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Early Childhood Intervention Curriculum Creation: Using Playful Project-Based Learning

Hannah Shullenberger Million
Otterbein University, hshullenberger@gmail.com

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Hannah Shullenberger Million, B.S.

Otterbein University

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Dr. Daniel Cho Advisor	_____ Signature	_____ Date
Dr. Allison McGrath Second Reader	_____ Signature	_____ Date
Dr. Diane Ross Graduate Faculty Representative	_____ Signature	_____ Date

EARLY CHILDHOOD INTERVENTION CURRICULUM CREATION: USING PLAYFUL PROJECT-BASED LEARNING

VITA

Education

2022	Master of Arts in Education
(Pending completion of courses)	Curriculum and Instruction
	Otterbein University
	Westerville, OH
2007	Bachelor of Science in Education
	Intervention Specialist (K-12), Mild/Moderate
	Early Childhood Intervention Specialist (P-3)
	Miami University
	Oxford, OH

Teaching Experience

2007-2008	Early Intervention Specialist (Birth-3 years)
	Northwest Child Development Center
	(now Northwest Center)
	Seattle, WA
2008-2012	Preschool Intervention Specialist
	ESCCO

	Columbus, OH
2012-2015	Preschool Intervention Specialist Olentangy Local School District Lewis Center, OH
2017-2019	Itinerant Preschool Intervention Specialist Olentangy Local School District Lewis Center, OH

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ABSTRACT

The purpose of this study is to present an early intervention curriculum incorporating Project-Based Learning (PBL) and opportunities for play. The project aims to answer the questions: What does a Project-Based Learning curriculum model look like in high quality early childhood special education? and How does PBL curriculum work in conjunction with play? The created curriculum answers these questions based on a review of research and guidance from three theoretical frameworks: a Vygotskian *Tools of the Mind* approach (Bodrova & Leong, 1996), implementation of PBL in early childhood (Lev et al., 2020) and the early intervention *Building Blocks* framework (Sandall et al., 2019). Early learning standards and differentiation strategies are embedded throughout the curriculum's high-quality early learning environment set up, sample daily schedule, lessons for daily routines, lessons for rotational small group play centers, and four-week PBL unit. The proposed curriculum is designed for inclusive early learning settings (ages three to six years old) for peers and students who qualify for preschool special education services under Individuals with Disabilities Education Act (IDEA).

SECTION ONE

Chapter 1- Introduction

As a former Early Intervention Specialist, it was difficult to find a curriculum that meets the needs of students presenting with developmentally typical skills, with significantly low developmental abilities and with scatter skills across different areas of development. The students that qualified for Intervention (Special Education services) in the inclusive preschools that I've taught have included the following preschool disability categories: developmental delay, physical delay, cognitive delay, social/emotional delay, speech/language delay, Autism, adaptive delay, fine motor delay, and Other Health Impairments. Previously, I worked with a variety of curricula that needed to meet the needs of a range of students with access to the same content standards. With the Amendment to the Individuals with Disabilities Education Act (IDEA) Part C in 2004, children birth through 21 in the US are provided with a "free and appropriate education... in the least restrictive environment" (§1412) in the public-school setting. Least restrictive environment (LRE) partly refers to the physical inclusion (classroom, school, etc.) of students with and without disabilities, but is also a guiding principle of including students with special needs. The LRE is unique to each child and provides them with a plan and environment placement which both meets their best educational outcome with the least amount of boundaries to the general education content and population. This may mean that they receive some/all services in different classrooms than the general education classroom if their needs require it. While this allows for specialized education services, it also constitutes access to general education classrooms and curriculum. With the inclusion of more children with a higher range of abilities and disability risk factors, schools need to find curriculum approaches that can support the needs of all students in accessing the content standards. This is an enormous range of

needs to address in curriculum planning while also meeting the Ohio Department of Education (ODE) Early Learning Standards. The ODE (n.d.) Early Learning Standards address the wholistic development of the child, including the following domains: Social and Emotional Development, Physical Well-being and Motor Development, Approaches Toward Learning, Language and Literacy Development, and Cognition and General Knowledge (Introduction Section, Para. 1).

There is research to show the correlation between achievement and inclusion to the general curriculum (Cross et al., 2004; Huberman et al., 2012). Horn and Banerjee (2009) contend that to ensure high-quality, inclusive early intervention services, a curriculum should include developmentally appropriate practices/activities, be prepared to support a range of abilities, include functional outcomes, and give room for "naturalistic instructional approaches" (p. 409). These "naturalistic instructional approaches" (Horn & Banerjee, 2009, p. 409) can be referred to as embedded learning or routine-based interventions. Play is an element in early learning settings which is natural to development and can be routinely addressed in the early childhood day.

Because play is motivating to young children and allows for participation at all levels of ability, the National Association of Educating Young Children (NAEYC) describes it as "an important vehicle for children's social, emotional, and cognitive development, as well as a reflection of their development" (Bredekamp & Copple, 1997, p. 14). Research shows that play supports development of a child's social-emotional skills, language, literacy skills, math skills and creativity (Bronson & Merryman, 2010; Fisher et al., 2013; Guirguis, 2018). The seminal developmental psychologist, Lev Vygotsky (1967/2016) argued that play is the way in which

children develop and learn. Guided play is a method in which the natural tendency of children's play is supported by a teacher to focus on learning targets and can be viewed as embedded teaching practice in early childhood (Hirsh-Pasek et al., 2009). In addition to opportunities for play, an inclusive early childhood curriculum must have a highly engaging pedagogy.

Based on the research (Bell, 2010; Beneke & Ostrosky, 2009; Duke, 2014; Lev et al., 2020), Project-Based Learning (PBL) is a curriculum approach that allows a variety of students the room to experience success. It engages students in an extended period, process-based approach to learning while addressing content standards (Bell, 2010). Bell (2010) argues that in early childhood PBL environments, "preschool students are encouraged to explore, investigate, and experience" (p. 42). These hands-on experiences captivate the attention of young children in constructing knowledge. Lev et al. (2020) assert that PBL "is based on the constructivists belief that the most effective form of learning occurs when knowledge is *constructed*, meaning that through social interactions with other students build upon their existing wealth of experiences and knowledge in order to create new understandings" (p. 3). Based on my personal experience and research, it seems PBL would be complementary to an early intervention setting with playful components. The purpose of this project is to create a research-based, inclusive early childhood intervention curriculum. In this curriculum development, I will explore using play in combination with Project-Based Learning (PBL). The early intervention curriculum created based on this theory will focus on routine-based and small group play activity lessons that complement the PBL unit. The parallel PBL lessons will be 4 weeks of small group and whole group instruction.

Through reading the research on PBL, play and quality early intervention education, this study will explore two **research questions**:

1. What does a Project-Based Learning curriculum model look like in high quality early childhood special education?
2. How does PBL curriculum work in conjunction with play?

SECTION TWO

Chapter 2: Review of Literature

Since the first passing of the Individuals with Disabilities Education Act (IDEA) in 1975, students with disabilities in the United States have gained greater access to the general education curriculum and classrooms (U.S. Department of Education, 2020). There has been much research to support benefits of the inclusion of these individuals (Cross et al., 2004; Dessemontet et al., 2012; Huberman et al., 2012; Roach & Elliott, 2006; Warren et al., 2016). Starting inclusive intervention in the early years leads to success later in school and life (Campbell & Ramey, 1991; Cross et al., 2004; Schweinhart & Weikart, 1997; Warren et al., 2016). Through incorporating collaboration between team members (general educators, special educators, related staff, etc.) and adaptations to the general curriculum, educators have increased opportunities for inclusion (Cross et al., 2004; DeSimone & Parmar, 2006; Finnerty et al., 2019; Huberman & Parrish, 2012; Kurth & Keegan, 2014; Warren et al., 2016). Specifically, in the early childhood settings, play provides a highly effective context in which to support learning opportunities and development for diverse learners (Bodrova & Leong, 1996; Bredekamp & Copple; 1997; Creaghe et al., 2021; Diamond et al., 2007; Doernberg et al., 2021; Fisher et al., 2013; Goldstein & Lerner, 2018; Hirsh-Pasek et al., 2009; Lee et al., 2019; Vygotsky, 1967/2016). Project-based learning (PBL) is a curriculum approach that can promote motivation and engagement in a range of learners as well (Bell, 2010; Beneke & Ostrosky, 2009; Duke, 2014; Harris & Gleim, 2008; Kincaid & Jackson, 2006). While PBL can be found in many older school grades, the aim of this review of the literature is to explore the research in quality early intervention curriculum with the incorporation of play and PBL curriculum.

What is Quality Special Education Curriculum?

