# APPROACHES TO LEARNING: HOW YOUNG CHILDREN LEARN





PRINCIPLES FOR USE ACROSS NEW JERSEY'S PRESCHOOL THROUGH THIRD GRADE (P-3) TEACHING AND LEARNING CONTINUUM

# Approaches to Learning: How Young Children Learn

Principles for Use Across New Jersey's Preschool Through Third Grade (P-3) Teaching and Learning Continuum

The New Jersey Department of Education (Department), developed this document and related resources to continue to improve the education and learning opportunities for New Jersey's youngest students as they progress from preschool through third grade. This work was done in collaboration with staff from the Region 4 Comprehensive Center (R4CC), one of 20 technical assistance centers funded by the U.S. Department of Education to provide support to state education agencies in addressing high priority projects in their states.

Staff from the Region 4 Comprehensive Center brought excellence and high professional standards to the development of this work.



"The science of child development and early learning provides the foundation for the knowledge and competencies that early childhood professionals need, the infrastructure and systems in which they work, and their systems for professional learning."

- National Academy of Sciences, Transforming the Workforce for Children Birth Through Age 8: A Unifying Foundation (2015)

## ACKNOWLEDGMENTS

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The New Jersey (NJ) Department of Education is grateful to the many practitioners who reviewed and provided feedback on the New Jersey Approaches to Learning Principles. They helped make this resource a useful component of practice and a support tool for continued professional growth. We are exceptionally thankful to Dr. Mary Reece, the teams of district preschool to third grade educators participating in the NJ Principals and Supervisors Association's (NJPSA) Transforming Early Childhood Leadership Institute, and the NJPSA Early Childhood Education Committee members who all exemplify the most valuable resource provided to NJ's youngest students; our early childhood educators.

The Department expresses appreciation to the colleagues who collaborated and contributed to the New Jersey Approaches to Learning core document and resources in the accompanying electronic folders. We value their partnership, experience, and commitment to serving and supporting New Jerseys youngest learners, their educators, and their families.

The following office teams collaborated on this project: K-3, Preschool, Title III, Special Education, and Standards.



For more resources to support children from birth to third grade visit the <u>Division of Early Childhood Services website</u>.



State of New Jersey DEPARTMENT OF EDUCATION PO Box 500 TRENTON, NJ 08625-0500

KEVIN DEHMER Commissioner

PHILIP D. MURPHY Governor

TAHESHA L. WAY Lt. Governor

Dear Early Elementary Practitioner,

Anyone who has interacted with young children knows it is fascinating to watch how their brains try to make sense of the world around them. They are constantly learning and building a foundation for their future success in school and in life. Researchers continue to build our understanding of how children learn and how we can best help them succeed. This document and accompanying resources on the New Jersey Department of Education website aim to provide information for anyone who works with young children in the preschool through third grade age range: teachers, program administrators, principals and school district staff, parents, and instructors in teacher preparation programs. The eight Principles of learning identified here describe current knowledge on how children learn and ways that educational settings can be structured to support our young learners. We also hope that district and even state-level policymakers will also consider these Principles when shaping policies that impact young children's classrooms and the teachers who work in them.

We all know that children under the age of eight undergo massive changes in how they understand their surroundings, and that it is a critical time for laying strong foundations for children's learning success. We hope that these resources will be helpful in maximizing the essential growth of our youngest learners. Only by truly understanding how children learn can we all help them learn best.

Sincerely,

Cary A. Booker Assistant Commissioner Division of Early Childhood Services

New Jersey Department of Education April 2025

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## OVERVIEW

Children's minds are truly amazing. They have to make sense of all manner of new stimuli, organizing and categorizing, figuring out their place in the world, and preparing themselves to keep learning. Research continues to unlock the mysteries of how children learn, and these findings are critical for educators, administrators, and families to understand.

This resource was developed to synthesize the research on how children learn—particularly between the preschool through third grade years—and to present a set of Principles intended to help all those involved in supporting children (including teachers, program and school administrators, teacher preparation programs, families, community members, and policymakers) understand how to structure learning experiences and environments in ways that allow children to flourish.

Traditionally, preschool and kindergarten learning environments are considered distinct from early elementary school settings (i.e., first through third grades). Increasingly, however, childhood learning is considered a continuum that begins at birth and extends into the elementary school years and beyond.

This document focuses on the child development processes occurring between preschool and third grade. The New Jersey Department of Education (NJDOE) is committed to supporting a "P-3 continuum" for childhood learning throughout New Jersey.

The NJDOE, in partnership with the Region 4 Comprehensive Center, has developed a set of Principles based upon a review of the broad research on how children learn. These Principles can inform learning environments for young children in preschool programs; in kindergarten, first, second, or third grade classrooms; in afterschool programs; or at home. By understanding these Principles, adults can create learning environments that maximize learning and development for all children.



#### WHO CAN USE THIS REPORT:

- » Preschool to third grade educators
- » Preschool to third grade school and program leaders
- » Curriculum and assessment designers
- » Instructional coaches in P-3
- » New teacher mentors
- » Early intervention and special education specialists
- » Instructors in teacher preparation programs
- » Community parent involvement specialists
- » Other district administrators
- » Parents and families
- » Policymakers

Additional guidance and professional learning resources tailored to specific audiences are available on the <u>NJDOE</u> <u>Early Childhood Education</u> website.



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"The scientific basis for focusing on the continuum of years from birth through third grade is persuasive. It is during these years that children acquire the skills, behaviors and dispositions that are foundational as they transition to later learning."

- Dr. Kristie Kaverz, Executive Director, National P-3 Center

## INTRODUCTION

Ideally, teaching and learning are symbiotic activities supported by all stakeholders invested in children's growth and development. **Teachers** understand how children learn and intentionally tailor and provide opportunities to maximize their learning. **School leaders** ensure that teachers have the necessary support to facilitate student learning. **Families** support and expand the educational opportunities experienced by their children. The "P-3 Continuum" encompasses a coherent, continuous learning period from preschool through third grade that provides the foundation for later learning.



- » What is important to know about these key Principles of child learning and development to teach and/or support preschool to third graders.
- » How to use this information with children in all educational settings, formal and informal.



The NJDOE is committed to developing policies and practices that ensure all stakeholders, especially teachers, are equipped with the knowledge and understanding that supports the development of children in their early years. (These years of preschool through third grade are collectively referred to as "P-3.")

Experts increasingly view the P-3 years as a critical period in a child's development when a tremendous amount of learning can occur and provide the foundation for later learning. This document was developed based on research examining how children learn during their early years of formal schooling. While individual learning during this period varies, there are commonalities specific to this period of development-regardless of a child's family structures, socio-economic status, or language background. Accordingly, to create equitable opportunities for all children, instructional practices, curricula, and assessments across the P-3 continuum should be aligned and rooted in a solid understanding of the Principles of how children learn.

Links throughout this document are correct as of time of publication.

#### WHAT IS MEANT BY "APPROACHES TO LEARNING"

Understanding how children learn reflects a complex interplay between aspects of individual child development and the underlying processes of learning. Although educators have used the phrase "Approaches to Learning" in different ways, this document focuses on:

- » The research and evidence-based Principles about how child development and learning occur.
- » The underlying learning processes that can be linked to identifiable competencies among children but that does not assume all child development follows a sequence defined through grade- and content-specific academic standards.
- » How teachers can use their understanding of child development, individual children's needs, and the learning process to shape their instruction and most effectively support child learning.

#### DEFINING THE NJ APPROACHES TO LEARNING PRINCIPLES

This resource offers a set of scientific or developmental concepts about how children learn, based on the research on child development. These NJ Approaches to Learning Principles focus on how best to prepare children to acquire new knowledge and skills. These ideas can be used to ensure that children's opportunities to learn from preschool to third grade align with how they learn. The content of learning standards, curricula, instruction, and assessment all build from these Principles (see figure 1).

Decades of research have provided insights into how children learn, and the processes, experiences, and opportunities that influence the learning



The NJ Approaches to Learning Principles were identified from research to help ensure that the education that preschool to third grade children receive aligns with how they learn. process. These insights can be distilled into a set of key *NJ Approaches to Learning Principles* that apply to how children learn in preschool through third grade and beyond. The Principles are not limited to learning in specific domains (e.g., literacy or math), but instead address the development of the whole child. Teachers can use these Principles to inform their instructional choices, how they plan and organize their classroom or learning spaces, and how they build and sustain relationships with students and families. The Principles are interconnected, and their order of presentation here does not reflect any inherent hierarchy or sequencing. They are numbered for ease of reference.

