all have regional support structures. For example, Wisconsin has a true universal preschool program for all age-eligible preschoolers. Their system is run through the public schools that subcontract and collaborate with community providers. Michigan has a similar approach, with its intermediate school districts being the regional support structures that distribute funds to districts and local providers.

Preschool Policies With Potential Connection to the Science of Reading

All the states analyzed for this report have comprehensive early learning development standards in preschool that are aligned with K–3 standards and include multilingual learners. It is important that these standards are also aligned with the Science of Reading for preschool and all grades. All states have curriculum approval processes for their preschools, but they vary on the supports provided for implementation (Friedman-Krauss et al., 2023). Though not inclusive of preschool, Alabama and Wisconsin address the content of materials in their Science of Reading laws (ExcelinEd, 2022a; National Center on Improving Literacy, 2023).

Understanding how the curriculum and materials approval processes intersect with the Science of Reading for preschool across states may prove beneficial. Though not specific to the Science of Reading, all comparison states have mandated screening in preschool (Friedman-Krauss et al., 2023). Alabama is an exemplar in including vision, hearing, psychosocial, behavioral, and developmental screening. Alabama also requires referrals when screening results deem it necessary. It is worth considering aligning preschool screening with the Science of Reading, particularly as it relates to dyslexia.

Though not specific to the Science of Reading, Alabama, Kansas, Massachusetts, Michigan, and South Carolina all have dedicated processes for supporting the transition to kindergarten

activities (Friedman-Krauss et al., 2023). This may be an area to explore for incorporating the Science of Reading in transition supports through family-home collaborations. Additionally, effective data systems from preschool through K–12 may also support smooth transitions.

The Education Commission of the States has a special report on effective transition supports (Atchison & Pompelia, 2018). One example from Alabama's Transition to Kindergarten Toolkit involves having preschool and kindergarten staff support home learning by encouraging families to read to their children every day. This recommendation is also echoed in Michigan's Essential Practices for Successful Child Transitions. Michigan's Great Start Readiness Program Implementation Manual has extensive guidelines for transitioning families. These include recommendations such as home visits, orientations, and ongoing family communication.

Kansas has a Kindergarten Transitions Toolkit with a template for creating community-based transition teams. One of the recommendations includes data-sharing activities. In Massachusetts, transition plans are part of the evaluation of the effectiveness of early education and care programs. Massachusetts has a free program, Summer Explore Kindergarten Transition, for those children who may benefit the most from summer learning opportunities, for example, multilingual learners and children from low-income families (Atchison & Pompelia, 2018). South Carolina, through its Early Childhood Advisory Council and with technical assistance from the Education Commission of the States, developed a comprehensive transition plan focusing on family engagement in 2021. This plan includes the Pre-K to Kindergarten Transition Toolkit for Families, which describes the language and literacy skills of the "ready kindergartener." Transitions to Kindergarten in Colorado: A Roadmap includes strategies for supporting the transition to kindergarten, and it specifically mentions language and literacy. Additional resources on school readiness have been developed by the Institute for Education Sciences Regional Educational Laboratory Southeast. These resources include descriptions of emergent literacy skills and how to support them.

Colorado's K-3 Science of Reading Policy

Colorado is a leader in Science of Reading policy and implementation in Grades K–3 with the Colorado READ Act. Although the Colorado READ Act is focused predominantly on elementary reading, it does mention preschool in the declaration and context of the state's investment and alignment of state board approved standards. Specifically, Colorado's HB 22-1295 addresses the importance of aligning Colorado Universal Preschool with the Science of Reading in ways that are comparable with the Colorado READ Act. Colorado can use its approach to the Science of Reading via the Colorado READ Act to inform and guide its supports for preschool and be a leader in this area.

Understanding the components of the Colorado READ Act that have met or exceeded the benchmarks established by national experts

can help inform considerations around creating policies and guidelines for implementing the Science of Reading in preschool.

Within the past few years, several state-by-state policy analysis reports have investigated how states address critical recommendations to apply the Science of Reading. ExcelinEd analyzed support for teachers and policy, assessment and parent notification, instruction and intervention, retention, and intensive intervention (ExcelinEd, 2022a). The National Center on Improving Literacy explored legislation specific to dyslexia and other reading disabilities, including screening and identification, teacher training, intervention, and parent notification requirements (National Center on Improving Literacy, 2023). The Reading Reform Across America report surveyed Science of Reading state legislation specific to assessment and student supports, professional development, curriculum and instruction, leadership, teacher preparation, and family and community supports (Neuman et al., 2023).

Across these three reports, Colorado demonstrates strong alignment with national recommendations in its policies supporting the Science of Reading through the Colorado READ Act and dyslexia legislation (for a complete analysis of all benchmarks and supporting documentation, see Table S6.1 of the supplemental document).

Colorado's Science of Reading laws emphasize evidence-based instruction focusing on key literacy skills like phonemic and phonological awareness, phonics, vocabulary, fluency, comprehension, writing, and oral language.

Colorado mandates universal screening using state board approved screeners; screeners identify significant reading risk, including screening for key indicators of dyslexia. Reading plans are developed along with parental engagement. Interventions and progress monitoring are required, and interventions may extend to non-school hours (e.g., tutoring and summer school).

Colorado's dyslexia guidance[10] adheres to Individuals with Disabilities Education Act definitions, using a response to instruction/intervention model for eligibility instead of a discrepancy model. Teachers are provided training on evidence-based interventions within multitiered systems of support or response to instruction/intervention frameworks to ensure literacy support for all students.

Colorado has a comprehensive support system for reading that includes teacher preparation, professional development, coaching, and funding to sustain programs, all aligned with state board approved curricula. Teacher certification and licensure renewal requirements also reflect these priorities.

Colorado emphasizes a focus on family/community engagement, multilingual learners, and culturally relevant instruction.

[10] See Colorado resources used for the State of Dyslexia analysis (National Center on Improving Literacy, 2023).

How Do States Address the Science of Reading for Preschool?

This section provides an overview of how each selected state addresses the Science of Reading for preschool, either in legislation or through guidance documents. The following questions guided the state profiles analysis.

	Who?	Who are the children being served? ▶ Demographic profiles ▶ Student qualifications
	What?	What instruction is being provided? ▶ Standards alignment ▶ Curriculum ▶ Screenings ▶ Parent involvement
	Where?	Where are children being served? ▶ Programs ▶ Service delivery
	When?	When are children being served? ▶ Hours ▶ Days
	How?	How is the system supporting this? ▶ Coordination/funding ▶ Educator preparation/qualifications ▶ Professional development and coaching

Full state summaries can be found in Chapter 3 of the supplemental document. For each state included in the policy review, in the left column, we identify the state's progress towards universal preschool, how it is provided, and who is eligible. The right column provides a high-level summary of ways the state is addressing the Science of Reading for preschool.