Prior to 1975, children with disabilities were not guaranteed placement in public school settings (U.S. Department of Education, 2020). These students were often institutionalized, and families did not have a say in the environments in which the students were placed. In fact, "In 1970, U.S. schools educated only one in five children with disabilities, and many states had laws excluding certain students, including children who were deaf, blind, emotionally disturbed, or had an intellectual disability" (U.S. Department of Education, 2020, para. 2). In 1975, the Education for All Handicapped Children Act (EHA or Public Law 94-142) was passed. One of the main rights of IDEA (1975/2004) gave students with disabilities "free and appropriate education [FAPE]... in the least restrictive environment" (§1412), "which emphasizes special education and related services designed to meet their unique needs" (Section 1975: Public Law 94-142, para. 2). This law also promoted the education of children in the least restrictive environment (LRE) or most inclusive environment which will be discussed in depth later in this review of the literature. The EHA provided FAPE for individuals ages 3-21 (under IDEA Part B), but there was growing research for providing special education for children birth to age 2 and so Part C of IDEA was added in 1986 to include early intervention services from birth on (U.S. Department of Education, 2020). The name of the EHA was changed in 1990 to the Individuals with Disabilities Education Act (IDEA) as it is now known. In 2004, IDEA was again amended to align with the No Child Left Behind Act to add more regulations and accountability to special education outcomes (U.S. Department of Education, 2020). With the passage of these laws, schools, administrators, educators, and parents began to shift their focus to educating children with disabilities more frequently in general education classrooms with access to the general core

curriculum. In addition to inclusion, the 2004 IDEA amendment legislated the importance of starting intervention early.

Early Intervention

For maximum benefits to special education (or intervention), several studies have explored the benefits to starting early (Campbell & Ramey, 1991; Cross et al., 2004; Schweinhart & Weikart, 1997; Warren et al., 2016). In their seminal and longitudinal study, Campbell and Ramey (1991) followed students with intellectual disabilities through young adulthood after access to preschool intervention in the 1970's. Based on referrals from prenatal clinics and social services agencies, Campbell and Ramey (1991) invited families of infants at-risk for mental retardation (the former term; now referred to as Intellectual Disability) to enroll in the study, explaining that "The research was a prospective longitudinal experiment to learn the degree to which the course of children's cognitive development might be positively altered. The intervention was primarily child-focused, delivered in a day care setting" (p. 3). Participants were randomly assigned to preschools in either a control or experimental group (preschool intervention group); they attended as infants through kindergarten age (Campbell & Ramey, 1991). Components of the intervention preschool group included curriculum materials based on whole child development, two meals while at the setting, medical care from doctors/nurse practitioners, family visit invitations, parenting programs, and summer services offered the summer before kindergarten transition (Campbell & Ramey, 1991). The control group received similar medical care and nutrition, support from social services and data was collected the same as the experimental group. Campbell and Ramey (1991) collected data through standardized tests, and observations during site and home visits. Initial findings showed "At the end of the

preschool phase, the children's scores on standardized measures of intellectual development showed that the E group significantly outscored the C group at every point after 12 months of age" (Campbell & Ramey, 1991, p. 5). Data was taken after 3 years of school intervention post preschool transitioning and then again 4 years later at age 12, where Campbell and Ramey (1991) reported "we found that the effects of Abecedarian preschool intervention on measured IQ, particularly Verbal IQ, were still apparent at age 12" (p. 8). The other benefits that were found at age 12 from the intervention group included higher academic scores (writing and reading) and lower retention rates (Campbell & Ramey, 1991).

In another seminal, longitudinal study, Schweinhart and Weikart (1997) tracked three- to four-year-old, Michigan preschool students through adulthood after participating in one of three different preschool curricula. Participants of the study included 68 early childhood students from families that were deemed in poverty and were in "high risk of school failure" (Schweinhart & Weikart, 1997, p. 122); these students were randomly assigned either the Direct Instruction, traditional Nursery School, or High/Scope Preschool Program in 1967. The Direct Instruction approach was based in a behavioral learning pedagogy with academic skills focus and included didactic teaching methods of small, teacher-led groups of highly planned and structured lessons using workbooks and teacher guides (Schweinhart & Weikart, 1997). The Nursery School approach was considered best practice at the time and focused on student choice with themed activities. The Nursery School concentrated on social-emotional development such as interactions with peers and adults, the ability to work within a group, the ability to transition between activities, and the ability to "show good manners" (Schweinhart & Weikart, 1997, p. 120). The High/Scope approach was based on the constructivist theoretical framework of Jean

Piaget (1936/1997). The program described “adults engaged children as active learners and arranged their classrooms in discrete, well-equipped interest areas” (Schweinhart & Weikart, 1997, p. 120). With some overlap in elements of the Nursery School program, the High/Scope program was designed to be student-led and teacher facilitated, gave students choice, and focused on the wholistic development of the child (Schweinhart & Weikart, 1997).

While in these programs, data was collected through observations of students, home visit notes and site visits by early childhood experts (Schweinhart & Weikart, 1997). Follow up data post program included collection every year from age 3 to 8 and IQ testing of participants at age 10, 15, and 23 (Schweinhart & Weikart, 1997). Schweinhart and Weikart (1997) included data collection on “community behavior” at age 15 (p. 118) and criminal records from ages 15 through 23.

Schweinhart and Weikart (1997) found that because both the Nursery School and High/Scope curricula focused on planning and social reasoning, the participants had more “adult success and social responsibility” (p. 120). Schweinhart and Weikart (1997) observed that the students primarily in the High/Scope program, secondarily by students in the Nursery School, were encouraged “to take initiative, to select and plan their own activities, to be decision makers to the extent that their ages and abilities permit.” (p. 120). The High/Scope preschool students showed benefits over the Direct Instruction group with "highest year of schooling planned, higher percent living with spouse, fewer sources of irritation, less self-reported misconduct at age 15, fewer felony arrests, and fewer arrests for property crimes” (Schweinhart & Weikart, 1997, p. 138). The High/Scope and Nursery preschool students were less likely to be labeled with emotional impairments. The Direct Instruction student outcomes did not demonstrate any

long-term advances over the other classrooms. Early intervention can result in beneficial, long-term results (Campbell & Ramey, 1991; Schweinhart & Weikart, 1997). Other successful practices in intervention include inclusion of students with disabilities in the general curriculum and classrooms.

Inclusion

With the increase of students of all ages on Individualized Education Programs (IEPs) in inclusive settings, more research emerged on the benefits and successful traits of access to general education classrooms and curriculum (Dessemontet et al., 2012; Huberman et al., 2012; Roach & Elliott, 2006). The 2004 amendment to IDEA would "mandate an even greater access to the general education curriculum. Although each student with disabilities has the legal right to individually referenced curriculum and instruction, outcomes linked to the general education program have become the optimal target" (Roach & Elliott, 2006, p. 182).

Benefits to Accessing the General Curriculum and Classroom

Roach and Elliott (2006) investigated the correlation between student access to the general curriculum and their performance on alternative assessments. The study aimed to explore the effect of the least restrictive environment and access to the general curriculum as had recently been passed with the amendment to IDEA in 2004 (Roach & Elliott, 2006). Data was collected in the form of scores from the WAA (Wisconsin Alternate Assessment), IEP goals (both functional and academic), and teacher surveys describing the access these students had to the general curriculum. The data was submitted by 113 special educators of the sample students who were mostly representative of all students with significant cognitive disabilities from urban, rural, and suburban districts who took the WAA during the same timeframe (Fall 2003 and

Spring 2004) in Wisconsin. Based on their analysis of the data, Roach and Elliott (2006) found that overall students with more access to the general curriculum had higher scores on the scales of the alternate assessment used (mathematics, language arts and reading). The implications of the study supported future professional development for both general education and special education teachers to increase inclusion, access to general education and knowledge of the core standards and alternate assessments to be used (Roach & Elliot, 2006).

Like Roach and Elliott (2006), Huberman and Parrish (2012) researched practices which led to higher achievements from students with special needs. The goal of this study was to compare districts in a similar area with higher (than expected) state scores for students with special needs to discover different policies that make districts effective in seeing better outcomes in their performance in students identified with special needs. Huberman and Parrish (2012) state that "Given the magnitude of spending on special education services and all that is at stake for these children, a better understanding of what these districts are doing that might inform others should be gained" (p. 70). Huberman and Parrish (2012) collected data from 2005-2009 including state testing results, district demographics, interviews with special education teachers of eight California districts and an in-depth write up from the highest performing district. After comparative analysis of district scores and semi-structured interview responses, Huberman and Parrish (2012) chose to report on four districts which had the clearest explanations in their interviews while also attempting to exclude districts in reporting that may have had "external factors" (p. 64) contributing to their achievement (such as overidentification of students in special education). Findings of the study showed "All four districts were very clear about the

need for students in special education to gain full access to the curriculum, which will only occur through strong general and special education collaboration (Huberman & Parrish, 2012, p. 70).