The early education experience for children from preschool through third grade occurs within a system of what children are expected to learn (standards), how they are taught (curricula and instruction/pedagogy), and how their learning is measured (assessment).





**INSTRUCTIONAL DECISION-MAKING** By understanding how children learn, teachers can select and apply appropriate instructional strategies to match each child's learning needs, making adaptations as necessary.

**ORGANIZING CLASSROOMS** With the use of the Principles, virtually all aspects of the classroom environment can be planned to support children's learning. For example, classroom décor and furnishings should be intentionally selected to offer rich opportunities for student exploration and learning without being overly stimulating and potentially distracting or chaotic. Likewise, providing curriculum-based, yet varied, equitable learning materials offers opportunities to meet all students' learning needs. All learning spaces should also represent and respect the cultures of the children and families in the school community.

#### **BUILDING AND SUSTAINING RELATIONSHIPS**

Early education is relationship-based. The *NJ Approaches to Learning Principles* underscore the critical importance of teachers developing relationships with children and their families. Strong relationships support children's social and emotional development which, in turn, helps teachers effectively engage children in learning. Likewise, close relationships with families allow teachers to know their students better to maximize children's learning in the classroom and at home.

#### **NEW JERSEY P-3 RESOURCES**

- » <u>Preschool Program</u> <u>Implementation Guidelines</u>
- » <u>Preschool Classroom</u> <u>Teaching Guidelines</u>
- » P-3 Alignment
  - » <u>Kindergarten Implementation</u> <u>Guidelines</u>
  - » <u>First Through Third Grade</u> <u>Implementation Guidelines</u>
- <u>Attendance Toolkit: Strategies</u> for Improving Attendance in <u>Pre-Kindergarten and</u> <u>Kindergarten</u>
- » <u>New Jersey Student Learning</u> <u>Standards</u>



#### **P-3 Assessments**

- » Kindergarten Entry Assessment
- » Early screening assessments and diagnostic assessments for disabilities
- » Embedded and formative performance-based assessments to inform instruction
- » Summative assessments
- » Mandated/statewide assessments

#### P-3 Continuum

» Refers to a coherent, continuous teaching and learning period from preschool through third grade. This period bridges what traditionally was thought of as two distinct periods: early care and education delivered to three- and four-year-old children through a mixed-delivery system; and Kindergarten, first, second, and third grades located in elementary schools. While the settings may be different, wherever possible, structures should be aligned, and connections made to ensure a continuity of learning for children across this age band.

#### **Aligned System**

» Vertical alignment ensures that what a student learns in one grade is built upon in the grades that follow. Alignment between preschool and the early elementary grades helps students have a strong academic foundation and experience smoother transitions from one grade to the next.

#### GENERAL RESOURCES THAT DESCRIBE HOW CHILDREN LEARN:

- Top 20 Principles from Psychology for Early Childhood Teaching and Learning, American Psychological Association.
- » <u>Developmentally</u> <u>Appropriate Practice</u>, National Association for the Education of Young Children.
- The U.S. Department of Education's <u>What</u> <u>Works Clearinghouse</u> <u>Practice Guide</u> publications provide strong evidence to support instruction in specific domains of child learning and development (e.g., literacy, math).

## THE NJ APPROACHES TO LEARNING PRINCIPLES FOR USE ACROSS THE PRESCHOOL TO THIRD GRADE TEACHING AND LEARNING CONTINUUM

#### **EXECUTIVE FUNCTION**

and self-regulation skills describe the mental processes that enable us to plan, focus attention, remember instructions, and juggle multiple tasks successfully. They depend on three types of brain function: working memory, mental flexibility, and self-control (Harvard Center for the Developing Child).

### **PRINCIPLE 1:**

Children's brains develop rapidly and in ways that help them organize and understand their worlds.

Children's brains typically are equipped with specific capacities that emerge early and help them organize their experiences in a dynamic world as well as support and influence learning over time. These capacities include executive function skills such as attention regulation, behavior regulation, self-control, contingency learning, and engaging multiple senses. Learning environments (e.g., classrooms, preschools, etc.), instructional practices, and curricula should align to basic processes of brain development that help all children reach their full potential.

#### CHILDREN'S ABILITY TO REGULATE ATTENTION IMPACTS HOW THEY HANDLE STIMULATION.

Humans are natural explorers, seeking information from the world in the form of stimulation. If that stimulus is providing new information or other value, it gets attention. As that value decreases, the brain starts looking for new stimulation. Attention regulation, or the ability to control what gets attention, grows out of this tension. While all children tend to seek stimulation, they vary in the time they take to (1) turn their attention from a recognized stimulus to a new one, and (2) perceive a stimulus as pleasant or unpleasant. In preschool, where attention regulation is still developing, children are easily distracted and may struggle to sustain their focus, so moments of instruction tend to be brief. Kindergarten students are more able to concentrate, and by second or third grade, students' increased attentional regulation allows them to participate in longer lessons or instructional sessions. Differences in attention regulation may result from biological variations at birth or differences in prior experiences, including exposure to harmful or adverse developmental experiences.

#### THE ABILITY TO REGULATE BEHAVIOR THROUGH SELF-CONTROL USUALLY GROWS WITH AGE.

Children's ability to manage their behavior develops from opportunities to learn and practice self-control and from their underlying brain development, and variations in both opportunities and in their development may make it more or less challenging for them to self-regulate. The ability to control their behavior is critical for children to be able to effectively navigate their world-to know how to act-especially when things around them are changing. In preschool, children need concrete, ongoing guidance and support to encourage self-control, such as through sharing and perspective-taking, taking turns, raising their hand to speak during story time, or staying seated during circle time. As children learn selfcontrol, simple reminders may be enough, as when a third-grade teacher says, "Settle down," and students know how to do that.



#### CONTINGENCY LEARNING HELPS CHILDREN LEARN CAUSE AND EFFECT.

Starting in infancy, children engage in contingency learning, a process that links actions to specific consequences. Over time children learn both direct contingencies (what happens as a result of their action) as well as indirect contingencies (what happens as a result of someone else's action). By the time they enter preschool, children learn about consequences through their own actions and by observing the effects of others' actions. As they grow, children become more sophisticated and abstract in their understanding of cause and effect, and they can understand multistep contingencies, like what happens after following a sequence of instructions.



- » <u>Three Core Concepts in Early</u> <u>Development</u>, Center on the Developing Child, Harvard University.
- » <u>Supporting Early Brain</u> <u>Development: Building the Brain</u>, U.S. Department of Health and Human Services.

#### LEARNING IS STRONGER WHEN MULTIPLE SENSES ARE ENGAGED.

Scientists have identified deep interconnections among the five senses, finding that children engage with the world both through a single sense (e.g., running one's hand over sandpaper to feel its texture) and by combining senses (e.g., reading a text while listening to it read aloud). By engaging more than one of a child's senses concurrently, more parts of the brain are involved in learning, giving children more ways to connect with material. This helps with retention and with developing a more meaningful understanding of concepts.

#### CHILDREN'S INNER REGULATORY PROCESSES ARE SENSITIVE TO SUDDEN CHANGES IN THE P-3 YEARS.

Preschool teachers need to be particularly aware of this sensitivity and provide more emotional and organizational support than would be necessary for second or third grade teachers, for example. But sudden intense experiences may occur in any grade and teachers should recognize that children's responses may vary. For example, unexpected fire alarms can lead to a brief loss of attentional, behavioral, or emotional control for students at any age (although older students will likely recover more quickly). Teachers need to give children time and any necessary support to help them re-regulate after such experiences.

#### **IMPLICATIONS FOR PRACTICE**

- » To maximize opportunities for learning, instructional practices, curricula, and standards ideally would align to basic processes of brain development.
- » School leaders and educators should understand the basic processes and variations of brain development, ways it can be affected by targeted instruction, and what may be indicative of potential challenges that require more extensive intervention.
- » Children interact with the world differently based on variations in biology and experience, including cultural and familial influences. Teachers can build on these differences, using them as strengths to help positively impact learning.

- » Classrooms can be organized to balance and control the amount of stimulation children receive.
  - Classrooms may have too much visual stimulation, which can pose challenges to children, especially in preschool and kindergarten, whose attention regulation skills are more limited.
  - At the same time, too much repetition can be disengaging. Varying the learning materials and changing the themes of learning centers, for example, helps maintain students' attention.



» Classrooms can be organized and instruction planned to encourage children to use multiple senses for learning, including sensory, sand, or water tables (for younger learners), as well as concepts presented concretely, visually, and verbally for all P-3 learners. Manipulatives can engage students in hands-on learning that help them relate concrete mathematical ideas to abstract ones.