Alabama

Progress to a universal preschool program without legislative mandate

Mixed delivery

All age-eligible

Alabama does not have a clear overlap in its Science of Reading legislation with preschool. However, it includes preschool extensively in its *Action Plan for Literacy: Birth Through Grade 12* (Alabama Committee on Grade-Level Reading, 2020). The action plan emphasizes literacy as a fundamental right starting from birth. It has a strong focus on professional development and support for teachers from preschool through Grade 3, including certifications for dyslexia therapists. It also addresses higher education through Science of Reading coursework for initial teacher certification. All regional Alabama Reading Initiative staff undergo advanced coursework on the Science of Reading. The Alabama Department of Early Childhood Education provides education and professional development for families, teachers, and community partners. Its priority action plan outlines three actions for birth through pre-K for the Alabama Department of Early Childhood Education: (a) communicate to parents and child care providers on how to help children develop language skills and the advantages of pre-K and kindergarten, (b) publicly report data on access to pre-K, and (c) train 100% of pre-K teachers in Science of Reading, including new teachers.

Kansas

No universal preschool program

Mixed delivery

Eligibility requirements

Kansas does not have a clear overlap in its Science of Reading legislation with preschool. Kansas does include preschool in its *Dyslexia Handbook* (Kansas State Department of Education, 2023). For preschool, it lists the following risk factors: “Delays in learning to talk; Difficulty learning to pronounce new vocabulary; Difficulty following multistep directions; Difficulty retelling a familiar story in order; Difficulty with rhyming; Difficulty pronouncing words; Poor auditory memory for knowing rhymes or chants; Inability to recall the right word when speaking; and Trouble learning and/or remembering the letters in his/her name” (p. 8). Throughout the handbook, preschool is noted as a window for initial universal screening.

Massachusetts

No universal preschool program

Public schools

All age eligible

Massachusetts does not have a clear overlap in its Science of Reading legislation with preschool. It includes preschool extensively in its *Growing Literacy Equity Across Massachusetts* (GLEAM) program, which is part of the federal Comprehensive Literacy State Development grant funding (Massachusetts Department of Elementary and Secondary Education, 2023). Preschool activities in GLEAM include the following:

- Selection and implementation of preschool literacy screening assessments;
- Selection and implementation of core and supplemental curricular materials for English-language arts;
- Strengthening community partnerships to build comprehensive, evidence-based, inclusive, and culturally responsive preschool literacy plans; and
- Professional learning for district and EEC-licensed community partner educators to support evidence-based preschool literacy practices, use of preschool data in instructional decision-making, and foundation skills (Massachusetts Department of Elementary and Secondary Education, 2023).

Massachusetts includes preschool in its Dyslexia Guidelines (Massachusetts Department of Elementary and Secondary Education, 2020). Specifically, preschool is addressed regarding screening.

"In the context of identifying concerns related to dyslexia, developmental screenings could include, but are not limited to, gathering data on a child's phonological awareness, verbal working memory, name recognition, and letter knowledge" (p. 22).

Michigan

Governor-supported universal preschool program

Mixed delivery

Eligibility requirements

Michigan has a clear overlap between preschool and elementary Science of Reading provisions. Michigan's MI SB 0927, MI SB 845, and MI HB 4411 identify reading proficiency by the end of Grade 3 as one of the goals of early childhood funding for programs from birth through age 8. This legislation provides allocations for reading screening from preschool to Grade 3. It also provides professional development on literacy standards for preschool to Grade 3, as well as on diagnostic data interpretation. It specifically includes phonemic awareness, phonics, fluency, and comprehension as the key components of reading from preschool to Grade 3. In addition, it identifies the five fundamental building blocks of reading instruction as phonics, phonemic awareness, fluency, vocabulary, comprehension, and content knowledge.

It also includes language allowing AmeriCorps Pre-K Reading Corps members to implement research-based early literacy intervention strategies in Great Start Readiness Program (GSRP)/Head Start blended programs. MI SB 845 specifically prioritizes preschool through first grade teachers for professional development on the Science of Reading via the LETRS professional development.

Michigan includes dyslexia screening in preschool in its Michigan Dyslexia Handbook: A Guide to Accelerating Learner Outcomes in Literacy (Michigan Department of Education, 2022). It lists the following as potential reading difficulties in preschool: "Talks later than most children who are the same age; Deletes initial or final speech sounds in words; Stutters; Recognizes a limited number of letter names, colors, or shapes after being provided with quality instruction; Forgets words that were thought to be a part of an existing oral vocabulary; Needs support in following multi-step directions or following common routines; Has trouble recognizing and producing rhyming words" (p. 15).

South Carolina

No universal preschool program

Mixed delivery

Eligibility requirements

South Carolina has a clear overlap between preschool and elementary Science of Reading provisions. South Carolina's Read to Succeed Act requires evidence-based reading instruction starting in preschool. Teachers are required to include evidence-based reading instruction in prekindergarten through Grade 12. This instruction should specifically feature oral language, phonological awareness, phonics, fluency, vocabulary, and comprehension. Teachers should also record and leverage data to inform reading instruction and provide evidence-based interventions as needed so that all students develop proficiency with literacy skills and comprehension (2014 Act No. 284, Section 3, Section 59-155-10 (1)).

Districts' annual reading proficiency plans must include preschool. Reading readiness assessments must be administered in prekindergarten. Within the Read to Succeed website is a direct link to Early Learning information, which reinforces the connection between early learning and literacy and preschool programs. It also includes resources for early learning literacy resources.

Wisconsin

Universal preschool program

Mixed delivery

All age eligible

Wisconsin does not have a clear overlap in their Science of Reading legislation with preschool. Wisconsin does include 4-year-old preschool literacy in reading readiness assessments and requires screening of dyslexia and assessments to evaluate phonemic awareness and letter-sound knowledge (General School Operations, 2023). Wisconsin code specific to reading instruction (118.015) does not address preschool (General School Operations, 2023).

However, it does include 4-year-old preschool and literacy in reading readiness assessments and characteristics of dyslexia (118.016); it requires screening in 4-year-old kindergarten. It does specify that the assessment must evaluate phonemic awareness and letter-sound knowledge.

How Do States Support Multilingual Learners?

In an analysis of states' Science of Reading laws, which are not necessarily specific to preschool, researchers found that, in general, multilingual learners are not addressed extensively (Neuman et al., 2023). All states except for Wisconsin allow for bilingual instruction in preschool (Friedman-Kraus et al., 2018). However, states vary in the selection of services provided, particularly in preschool.

The Colorado Preschool Program (CPP) was noted to have multilingual learner policies that supported preschool families. Bilingual instruction was permitted, and recruitment, enrollment, and outreach for preschool were done in home languages. Lessons learned from CPP can be used to support efforts in Colorado Universal Preschool.

Kansas is the only state with extra funding for preschool multilingual learners. It has the most comprehensive selection of supports for preschool multilingual learners. These supports include the following:

- policies to support preschool families;
- written support plans, bilingual instruction permitted;
- monitoring of bilingual instruction;
- screening/assessment in home language;
- preschool multilingual learners placed in classes with other students with the same home language(s);
- recruitment, enrolling, and outreach for preschool are done in home language(s); and
- home language(s) surveys.

How Do States Support Learners With Disabilities?

Preschool students with identified disabilities are served through IDEA Part B. States have a certain amount of discretion as to how and where these students are served. In Colorado, 4–7% of Colorado's preschoolers had an Individualized Education Plan (IEP; Friedman-Krauss et al., 2023). Because IEP goals should be aligned with academic standards, and Colorado includes reading, writing, and communicating in its preschool academic standards, this is an

opportunity to ensure goals and specially designed instruction are related to the Science of Reading for preschool and evidence-based instructional practices.