In their international study, Dessemontet et al. (2012) investigated the academic and adaptive progress of students identified with Intellectual Disabilities (ID) in the general education classroom compared to those who were in segregated settings. ID is now the current term for this population of students, previously known as "mental retardation" as seen in the Campbell and Ramey (1991) study. Academic scores were compared from 2007-2009 at three different points of time and gathered from math and literacy scores on standardized testing (Dessemontet et al., 2012). Parent and teacher rating scales were collected twice during the study to compare adaptive skills progress (Dessemontet et al., 2012). The 134 participants were chosen from inclusive settings (55) and non-inclusive settings (79), came from five different Swiss providences, had a diagnosis of ID, lived with their parents, had an IQ between 40 and 75, and were between the age of seven and eight (Dessemontet et al., 2012). Results from Dessemontet et al.'s (2012) quasi-experimental study showed the literacy progress was higher in the students of the inclusive settings. Both groups of students showed progress in math and adaptative skills, but there was no difference between settings thus "Inclusive education is an appropriate educational option for primary pupils with ID who require extensive support in school" (Dessemontet et al., 2012, p. 579). Based on the research on inclusion and early intervention, beginning inclusion early could reap long term benefits.

Benefits of Inclusive Practices in Early Childhood

Children with and without disabilities benefit from high quality early childhood education (Cross et al. 2004; Warren et al., 2016). Kindergarten ready skills are learned in

preschool, particularly social skills and approaches to learning. Hirsh-Pasek et al. (2009) argue that "Children who thrive in preschool are prepared to become members of a classroom community where the individual's needs come after the needs of the group—a tough lesson for young children (p. 8). Preschool prepares students for later school success through learning independence, conflict resolution, communication, and executive functioning (listening, attending, organization, etc.) (Hirsh-Pasek et al., 2009).

Warren et al. (2016) used both qualitative and quantitative data collection in their mixed method study to explore the benefits of inclusive preschools for both students with disabilities (SWD) and students without disabilities (SWoD) and what elements make an inclusive preschool successful. Warren et al. (2016) included 28 SWoDs and 18 SWDs from four inclusive classrooms located at the same preschool. Students had weekly access to speech therapists, physical therapists and adaptative physical educators. Data was collected quantitatively with the Preschool Desired Results Developmental Profile-Access and the Brigance Diagnostic Inventory of Early Development II (Warren et al., 2016). Qualitative data was collected during group interviews following completion of the school year and included preschool staff and parents. Warren et al. (2016) found that "The overall impact of this full-inclusion preschool program was positive in that students, their families, and the school community benefited" (p. 549). Warren et al. (2016) assert that because the program included literacy heavy elements to address IEP speech/language goals, data analysis showed that both SWDs and SWoDs demonstrated cognitive gains (specifically literacy, language, and pre/reading).

In analyzing the information from the group interviews, Warren et al. (2016) found the students demonstrated academic growth due to the following elements included in the program:

> a goal-oriented focus; a solid, engaging curriculum that prepared the children for kindergarten; a strong emphasis on language acquisition and literacy; learning through play; the integration of thinking skills; modifications and differentiation in the curriculum to meet individual needs; ongoing monitoring of students' progress aligned with preschool standards and students' IEP goals; and high expectations for all. (p. 549).

Parents and staff reported that social development was found to help SWD "build confidence and learn how to socialize... [and SWoD learned to] accept, and be friends with others who are different" (Warren et al., 2016, p. 550). Community building was supported both in the classroom and within the school community (Warren et al., 2016). Through collaboration between educators, related staff, paraprofessionals, families, and administrators, a sense of teamwork and future planning was established (Warren et al., 2016).

In their qualitative study, Cross et al. (2004) also investigated the successful patterns seen in including children with disabilities in a general education preschool setting. Cross et al. (2004) considered four elements to constitute successful inclusion of SWDs: progress on IEP or IFSP (Individual Family Service Plan; a plan used for children younger than 3 years old) goals, progress in the general curriculum/developmental, relationships with peers and adults in the program, and family satisfaction with their child's progress and comfort in the program. Cross et al. (2004) collected data on children ages one to five with disabilities (including the following disability categories: developmental delay, multiple disabilities, orthopedic impairment, and mild cognitive delays). The children attended various community preschool settings including private preschool, childcare, and public-school preschool in rural and urban areas. For data collection, Cross et al. (2004) gathered interviews with service providers and families, observations of

students and staff, and written records (IEPs or IFSPs depending on the age of the student) over 6 months. Based on their analysis, Cross et al. (2004) identified the common themes for successful inclusion practices as "attitudes, parent–provider relationships, therapeutic interventions, and adaptations" (p. 174).

Cross et al. (2004) argued that attitudes of staff and parents are correlated to successful inclusion. It was also found that the general education teachers who included the students with disabilities in the study, increased their confidence in their own teaching and were open to including more children with disabilities into their future classes (Cross et al., 2004). Related staff (speech therapists, physical therapist, etc) reported that they observed benefits from seeing students not in 1:1 settings outside the room but included in the classroom and "having seen the benefits, they believed that the children worked harder and enjoyed therapy more when it was conducted in an inclusive setting with their same-age peers" (Cross et al., 2004, p. 175). Administrators of the early learning programs also agreed on the need to include children with disabilities in their settings. Parents of the students with disabilities observed progress and benefits from their child receiving support from both the intervention staff and the general education early learning staff (Cross et al., 2004). Parents of the children without disabilities reported that "the children were learning compassion and acceptance of differences at an early age" (Cross et al., 2004, p. 175). Based on the evidence supporting access to general education classrooms and curriculum, educators must find strategies to achieve successful inclusion results; however, there are some barriers towards ideal inclusive practices.

Problems with implementing inclusion

Teacher attitudes and experience of teaching students with disabilities can play a role in the success of inclusion. Werner et al. (2019) interviewed 352 teachers internationally (general and special educators) about their beliefs of inclusive practices based on their own confidence in their abilities and their knowledge about special education policy on the local and national levels. Werner et al. (2019) asserts that self-efficacy, policy understanding and experience in exclusive settings increase positive feelings towards inclusion. Problems with implementing inclusion were cited as lack of teacher preparation, policy information, administrative support, and non-collaborative work environments. Thus, for inclusion to be successful, teachers and schools must work together to prepare and understand how best to provide access to the general education curriculum and classrooms.

How Do Teachers Provide Access to Core Curriculum?

Huberman and Parrish (2012) found through their research on successful special education outcomes in certain districts that there is "the need for students in special education to gain full access to the curriculum, which will only occur through strong general and special education collaboration" (p. 70). Therefore, students depend on strong teamwork and communication of both intervention specialists and general classroom teachers to create and implement inclusive practices.

Collaboration Between Special Educators and General Educators

DeSimone and Parmar (2006) interviewed general education teachers in order to study perceptions of including students with learning disabilities in the classroom. Because "proportionately, students with learning disabilities (LD) are the largest special education group to be included in general education classes" (DeSimone & Parmar, 2006, p. 98), this study chose

to investigate general educators' beliefs about their ability to include these students. DeSimone and Parmar (2006) received 228 responses (of 361) mailed surveys to teachers in urban, suburban and rural districts in 19 states across the US. The researchers designed a three-part questionnaire that was based on their literature review of teacher attitudes toward their own abilities and those of their varying students. Twenty-six interviews (out of 42 who volunteered) were conducted with teachers who had completed the initial survey. The data analysis showed that general educators were conflicted about best placement for students with LD, because they were unclear whether inclusive classrooms or resource rooms provided more learning outcomes for students- citing a lack of administrative support and lack of teacher preparation regarding teaching those specifically with LD (DeSimone & Parmar, 2006). The majority of those interviewed believed that "general educators were responsible for curricular modifications and progress of the students with LD. The majority of teachers did not believe that students with LD caused the most behavioral problems in the classroom" (DeSimone & Parmar, 2006, p. 103). Answers also showed that teachers who had been teaching longer felt more confident with curricular adaptations (DeSimone & Parmar, 2006). Those interviewed cited "Teamwork and collaboration seemed to be an integral resource." (DeSimone & Parmar, 2006, p. 105). The majority of those interviewed by DeSimone and Parmar (2006) cited collaborators and team members as "the most significant resource available to them" (p. 106) and "were in favor of inclusion and had higher feelings of efficacy about adapting instruction and curriculum" (p. 107). Teachers reported that time to collaborate, supported by the administration would be beneficial to inclusive practices (DeSimone & Parmar, 2006). Collaboration is also a critical practice which supports inclusion in the early years of education.

Collaboration in Early Childhood

Like in older grades, the communication and relationship between parents and staff members also contribute to the success of an inclusive environment. Cross et al. (2004) found relationships between staff and parents "were identified as critical to the success of the inclusive experience" (p. 176). Cross et al. study (2004) found collaboration of the intervention team helped implement "services, goals, and placements to ensure that the benefits of successful inclusion have an impact beyond the early childhood years" (p. 181). Participants in the study conducted by Warren et al. (2016) reported feelings of inclusion and fellowship leading to better outcomes for the children.