#### » Young children thrive in classrooms that are familiar and where activities are predictable; regular schedules and clear expectations support the development of children's internal controls. Teachers can build predictability by regularly setting expectations and posting daily schedules. Planning for classroom transitions—both expected and unexpected—can help children stay motivated and on task through breaks and disruptions. Helping children prepare for any transition before it occurs is less taxing on their ability to self-regulate.

#### QUESTIONS TO GET STARTED

- » How can classrooms be organized and instructional materials selected to reflect how children process information, and recognize learning differences and cultural experiences?
- » How can educators create predictability and safety for students while also allowing for varied opportunities to learn?



### **PRINCIPLE 2:**

Children's thinking is imaginative and can be fostered.

Imagination and curiosity are complex cognitive processes that are uniquely innate, human abilities. Human brains can take unrelated mental images and sensory information and process them to form new ideas that may or may not exist in reality. Curiosity is the instinct to seek new information, igniting motivation and learning. Children are naturally curious, imaginative thinkers who explore their worlds with wonder.

#### AS CHILDREN EXPLORE THE WORLD, THE COMPLEX PROCESSES OF IMAGINATION AND CURIOSITY ARE ACTIVATED TO HELP THEM MAKE SENSE OF IT

As children encounter new scenarios and information, their minds begin to mentally manipulate stored information accumulated from previous experiences to make predictions about new information. This process is known as mental synthesis. The prefrontal cortex of the brain plays a central role in this process, as well as regions of the brain associated with episodic memory retrieval, mental stimulation, visualization, future thinking, reasoning ability, speech, nerve impulses, and spatial navigation. Thus, imagination is a whole-brain cognitive process. Imagination contributes to learning by providing opportunities for exploration and exposure to various ideas and experiences. Fueled by curiosity, possibilities are limitless in the mind of a child.

#### CHILDREN'S THINKING IS OPEN TO A BROADER RANGE OF POSSIBILITIES IN EARLY CHILDHOOD THAN IN LATER YEARS

From birth, the brain rapidly absorbs and manipulates new information, considers alternate solutions, and builds systems to organize and automate thinking. This process continues throughout childhood and even into adulthood. In the early childhood years, children may make several errors or incorrect guesses when trying something new or answering a question. Research shows that giving children opportunities to apply their limited knowledge, wonder about alternatives, and consider wide-ranging possibilities benefit learning and memory more than simply instructing them on how to arrive at the correct answers. In the early years, children need developmentally appropriate opportunities to question, explore and make spontaneous connections—without initially focusing on finding the "right" solution—to maximize learning.

As imaginative thinking occurs, counterfactual reasoning—the ability to devise alternate versions of events that have already transpired—begins. Asking, "What if x had happened instead of y?" is an example of counterfactual thinking. Recent studies indicate that children as young as four and five can engage in counterfactual thinking in simple scenarios. Research hypothesizes that counterfactual thinking helps children identify cause and effect and sparks scientific reasoning. When children think back on actions that had negative consequences, they might use counterfactual reasoning to think about how they can modify their behavior to achieve a positive outcome the next time they experience a similar scenario.

Time for imaginative and unpredictable thinking has been associated with a range of benefits for childhood development, including:

- Strengthening social and emotional skills.
- Fostering inquiry skills, creativity, and problem solving.
- Increasing memory storage and information retrieval.
- Generating new synaptic growth, which improves the brain's neuroplasticity, increasing cognitive power



#### **KEY RESOURCES**

- <u>A Curious Mind: How</u> <u>Educators and Parents</u> <u>Can Encourage and Guide</u> <u>Children's Natural Curiosity</u> <u>in the Classroom and at Home</u>, Harvard Graduate School of Education.
- <u>Rocking and Rolling. Fostering</u> <u>Curiosity in Infants and</u> <u>Toddlers</u>, National Association for the Education of Young Children.



#### **IMPLICATIONS FOR PRACTICE**

- » Allow time in the schedule and flexibility in the curriculum for experimentation and protected risk-taking.
- » Be open to making adjustments that build off unexpected student responses to curricular materials or instruction. Giving students freedom to develop creative or unique solutions engages their imaginations.
- » Foster inquiry by challenging thinking with open-ended questions and encouraging students to collaborate and find solutions to problems in different ways.

- » Encourage children to use their imaginations to help manage emotions. For example, "Imagine a thermometer that represents how happy or worried you feel." For older children, games that engage their imaginations can provide outlets for stress.
- » As children progress through school, their imagination and creativity are often sacrificed as they face increasing pressure to provide "correct" responses, especially on standardized and classroom-based tests. Teachers can balance this tension by providing children with creative activities that engage their imaginations.

Students feel valued when teachers incorporate inclusive learning practices.

#### QUESTIONS TO GET STARTED

- » Where in the curricula are there opportunities for children to develop and use their imagination?
- » How can teachers balance opportunities to support creative expression and risk-taking while also ensuring students meet grade-level standards?



### **PRINCIPLE 3:**

Children's learning and development are multidimensional.

Education has a long tradition of developing learning standards that define age or graderelevant expectations within specific domains. These standards describe what students are expected to know and be able to do, inform curriculum design, and can guide instructional decisions for teachers. Standards-based organization has some advantages, but it can be misleading by suggesting that children's learning is siloed by academic domain. Since learning is frequently multidimensional and interconnected, most successful early childhood educators take a whole-child approach to instruction.

#### LEARNING IS MULTIDIMENSIONAL AND OCCURS ACROSS DOMAINS

While there are times that structuring learning in individual domains can be beneficial, children do not generally approach the world in silos. Reading or writing about historical or scientific topics can be more interesting, as well as help students strengthen their literacy skills. Math skills can be incorporated into a science or social studies lesson when kindergarten students classify objects into categories or a second-grade student compiles and represents data using graphs. Social skills and peer dynamics impact how students operate in the classroom and emotional wellbeing impacts their readiness to learn. These connections across domains underscore the importance of looking at the whole child.

Additionally, research has validated what many teachers observe in their classrooms: students show different patterns of strength and weakness in their learning. Teachers who recognize these patterns can leverage students' strengths to help them improve in areas needing more support. Looking at learning in a more holistic way can also allow educators to incorporate and celebrate a student's non-academic strengths, such as cultural history or family diversity.

#### AT THE SAME TIME, THERE ARE BENEFITS TO BREAKING LEARNING INTO INDIVIDUAL DOMAINS

- Emphasizing literacy or social skills in the early years prioritizes those areas as fundamental to future learning.
- Children may have a learning disability focused on one domain or another, such as dyslexia or dysgraphia. Focusing on that domain offers a better chance of identifying and addressing that area of weakness.
- Knowledge of best instructional practices identifies strategies associated with specific domains or content areas. These best practices are collected in the U.S. Department of Education's <u>What Works Clearinghouse</u> <u>Practice Guides</u>, the <u>New Jersey Department</u> of Education's Preschool Classroom Teaching <u>Guidelines</u>, and <u>Kindergarten and 1st through</u> <u>3rd Grade Implementation Guidelines</u>.

Instructional settings are inherently organized by academic subject area, especially as students get older, but it is important to make cross-content connections as much as possible.





#### **KEY RESOURCES**

- » <u>Transforming the Workforce</u> <u>for Children Birth Through</u> <u>Age 8: A Unifying Foundation</u> (Chapter 4, pp. 85-206), The National Academies Press.
- Information on supporting a <u>Whole Child Approach to</u> <u>Education</u> from the Chan Zuckerburg Initiative.

#### **IMPLICATIONS FOR PRACTICE**

- » Learning standards, while usually organized by academic domain, can be written in a way that recognizes or highlights points of intersection with other domains.
- » Teachers and education leaders should continually assess curricula to ensure that instruction is meeting the needs of the whole child across all domains, including cognitive, social and emotional, and physical domains. High quality curricula allow for integration (looking across domains within each grade) of standards. Preschool curricula tend to integrate competencies and skills across domains more than early elementary curricula do.
- » Teachers can provide children with opportunities to show their learning across multiple domains, for example, by allowing a second-grade student struggling with writing to respond orally to a question about a book (or a math problem or science idea).
- » Teachers can allow students to build from areas of learning in which they excel to grow weaker areas. For example, a kindergartener who has trouble with counting but is good at playing with a ball could be encouraged to count the number of bounces with a basketball.
- » As teachers identify differing patterns of strengths and needs among students, they can more effectively plan for individualized and small group instruction to meet students where they are.

#### QUESTIONS TO GET STARTED

- » How can curricula be developed to take advantage of the interconnectedness of student learning?
- » How can multidisciplinary instruction be adapted to accommodate students with differing patterns of strength?