The lessons learned from including students with disabilities in the CPP should be used to inform and support preschool students with IEPs in Colorado Universal Preschool.

Prior to Colorado Universal Preschool, CPP included 96% of preschoolers with IEPs in the regular preschool setting (Friedman-Krauss et al., 2023). In contrast, other states ranged from including only 16.2% to 43.7%. This is commendable, as research suggests that the best practice for students with disabilities is to receive their instruction in their natural environment with their typical peers.

How Do States Support Learners With Exceptionalities?

Considering that early reading may be an indicator of exceptionality, it is important to ensure that exceptional learners receive the support they need to develop their reading skills through instructional practices aligned with the Science of Reading. Much of the policy and data around exceptional learners is focused on school-aged children. However, understanding how exceptional learners are supported in the K–12 system may inform supporting them in preschool.

Colorado has established a robust program for gifted students in the K–12 system and provided support to exceptional learners in the CPP. Relying on the expertise used to develop and support this system may be helpful in considering how to support exceptional preschoolers in Colorado Universal Preschool.

Only Alabama, Colorado, Kansas, South Carolina, and Wisconsin have definitions for learners with exceptionalities (Rinn et al., 2022). Three states have dedicated funding for learners with exceptionalities: Alabama, Colorado, and South Carolina. The Code of Colorado Regulations for the State Board of Education specifically addresses the budget for exceptional education (1 CCR 301-8 12.02(2)(k)); more information on the four funding sources in Colorado can be found through the Office of Gifted Education. In the 2020-21 school year, Colorado had six full-time equivalents assigned to gifted education at the state level (Rinn et al., 2022).

Alabama has the most comprehensive selection of supports for learners with exceptionalities across grade levels. Specific to preschool/kindergarten, Alabama has options for whole-grade skipping, subject matter acceleration, differentiation in the general education classroom, push-in programming, cluster classrooms, and consultation. Although Alabama has a mixed delivery preschool system, it is likely that these services are provided in public preschools.

How Do States Support Educators?

The Science of Reading is complex and requires a specific set of knowledge and skills to implement at all grade levels. Teaching children to read is both a science and an art. It is more than talking with children, reading books, and teaching alphabet songs, though it certainly is inclusive of those practices.

All Colorado Universal Preschool providers, regardless of setting, need to be equipped with the knowledge of the Science of Reading to meet the emergent literacy needs of developing readers before they enter kindergarten. Additionally, all Colorado Universal Preschool providers need to be supported in developing the skills and evidence-based practices aligned with the Science of Reading for preschool.

Supporting providers in gaining the requisite knowledge and skills is critical to ensuring preschool children enter kindergarten ready to learn to read. There are a variety of ways to support providers in gaining this knowledge, including, but not limited to, pre-service coursework, initial and ongoing professional development, and integrated coaching and mentoring. Recognizing that Colorado Universal Preschool providers have a range of educational backgrounds and experiences, it is important to consider how all providers can gain the knowledge and skills necessary to support students and align their practices with the Science of Reading for preschool.

This report is focused on the alignment of the Colorado Universal Preschool with the Science of Reading for preschool. However, it is important to understand the value of the vertical alignment of preschool to elementary systems. This includes the cross-training of preschool providers with elementary teachers both in pre-service and in-service development (Stipek et al., 2017). For example, Alabama, Massachusetts, South Carolina, and Wisconsin's teacher credential options span from Pre-K through elementary. Alabama, Massachusetts, Michigan, South Carolina, and Wisconsin require teachers to have a BA and specialized training relevant to Pre-K (Friedman-Krauss et al., 2023). Alabama, South Carolina, and Wisconsin address teacher preparation within their Science of Reading Laws (ExcelinEd, 2022a).

Regardless of credential requirements, all states require professional development for their preschool providers (Friedman-Krauss et al., 2023). However, the content of this professional development can vary greatly. Alabama, Kansas, Massachusetts, Michigan, and South Carolina provide specific funding for curriculum implementation training (Friedman-Krauss et al., 2023). This may be an avenue to consider when providing professional development around

the Science of Reading for preschool in alignment with the curriculums that are available to all providers.

All states have a system for preschool site visits, quality rating and improvement systems, observations, and/or structured observations of preschool provider quality (Friedman-Krauss et al., 2023). Colorado has a robust coaching system in place, which might be used to provide professional development and support in the implementation of evidence-based practices in the Science of Reading for preschool.

Spotlight on Alabama

Alabama has a comprehensive system of supports for its preschool teachers. The state provides support for selecting curricula, ensuring they are aligned with the Early Learning and Development Standards (ELDS). Professional development on ELDS provides technical assistance for curriculum and aligning assessments. Alabama requires 30 hours a year of professional development, with individual professional development plans and monthly coaching. Alabama requires preschool site visits more than once a year, uses structured classroom observations for the Quality Rating and Improvement System (QRIS), and all classrooms are observed at least annually using the Classroom Assessment Scoring System (CLASS). The state also provides funding for curriculum implementation training.

Spotlight on South Carolina

South Carolina provides extensive support from the state level. The state education agency provides support for selecting curricula and ensuring they are aligned with ELDS; it provides a list of state-approved and recommended curricula. It also provides technical assistance for the curriculum and professional development on ELDS. The state education agency has identified readiness assessments for preschool that comply with the South Carolina Read Act. Additionally, South Carolina requires two types of classroom observations. One is focused on language and literacy (Early Language and Literacy Classroom Observation Tool [ELLCO]), and the other focuses on social-emotional wellbeing (Teaching Pyramid Observation Tool [TPOT]).

The Science of Reading and Standards

3

Sets of Language and Literacy Standards across Colorado's preschool programming

Colorado Early Learning & Development Guidelines

Colorado Academic Standards

Head Start Early Learning Outcomes Framework

Standards & Guidelines for Preschool Providers

One of the complexities of mixed delivery preschool is the different sets of standards and early learning guidelines. For example, Head Start has guidelines set at the national level, and early childhood providers in Colorado have two sets of standards: Early Learning & Development Guidelines (ELDGs) (applicable to all) and Preschool Standards (applicable to school-based programs). Preschool providers in a mixed delivery system may not know which applies to them specifically, and they may not address the other set of standards/guidelines.

Colorado conducted a crosswalk of quality standards between Colorado Universal Preschool legislative requirements and existing standards in 2023 (Colorado Department of Early Childhood, 2023). Colorado's ELDGs focus on birth through age 8, and they are aligned with the preschool through Grade 3 portion of Colorado's P-12 Academic standards and the Head Start Early Learning Outcomes Framework. Colorado revised its P-12 Academic Standards for reading, writing, and communication standards in 2020 to include preschool to reflect the progression from preschool through fifth grade.

Across Colorado's ELDGs, Academic Standards, and Head Start Early Learning Outcomes Framework, the Science of Reading as it applies in preschool is well aligned. These guidelines and standards represent key areas, such as reading readiness, oral language, vocabulary, phonological and phonemic awareness, and print knowledge. The guidelines and standards include evidence-based practices to provide a print-rich environment, intentional and purposeful instruction, sequentially and developmentally appropriate learning, and inclusive and culturally responsive practices. There are considerations for multilingual learners. Though not included in the standards and guidelines, there are policies and directions for students with disabilities and exceptionalities.