> The preschool parents overwhelmingly felt included in the process and well informed about their children's progress. All groups shared that this teamwork and collaboration was key to keeping expectations high for the students and adults who supported them, as well as to the overall program success... Several of the instructional aides and teachers used the term family to describe the preschool program environment. They recognized the importance of creating relationships, especially among the staff, so that everyone felt appreciated and a contributing part of the team. The staff also mentioned the strengths of their colleagues and how they all shared in responsibilities for the good of the children and program, like a family. (p. 551)

Through interviews with service providers, preschool staff, and families, Cross et al. (2004) found that communication between team members is essential to providing high quality intervention in inclusive settings. Both "individual flexibility" and "individual and team responsibility" (Cross et al., 2004, p. 178) increased the success of inclusive practices by

allowing the team to work together to find answers instead of one team member as the expert for each child's problem. Cross et al. (2004) assert that "The challenge for the field is to understand and implement practices that permit all children—regardless of ability level—to have a successful inclusive experience" (p. 181). In addition to collaboration and communication, a key component of successful inclusive experiences is differentiation.

Differentiation

In their quasi-experimental study, Kurth and Keegan (2014) explored adaptations. Kurth and Keegan (2014) give the following definition to adaptations:

> to describe instructional and curricular changes, with the understanding that accommodations reflect adaptations made to support student access (such as providing written materials in Braille) and those modifications reflect adaptations made to support meaning (such as adjusting the difficulty level of an assignment). (p. 191)

Kurth and Keegan (2014) aimed to explore both how teachers made adaptations and how effective the adaptations were when implemented. Participants of Kurth and Keegan's (2014) study came from two urban and one rural district in the southwestern United States. Kurth and Keegan (2014) collected between one and four 4 photographs/photocopies of curricular adaptations and the original material used from each of 31 total general educators, special educators, and paraprofessionals. The participants provided information including the student and their IEP goal(s) requiring the adaptation, a write up of the modifications made to the original materials/lesson, a self-rating scale, and what adaptations they typically used for the student (Kurth & Keegan, 2014). Kurth and Keegan (2014) analyzed the educator's written descriptions with Qualitative Data Analysis Software for Mixed Methods Research (QDA

Miner) software and quantitative methods. Findings of the data analysis showed that adaptations' quality depended on resources available, experience creating adaptations and experience teaching (Kurth & Keegan, 2014). While "educators in this sample consider student need, ease of use, and the original assignment when creating adaptations" (Kurth & Keegan, 2014, p. 200), the educators were not always able to link the IEP goal or standard addressed to their adaptations. Kurth and Keegan (2014) reported that "access and participation in the general education curriculum were the primary goals of adaptations" (p. 200) and "adaptations provided to students were tied to the general education activity and did not promote removal of students from that setting. Furthermore, educators reported high success rates for the adaptations" (p. 200). Kurth and Keegan (2014) assert that future research would be beneficial to create a scale for educators to reflect on adaption creations, stating "a think-aloud process in which the educator "thinks aloud" while making an adaptation may provide valuable insight" (p. 201).

In their qualitative study, Finnerty et al. (2019) assert that inclusive settings are beneficial to students with disabilities if more research is done on adaptations. Finnerty et al. (2009) collected data through observations, interviews and photographs of adaptations used from a single districts' elementary "educator teams" (p. 89) consisting of a general and special educator. In analyzing the data, Finnerty et al. (2019) found that adaptations must be "tangible... student-centered [and]... blended with classroom materials and instruction" (p. 92). Adaptations were designed to help meet IEP goals (that promoted access to the state standards) (Finnerty et al., 2019). The data analysis also suggested that adaptations were used more consistently across settings and instructors if they were designed with the help of "team collaboration... resources available... [incorporated into the] rhythm and routine, and ...build momentum" (Finnerty et al.,

2019, p. 95). Problems with creating adaptations were reported to be lack of time to collaborate and prepare (Finnerty et al., 2019). In addition, the more the adaptations worked, the more likely the educators were to use them (Finnerty et al., 2019)

When DeSimone and Parmar (2006) interviewed teachers on beliefs about including students with Learning Disabilities (LD) in their classroom, the majority agreed that "Teachers need to broaden their repertoire of instructional and curricular modifications to better meet the needs of all students" (p. 108). While the research supports adaptations to increase inclusive success in school age adaptations (DeSimone & Parmar, 2006; Finnerty et al., 2019; Kurth & Keegan, 2014), Cross et al. (2004) focused their research to investigate curricular adaptations at the preschool level.

Quality Early Childhood Differentiation

Cross et al. (2004) reported that successful curricular adaptations are made to support skills for "a child's basic life functions" (p. 179), play/learning, ability to engage and participate in the environment, and social interactions. Familiarity with students supports teacher efficacy in creating and utilizing curricular adaptations with students (Cross et al., 2004). Cross et al. (2004) discuss the significance of adaptations to the overall progress of the student:

> Adaptation is an essential element in the successful inclusion of children with significant disabilities in community settings. Functional adaptations and adaptations to support play and learning, as well as socialization, go beyond the accommodations addressed in an initial IFSP or IEP in that they enable the child to fully engage in the environment, curriculum, or social relationships of the classroom. (p. 181)

Intervention practices and service delivery are key elements in successful inclusion according to Cross et al. (2004). In referring to the "mode of therapy" (p. 178), Cross et al. (2004) analyzed the following methods: within the natural routines/activities, consultative, 1:1 pull out, 1:1 in the classroom, and co-treatment. Cross et al. (2004) found that majority of the related staff (i.e., speech therapists, physical therapists, occupational therapists, and developmental therapists) reported better engagement and effort in students when they embedded their therapy throughout the classroom routine or tasks. Embedding intervention services within play and routines may be a more effective method of engaging students and increasing outcomes. In early childhood intervention, play is an activity that can be differentiated and included for a range of learners.

Play

Play is a process that is naturally engaged in by children with and without disabilities. It is a component of many preschool programs. Play can be embedded in the curriculum and facilitated by adults to support learning (Doernberg et al., 2021; Lee et al., 2019). Vygotsky (1967/2016) argued that play largely influences how children develop.

What are the benefits of playing?

Through play, Vygotsky (1967/2016) asserted, children learn how to practice scenarios in which unfulfilled wants can be imagined. For example, a child may want to go to Disney World and because their wish is not immediately (or even ever) granted by the parents, the child learns to set up various "rides" and "attractions" with their toys in symbolic play to pretend they are at the theme park. Thus, through play, preschool aged children develop "imagination, symbolic function [thinking], and the integration of thinking and emotions" (Bodrova & Leong,

1996, p. 57). For the purpose of this literature review, play will be viewed through Vygotsky's (1978) focus on symbolic play and playful social interactions (i.e., dramatic play, imaginative play pretend play, etc.). In addition, this paper will focus on the benefits of guided play and use of prompts to support play outcomes. Numerous studies have been conducted to prove the benefits of play in child development including (but not limited to) social-emotional skills, language development, and cognitive/academic skills (Creaghe et al., 2021; Diamond et al., 2007; Doernberg et al., 2021; Fisher et al., 2013; Goldstein & Lerner, 2018; Hirsh-Pasek et al., 2009; Lee et al., 2019).

Due to the association of executive function (referred to in this study as EFs), Diamond et al. (2007) explored the results of using play-focused, Vygotsky inspired Tools of the Mind curriculum in preschools. The Tools of the Mind Approach is based on the Vygotskian belief that children must be provided "mental tools" (Bodrova & Leong, 1996, p. 4) to increase independence in learning. Vygtosky (1978) believed that children are active in their learning, thus play is a vital component of the Tools of the Mind curriculum (Bodrova & Leong, 1996). Because children need to develop learning in social contexts (through interactions with others) and through hands-on activities, those who follow the Vygotskian approach believe that play is the "leading activity of the preschool and kindergarten period" (Bodrova & Leong, 1996, p. 57). Diamond et al. (2007) randomly assigned participants of their study to one of two curriculum classrooms: Tools of the Mind or balanced literacy approach. Participants consisted of 147 preschoolers from low-income households, living in an urban area who had already attended at least one year of preschool previously. Diamond et al. (2007) found that the Tools of the Mind curriculum consistently used play in activities which then increased children's (with lower than

age expected EFs) executive functions to improve. Tools of the Mind also focuses on the Vygotskian idea that language is learned through play (Bodrova & Leong, 1996; Vygotsky, 1978).

Creaghe et al. (2021) studied play interactions between caregivers and infants (at 18 months and again at 24 months) to analyze the effect on language. Through observation and comparison of play with toys intended for symbolic play (a stuffed animal, a blanket, pots/pans, etc.) or functional play (a cause-and-effect toy, a puzzle, etc.), Creaghe et al. (2021) observed that in symbolic play there are more conversational turns, questions asked (by caregivers) to elicit responses from the child, and gestures (to support meaning). Creaghe et al. (2021) asserted that these observations of techniques used in symbolic play are important components of language development. Based on the benefits of play, many researchers have studied specific play techniques that are beneficial to students with disabilities and at-risk students (Doernberg et al., 2021; Fisher et al., 2013; Goldstein & Lerner, 2018; Lee et al., 2019).