### **PRINCIPLE 4:**

Children's learning tends to follow a predictable, progressive learning sequence.

Language, cognition, social interaction, physical movement, and problem-solving skills become increasingly complex with age. As children grow, they learn to better organize, memorize, recall information, and combine simple routines into more complex strategies. Learning tends to follow a predictable sequence toward complexity, even if it happens at varying speeds. For example, children learn to walk by progressing from sitting up, to crawling, and ultimately to independent walking and running. Most children progress similarly through this sequence, although some may be walking by nine months while others may take a year or more. Similarly, in other areas of learning and development, such as literacy and mathematics, learning usually follows a common trajectory (usually captured in relevant early learning standards), even if

some children progress more quickly than others. For example, preschoolers recognize quantities of "more" and "less," then associate these quantities with numbers and value, which they can use to quantify (count).

Learning progressions are generally consistent across most children of the same approximate age with comparable opportunities to learn. But important differences may arise that educators must recognize to support the learning of all children. Section 3 of this document provides a more in-depth discussion of the Principles in relation to the needs of diverse learners.

#### CHILDREN LEARN BEST WHEN THE GOAL IS JUST OUT OF REACH BUT MANAGEABLE

Teachers optimize children's learning by giving them opportunities to make small advancements that build on their skills and knowledge, giving their learning a stronger foundation. Skill development that is too far out of reach can lead to frustration and, even if achieved, will be challenging to retain. Well-developed standards for children in the P-3 years ensure a predictable and sustainable learning sequence.



- » <u>Learning and Teaching with Learning</u> <u>Trajectories [LT]2</u>, Morgridge College of Education, University of Denver.
- Transforming the Workforce for Children Birth Through Age 8: A Unifying Foundation (chapter 4), The National Academies Press.
- <u>The Lowdown on Learning</u> <u>Progressions</u>, Educational Leadership, 64 (7).

#### LEARNING AND DEVELOPMENT CAN OCCUR AT UNEVEN RATES ACROSS DIFFERENT AREAS FOR EACH CHILD

The full range of learning and development that occurs in early childhood does not occur all at once, or even in clearly defined stages. Instead, children learn and develop at different rates in different areas. For example, a child may show strong early literacy skills and an emerging understanding of mathematics yet struggle with behavior control. Another child may have a large speaking vocabulary but a more modest ability to engage peers in play.

The observed variation in child learning tends to show that the majority of children learn at about the same rate whereas smaller aroups or individual students learn at faster or slower rates. In this context, developmentally appropriate practice can become nuanced as each child's needs reflect both commonalities with many other children and uniqueness for each child. Tiered approaches, such as Positive Behavioral Interventions and Supports (PBIS) or multi-tiered systems of supports (MTSS), provide learning opportunities that match most children's learning needs, with increasing supports for children who are further behind. The New Jersey Tiered System of Supports gives schools structure to meet the academic, behavioral, health, enrichment, and social/ emotional needs of all students.



#### **IMPLICATIONS FOR PRACTICE**

- » As teachers come to know and understand each student's learning needs, they can help propel learning forward by providing opportunities for students to practice what they already know while challenging them with the next closest step in learning.
- » Some variation in student learning is typical, but persistent learning gaps and/or signs of stalled learning may warrant investigation. The <u>New Jersey Dyslexia Handbook</u> is one model for recognizing potential indicators of learning disabilities (i.e., for literacy).
- » Tiered and differentiated instruction is not limited to identified groups of students. All students benefit when teachers can more closely match instruction to each child's needs.

As children grow, they learn to better organize, memorize, recall information, and combine simple routines into more complex strategies. Learning tends to follow a predictable sequence toward complexity, even if it happens at varying speeds.

#### QUESTIONS TO GET STARTED

- » What are effective strategies to re-engage students when learning has "stalled," or students have stopped making progress?
- » Why is it important to know the student learning standards for the grade being taught and the grades before and after?



### **PRINCIPLE 5:**

Children's learning fluctuates.

Children need repeated opportunities to learn about and apply new knowledge and skills before they achieve mastery. The periods during which children learn new information or develop new skills are often marked by moments of regression or loss, followed by understanding and competency. Likewise, children can show flashes of what appears to be advanced learning that has not yet crystallized. Learning can look uneven for young children who are learning vast amounts of information and developing an array of new skills quickly. While learning will tend to follow a progressive sequence, it is not always linear.

#### CHILDREN'S LEARNING CAN PARADOXICALLY APPEAR TO REGRESS

While children's learning tends to be progressive, sometimes it seems to go backward or regress. A child who has learned to use the bathroom independently may have an occasional accident (variation) but may also start to have accidents consistently (regression). Another child who seems to have mastered some basic mathematical concepts may make simple errors in computation while learning more advanced mathematical skills. These regressions tend to occur with sudden change and/or heightened emotional or attentional arousal.

#### CHILDREN CAN DEMONSTRATE EVIDENCE OF LEARNING WITH SUPPORT BEFORE THEY CAN DEMONSTRATE IT INDEPENDENTLY

Learning new skills and acquiring new knowledge is easier for children when they have engaged in formal learning and some sort of learning support. Prior knowledge provides support, but there are other, often external, supports for learning. A child may hold onto a railing to keep walking, use blocks to help count, families may help extend learning, and a teacher may provide encouraging feedback or give corrections to newly emerging skills and knowledge. Children show evidence of more advanced learning when they have some form of support rather than when left on their own. The best support provides a clear link between what the child already knows or can do and what they are trying to learn. Providing these supports is a key feature of scaffolding—providing just enough support of various kinds to allow the child to build new learning from an established foundation.

#### CHILDREN'S LEARNING MAY BE UNDERESTIMATED

Educators and families rely on demonstrations of learning to confirm that learning has occurred, but children's learning often occurs in ways that may not be obvious or explicit. For example, children can recognize, understand, and use oral language before they can produce and effectively use words themselves. Children often make errors in spelling (invented spelling) as they learn to write. Older children may be able to demonstrate problemsolving skills by rote memory before they can explain them to a teacher, verbally or in writing. Learning can look uneven for young children who are learning vast amounts of information and developing an array of new skills quickly. While learning will tend to follow a progressive sequence, it is not always linear.



- » <u>Scaffolding Children's Learning</u>, U.S. Department of Health and Human Services.
- » <u>Using Scaffolded Instruction to Optimize Learning</u>, ERIC Clearinghouse on Disabilities and Gifted Education.

#### **IMPLICATIONS FOR PRACTICE**

- » It is important to remember that any assessment of children's learning provides a single point-intime picture of children that may not accurately reflect the true level of learning.
- » Scaffolding may look different for each child. Teachers can structure their instruction to meet each child where they are in their learning and provide appropriate supports to facilitate learning. Offering different types of support allows students the option of using help when they need it.
- » Students benefit from having more than one way to demonstrate mastery of a skill (e.g., a student may be able to draw their understanding of a story before they can retell or write about it).
- » Variation in learning and occasional regressions are typical for most children. At the same time, children's learning progress should be monitored for potential concerns, including disabilities, lost learning time, or other less typical changes.
- » Because the degree to which children show evidence of their learning can be influenced by context, it is important for teachers to share what they know and have observed about children's learning with each other and with families. This is true for teams of teachers within and across grades as children transition from grade to grade and teacher to teacher.

#### QUESTIONS TO GET STARTED

- » What are effective strategies for monitoring students' varied progress and for tailoring instruction?
- » What kinds of learning supports are appropriate to provide to students and in what contexts?



## **PRINCIPLE 6:**

Children's emotional security and regulation skills are essential to successful learning.

Increasingly, research confirms what many educators already know: Children who are emotionally secure and able to effectively regulate their emotions are better able to learn. A growing body of research suggests that emotional security is as critical to student success as academic skills. Poor emotional regulation skills and lack of emotional security can increase students' stress levels and decrease their capacity to pay attention, process and retain information, and fully engage in learning, which, in turn, can contribute to chronic absenteeism. In more extreme circumstances, poor emotional regulation and high levels of emotional insecurity may indicate or contribute to mental health challenges. In recent years, the state of New Jersey has emphasized expanding resources for students' social and emotional (SEL) needs and mental health. Still, these resources must be integrated into the school day and culture as much as possible and not used as an "add-on" to improve learning outcomes.