RECOMMENDATIONS OVERVIEW

These recommendations are intended to strengthen the state's support of evidence-based practices aligned with the Science of Reading across the preschool through K-12 system. They are also meant to complement—not replace—the substantial work conducted through the Colorado READ Act.

The ideas presented in the recommendations align with recommendations across research, policy, and practice related to the Science of Reading for preschool in a mixed delivery universal preschool program. At the time of this report, Colorado Universal Preschool finished its first year and was starting on its second year. Some of the recommendations put forth in this report are already codified in legislation; others are already in progress through various efforts in the CDEC and the CDE. A crosswalk of the recommendations with Colorado legislation and rule can be found in the appendix. Some recommendations may apply to both preschool and K–12 systems. Other recommendations apply specifically to state-level supports, regional-level supports,[11] and provider implementation; other recommendations apply across multiple areas. In total, there are 22 recommendations within the 5 categories described below.

- **Strengthening Leadership for Colorado Universal Preschool Alignment.** These recommendations set the stage to align Colorado Universal Preschool with the Science of Reading. They focus on creating a clear definition of the Science of Reading for preschool, forming a diverse taskforce to guide related policies, and ensuring the program supports language and literacy learning for all learners. These recommendations are most applicable to state-level policymakers.
- **Alignment and Coordination.** These recommendations aim to ensure that the Science of Reading in preschool is aligned with the K–12 system. They focus on aligning standards, curricula, assessments, and instructional practices with the Science of Reading. The recommendations also include providing professional development and considering licensure and credentialing to match these guidelines. These recommendations are most applicable to state-level policymakers.

[11]Regional-level supports may include Local Coordinating Organizations as defined in HB 22-1295 Section 26.5-2-103.

- **Educator Preparation and Support.** These recommendations ensure that preschool providers and educators receive the support they need to understand and apply the Science of Reading. They focus on creating a statewide professional development approach, requiring specific training, offering provider observations and coaching, and developing lending libraries for preschool materials. Additionally, they address the Science of Reading in educator preparation programs and encourage collaboration with higher education institutions, particularly for supporting multilingual learners. These recommendations are most applicable to those interested in supporting the Colorado Universal Preschool workforce at both the state and local levels.
- **Instructional Approaches and Student Supports.** These recommendations guide Colorado Universal Preschool providers and educators on teaching practices aligned with the Science of Reading. They focus on delivering systematic, explicit, and differentiated instruction in key areas like oral language, vocabulary, phonological awareness, and print knowledge. The recommendations also include providing screenings aligned with the Science of Reading and collaborating with regional support systems to create kindergarten transition programs that maintain the language and literacy skills developed in preschool. These recommendations are most applicable to Colorado Universal Preschool providers and educators and those who support them.
- **Family and Community Engagement.** These recommendations focus on improving family and community involvement in preschool language and literacy development. They include increasing family outreach, building strong preschool-family partnerships, and providing best practices for supporting multilingual learners. The recommendations also call for home-language surveys, supporting communication in home languages, and using community resources to promote culturally inclusive materials for language and literacy. These recommendations are most applicable to Colorado Universal Preschool providers and educators and those who support them.

Presently, no state has implemented every one of these recommendations. While the Science of Reading for preschool is clear, there is no sole source on successful implementation of the Science of Reading for preschool policy in a mixed delivery universal preschool program.

6 Action Steps & 22 Recommendations

Action Plan to Align Colorado Universal Preschool With the Science of Reading for Preschool

Colorado has a unique opportunity to be a national leader in its effort to align Colorado Universal Preschool with the Science of Reading for preschool. This is a significant and impactful undertaking that will likely take years to complete. All recommendations are intended to be flexible and adaptive to the various challenges of providing a universal preschool program. An action plan to begin to address this process includes the following six steps:

1. **Identify** the key leaders and decision makers to guide the integration of the Science of Reading into the Colorado Universal Preschool program and engage in shared learning.
2. **Review** the 22 recommendations to identify and prioritize the recommendations that resonate and align most closely with the goals and priorities of Colorado Universal Preschool.
3. **Explore** existing data or identify data that needs to be collected to understand current practices and implementation related to the prioritized recommendations.
4. **Analyze** data to understand root causes and identify needs, gaps, and barriers related to the prioritized recommendations.
5. **Use** the data from step four to develop a plan for action that prioritizes short- and long-term goals and action steps to meet the needs around the recommendations.
6. **Implement** the plan and re-evaluate progress towards short- and long-term goals.

RECOMMENDATIONS

These recommendations are intended to strengthen the state's support of evidence-based practices aligned with the Science of Reading across the preschool through K–12 system. Some recommendations apply specifically to state-level supports, regional-level supports, and provider implementation; other recommendations apply across multiple areas. We use the following icons to indicate the targeted audience for each recommendation:

State-level coordination and support

Regional-level coordination and support

Provider-level practices

Strengthening Leadership for Colorado Universal Preschool Alignment

L1. Create an **operational definition for the Science of Reading for preschool** that includes the critical components (oral language, vocabulary, phonological awareness, print knowledge) and evidence-based developmentally appropriate practices for emergent literacy.

- This definition should be the foundation of all related requirements, recommendations, and supports provided at the state, regional, and provider levels for Colorado Universal Preschool.
- Emphasize that the Science of Reading applies to all learners, and some populations require additional supports. Specifically, address multilingual learners, learners with disabilities, and learners with exceptionalities.
- Colorado already has a robust definition of the Science of Reading via the Colorado READ Act and has content experts who can help guide the writing of this definition. The definition should ensure language alignment across all programming to ensure every program is referencing the language in the same way (for example, emergent literacy for preschool and early literacy for early elementary).
- Including leaders from the CDE's offices of Culturally and Linguistically Diverse Education, Special Education, and Gifted Education in writing the definition and guidelines may be beneficial, as they have expertise in their respective populations

and may have suggestions for application to Colorado Universal Preschool. CDEC's Diversity, Equity, Inclusion and Accessibility Director should be involved as well.

- Ensure that leaders from all relevant offices, units, and divisions in the CDE and CDEC understand how the Science of Reading guides emergent literacy in preschool and how it aligns to early literacy. The critical leaders should include those from Colorado Universal Preschool and Early Learning Access and Quality Units at the CDEC, as well as all the regional support structures.
- Educate and empower preschool providers with knowledge of the Science of Reading from preschool through elementary.
- Develop clear messaging to all providers on the importance of developing language and literacy according to the Science of Reading for preschool and explain that it can be implemented in all Colorado Universal Preschool settings. Ensure messaging is accessible and educator-friendly; consider text-based and audio-visual messaging.
- Develop a communication strategy around messaging the importance of language and literacy development for preschool children. This should be targeted at parents and providers as well as community resources such as pediatricians. Ensure messaging is accessible and consider text-based and audio-visual messaging. Consider partnering with known organizations such as Reach Out and Read, Bright by Text, or Imagination Library. Ensure that messaging emphasizes the importance of developing emergent literacy skills.

L2. Create a **representative taskforce** for developing policy, guidelines, and supports for implementing the Science of Reading for preschool across all Colorado Universal Preschool settings.