Lee et al. (2019) studied play development in students with Autism Spectrum Disorder (ASD) who had received play intervention sessions with probe trials. Probe trials are highly specific methods using a series of prompts (from least to most supportive) to gain a response, engage in an interaction or complete an activity/task (Lee et al., 2019). In some ways, probe trials can be compared to Vygotsky's (1978) concept of zone of proximal development- the area between a child's independent abilities and a child's abilities that need adult scaffolding (support or prompts). Based on the observations of the participant's free play skills after their supported play sessions, Lee et al. (2019) argued that students engage in more imaginative play (i.e.,

pretending one item was something else) and generalize some taught play skills from guided interventions to free play opportunities.

Like Lee et al. (2019), Doernberg et al. (2021) studied the effects of play on students with Autism ages six to nine. The experimental school-age group participated in weekly play intervention sessions for 15-20 minutes for five weeks; the control school-age group had no changes to their school day. During the play intervention sessions, open ended toys were presented to children and interventionists used various prompts and scaffolding "for imagination and organization, [and] the interventionist utilized prompts to facilitate affect expression in play" (Doernberg et al., 2021, p. 581). Data was collected using the standardized Affect in Play Scale (APS) and child-interview measurement, the Kusche Affective Inventory Revised (KAI-R) (Doernberg et al., 2021, p. 580). Based on their data analysis, Doernberg et al. (2021) found that participants in the control group were less likely to identify their simple personal emotions than those in the intervention group. Also based on the APS results, participants in the intervention group showed better scores on the Imagination scale "which demonstrates the impact of the play intervention on the children's ability to think flexibly and creatively within their play" (Doernberg et al., 2021, p. 584). Doernberg et al. (2021) assert that because individuals with ASD-HF can display more rigid thinking and interactions, play intervention is a successful intervention strategy.

Fisher et al. (2013) also found that play with prompting and scaffolding was most beneficial to students with disabilities and "Specifically, the research shows how appropriate scaffolding through dialogic inquiry and engagement facilitate geometric shape learning. Free play alone does not provide sufficient information to help children form specific shape concepts"

(p. 1877). Fisher et al. (2013) conducted a quasi-experimental study to explore the mathematical gains children would demonstrate based on use of guided play (when compared to instructing through free play or didactic teaching). Fisher et al. (2013) assessed 60 four- and five-year olds in a suburban area, twice using a shape sorting activity based in guided play, free play, and didactic teaching. For the purpose of this study, guided play was used when "Participants were taught definitional properties for each shape in a playful, exploratory manner" (Fisher et al. 2013, p. 1874). Didactic instruction was used when "During training, the experimenter acted as "the explorer" while the child passively watched and listened through each step of training" (Fisher et al., 2013, p. 1874). However, the experimenter used "similar wording" and introduced the same shapes the same number of times in both guided play and didactic instruction. For the participants who were taught through free play, the researcher first prepared the shapes by sorting them into categories and children were then free to engage with the materials as they liked. In the second session of play assessment, participants were asked what they remembered from the previous play session and to then sort the shapes by category (Fisher et al., 2013). Because the study aimed to explore guided play vs free play, "The experimenter made special efforts to maintain child-friendly affect across all conditions during training." (Fisher et al., 2013, p. 1875). Data collected showed that the participants who engaged in guided play showed better shape recall/organization and that they were able to maintain the knowledge for longer than a week. Participants who received didactic instruction "did not seem to extract the relevant geometric principles (p. 1877). Thus, the guided play sessions promoted higher level thinking results which lasted longer. In addition to academic gains, play research explores the social-emotional functioning of children.

Goldstein and Lerner (2018) studied the effects of dramatic play in social-emotional outcomes of 97 preschoolers in Head Start programs and found "evidence that for low-SES 4-year-old children, dramatic pretend play games can be a tool for increasing emotional control skills" (p. 10). The children participated in small group, dramatic play intervention sessions three times per week for eight weeks. After completing a drawing transition activity, the researchers conducted 3 activities including dramatic play activities, block building and stories. Goldstein and Lerner (2018) collected data on behaviors demonstrating various social-emotional skills such as empathy, emotional identification, helping those in distress, and basic social interaction skills. After analyzing the data, Goldstein and Lerner (2018) found that "participation in 24 sessions of guided dramatic pretend play games resulted in lowered personal distress across two measures of emotional control as compared to engaging in either guided block play or story time. We also found that engaging in dramatic pretend play games was associated with lower levels of neutral social behaviors over time" (p. 7). Though some research has given examples of "the positive impact of a short, easily facilitated, accessible play intervention" (Doernberg et al., 2021, p. 576), conflicting ideas about the objectives of preschool can result in the absence of play form the curriculum.

What are the barriers to including play in the curriculum?

Hirsh-Pasek et al. (2009) proclaimed that preschools which focus strictly on academics rather than play are detrimental to child development, stating these programs:

> demonstrates how far society has gone astray in early childhood education and how badly misled many parents are. At a time when children should be experimenting with making

> shapes in clay and building towers only to crash them, we have created an environment in which children are drilled and practiced like parrots in a circus act. (p. 5)

Hirsh-Pasek et al. (2009) assert that didactic teaching in early childhood has been reinforced by parent pressure for children to achieve academic growth earlier than is developmentally appropriate. Thus, preschool staff and administrators have redesigned curriculum to fit parent insistence; however misguided it may be. The toy industry has also increased production of academically based (often electronic) toys that promote pre-academics instead of free play (Hirsh-Pasek, 2009). In an attempt to close the achievement gap between children from upper-middle class and middle-class backgrounds and students from lower socio-economic backgrounds, the No Child Left Behind Act OF 2001 (NCLB) encouraged pushing academics at a young age (Hirsh-Pasek et al., 2009). Hirsh-Pasek et al. (2009) argue that with the passing of NCLB, preschool classroom "replaced playful learning with practice and drill. Blocks were replaced with worksheets. Both free play and playful learning declined precipitously in U.S. preschools, where they were sidelined as an expendable diversion in favor of early preparation for school test-taking" (Hirsh-Pasek et al., 2009, P. 9). Hirsh-Pasek et al. (2009) explain the necessity for play in early childhood education and what future benefits can be achieved:

> Education for young children should resemble play, with children delighting in acquiring knowledge and skills in ways that make them feel competent and capable... Children in the 21st century need not only basic skills but the ability to go beyond the facts—to synthesize, integrate, create, and evaluate. They also need to collaborate and lead effectively to achieve significant innovation and change. (p. 15).

Based on the research, play is linked to learning (Bodrova & Leong; 1996; Diamond et al., 2007; Doernberg et al., 2021; Fisher et al., 2013; Goldstein & Lerner, 2018; Hirsh-Pasek et al., 2009; Lee et al., 2019; Vygotsky, 1978). It is how children develop (Vygotsky, 1967/2016) and encourages children to develop more complex thinking needed for the future (Hirsh-Pasek, 2009). Schweinhart and Weikart (1997) stated that "specific curriculum models based on child-initiated learning activities are essential if preschool programs are to produce lasting benefits." (p. 139). A curriculum choice which is steeped in student initiation is Project Based Learning (PBL).

Project Based Learning (PBL)

Project-based learning (PBL) engages students in an extended period, process-based approach to learning. PBL is facilitated by teachers, but student led, and as Bell (2010) explains "Student choice is a key element of this approach" (p. 39). PBL involves core content and subjects embedded into larger projects. Early practices to include in PBL curriculum are planning (with students involved), standards alignment, and to "build the culture" (Buck Institute for Education, 2019, para. 5). The culture of a PBL classroom should support autonomy, collaboration, communication, progress and high, but achievable, standards (Buck Institute for Education, 2019). To guide students, teachers should engage in managing/organizing (deadline reminders, support finding resources, etc), scaffold based on students ZPD, and then assess progress (including some self-reflection by the teacher and the students on their engagement) (Buck Institute for Education 2019). The Buck Institute for Education (2019) describes a quality PBL classroom teacher as someone to "engage and coach" (para. 9) the students during projects. For example, in their successful PBL case study, Kincaid and Jackson (2006) found that when teachers engaged as facilitators, the "stereotypes of students with special needs as not being

capable of taking the lead role in academic projects...were successfully shattered during this project. The students took on the roles of researchers, writers, photographers, reporters, and community activists" (p. 5).

High-Quality Elements of PBL

The Buck Institute of Education created the PBLWorks website to provide information on high quality elements of PBL. Similarly, the High Quality Project Based Learning (HQPBL, 2018) framework was created to describe what best practice PBL looks like. The HQBPL (2018) framework describes six criteria to achieve successful PBL for all students, while the PBLWorks cite include seven "gold standards of PBL" (Larmer, 2020, para. 3). Both HQPBL (2018) and PBLWorks (Larmer, 2020) cite the beginning of PBL with a challenging problem or questions. This initial challenge promotes connecting prior knowledge to an unknown problem (HQPBL, 2018). The initial inquiry that is student led in PBL promotes critical thinking (divergent thought), creativity and intrinsic motivation. It allows students to experience success or accomplishments that they set out to achieve. The initial problem to solve should be achievable by students (Larmer, 2020). PBLWorks also includes the criteria of sustained inquiry to their standards (Larmer, 2020). Students must be able to engage in extended time to research their inquiry (Larmer, 2020).