#### CHILDREN'S EMOTIONAL SECURITY AND EMOTIONAL REGULATION SKILLS OFTEN IMPROVE RAPIDLY THROUGH THE P-3 YEARS

In the early years of life, biological factors, temperament, exposure to toxic stress or trauma, early learning and care experiences, and cultural norms all play a role in the development of neural pathways in the brain that impact a child's self-concept and emotional security. These neural pathways continue to evolve and change throughout children's lives, but the early schooling years can play a significant role in this developmental process. The preschool through third grade years are when children develop rapidly both socially and emotionally as they engage in increasingly complex social exchanges in the classroom and on the playground. As they interact and collaborate more with others, they are learning, practicing, and encoding important- and preferably positive-social and emotional concepts and skills. These skills will lay the foundation for how they handle stress, frustration, challenges, and novel opportunities throughout their lives. Increasingly, early grades curricula include social and emotional skills to further support children's growth in these areas.

#### EMOTIONAL SECURITY IS KEY TO NURTURING A POSITIVE MINDSET TOWARD SCHOOL AND POSITIVE SOCIAL DEVELOPMENT

Positive attachments with teachers and peers foster a sense of belonging and safety that can bolster self-confidence and self-esteem, boosting a child's willingness and ability to engage socially and in a new or challenging task. When a child does not feel secure in their environment, the body and mind may interpret that environment as a threat, whether consciously or unconsciously, and that can contribute to increased levels of stress. Young children who feel emotionally insecure at school may doubt their abilities and refuse to try new things, develop a negative selfconcept, become distrustful of others, isolate from peers, or develop a fixed mindset rather than a growth mindset.



#### **KEY RESOURCES**

- » Self-Regulation Snapshot #2: A Focus on Preschool-Aged Children, U.S. Department of Health and Human Services.
- » Self-Regulation Snap Shot #3: A Focus on Elementary-Aged Children, U.S. Department of Health and Human Services.
- » <u>Children's Emotional Development Is Built into the Architecture of Their Brains</u>, Center on the Developing Child, Harvard University.

#### EMOTIONAL REGULATION SKILLS AFFECT THE LEARNING PROCESS

Students' emotional regulation skills also affect their social interactions with peers and teachers. That is, when children are unable to manage feelings of stress, worry, anger, or embarrassment, for example, it can hinder learning and create challenges for social relationships. It also affects their ability to actively listen and participate in class, collaborate with peers, start and persist at a task, and problem solve.



#### **NEW JERSEY RESOURCES**

 » NJ has a set of <u>Social and</u> <u>Emotional Learning (SEL)</u> <u>Competencies and Sub-</u> <u>Competencies</u> that are designed to help educators address the social-emotional needs of children across the curriculum to enhance the building of positive school climates and the healthy development of young people. To manage their emotions effectively, children need to understand what they are feeling, have the language to name those feelings and express them to others, and have strategies to manage their emotions in an age-appropriate way. For example, a child may appear to be defiant if they do not understand an assignment, but the behavior is actually a reflection of not having the vocabulary to say why they are frustrated. Children will develop the necessary emotional regulation skills over time, but they need consistent guidance and modeling from adults. In addition, children can be explicitly taught to understand, name, and talk about their emotions and work through them. Learning these types of skills prepares students to effectively manage their emotional response when confronted with more complex academic concepts and social interactions in later years when they will be expected to do so independently.

Regardless of the factors and experiences that cause emotional distress, or delay the progression of self-regulation, all children can learn skills and strategies that help them improve their ability to self-regulate. Brain research shows that neuroplasticity (the restructuring of the brain's architecture) is a lifelong process, and neural pathways can be strengthened, especially during the P-3 years. When children have the skills and abilities to manage their emotions, they are better able to process information and store it in their memory, thereby improving learning and retention.

#### **IMPLICATIONS FOR PRACTICE**

- » Teachers can learn to recognize common signs of emotional distress among their students. Young children within the P-3 age span often lack the language to describe how they are feeling so they might signal emotional distress through an inability to focus on a task, acting out, or withdrawing from classroom activities. Educators build positive relationships with their young students by being responsive to their needs and providing comfort in times of stress.
- » Consistent expectations, routines, and having positive interactions and inclusive practices with students across the school environment is important to ensuring that students feel a sense of security at school.

- » Teachers can support students' social and emotional development by embedding SEL learning into routines, curriculum, and classroom management strategies.
- » Educators can model and teach children selfregulation skills.
  - Preschool teachers may focus on helping children identify feelings, name emotions, and practice ways to express emotions through art and role play.
  - Kindergarten teachers can continue to coach and model self-regulation skills for all children and understand that some children will need extra support in this area.
  - First- through third-grade students may need ongoing support in developing self-regulation skills as well as with engaging positively and collaboratively with peers, goal setting, organization, planning, and self-monitoring.

#### QUESTIONS TO GET STARTED

- » What are some strategies for helping children build social and emotional skills that facilitate positive relationships?
- » Do the curricula address the <u>New Jersey</u> <u>SEL Competencies</u> in a meaningful way throughout the school year?



### **PRINCIPLE 7:**

Children learn better with a well-developed sense of self-agency.

"Self-agency" is the concept of a student's ability to define and act on their own goals and objectives. Children start developing a sense of self-agency as babies, when they decide, for example, to build a block tower and choose the blocks to stack. When children have some control over their learning, they are more attentive to what they are doing and can better retain information. The curriculum and instruction delivered in the P-3 years are critical for helping shape students' sense of self-agency and that can lead to more motivated and engaged learning.

#### CHILDREN ARE NATURALLY INQUISITIVE AND LEARN THROUGH EXPLORATION

In the early years, learning is a multi-sensory experience. Exploration leads to trial and error, where errors lead to more exploring until the goal is reached. Children learn and retain information best when they are provided with the right amount of support and space for self-directed exploration.

In preschool and kindergarten classrooms, self-exploration often occurs during centerbased activities where children explore a curricular concept introduced during wholegroup instruction. The centers typically provide children with multi-sensory, open-ended opportunities for exploration and conversation about ideas related to the curricula. Preschool programs include substantial periods of "choice time," where children make their own choices within the classroom.

As children move into elementary school, there often are fewer opportunities for self-directed learning. Teachers are usually required to teach a proscribed curriculum, and there is less freedom to allow students to explore ideas and make choices. Wherever possible, teachers can promote agency through problem/project-based learning, choice in reading materials, choice about how to demonstrate knowledge, oral presentations, drawing, writing, game-based exploration, and allowing for flexibility in selecting and completing assignments.

#### CHILDREN ARE MOTIVATED TO LEARN WHEN THEY HAVE A SENSE OF SELF-AGENCY

When children feel that they are in control, they are empowered to act. As children engage in selfdirected learning, the reward system of the brain is activated and the child is better able to focus on a task. Self-directed learning provides children with the opportunity to apply knowledge and skills within a context that is of interest to them, increasing engagement and positive behavior. When children feel that they have no control, they are more likely to disengage from learning and exhibit negative behaviors.

#### SELF-AGENCY CONTRIBUTES TO THE DEVELOPMENT OF SELF-REGULATION SKILLS

Children who have more opportunities for selfdirected learning generally learn to manage their time, emotions, behaviors, and actions more effectively. Every opportunity to practice these skills helps children strengthen them. Self-regulation, or executive functioning, skills are important to the development and learning process not only in early childhood, but throughout adolescence and adulthood. Research has demonstrated correlations between selfregulation skills and academic achievement, employment outcomes, and life outcomes including health and socioeconomic status.



#### **KEY RESOURCES**

- » OECD Future of Education and Skills 2030 Conceptual Learning Framework: Student Agency for 2030. Organization for Economic Cooperation and Development.
- <u>Making Sense of</u> <u>Student Agency in the</u> <u>Early Grades</u>, Phi Delta Kappan 99 (7), 62-66.

#### NJDOE RESOURCES

- » Preschool Resources
- » <u>Kindergarten –</u> <u>3rd Grade Resources</u>

#### **IMPLICATIONS FOR PRACTICE**

- » Encourage children's exploration of personal interests and help them relate those interests to standards and educational concepts. However, provide "guardrails" that allow choices that match their age and grade and that enable them to meet curriculum goals and standards.
- » Where possible, allow children to engage in and express themselves through different modalities, such as writing, drawing, singing, and movement.
- » Give children opportunities to provide input on classroom management, such as helping establish the class rules or deciding on rewards and consequences that are appropriate to their grade. For example, in preschool, teachers primarily provide

expectations and consequences for students, but in later grades, students can be more engaged in co-developing them.

- » Design the classroom in ways that give children agency. For example: ensure books and toys are low enough for children to reach them independently; build time in the schedule for free play or for children to choose what they want to play with and how; and, for first through third grades, build choice time into each instructional block.
- » Err on the side of too much freedom, and then scale back as needed. This can be challenging, as some students will have a stronger sense of agency than others. By adapting instruction and scaffolding to meet students' needs, teachers can allow that sense of control to develop in productive ways.