- Subject matter experts should guide the taskforce so that it remains grounded in the Science of Reading for preschool. The basis of this taskforce may begin with developing shared learning around the Science of Reading for preschool.
- Ensure that Colorado Universal Preschool providers, including all eligible provider types, are part of conversations and decisions.
- Ensure that representatives for all student populations (e.g., multilingual, disabilities, exceptionalities) are part of conversations and decisions.
- Ensure that parents, preschool providers, and educators are part of conversations and decisions. This could involve their participation in the taskforce or through surveys or interviews.

L3. **Consider special populations** and identify additional supports needed related to the Science of Reading for preschool multilingual learners to fully meet their needs in all of Colorado Universal Preschool settings.

- Identify the number of multilingual learners in preschool and use this for policy decisions such as educator preparation, curriculum, and location of programs.
- Explore ways to increase access to bilingual preschool for multilingual and monolingual speakers.

L4. **Consider the programmatic requirements** that facilitate optimal language and literacy learning as they relate to the Science of Reading for preschool.

- Maintain a low adult-to-child ratio and small class sizes so that instruction can be individualized, differentiated, and appropriately scaffolded across all Colorado Universal Preschool settings.
- Consider the total number of hours preschool children have access to instruction. The number of preschool hours per day offered should be enough to provide instruction consistent with the expected growth and development of language and emergent literacy skills. Consulting with Head Start centers may be a place to anchor recommendations for the hours of preschool access.

L5. **Explore funding** and reprioritization of existing local, state, and federal funds to be inclusive of the Science of Reading for preschool.

- Understanding that implementing the Science of Reading requires a high level of knowledge and skill, providers should be compensated accordingly. Thus, it may be important to review current compensation structures across all Colorado Universal Preschool providers and public schools and identify strategies to address inequities.
- Explore opportunities to incentivize Colorado Universal Preschool providers to obtain specialized training and credentials related to the Science of Reading and evidence-based practices. Consider ways to provide additional, intensive opportunities and incentives to Colorado Universal Preschool providers to receive additional training to support multilingual learners (e.g., multilingual specialist preschool educators) and learners with disabilities or exceptionalities.

Alignment and Coordination

A6. Ensure the Science of Reading for preschool is included in academic standards, learning guidelines, and frameworks, and **streamline the number and types of standards and guidelines across systems.**

- For example, there are currently three sets of standards across Colorado's preschools depending on the provider's setting: Colorado Academic Standards (22-7-1005. C.R.S), Colorado Early Learning & Development Guidelines, and Head Start Early Learning Outcomes Framework. Pursue ways to consolidate these sets of standards and documents.
- Use the definition of the Science of Reading for preschool to ensure alignment across all standards and learning guidelines.
- Consider including the Science of Reading for preschool in the Colorado Shines framework.

A7. Provide **guidance and support on Science of Reading for preschool curricula, assessments, and instructional practices** that are well aligned horizontally (across all Colorado Universal Preschool settings) and vertically (preschool through elementary).

- Guidance and support should be based on evidence-based research, such as the work of Herrera et al. (2021) and Kosanovich et al. (2020). Resources such as the Reading League example and the Regional Educational Laboratory Southeast rubric may be adapted to reflect preschool Science of Reading.
- Put forth requirements or recommendations for curricula and materials that are aligned with the Science of Reading for preschool. This may be part of the resource bank, which is currently in development. This work can be informed by the processes Colorado already goes through at the K–12 level. Include recommendations for culturally responsive materials that support multilingual learners and can be scaffolded for learners with disabilities and exceptionalities. Consider creating a list of approved or recommended curricula as well as checklists to help preschool providers make informed curricular decisions. For example, South Carolina reviewed seven preschool curricula in 2023.
- Consider creating a list of approved or recommended assessments (screeners). Ensure assessments are aligned with preschool standards and the Science of Reading for preschool. Ensure assessments are valid and reliable for preschool students. Consider

developing checklists to help preschool providers make informed assessment decisions. This may be part of the resource bank currently in development.

- Ensure that student data collected while a student is in Colorado Universal Preschool (e.g., emergent literacy screening) is securely transmitted to their elementary schools.
- Regional support structures should explore ways of creating resource libraries of preschool curricula and assessments that providers in any entity could access, explore, or borrow.
- Provide a system to support curriculum implementation. This may include technical assistance on instructional materials, observation of curriculum implementation, and ongoing coaching.

A8. Develop and provide **professional development on the Science of Reading** for preschool.

- Training should include information on the Science of Reading for both preschool and elementary learners.
- Training should also include information on how to support children and families in the transition from preschool to kindergarten specific to the child's language and literacy development.

A9. Consider **licensure and credentialing** for preschool providers and educators as they relate to the Science of Reading for preschool.

- Consider credentialing that spans preschool through elementary to support the understanding of vertical alignment from preschool to kindergarten and beyond.
- Include the Science of Reading for preschool in any courses towards degrees, certifications, or licensures that address literacy.
- Explore opportunities to provide access to higher education, at minimum an early childhood related bachelor's degree (for example, pre-k through third grade, child development), which includes content on the Science of Reading.

Educator Preparation and Support

T10. Develop and provide **professional development on the Science of Reading** for preschool.

- Develop an accessible online repository with training materials for all preschool providers and educators. Include online modules, webinars, and a directory for extended learning resources. Colorado should utilize the Professional Development Information System and the resource bank housed therein to ensure the availability of content and materials aligned with the Science of Reading for preschool.
- Increase regional support capacity to deliver state-developed training on the Science of Reading.
- Explore opportunities for professional learning communities that can reach a broad range of Colorado Universal Preschool providers. These may include online professional learning communities that meet synchronously, asynchronously, or in a hybrid format.

T11. Establish **professional development requirements specific to the Science of Reading** for preschool for all Colorado Universal Preschool providers.

- Ensure professional development requirements consider the unique needs of each provider type, ensuring accessibility and preventing undue burdens on family child care providers.
- Leverage materials from the Emergent Literacy Professional Learning Community developed by the Regional Educational Laboratory Southeast.
- Professional development should include content on culturally responsive teaching.
- Professional development should include ongoing coaching and mentoring with provider observations on implementing the Science of Reading for preschool.
- Explore ways to support providers in having sufficient time and opportunity to engage in meaningful professional development. Encourage regional support structures to develop a system of "leave for professional development" with substitute preschool providers and educators, utilizing the Substitute Placement Agencies supported by CDEC's Substitute Fund.

T12. Provide guidelines (e.g., minimal length and frequency, content) for provider **observations specific to the Science of Reading for preschool**.

- Consider identifying and recommending specific provider observation measures.
- Link observations to ongoing professional development and coaching.
- Observations should be feasible across all Colorado Universal Preschool providers.

T13. Identify a system for providing **ongoing, job-embedded coaching** on the Science of Reading for preschool.

- Ensure coaches are experts in the Science of Reading and proficient in best practices for instructional coaching. Colorado has a robust coaching network for early care and learning professionals. They could be used to support coaching on the Science of Reading for preschool.
- Offer professional development to coaches on the Science of Reading for preschool so they can sufficiently support Colorado Universal Preschool providers.
- Coaches should be available to all Colorado Universal Preschool providers. Consider flexible strategies such as in-person or virtual coaching.