While both PBLWorks (Larmer, 2020) and HQPBL (2018) include individual student components to their criteria, Larmer (2020) refers to student voice and choice while HQPBL (2018) refers to project management. Larmer (2020) asserts that students must be able to have a say in what and how they want to learn. Project management in HQBPL (2018) adds to a student's independence, executive functioning skills and achievement. It teaches students to

manage their ideas, time, resources, and presentation with scaffolding from the teacher as needed (HQPBL, 2018). Well done PBL allows students to engage in reflection to improve their metacognition (HQPBL, 2018).

Authenticity is another criterion both PBLWorks' gold standards (Larmer, 2020) and HQPBL (2018) cite as essential. Authenticity in PBL gives value to students' life experience and thus is motivating to them (HQPBL, 2018; Larmer, 2020). Authenticity, according to HQPBL (2018), can be created through "context, tasks, impact, personal [values/interests and] choices" (p. 4-5).

Public products are a component in PBL which creates opportunities for communication with others about their work and even feedback that can be attributed to a student's self-reflection/evaluation (HQPBL, 2018). Larmer (2020) cites the public product criteria as important to increase motivation in students, give them a tangible outcome to show their learning and help increase communication of the project and PBL to students and the community. Furthermore, "Such exhibitions of student work not only explain what HQPBL is all about; they also engender goodwill and promote HQPBL as a powerful approach to teaching and learning" (HQPBL, 2018, p. 7).

Reflection allows students to gain knowledge for future projects and encourages them to use divergent thought when faced with problems (HQPBL, 2018). Reflection supports both future student learning and future teacher instruction (Larmer, 2020).

As a critical 21st century skill, collaboration is an element of successful PBL that allows for practice needed later in life. Collaboration allows students to work with others who differ

from them, to grow in communication and community inclusiveness (HQPBL, 2018). PBLWorks also describes "critique and revision" (Larmer, 2020) as critical to engaging with others in PBL. This allows students to practice receiving feedback and negotiating differences in opinions (Larmer, 2020). If teachers include these high-quality factors in PBL, students will gain "success skills that prepare students for the adult world and the workplace, and create confident young people who are willing and ready to take on challenges" (HQPBL, 2018, p. 10).

Benefits of PBL

In PBL classrooms, students learn independence, real world issues, and leadership skills all while reaching a more complex level of understanding on their chosen topic (Bell, 2010). The basis of using real world issues in PBL helps create meaning and context to student learning. Because PBL is authentic and engages with student interests in the real world, student engagement and motivation are high (Bell, 2010; Beneke & Ostrosky, 2009; Duke, 2014; Harris & Gleim, 2008; Kincaid & Jackson, 2006). In their case study of PBL with students with disabilities, Kincaid and Jackson (2006) explain that "Real life is often unstructured (not the typical sterile classroom environment) and students benefit from adding these real life learning situations to their traditional classroom learning" (p. 4). Duke (2014) argues that PBL is an approach that works for all learners and explains that they "were able to statistically close the gap between students in high-poverty school districts- who experienced project-based units- and students in wealthy school districts- who did not" (p. 8). Because PBL also promotes making and learning from mistakes, differentiation occurs when students reflect on their project choice, process, and presentation (Bell, 2010). Bell (2010) asserts that "Scaffolded instruction occurs in PBL when teachers use organizers that aid students in bridging the gaps that exists in knowledge

and skill, and it makes the tasks manageable and achievable" (Bell, 2010, p. 41). In their case study of a project approach in an inclusive classroom, Harris and Gleim (2008) contend that projects promote "Curiosity, wonder, creativity, questions, initiation by the child, and framing by the teacher" (2008). Duke (2014) also explains that PBL is an excellent current curriculum choice, because it incorporates the 21st century skills that many schools and employers are seeking. Bell (2010) asserts that "By implementing PBL, we are preparing our students to meet the twenty-first century with preparedness and a repertoire of skills they can use successfully. Moreover, PBL projects are often impressive, grand undertakings created and presented with ultimate pride and care" (p. 43). Therefore, PBL learning promotes the Four C's of 21st century thinking-collaboration, communication, critical thinking, and creativity.

In project-based learning, students work together and there is individual accountability within the project (Bell, 2010). Students can often decide in PBL if they want to work by themselves or with others, hence empowering them to make their own choices about collaboration (Bell, 2010). When students oversee their own decisions, they are often more engaged in the process and likely to work well with others (Bell, 2010). Projects in PBL are divided up into various parts and each student has their own responsibility for the product (Bell, 2010). Bell also asserts that through PBL "students develop the "twenty-first-century skills of communication, negotiation, and collaboration" (p. 40).

Students must navigate the process of PBL together and resolve conflict (Bell, 2010). Because PBL involves working with others, there is a certain amount of disagreement that students must solve together. Conflict resolution in PBL is enabled by active listening to other's ideas and disagreements (Bell, 2010). When students reflect on their learning at the end of their

project, they must assess both their tangible work and their interactions during the process. Bell (2010) argues "These skills are critical to future success in the structures of our global economy" (p. 41).

During PBL, students refine their executive functioning skills and learn how to reflect and revise their own work (Bell, 2010). Because there are "phases" to PBL, students must be conscious of time and organized (Bell, 2010). In the order of PBL, the first phase is to select a question to solve- a skill that involves some metacognition about what they want to learn and what they already know (Bell, 2010). Kincaid and Jackson (2006) found that their students with disabilities increased problem-solving abilities in their PBL case study. Through the student-led process, students are "Learning responsibility, independence, and discipline" (Bell, 2010, p. 40). PBL promotes individuality in learning as students pick their topics and so can steer their learning. It supports their metacognition to figure out how they learn best. Bell (2010) states that "Children learn so much about themselves when they are empowered to make their own learning decisions" (p. 41). To further their metacognition skills, students can reflect on their own learning at the end of PBL (Bell, 2010).

In addition to PBL allowing for innovation and creativity of their selected inquiry, process and product, students use technology to aid their creativity in both research and presentation. (Bell, 2010) PBL often involves research, so students can use technology to support their learning. They then become more proficient in how to navigate the internet to find valid information (Bell, 2010). Bell (2010) argues that they must use creativity to decide what technology best supports their ideas. These 21st century skills are not only accessible to students without disabilities, as Kincaid and Jackson (2006) explain in their PBL case study that "A goal

of special education is to teach students to become more independent in their academic endeavors. This is a natural process in a PBL classroom" (Kincaid & Jackson, 2006, p. 6).

PBL in Early Childhood and Inclusive Settings

Kincaid and Jackson (2006) conducted a narrative case study exploring the benefits of utilizing PBL with students with disabilities. When students were taking an outdoor walk, they encountered a real-life problem in noticing how access was blocked for students with wheelchairs by uneven/broken sidewalks and barriers in front of paths (Kincaide & Jackson, 2006). This encouraged students with coaching of their teachers (who were previously trained in PBL) to start a project answering the question of walkability in their community (Kincaid & Jackson, 2006). Students who participated came from three different classrooms and ranged from having mild to severe mental and/or physical disabilities (Kincaid & Jackson, 2006). During the project, students showed increased motivation, engagement, attendance, and more independence (Kincaid & Jackson, 2006). Just as Vygotsky's (1978) ZPD and scaffolding is meant to increase a child's ability to progress towards independence, Kincaid and Jacson (2006) explained "when we raised expectations, students rose to meet them. This is true for all students, including those with special needs" (p. 5). Thus, PBL provides opportunities for students to experience more authentic problem solving which increases motivation and achievement (Harris & Gleim, 2008; Kincaid & Jackson, 2006). Harris and Gleim (2008) also investigated the project approach in an early childhood classroom with diverse learners, and observed comparable results through motivation, increased cooperation, communication, and socialization. In addition to these social-emotional and approach to learning benefits, Kincaid and Jackson (2006) utilized rubrics to assess academic growth and found that students completed requirements for the project and had

better grades at reporting time. Accommodations included "community field trips, using audiovisual equipment, researching on the computer, sharing in interpersonal groups...working on solitary activities within the groups allowed all learners to work in their comfort zones and even venture out of their comfort zones at times." (Kincaid & Jackson, 2006, p. 7). In the future, Kincaid and Jackson (2006) argue that using PBL with diverse learners would benefit from narrowing topics and planning for alternatives when students of various needs were not on task, and including more organizational graphics (checklists, etc.) to help keep students on task. During the project, students reported increased pride in their achievements and empathy for others (specifically those who counted on good accessibility to get around). Based on the enthusiasm observed in the students during the PBL implementation, Kincaid and Jackson (2006) convincingly explain the transformation of their students with disabilities:

> Students who always had a passive role in their education became leaders. Students who had histories of problem behaviors and hostile personalities became caring and compassionate classmates. Students who normally had poor academic performances were given a chance to shine under the admiration of classmates whose challenges were more severe than theirs. (p. 8)

If students are to reap the benefits from PBL, Bell (2010) suggests that starting early can lead to better student outcomes. Beneke and Ostrosky (2009) interviewed seven early childhood teachers in Illinois with a range from no experience, some experience and experienced in implementing the "Project Approach". The first set of interviews were conducted before these teachers used a project approach in their early learning classroom (Beneke & Ostrosky, 2009). Based on the analyzed transcripts of the initial interviews with teachers, Beneke and Ostrosky

(2009) created and conducted interviews with the teachers following their implementation of classroom projects. In the majority of responses, teachers replied that implementing projects in the classroom helped increase their comfort with making adaptations, dealing with problem behaviors (for example, they references increase in communication which decreased behavioral problems), and helped give them strategies in including diverse learners (Beneke & Ostrosky, 2009). In their earlier study, Beneke (2000) also interviewed early childhood teachers who implemented projects with diverse learners, those teachers also reported better ability to work with and challenge students with disabilities. Because the students were observed to be highly engaged during projects, most teachers also reported observing more motivation and both social and academic outcomes in the learners with and without disabilities (Beneke & Ostrosky, 2009). Almost all teachers in Beneke and Ostrosky's (2009) study agreed that use of authentic materials as opposed to pictures or toy versions (i.e., real tools, utensils, etc.) increased student interest. Teachers described an increase in planning abilities in the students and themselves; they reported that listening to student interests and ideas helped them create higher-level questions (Beneke & Ostrosky, 2009). Beneke (2000) also reported that teachers felt this approach increased their lesson planning and assessment abilities. Early childhood teachers interviewed by Beneke (2000) further reported that the project approach helped them collaborate with parents/caregivers and dramatically benefited their teamwork with other teachers, sharing that "This team approach may also have contributed to their success" (p. 20).

Even though there is much evidence to support child-directed, active, hands-on, playful learning in early childhood (Beneke, 2000; Marcon, 2002; Vygotsky, 1978), there remain few studies to support the practice of PBL in inclusive early childhood settings.

Problems with implementation of PBL (particularly in EC or Intervention settings)

Just as play has been misconceived as unstructured and permissive learning practice, PBL, particularly in early childhood, is sometimes viewed as "scattered and inconsistent" (Lev et al., 2020, p. 3). Those who have not worked in PBL, may think this type of curriculum's student choice gives children too much control of the learning environment or planning means each child has an individualized learning plan which is very time consuming (Lev et al., 2020). Some might argue that young children do not have the metacognition or executive functioning skills to participate in long term projects or engage in reflection and revision of their work (Lev et al., 2020). However, based on the research (Beneke, 2000; Beneke & Ostrosky, 2009; Kincaid & Jackson, 2006), PBL increases motivation and engagement in young, diverse learners to participate in projects with beneficial academic and social outcomes. Beneke and Ostrosky (2009) further argue that PBL helps teachers with planning for and working more successfully with students with disabilities. Kincaid and Jackson (2006) argue that PBL helps set high, but reachable goals for students with disabilities and allows them to take on more active roles in their own learning.

Summary

Inclusive intervention practices support long–term benefits for students and societal outcomes (Campbell & Ramey, 1991; Cross et al., 2004; Dessemontet et al., 2012; Huberman et al., 2012; Roach & Elliott, 2006; Schweinhart & Weikart, 1997; Warren et al., 2016). Through collaboration and differentiation, students with disabilities (and those without) have better inclusive experiences (Cross et al., 2004; DeSimone & Parmar, 2006; Finnerty et al., 2019; Huberman & Parrish, 2012; Kurth & Keegan, 2014; Warren et al., 2016). Play in early intervention is key to ensure inclusive practices start with success (Bodrova & Leong, 1996;

Bredekamp & Copple; 1997; Creaghe et al., 2021; Diamond et al., 2007; Doernberg et al., 2021; Fisher et al., 2013; Goldstein & Lerner, 2018; Hirsh-Pasek et al., 2009; Lee et al., 2019; Vygotsky, 1978). Guided play can be incorporated as adaptations to curriculum for young children (Doernberg et al., 2021; Fisher et al., 2013; Goldstein & Lerner, 2018; Lee et al., 2019). A curriculum choice which allows room for students of all abilities to experience success is high quality project-based learning (Bell, 2010). According to Duke et al. (2021), most PBL studies have centered around older grades (middle and high school) with typical students. This resonates in this review as very few studies were found on PBL in inclusive intervention early childhood settings. There appears to be a gap in the research with PBL in the early childhood years with diverse learners. More information on inclusive early childhood PBL approaches would extend the opportunities to implement successful programming in older grades. Access to high quality early learning programs with playful project-based curriculum could deliver long-term benefits to students with and without disabilities.

SECTION THREE

Chapter 3- Theoretical Frameworks

Introduction

There are no available models of inclusive, early intervention PBL curriculums incorporating play, thus this curriculum will take pieces from three relevant frameworks. Sandall et al.'s (2019) *Building Blocks for Teaching Preschoolers with Special Needs* (3rd ed) will guide intervention delivery in an early learning environment. A piece of Bodrova and Leong's (1996) Vygotskian framework, *Tools of the mind: The Vygotskian Approach to Early Childhood Education*, will give insight toward promoting play. Lev et al.'s (2020), *Implementing Project Based Learning in Early Childhood; Overcoming Misconceptions and Reaching Success*, will guide the Project-Based Learning (PBL) components of the curriculum. With the guidance from these three frameworks, an early intervention PBL curriculum incorporating play will be sampled in chapter 4.

Early Intervention Guidance

The *Building Blocks* Framework (Sandall et al., 2019) describes inclusive intervention practices that complement a variety of early childhood pedagogies and curricula. This framework was created by researchers, writers, professors, and members of nationally accredited organizations that specialize in various disability studies, special education programming, and early childhood/child development areas (Sandall et al., 2019).

Sandall et al. (2019) assert that the first step in early intervention is creating the foundation of a "High-quality early childhood program" (p. 14). When students have had access to a quality learning program and still require more support, those needs can be addressed

through Sandall et al.'s (2019) hierarchy of three specialized approaches to instruction which increase in intensity and individuality: "Curriculum modifications and adaptations" (p. 14), "Embedded learning opportunities (ELO) "(p. 14), and "Explicit, child-focused instructional strategies (CFIS)" (p. 14). A high-quality learning environment can include various curriculum choices, however, there are certain elements that Sandall et al. (2019) argue are universal in early childhood best practices.

High-Quality Early Childhood Program

Based on their research and classroom experience, Sandall et al. (2019), argue that "key ingredients for a quality early childhood program include promotion of children's active engagement, participation, and learning. Quality programs also recognize and support the importance of relationships. Quality programs create a caring environment" (p. 2). Before beginning instruction, teachers should assess the quality of the environment (Sandall et al., 2019). Using the results of this reflection, teachers can address the strengths and weaknesses of their program. Sandall et al. (2019) identified eight elements that should be included to maximize potential student growth:

- Engaging interactions
- A responsive and predictable environment
- Many opportunities for learning
- Intentional teaching
- Developmentally appropriate materials, activities, and interactions
- Safe, hygienic practices

- Appropriate levels of child guidance
- Meaningful involvement for families. (p. 14)

In addition to these fundamentals, teachers must incorporate "structural supports" within classrooms which decrease common behavioral problems in early childhood environments (Sandall et al., 2019). Structural supports are built in techniques that are used daily to try and minimize negative behavior (Sandall et al., 2019). Teachers can include structural supports in their planning by offering open-ended activities (in which children get choices) in addition to teacher-guided tasks, creating clearly defined and observable areas of the classrooms (blocks center, writing center, etc.), and providing safe, interesting, organized, and accessible materials (Sandall et al., 2019). Structural supports in the class schedule include a schedule with visual supports (pictures) with minimal transitions; Sandall et al. (2019) also suggest a team schedule to inform various therapists, paraprofessionals etc. of daily routines. Activity structural supports include presenting a variety of children's interests into materials, giving children ways to join in (with tangible items, scripts, etc), breaking down multi-step directions into one step directions, using immediate feedback with challenging but appropriate direction, and promoting consistent expectations (Sandall et al., 2019). To increase smoother transitions, Sandall et al. (2019) suggests using visual cues, explicit teaching of routines, stating clear expectations, and designing engaging activities to encourage attention and participation in the upcoming activity. Because there are often many individuals who support special education services within a preschool program (Intervention Specialist, paraprofessionals, related staff, etc.), collaboration is key in supporting standards of a high-quality program.