#### QUESTIONS TO GET STARTED

- » How can teacher-directed learning be balanced with student-directed learning but still meet grade-level standards?
- » What are effective strategies to encourage and support student agency when students do not seem motivated or confident in making choices?



### **PRINCIPLE 8:**

Joyful play supports children's learning and development.

Play contributes to social and emotional development, can support development of physical skills, and can be harnessed to encourage creativity and risk-taking. Play also fosters joyfulness, which promotes engagement, curiosity, persistence, and enjoyment, all contributing to higher rates of learning. Educators in P–3 programs can structure curricula, environments, and schedules to purposefully build upon a child's innate sense of play.

#### CHILDREN'S BRAINS ARE WIRED TO PLAY

Play is a mode of learning universal to all cultures from a very young age. The concept of learning through play does not need to be taught; indeed, research indicates that children begin engaging in pretend or imaginary play in the toddler years and continue to engage in increasingly varied forms of play throughout childhood. Consequently, any learning that is child-centered and designed to meet children's developmental needs would build off this instinct to play.

#### PLAY CONNECTS THE NJ APPROACHES TO LEARNING PRINCIPLES

As described in the previous Principles, children learn best when their learning builds on how they understand the world, how they process the world, and how they engage with it. Play, when constructed well, can leverage a child's abilities to meet specific learning goals, develop new skills, and spark creativity and imagination. Play allows for the consolidation of knowledge, practice of newly acquired skills and knowledge, and management of prior knowledge to explore new ideas in a developmentally appropriate way.

#### THERE ARE A VARIETY OF WAYS TO PLAY

The word "play" captures a wide range of activities that can look different and that develop in complexity across the P-3 continuum. Play looks different at different ages and developmental stages. Play can be passive or intentional, solitary or social. Educators can be knowledgeable about various forms of play and how best to design and integrate playful learning into the curriculum to achieve specific student outcomes.

Multifaceted play generally follows a developmental trajectory. Simpler forms of play are more common among younger children, with preschoolers tending to have more solitary or parallel play, while more complex forms of play emerge increasingly as children progress through the elementary years. Rules-based games emerge later with explicitly given rules, like when preschoolers and kindergarteners are taught simple games, but older children may negotiate rules among players. Imaginative play, or role playing, typically starts as individual play with children mimicking others they've observed, like playing firefighters. As children get older, they engage in both fantasy play (taking on roles not based upon real models) as well as collective role playing, where multiple children assume roles to play out scenes. Imaginative play tends towards more complexity as children get older.

Play can be entirely child-directed (e.g., free play), or influenced by an adult (guided play). Allowing younger children to explore a range of play opportunities can help them make sense of new concepts. For older children, playful learning could look like taking the class outside during science to explore types of soil around the school, finding as many shapes as they can on the playground during a geometry lesson, or

Designing curriculum that intentionally and meaningfully allows for self-agency, creativity, collaboration, and hands-on learning is playful learning. Playful learning is not an invitation for chaos; rather, it involves establishing shared rules and boundaries within which children are encouraged to explore and create joyfully in ways that align with learning outcomes. having students work in groups to write their own theatrical production and perform it for their classmates in language arts.

The extent of guidance can vary from a modestly constructed theme based on the child's interests and specific learning goals to a completely adult-controlled and directed play scenario. For example, gamification is a simple tool teachers can use to teach almost any preschool through third grade skill (and beyond). Games can be bought-or, with a little creativity, designed—to teach anything from colors, shapes, and number recognition to sight words, syllables, phonemic awareness, multiplication, pattern recognition, and fractions. Older students can even design their own games as a class activity. Teachers can provide students with a variety of classroom materials to use to design their own game,

and give them an objective (i.e., design a game students can use to practice vowel sounds), and some parameters (e.g., only use any communal supplies you can find in the classroom and the game must be designed for two to four players) and present a sample or two. Give them a time limit and have them work in teams. When time is up, students can present their games to the class and practice playing each other's games.

#### PLAY CAN BE INTEGRATED WITH OTHER INSTRUCTIONAL PRACTICES

In the preschool years, play is typically at the heart of instructional practice. For example, a preschool class can sing rhyming songs with made-up words to reinforce phonemic awareness. As children mature and are exposed



#### **KEY RESOURCES**

- » <u>Play, Mathematics, and False Dichotomies</u>, Development and Research in Early Mathematics Education (DREME).
- » <u>A Pedagogy of Play: Supporting Playful Learning in Classrooms and Schools</u>, Project Zero.
- » Learning Through Play, a website supported by the LEGO Foundation.

to more complex academic concepts, educators necessarily add additional instructional approaches, but play-based approaches should not be abandoned. A first-grade lesson on basic mathematics operations can become a movement-based game ("Ok, now take two steps forward, and three steps back, then four steps forward-where are you?") or a second-grade lesson may use cards or dice as part of a game rather than rely on seat-based instruction. Play can also help students build connections between the familiar and the new. Teachers can use children's background knowledge and experiences, whether from home or in earlier grades, as a launching point for adding new information.

There are often inequities in how programs and schools incorporate play into their students' days. Research shows that early childhood programs in lower-income communities often allow less time for playful learning, and the time that is allowed often is very adult-directed. Educators may think that they are helping children with more formalized instruction, but allowing all students time to learn through play can strengthen their understanding of the world and begin to close gaps in knowledge and skill development. They are more likely to retain what they learn and be able to apply mastered concepts to novel situations.

Whether early elementary teachers find ways of integrating playful learning within contentfocused instruction or provide opportunities for playful learning without a specific academic focus, children benefit from play. Without some opportunity for self-directed, imaginative exploration, students may become frustrated and irritable, or display signs of regression, avoidance, or refusal in the learning process. If a child begins to display these types of behaviors when they may not have occurred before or are outside of the norm for the child. educators may consider reflecting on the instructional approach and consider ways to integrate more opportunities for game-based learning, self-directed learning, free play, project-based learning, outdoor learning, or multi-sensory learning.



#### **IMPLICATIONS FOR PRACTICE**

- » Teachers can find ways to integrate play into their instruction at all age levels.
   Play and learning are complimentary—not contradictory.
- » As children are exposed to increasing amounts of academic content in the P-3 years, opportunities for play-based learning tend to diminish or even stop. Instead, educators can find ways to sustain playful learning during these years through

additional professional learning, working with other teachers or mentors, or accessing additional resources to build their use of playful learning across curricula and grades.

» Teachers may feel pressure to teach young children in ways more common for older children, called "academic pushdown," or may not be supported in their efforts to teach younger students differently. Ideally, educational leaders will learn to recognize play as a teaching and developmental learning strategy and support teachers who provide rich opportunities for children to learn through play and not dismiss these experiences as "just play." Specifically, first-, second- and third-grade teachers need resources like activity centers and materials and implicit and explicit encouragement of play-based instruction in classrooms to support intentional playful learning.

» Teachers in P-3 classrooms come from various backgrounds and preparation programs that likely provided differing amounts of training and practice in using playful learning in their classrooms. They also vary in their understanding, value, confidence, and comfort in providing play-based instruction. Across the P-3 continuum, school communities, cross-classroom coaching, common professional learning communities, and other professional experiences can bring playful learning to all classrooms.

#### PLAY GIVES CHILDREN OPPORTUNITIES TO...

- Use their imaginations, make decisions, and problem solve, all of which contribute to building self-confidence, self-regulation skills, creativity, risktaking, reasoning, and remembering.
- Learn through peer interaction, which gives them the space to practice and develop social and language skills.
- Explore the world in a contained space to foster the understanding of the self, social norms, emotions, and the application of new concepts and skills.
- Learn in a way that fosters movement and development of psychomotor skills that are important to the development of dexterity, spatial awareness, and body control.
- Build self-agency that fosters feelings of control and safety and can be designed to relieve stress, fears, and anxiety.

#### QUESTIONS TO GET STARTED

- » In what ways can teachers integrate opportunities to learn through play across content areas and at every grade level?
- » What barriers exist to bringing more joyful learning into the classroom, and how can these be addressed?

## CONSIDERING THE NJ APPROACHES TO LEARNING PRINCIPLES WITHIN DIVERSE LEARNING CONTEXTS

The *NJ Approaches to Learning Principles* apply to the learning and development of all children in preschool through third grade and recognize their diversity in ability, experience, and opportunity, which can affect the depth and pace of their learning. However, as described in this chapter, there are noteworthy considerations when applying the Principles to groups of children with additional learning needs, including those with neurodiversity, with inequitable opportunities to learn, from diverse cultural contexts, and who have had traumatic experiences.