T14. Develop a system of **state and regional supports** to which all Colorado Universal Preschool providers have access for **technical assistance** on the Science of Reading for preschool, dyslexia, multilingual learners, learners with disabilities, and learners with exceptionalities.

- Supports may include professional development materials, lending libraries for educator growth, and culturally responsive reading materials for students. For example, Michigan developed this brief guide for educators along with this website that includes videos of sample practices.

T15. Deepen or expand partnerships with institutions of higher education to **address educator preparation programs** and ensure educator candidates have the knowledge and skills to provide evidence-based practices aligned with the Science of Reading for preschool.

- Review course offerings and instructional approaches to align with the Science of Reading and evidence-based practices, specifically inclusive of preschool education.
- Programs should explicitly address the Science of Reading for all learners, including multilingual children and children with disabilities and exceptionalities.
- Require pre-service educators to demonstrate competency in teaching reading for their targeted age/grade band. Consider establishing consistent requirements across institutes of higher education for how competency is demonstrated (e.g., standardized performance assessment, standardized rubric for a portfolio, knowledge assessment) and age/grade band targeted. For example, early childhood educators may demonstrate competency focused on emergent literacy with some background on early literacy, whereas elementary educators could demonstrate competency on early literacy with some background on emergent literacy.

T16. Consider developing **partnerships with institutions of higher education** with specializations in the Science of Reading for preschool and multilingual learners.

- Explore opportunities for both pre-service and in-service preschool educators to earn specializations in the Science of Reading for preschool and multilingual learners. For example, educators may earn a certificate of completion for a specific set of courses or professional development experiences.

Instructional Approaches and Student Supports

I17. Preschool providers and educators should provide **daily instruction and learning experiences in both code-focused and meaning-focused skills** that explicitly target the development of oral language, vocabulary, phonological awareness, and print knowledge to develop preschoolers' emergent literacy skills.

- Provide systematic, explicit, and differentiated instruction, individually scaffolded to meet the diverse needs of learners. Instruction should be embedded in developmentally appropriate practices.
- Preschool providers and educators should provide students with ample and varied opportunities to practice emergent literacy skills and practice reading and writing in developmentally appropriate ways.
- Consider developing a guide on evidence-based practices for all preschool providers and educators.

I18. Develop guidelines and a system to ensure **all preschool children across Colorado Universal Preschool settings have access to annual developmental screening** that includes vision, hearing, development, language, and literacy.

- Include staff from CDEC's Colorado Universal Preschool and Early Learning Access and Quality Units, all regional support structures, and CDE's Office of Special Education, Culturally and Linguistically Diverse Education, and Gifted Education in conversations around universal screening.
- Consider screening for characteristics of dyslexia, including family history.
- Create a system for notifying parents and maintaining engagement when a reading deficiency is identified. Consider requiring referrals in addition to parent notification.
- Require home-language(s) surveys. Screen and assess all children in their home language(s).

I19. Districts should collaborate with regional support structures and all Colorado Universal Preschool providers to develop **systematic kindergarten transition programs with a focus on maintaining and building the language and literacy skills** developed during preschool.

- Establish a seamless data pipeline to ensure that language and literacy development data from preschool follows each child into elementary school.

Family and Community Engagement

F20. **Increase access, outreach, and participation** in preschool that is focused on developing language and literacy skills for all children, including multilingual learners and learners with disabilities and exceptionalities.

- Develop best practice guidelines for supporting multilingual preschool children and families, and require programs to plan for meeting multilingual students' specific educational needs related to language and literacy development.
- Require home-languages surveys and provide support for communication in home languages to support the language and literacy development in both the school and home languages.
- Identify a system for timely translation and interpretation services for educator-parent communications.

F21. Preschool providers and educators should foster genuine **preschool-family partnerships around language and literacy development** in line with the Science of Reading for preschool.

- Communicate with families about their preschooler's language and literacy skills, providing guidance on how to support development at home, in the community, and through daily activities.
- Develop training and support for preschool providers and educators on developing and fostering strong, regular, bidirectional communication with the family, emphasizing the importance of language and literacy development. Encourage building family engagement training that emphasizes language and literacy development materials and provides talking points for providers.

- Create statewide "Language and Literacy Activities and Suggestions for Home and Community" materials for all students and families (e.g., flyers, videos, vetted online resource hubs for all parents to support language and literacy). Provide guidance for developing individualized supports around language and literacy for home and community for students identified with a delay in language or literacy skills.

F22. **Leverage libraries and other community assets** to promote students' language and literacy development.

- This is particularly important for accessing authentic materials in children's home languages and cultures to promote multilingualism and multiliteracy.
- This helps provide access to reading materials across a range of reading levels, meeting the needs of emergent readers and exceptional readers.

APPENDIX

About the Appendix

This appendix includes the following sections with details that support the findings and recommendations of this report:

- Conceptual crosswalk between recommendations and Colorado legislation and rules
- References

About the Supplemental Document

The supplemental document contains the detailed information that contributed to this report. Specifically, it includes the following:

- Chapter 1: Literature Review
  - Science of Reading and Emergent and Early Literacy
  - Evidence-Based Practices for Emergent Literacy Skills
  - Professional Development
  - Aligning Preschool with Grades K–3
- Chapter 2: Policy Review
- Chapter 3: State Summaries
- Chapter 4: Colorado Standards and Guidelines
- Chapter 5: Recommendations
- Recommendations Framework
- Chapter 6: Data Tables
- Reference List

CONCEPTUAL CROSSWALK BETWEEN RECOMMENDATIONS AND COLORADO LEGISLATION AND RULES

The 22 recommendations are based on research and policy across the Science of Reading and preschool. The recommendations are specific to ensure that Colorado Universal Preschool is aligned with the Science of Reading for preschool. Some of the recommendations may be long-range goals, while others Colorado may not decide to pursue. Many recommendations are at least conceptually related to, if not directly supported by, Colorado legislation, rules, and statutes. Exploring these potential connections may be helpful in adapting, refining, clarifying, or adding to legislation, rules, or standards.

Table A1 provides a crosswalk showing the conceptual connections between each of the 22 recommendations and Colorado-specific language in legislation and rules, specifically:

- Colorado READ Act, which establishes the guiding philosophy, structure, and resources to get children reading at grade level by the time they enter the fourth grade;
- House Bill 22-1295 and Colorado Revised Statutes 26.5, which establishes Colorado Universal Preschool;
- Code of Colorado Regulations 8 CCR 1404-1 (2024), which provides Colorado Universal Preschool rules and regulations.

The crosswalk does not indicate absolute alignment or agreement between the recommendation and the cited policy. It is meant to help identify conceptual connections of how the recommendation may support or be supported by legislation, rule, or standard.

For example, Recommendation 1 is related to creating an operational definition of the Science of Reading for preschool. The Colorado READ Act has defined the Science of Reading as it applies to elementary learners (C.R.S. 22-7-1202 (1.5)(a)(II)). Creating an operational definition of the Science of Reading for preschool may help inform the standards for instructional practice in preschool (C.R.S. 26.5-4-205(2)(g)), what is included in the Resource Bank (C.R.S. 26.5-4-205(3), 8 CCR 1404-1 4.103.NN), or Learning Approaches (8 CCR 1404-1 4.111.A).