#### The NJ Approaches to Learning Principles: CONSIDERATIONS ABOUT CHILDREN WITH NEURODIVERSITY

The concept of neurodiversity recognizes the breadth of differences in how children's brains function. While much of this document highlights commonalities in how children learn, the term neurodiversity is increasingly applied to describe differences in how children's brains interpret their world, recognizing both the challenges children may experience but also the potential strengths that come from their learning differences. Children identified as gifted, as well as those identified as having a disability, are neurodiverse in this way. Formative, and possibly summative, assessments can help indicate possible neurodiversity, but early identification and intervention is often essential to help meet the specialized needs of these children. Educators knowing the developmentally appropriate expectations for their students can create classroom environments that are equitable and accessible to all learners.

**CHILDREN WITH DISABILITIES** – Most children identified with learning differences receive some amount of specialized supportive services but also learn in classrooms alongside peers who do not have a disability. Teachers thus need to understand how to teach children across the full spectrum of abilities.

Because the unique needs and experiences of children with disabilities are wide-ranging, consideration should be given to how the Principles apply to these students. While they may directly affect some children with disabilities, they may not affect all. For example, a child with attention-deficit disorder likely has different challenges compared to the attention regulation of other children. The supports they receive could include specialized intervention plans or accommodations in instruction, like additional white space on paper and limited text density or allowing frequent short breaks to support attention regulation. Some basic accommodations in instructional practice may be easy to do and may even benefit children without disabilities. For example, audio books might help a student who has reading challenges, but also might be more engaging for a student who reads independently.

Certain learning disabilities may disrupt the sequence of learning for a child in a specific way, but the overall trajectories tend to be similar. A child may take longer to get to the desired outcome, but still can achieve the goal, especially with assistance.

Under federal special education law, a student identified with a disability must have an Individual Education Program (IEP) that outlines a program to best meet their needs. The IEP clearly states all accommodations and modifications that have been deemed necessary to help the student succeed academically. The district, school, and the child's teachers need to fully understand the child's needs and incorporate the supports into the IEP. The IEP team may also consider the NJ Approaches to Learning Principles when developing the student's academic and other goals, as well as when identifying the appropriate—and least restrictive—educational setting for the student.



#### STUDENTS IDENTIFIED AS GIFTED

**AND TALENTED** – Just as students with disabilities experience and demonstrate learning differently, so can students identified as gifted. The NJDOE identifies a "gifted and talented student" as someone who processes or demonstrates a high level of ability in one or more content areas when compared to their chronological peers and who require modifications of their educational program to achieve to their capabilities. Gifted children's strengths and abilities should be identified as early as possible so they can be provided with expanded opportunities. Although these students may meet grade-level expectations without an apparent need for assistance, developmentally they can continue to benefit from instructional supports that meet their learning needs and abilities. New Jersey's Strengthening Gifted and Talented Act calls for adjustment or modification to instruction to enable gifted students to participate in, benefit from, and demonstrate knowledge and application of the New Jersey Student Learning Standards in one or more content areas at the instructional level of the student, not the student's grade level.

There are additional considerations when identifying children as gifted. First, based on national data, gifted children come from all socioeconomic and cultural backgrounds. Second, children may be gifted in less apparent ways; in addition to math or reading, children can be gifted in areas such as artistic ability, social skills, or empathy. Finally, some children who present aspects of giftedness also present signs of learning disabilities or weaknesses in other areas, such as emotional development, executive functioning, or social development. These "twice exceptional" students may appear high performing, but that does not mean that they do not need additional supports or modifications, sometimes even in an area of strength.

#### THE CRITICALITY OF A ROBUST SCREENING

**SYSTEM** — The range of differences among neurodiverse children is broad and complex. It takes a strong, high quality, comprehensive early screening system—including developmental screeners and opportunities for teacher and family input—to identify children who may be gifted and who may have disabilities. Once screened, in-depth diagnostic procedures are necessary to specify the nature of each child's neurodiversity, which then will inform interventions and instructional decisions to ensure their needs are met. Early identification of neurodiversity, particularly disabilities, can be instrumental in helping students reach their potential and prevent challenging interventions later in school.

Some teachers or parents may be hesitant to screen a child or seek a diagnosis of a potential learning challenge for fear of labeling a child or preferring to take a "wait and see" approach. However, research is clear that early intervention can mitigate learning loss, mental health issues, and other challenges that can accumulate from years of living with an undiagnosed learning difference. Past generations of experience with bias, negative experiences with the education, health or mental health communities, and stigmatization may prevent students from getting the support they need under the assumption that the child will catch up in time. Distinguishing neurodiverse learners relies on a systematic approach to identification, including screening and, if needed, diagnostic testing. Just as with hearing loss, speech impairment, and other physical disabilities, neurodiverse children will have better school experiences with the appropriate services and supports sooner rather than later.





Research shows that for many, learning differences that qualify a student for special education services, other than severe cognitive disabilities, indicate specific areas of difference that may not be generalized across all areas of learning and development. Thus, a child who meets the criteria for special education services should receive the appropriate accommodations for their learning differences so they can have full access to the appropriate curriculum, especially in an area of strength. This could even include gifted education services. Conversely, children with advanced academic skills, particularly higher-order language skills, reasoning, and problem solving, may be masking deficits in low-level auditory and visual processing skills, or working memory that could be associated with an undiagnosed learning disability. In other words, high intelligence does not mean that a child cannot have a learning disability.

The *NJ Approaches to Learning Principles* provide insight and support for all educators working with every child, including those with unique learning needs.

#### **IMPLICATIONS FOR PRACTICE**

- » The broad range of learning and development outcomes among children of comparable age means that teachers need to be prepared to deliver a range of multi-sensory instructional strategies to support all students.
- » Neurodiversity reflects differences between students that at times may have been stigmatized by other children, families, and possibly schools and teachers. Teachers and leaders need to be clear in their work with students, families, and communities that neurodiversity is not an indication of low intelligence or inferiority.
- Inclusive practices, such as <u>Universal</u>
  <u>Design for Learning</u>, allow children with learning differences to access the equitable

accommodations they need without being singled out or excluded from the general education classroom and curriculum, and without the fear of stigmatization. Students without learning differences—and especially students with undiagnosed learning differences—will also benefit from inclusive practices such as allowing additional time to complete assignments, spending time in a calming area if they need time to regulate their emotions, and learning using assistive audio and visual tools.

» There are multiple systems to support children with learning differences in place across the preschool to third grade years, some of which more readily "follow the child" as they move through school. For example, a child may have had an IEP while enrolled in Early Head Start that informs their kindergarten plan (if it is available to the kindergarten teacher or school). Teachers and school leaders can be a resource for families to facilitate their child's transition across grades and supports.

#### QUESTIONS TO GET STARTED

- » How can instruction be differentiated in general education classrooms to better meet the needs of neurodiverse children?
- » How can specialists, both within the school or district as well as outside school, provide support to classroom teachers in helping support neurodiverse students?

#### The NJ Approaches to Learning Principles: CONSIDERATIONS ABOUT INEQUITABLE OPPORTUNITIES TO LEARN

The NJ Approaches to Learning Principles outline considerations for the ideal conditions and supports to center learning on how children learn. Unfortunately, there are many situations across the nation, including in New Jersey, where some children have inequitable access to high-quality learning opportunities and are likely to fall behind their peers.

Even if children have access to schoolbased, full-day early childhood education programs, they may still lack access to highquality learning opportunities. Schools that do not employ evidence-based practices in literacy and mathematics instruction, and schools that do not center instruction on how children learn, create disadvantaged learning environments for all children. Ideally, schools should be designed to ensure that all children have equitable learning opportunities and have teachers who are prepared and supported in their efforts to use effective instructional practices for each child.

#### **KEY RESOURCES**

» <u>Closing the Opportunity</u> <u>Gap for Young Children</u>, The National Academies Press.

#### **IMPLICATIONS FOR PRACTICE**

- » Children enter the classroom with a wide range of prior learning experiences that need to be recognized. Children entering preschool may have spent earlier years at home, or in a range of potential care experiences. Children entering kindergarten may come from a formal preschool program (possibly even in the same building as their kindergarten), from some other experience outside of their home, or without any prior experiences outside of the home. Teachers need to quickly understand their students' prior experiences to inform their instruction. However, teachers should recognize that while children may have had common prior experiences (e.g., Head Start, Montessori, at-home, etc.), those experiences likely varied widely in programmatic quality and approach.
- » Identify opportunities in the community where learning may occur, share details and potential benefits with families, explain how the experience supports learning and development, and encourage students and families to take advantage of them, such as library story hours for preschoolers, afterschool programs for elementary school students, or organized summer camps, among many others. These supplemental learning settings can reinforce what students are learning in schools or fill gaps that may exist due to differing learning environments.