Table A1
Conceptual Crosswalk Between Recommendations and Colorado Legislation, Rules, and Standards

	Conceptually related to		
Recommendation	CO READ Act[12] SB 19-199 CRS 22-7-12	CO Early Childhood Programs and Services[13] HB 22-1295 CRS 26.5	CO Universal Preschool Rules and Regulations[14] 8 CCR 1404-1
Strengthening Leadership for Colorado Universal Preschool Alignment			
L1. Create an **operational definition for the Science of Reading for preschool** that includes the critical components (oral language, vocabulary, phonological awareness, print knowledge) and evidence-based developmentally appropriate practices for emergent literacy.	▶ Evidence-based (22-7-1203(4)) ▶ Scientifically based (22-7-1203(14)) ▶ Early literacy education (22-7-1204) ▶ Public relations (22-7-1209(7))	▶ Standards for instructional practice (26.5-4-205(2)(g)) ▶ Resource bank (26.5-4-205(3))	▶ Program purpose (4.104.A) ▶ Resource bank (4.103.OO) ▶ Learning Approaches (4.111.A)
L2. Create a **representative taskforce** for developing policy, guidelines, and supports for implementing the Science of Reading for preschool across all Colorado Universal Preschool settings.		▶ Early Childhood Councils (26.5-2-203) ▶ Resource bank (26.5-4-205(3))	▶ Resource bank (4.103.OO) ▶ Learning Approaches (4.111.A)

[12] SB 19-199 and CRS 2022 Title 22 Article 7 Part 12
[13] HB 22-1295 and CRS 2022 Title 26.5
[14] Universal Preschool Program Rules and Regulations 8 CCR 1404-1

	Conceptually related to		
Recommendation	CO READ Act[12] SB 19-199 CRS 22-7-12	CO Early Childhood Programs and Services[13] HB 22-1295 CRS 26.5	CO Universal Preschool Rules and Regulations[14] 8 CCR 1404-1
L3. **Consider special populations** and identify additional supports needed related to the Science of Reading for preschool multilingual learners to fully meet their needs in all of Colorado Universal Preschool settings.	▶ Multilingual learners 22-7-1202(3)(c)	▶ Equal opportunity (26.5-4-205(2)(b)) ▶ Standards for family and community engagement (26.5-4-205(2)(i)) ▶ Requirements for dual-language learners (26.5-4-205(2)(j)) ▶ Resource bank (26.5-4-205(3))	▶ Resource bank (4.103.OO) ▶ Basic requirements—Equal opportunity (4.109.B) ▶ Preferences for multilingual learners (4.110.A.9, 10) ▶ Family engagement with multilingual learners (4.113.A.1.c)
L4. **Consider the programmatic requirements** that facilitate optimal language and literacy learning as they relate to the Science of Reading for preschool.		▶ 10 hours (26.5-4-203(17)) ▶ Contact hours (26.5-4-205(2)(a)) ▶ Ratio (26.5-4-205(2)(c))	▶ General Hours (4.109.A.1) ▶ General Ratios and Group Size (4.109.C)
L5. **Explore funding** and reprioritization of existing local, state, and federal funds to be inclusive of the Science of Reading for preschool.	▶ Per-pupil intervention money (22-7-1210.5) ▶ Early literacy fund (22-7-1210) ▶ Early literacy grant program (22-7-1211)	▶ Child care teacher salary grant program (26.5-3-806) ▶ Compensating Early Childhood Workforce (26.5-4-204(5)(e)) ▶ Preschool funding (26.5-4-208) ▶ Early Childhood Workforce (26.5-6-101)	▶ Preschool provider funding (4.108)

	Conceptually related to		
Recommendation	**CO READ Act[12] SB 19-199 CRS 22-7-12**	**CO Early Childhood Programs and Services[13] HB 22-1295 CRS 26.5**	**CO Universal Preschool Rules and Regulations[14] 8 CCR 1404-1**
Alignment and Coordination			
A6. Ensure the Science of Reading for preschool is included in academic standards and learning guidelines and **streamline the number and types of standards and guidelines across systems**.	▶ Reading standards (22-7-1005)	▶ Aligned standards (26.5-4-205(2)(f)) ▶ Standards for instructional practice (26.5-4-205(2)(g)) ▶ Resource bank (26.5-4-205(3))	▶ Resource bank (4.103.OO) ▶ Learning Approaches (4.111.A) ▶ Colorado Academic Standards (4.103.G) ▶ Colorado Early Learning & Development Guidelines (4.103.H) ▶ Aligns with Colorado Early Learning & Development Guidelines and the Colorado Academic Standards (4.11.A.1.a)
A7. Provide **guidance and support on Science of Reading for preschool curricula, assessments, and instructional practices** that are well aligned horizontally (across all Colorado Universal Preschool settings) and vertically (preschool through elementary).	▶ Early literacy education (22-7-1204) ▶ Assessment in home language (22-7-1205(1)(a.7) ▶ Daily reading approaches (22-7-1206(5)(d)) ▶ Core and Supplemental Reading Curriculum (22-7-1208 (5)(a)(I)) ▶ Assessments (22-7-1208 (5)(a)(III) ▶ Advisory list (22-7-1209)	▶ Quality standards (26.5-4-205(2)) ▶ Standards for instructional practice (26.5-4-205(2)(g)) ▶ Screening (26.5-4-205(2)(k & l)) ▶ Resource bank (26.5-4-205(3))	▶ Early learning and assessment approach (4.103.Q) ▶ Learning Approaches (4.111.A) ▶ Assessment findings for instructional decision-making (4.111.A.1.a) ▶ Assessments, tools, and related resources in Resource bank (4.112.A.2)

	Conceptually related to		
Recommendation	**CO READ Act[12] SB 19-199 CRS 22-7-12**	**CO Early Childhood Programs and Services[13] HB 22-1295 CRS 26.5**	**CO Universal Preschool Rules and Regulations[14] 8 CCR 1404-1**
A8. Develop and provide **professional development on the Science of Reading for preschool.**	▶ Professional development (22-7-1208, 1209, 1210)	▶ Professional development (26.5-4-204(5)(e); 26.5-4-205(2)(e)) ▶ Standards for instructional practice (26.5-4-205(2)(g)) ▶ Resource bank (26.5-4-205(3))	▶ Professional development (4.114)
A9. Consider **licensure and credentialing** for preschool providers and educators as they relate to the Science of Reading for preschool.		▶ Increasing the qualifications (26.5-4-204(5)(d)) ▶ Qualifications (26.5-4-205(2)(d)) ▶ Early Childhood Workforce (26.5-6-101)	▶ Colorado's Competencies for Early Childhood Educators and Professionals (4.103.K; 4.114.A) ▶ Qualifications for lead teachers (4.109.D.1)
Educator Preparation and Support			
T10. Develop and provide professional development on the Science of Reading for preschool.	▶ Professional development (22-7-1208, 1209, 1210)	▶ Professional development (26.5-4-204(5)(e); 26.5-4-205(2)(e)) ▶ Standards for instructional practice (26.5-4-205(2)(g)) ▶ Resource bank (26.5-4-205(3))	▶ Resource bank (4.103.OO) ▶ Professional development (4.114)