#### QUESTIONS TO GET STARTED

- » How can teachers learn more about the different experiences students had prior to their class?
- » How can teachers provide continuity of learning when students may be coming from very different learning opportunities?



## CONSIDERATIONS ABOUT CULTURAL CONTEXTS

Typically New Jersey's public schools are filled with students from widely diverse cultural and linguistic backgrounds. Schools can respond to this richness by ensuring that diversity is recognized as an asset while also recognizing their responsibility to ensure equitable access to learning opportunities for all children to succeed.

#### MULTILINGUAL LEARNERS (MLs) - A

growing body of research shows an array of benefits from learning multiple languages. In addition, research shows that providing supports for children to learn their home language while also introducing English as opposed to English immersion—allows children to grow in both languages. New Jersey requires that schools identify every <u>child's home</u> <u>language</u> to identify children who are multilingual learners and to provide them appropriate program and instructional support.

Children learning multiple languages, whether for practical reasons (i.e., speaking a language other than English at home) or from a desire to be multilingual, may appear to be learning each language at a slower pace than their monolingual peers. Children from cultures with language structures that differ from English and other sound-based reading systems, such as Mandarin or other iconographic languages, will require somewhat different neural systems, so they may be in very different places in learning a new language. These learning differences tend to be most apparent in preschool and kindergarten, or the grade a child first enters a NJ school. However, research suggests that most young multilingual children catch-up to their English-only peers on language and literacy assessments as they progress through mid-elementary school. The NJDOE Office of Supplemental Education Programs provides additional information on Title III, Language Instruction for English language learners and Immigrant Students.

To fully support cultural and linguistic diversity, it is important to examine if and how learning expectations for children may be biased towards certain groups of children, notably economically advantaged, native English-speaking white children and not others.

#### CULTURAL EXPECTATIONS AND

**PRACTICES** — Educators also need to be mindful of how cultural differences can impact families' perspectives towards schools and learning environments. Cultural traditions and values influence the interactions between students, families, classrooms, and schools, Individual parent experiences shape their children's perspectives as well. These differences may be challenging for educators to navigate but essential to help ensure that the needs of all students are met. For example, some cultures may value the role of the teacher as the leader of the classroom. But teachers may want to support children's emerging



**KEY RESOURCES** 

- » Practical Guide for State **Education Agencies to Promote** Success of English Learners PreK-Grade 3, Council of Chief State School Officers.
- » Advancing Equity in Early Childhood Education, NAEYC.
- » Research Brief: Professional Development for Teachers of Young Dual Language Learners and Its Connection to Teacher Beliefs and Practices, First 5 California.

executive function skills and give them choices and a stronger sense of self agency. This may appear to parents as the teacher being too "hands" off" or "not teaching." Some parents prefer a more traditional learning environment, with teachers focused on building specific academic skills, as opposed to a setting that facilitates playful learning.

Taking the time to explain to parents how classrooms and instruction are organized based on how children learn best can help mitigate some of these differences. For example, teachers can explain the research that supports intentional play activities to help families understand the benefits of incorporating play into learning. Similarly, children's tendencies to make frequent errors and give unpredictable responses may be valued by some families as indicators of creativity, while in others, a focus on correct answers to demonstrate learning may be valued more. It is important that educators communicate about teaching and learning goals and children's developmental approaches to learning.



#### **IMPLICATIONS FOR PRACTICE**

- » Teachers should approach their students with curiosity and interest to learn more about students' experiences.
- » Give children opportunities to describe their family life, community, traditions, and, if applicable, their country of origin. Invite family members into the classroom to share their experiences with the class. Include classroom books representing the cultural and linguistic diversity of the students.
- » Learn more about the school community and seek professional growth to continually build the capacity to recognize the needs of multilingual students and how their language and instructional needs may differ from their peers and change over time during the P-3 years.

#### QUESTIONS TO GET STARTED

» What NJ online resources can be used to support students and families?

» How can teachers be prepared to engage families in their school communities?



#### The NJ Approaches to Learning Principles: CONSIDERATIONS ABOUT TRAUMATIC EXPERIENCES

Educators have become increasingly aware of the profound impact trauma can have on children's learning and development. However, identifying and understanding trauma and the impact on learning can be challenging. Oftentimes, children's traumatic experiences are hidden from teachers and school leaders. Children may lack the language to communicate their experiences, and families may be unwilling to talk about them.

Teachers and school leaders should become informed about the signs of trauma and the relationship to children's behaviors. While many children experiencing trauma may show outward signs of distress, others may become withdrawn and quiet. While some experiences may be considered traumatic by most people for example, witnessing or experiencing violence in the home or at school—some experiences are more traumatic for some children than they are for others.

Traumatic experiences have both direct and indirect effects on how children learn:

- Prolonged periods of traumatic stress can change how the brain of a child functions, including the systems and processes that control behavior, emotion, and attention. As a result, children's development of these regulatory skills may be delayed or inconsistent.
- Often traumatic experiences can affect children's emotional security, the ability to engage in positive relationships, or the ability to develop their own agency and sense of self.
- Some traumatic experiences lead to specific disruptions in children's living and family situations. Housing and food insecurity are significant issues impacting children's ability to learn but are often under-recognized or acknowledged.

Schools can establish supportive, positive learning environments and practices for all students that not only provide structure, but are also safe, welcoming, and relationship centered. Doing so can help mitigate the effects of trauma or adversity a student may be facing and support positive growth. The NJDOE has <u>developed resources</u> around utilizing traumainformed and healing centered practices for educators of students at all grade levels.

#### **IMPLICATIONS FOR PRACTICE**

- » Because teachers and school leaders may not be aware of the ways that individual children have experienced trauma, there is a need for caution in inferring some traumatic experience on the basis of biases, stereotypes, and misinformation.
- » While children's responses to even the same traumatic experience may vary, to the extent that these events may be anticipated, teachers and schools can establish plans to respond to all children's needs.
- » Cultivate a practice of mindfulness in the daily classroom routine. Research shows that mindfulness is beneficial for restoring a sense of calm, focus, and self-regulation for everyone. Young children dealing with stress, trauma, anxiety, or any other issue that may be causing self-regulation impairments can benefit greatly from regular mindfulness practice.
- » Share the calming strategies used in the classroom with families so that they are informed of tools they can use to support themselves and their children at home.

#### **KEY RESOURCES**

- <u>A Guide for Early</u> <u>Childhood Professionals</u> <u>to Support Young</u> <u>Children's Resilience</u>, National Center for Pyramid Model Innovations.
- » <u>Considerations for</u> <u>Trauma-Informed</u> <u>Child Care and Early</u> <u>Education Systems. OPRE</u> <u>Report</u> #2023-041, U.S. Department of Health and Human Services.
- » Early Childhood Trauma, National Child Traumatic Stress Network.
- <u>Child Trauma Toolkit for</u>
  <u>Educators</u>, National Child
  Traumatic Stress Network.

#### QUESTIONS TO GET STARTED

- » How can teachers better understand traumatic experiences students may have had?
- » What resources are available (from the school or the broader community) to help children and families experiencing trauma, and how can those be appropriately and sensitively shared with those who need them?

## CONCLUSION

This resource was designed to provide professionals working with children in P-3 with an essential understanding of children's approaches to learning. Teachers can use this knowledge to align learning opportunities with how children learn to support the success of all children during the early years of school. School and district leaders can also use this knowledge to inform their decisions to align with children's learning needs and to provide a common space for conversations around instruction with teachers and other classroom staff.

The *NJ Approaches to Learning Principles* outlined here can inform different aspects of the early childhood education system, including curriculum and program design, the content and articulation of learning standards, the use of assessments, educator preparation programs, and the design of professional learning opportunities.

<u>Additional resources</u> related to putting these Principles into practice and which are targeted to various audiences are available on the NJDOE website.



#### **Text Version of Figure 1**

NJ approaches to learning principles are the center of early education

Children's:

- Brains develop rapidly and in ways that help them organize and understand their worlds
- Thinking is imaginative and can be fostered
- Learning and development are multi-dimensional
- Emotional security and regulation skills are essential to successful learning

Children's learning:

- Tends to follow a predictable, progressive learning sequence
- Fluctuates

Children learn better with a well-developed sense of self-agency.

Joyful play supports children's learning and development.

Instruction, Curriculum, Standards, Assessment

Back to place in document (after Figure 1)

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