	Conceptually related to		
Recommendation	**CO READ Act[12] SB 19-199 CRS 22-7-12**	**CO Early Childhood Programs and Services[13] HB 22-1295 CRS 26.5**	**CO Universal Preschool Rules and Regulations[14] 8 CCR 1404-1**
T11. Establish **professional development requirements specific to the Science of Reading** for preschool for all Colorado Universal Preschool providers.	▶ Professional development (22-7-1208, 1209, 1210)	▶ Professional development (26.5-4-204(5)(e); 26.5-4-205(2)(e)) ▶ Qualifications (26.5-4-205(2)(d)) ▶ Standards for instructional practice (26.5-4-205(2)(g)) ▶ Resource bank (26.5-4-205(3))	▶ Resource bank (4.103.OO) ▶ Basic requirements—Teacher Qualifications (4.109.D) ▶ Professional development (4.114)
T12. Provide guidelines (e.g., minimum length, frequency, content) for provider **observations specific to the Science of Reading for preschool**.		▶ Resource bank (26.5-4-205(3))	▶ Resource bank (4.103.OO) ▶ On-Site Observations (4.111.B)
T13. Identify a system for providing **ongoing, job-embedded coaching** on the Science of Reading for preschool.	▶ Funding for coaching (22-7-1210.5(4)(g))	▶ Resource bank (26.5-4-205(3))	▶ Resource bank (4.103.OO)

	Conceptually related to		
Recommendation	**CO READ Act[12] SB 19-199 CRS 22-7-12**	**CO Early Childhood Programs and Services[13] HB 22-1295 CRS 26.5**	**CO Universal Preschool Rules and Regulations[14] 8 CCR 1404-1**
T14. Develop a system of **state and regional supports** to which all Colorado Universal Preschool providers have access for **technical assistance** on the Science of Reading for preschool, dyslexia, multilingual learners, learners with disabilities, and learners with exceptionalities.	▶ Technical assistance (22-7-1209(6))	▶ IDEA and ECEA (26.5-4-204(3)(b)(I)) ▶ Equal opportunity (26.5-4-205(2)(b)) ▶ Requirements for dual-language learners (26.5-4-205(2)(j)) ▶ Resource bank (26.5-4-205(3)) ▶ Preschool special education (26.5-4-206)	▶ Resource bank (4.103.OO) ▶ Basic requirements – Equal opportunity (4.109.B) ▶ Educating children with disabilities (4.109.F)
T15. Deepen or expand partnerships with institutions of higher education to **address educator preparation programs** and ensure educator candidates have the knowledge and skills to provide evidence-based practices aligned with the Science of Reading for preschool.		▶ Early care and education recruitment and retention grant and scholarship program (26.5-3-805) ▶ Increasing qualifications over time (26.5-4-204 (5)(d)) ▶ Early Childhood Workforce (26.5-6-101)	
T16. Consider developing **partnerships with institutions of higher education** with specializations in the Science of Reading for preschool and multilingual learners.		▶ Early care and education recruitment and retention grant and scholarship program (26.5-3-805) ▶ Increasing qualifications over time (26.5-4-204 (5)(d))	

	Conceptually related to		
Recommendation	**CO READ Act[12] SB 19-199 CRS 22-7-12**	**CO Early Childhood Programs and Services[13] HB 22-1295 CRS 26.5**	**CO Universal Preschool Rules and Regulations[14] 8 CCR 1404-1**
Instructional Approaches and Student Supports			
I17. Preschool providers and educators should provide **daily instruction and learning experiences in both code-focused and meaning-focused skills** that explicitly target the development of oral language, vocabulary, phonological awareness, and print knowledge to develop preschoolers' emergent literacy skills.	▶ Evidence-based (22-7-1203(4)) ▶ Scientifically based (22-7-1203(14)) ▶ Early literacy education (22-7-1204) ▶ Daily reading approaches (22-7-1206(5)(d)) ▶ Core and Supplemental Reading Curriculum (22-7-1208 (5)(a)(I)) ▶ Advisory list (22-7-1209)	▶ Standards for instructional practice (26.5-4-205(2)(g)) ▶ Resource bank (26.5-4-205(3))	▶ Early learning and assessment approach (4.103.Q) ▶ Resource bank (4.103.OO) ▶ Learning Approaches (4.111.A)
I18. Develop guidelines and a system to ensure **all preschool children across Colorado Universal Preschool settings have access to annual developmental screening** that includes vision, hearing, development, language, and literacy.	▶ Body of evidence (22-7-1203(1) ▶ Reading assessments (22-7-1205) ▶ Assessments available in both English and Spanish (22-7-1209(2)(a)(II)(D))	▶ Requirements for dual-language learners (26.5-4-205(2)(j)) ▶ Screening (26.5-4-205(2)(k & l)) ▶ Resource bank (26.5-4-205(3))	▶ Resource bank (4.103.OO) ▶ Healthy Development Requirements (4.112)

	Conceptually related to		
Recommendation	**CO READ Act[12] SB 19-199 CRS 22-7-12**	**CO Early Childhood Programs and Services[13] HB 22-1295 CRS 26.5**	**CO Universal Preschool Rules and Regulations[14] 8 CCR 1404-1**
I19. Districts should collaborate with regional support structures and all Colorado Universal Preschool providers to develop **systematic kindergarten transition programs with a focus on maintaining and building the language and literacy skills** developed during preschool.	▶ Summer school literacy program (22-7-1212)	▶ Standards for family and community engagement (26.5-4-205(2)(i)) ▶ Resource bank (26.5-4-205(3))	▶ Resource bank (4.103.OO) ▶ Involving families in transition between preschool and kindergarten (4.113.A.1.e)
Family and Community Engagement			
F20. **Increase access, outreach, and participation** in preschool focused on developing language and literacy skills for all children, including multilingual learners and learners with disabilities and exceptionalities.	▶ Language the parent understands (22-7-1205(2)(a))	▶ IDEA and ECEA (26.5-4-204(3)(b)(I)) ▶ Equal opportunity (26.5-4-4205(2)(b)) ▶ Standards for family and community engagement (26.5-4-205(2)(i)) ▶ Requirements for dual-language learners (26.5-4-205(2)(j))	▶ Basic requirements – Equal opportunity (4.109.B) ▶ Educating children with disabilities (4.109.F) ▶ Preferences for multilingual learners (4.110.A.9, 10) ▶ Family and Community Engagement Requirements (4.113)
F21. Preschool providers and educators should foster genuine **preschool-family partnerships around language and literacy development** in line with the Science of Reading for preschool.	▶ Parent partnership (22-7-1202(1)(e),(f)); 22-7-1202(2)) ▶ Parent involvement (22-7-1205)	▶ "Family support and parent education" (26.5-3-101(5)) ▶ Standards for family and community engagement (26.5-4-205(2)(i))	▶ Family and Community Engagement Requirements (4.113)

	Conceptually related to		
Recommendation	CO READ Act[12] SB 19-199 CRS 22-7-12	CO Early Childhood Programs and Services[13] HB 22-1295 CRS 26.5	CO Universal Preschool Rules and Regulations[14] 8 CCR 1404-1
F22. **Leverage libraries and other community assets** to promote students' language and literacy development.	▶ Partner with public libraries (22-7-1208(7))	▶ Standards for family and community engagement (26.5-4-205(2)(i)) ▶ Resource bank (26.5-4-205(3))	▶ Resource bank (4.103.OO)

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