Before, during and after planning, collaboration of team members is essential in an inclusive early childhood setting. Sandall et al. (2019) support a team mentality to increase the likelihood of student success and generalization of skills. Because team members all come with different ideas and skill sets, Sandall et al. (2019) recommend the following key elements to collaborate:

- Adequate time for team to meet
- Time to develop trusting relationships
- Clarity of roles and respect for others' contributions
- Effective and frequent communication, and appreciation for variations in the customs and preferences in communication and interaction
- Shared responsibility for all children
- Participation of all team members
- Ability to identify goals and develop strategies to meet them. (p. 24)

Team members need to work together to address content and solve problems. Through thoughtful planning and implementation, learning goals can be created and support accessibility for all students. However, if structural supports within a high-quality learning environment do not meet the needs of a student, the next solution would be to include curricular modifications (Sandall et al., 2019).

Curricular Modifications

A modification is described by Sandall et al. (2019) as "a change made to the ongoing classroom activity or materials to achieve or maximize a child's participation" (p. 16).

Modifications increase accessibility for students to everyday classrooms components and planned activities. Sandall et al. (2019) argue that the goal of modifications in early childhood is to lead to "increased participation as well as playful interactions with toys and peers [that] will enable the child to take advantage of these opportunities and consequently develop and learn" (p. 55). A modification is useful when a student is interested and willing to participate in an activity but needs support in some aspect of fully participating or engaging (Sandall et al., 2019).

Sandall et al. (2019) categorize modifications as "Environmental support...Materials adaptations...Activity simplification...Child preferences...Special equipment...Adult support...Peer support...Invisible support (p. 56). Environmental support includes changing the "physical, social, and temporal environments" (Sandall et al., 2019, p. 62). For example, pictures can be used to show a child where to put a toy away (physical environment), how to give a toy to a friend (social environment) or in knowing what sequence of activities he/she needs to complete (temporal environment). Material modifications include changing location of items for accessibility, stabilizing items (example "tape paper to the table"), altering the response needed (example: grippers for holding a writing utensil), and increasing size and contrast of items (Sandall et al., 2019). Activity simplification occurs when teachers isolate or decrease steps from multi-step activities (Sandall et al., 2019). Child preference refers to using the student's favorite item, person, or activity to increase motivation and engagement (Sandall et al, 2019). Special equipment refers to purchased (wheelchair) or hand created materials (for example, a weighted vest sewn by the occupational therapist to support proprioceptive input) to help the child engage in an activity (Sandall et al., 2019). Adult support includes providing models of behaviors/skills, increasing adult proximity, and using positive reinforcers for positive

attempts/behaviors (Sandall et al., 2019). Peer support uses the same techniques as adult support with peers as opposed to teachers (Sandall et al., 2019). Invisible support involves "Purposely arrange naturally occurring events within one activity" (Sandall et al., 2019, p. 84).

When curricular modifications still do not meet the needs of a learner, teachers can try using embedded learning opportunities (ELO) which involve more explicit teaching practices (Sandall et al., 2019).

Embedded Learning Opportunities (ELO)

ELOs are planned strategies intended to teach a new skill that can be utilized during multiple opportunities in the student's natural activities and routines. By using an ELO, "teachers can increase or enhance children's learning by embedding or integrating planned opportunities within the usual classroom activities and routines" (Sandall et al., 2019, p. 17). ELOs do not involve large environmental modifications and aim to use a child's interest in their natural learning environment to increase generalization and should be "effective...normalized...useful across environments...[and] respectful of the child" (Sandall et al., 2019, p. 145). Teachers can use seven steps for planning an ELO: identify the learning goal, collect initial data on child's abilities, plan where and when the ELO can be incorporate within the daily schedule, create an intentional strategy to address the learning goal, implement the strategy, take data on student response to strategy and assess progress on the original learning goal (Sandall et al., 2019).

When writing an Individualized Education Program (IEP) for a student, it is beneficial to create learning objectives/IEP goals that can be addressed in activities within the natural environment (the classroom, school halls, recess, etc.) and support possible ELOs (Sandall, et al., 2019). When IEP goals and learning objectives are planned in a way that allows the

skills/concept to be generalized (practiced in different settings and with different instructors), ELOs are a great strategy to use (Sandall et al., 2019). For example, if the child's learning objective is to engage in a specific gross motor skill (running, climbing, jumping, balancing, etc.) for a certain amount of time, then their goal may be written to be addressed during outdoor/recreational play as opposed to being addressed in a therapy room away from the natural environment. Sandall et al. (2019) recommend writing IEP goals in a way which makes using an ELO achievable such as allowing for a variety of prompts/reinforcements (instead of picking just one such as "with an adult verbal cue") and generalize accomplishment and materials of the goal instead of extremely specific to one strategy (such as "cleaning up toys" as opposed to "putting blocks away in the block section"). Sandall et al. (2019) argue that "The purpose [of ELOs] is to translate an objective from a child's IFSP or IEP to a learning objective that can be addressed more easily and effectively in the classroom, home, or child care setting" (p. 144). Teachers should keep data on opportunities to engage in ELOs and how the child is demonstrating the learning objective (Sandall et al., 2019). After analyzing this data, teachers must decide on whether the ELO should continue or be altered either for more success or more challenges. When a child requires more specialized "instruction that is more systematic, more frequent, and even more carefully planned" (Sandall et al., 2019, p. 147) than an ELO, it is recommended to use a child-focused instructional strategy (CFIS).

Child-Focused Instructional Strategies (CFIS)

A CFIS is a more intensive, planned strategy to target a specific learning objective and occurs with either a teacher or peer (Sandall et al., 2019). There are some similarities to modifications and ELO's, but Sandall et al. (2019) describe the difference:

> Sometimes, children with special needs require directed, explicit instruction in order to achieve their learning objectives and take advantage of the typical early childhood curriculum. In such situations, teachers must use instruction that is more systematic, more frequent, and even more carefully planned than that described in previous chapters. Child-focused instructional strategies (CFIS) are, for the most part, the same strategies that are used in embedded learning opportunities (ELOs). The difference is the level of intensity with which instruction is provided. To acquire necessary skills and concepts, some children may need more opportunities every day to practice the skill, more assistance from their teachers, instruction in a setting with fewer distractions, positive reinforcement in a more consistent manner, and consistent guidance when they make errors. (p. 147)

The skills that work best with a CFIS occur when a child's progress is slower than expected, the targeted skill is foundational to being in an early childhood setting, safety or self-help related (toileting, dressing, etc.), and related to a child's individual needs and/or their assistive technology (Sandall et al., 2019). When planning a CSIF, teachers should consider "scheduling...selecting materials...motivation... [and consistent] monitoring progress" (Sandall et al., 2019, p. 154- 157).

The same steps to create an ELO can be used to create a CFIS, but data should be collected daily (Sandall et al., 2019). When planning a CFIS, a teacher should consider how to use good instructions, prompting strategies and consequences. Good instructions are "short...clear...focused on the observable behavior...positive (i.e., they tell the child to *do* something rather than to *stop doing* something)" (Sandall et al., 2019, p. 150).

Prompts are teacher actions used to support student performance. For example, if a teacher is asking a child a question in the hopes of a verbal response, they may give a choice in their question (i.e., “What do you want to play with? You can have a block or a ball.”). Prompts are intended to be temporary (only used until needed), and to "be combined with reinforcement. Prompts may be verbal, gestural, a model, physical, or pictorial” (Sandall et al., 2019, p. 150). Sandall et al. (2019) describe three prompt hierarchies: graduated guidance (least prompts needed until no longer needed at all), time delay (waiting a specific time before using a prompt), and backward chaining (prompts used for all steps, until teachers can remove a prompt from last step to first step).

When discussing consequences in a CSIF, Sandall et al. (2019) are referring to “a teacher behavior or an environmental event that occurs after a child behavior” (p. 152). Reinforcers are responses to behaviors; Sandall et al. (2019) focus on positive reinforcement. In education, positive reinforcement is used to encourage specific behavioral response from a student. Sandall et al. (2019) note that the reinforcer must be tailored to the student’s interests and motivations (this can be discovered by observing responses of the child after a reinforcer is utilized). Differential reinforcement of other behavior (DRO) “is to catch the child being good and to let him or her know it! This technique is used when you want to decrease a challenging behavior in the classroom by providing the child with positive reinforcement for behaviors that are incompatible with the challenging behavior” (Sandall et al., 2019, p. 152). For example, when a student says, “help please” (when the child may typically scream in frustration), the teacher might say “you used your words! That helps me understand what you need!”, as opposed to only telling the student “No screaming.” Sandall et al. (2019) contend that corrective feedback is to be

"utilized to show a student a more appropriate alternative. Corrective feedback should never be punitive. It offers the child information only and should be delivered in a neutral tone of voice" (Sandall et al., 2019, p. 152-153).

It can be difficult to decide on what level of support a child needs in the classroom. Sandall et al. (2019) give the following suggestions in choosing which intervention strategy to use with a student:

- If the child needs a little bit of help, try a curriculum modification.
- If the child needs a lot of assistance and direction, try a child-focused instructional strategy.
- If the need lies somewhere in between, try an embedded learning opportunity.
- If your evaluation data tell you that your first attempt was not successful, adjust and try again. (p. 51)

These intervention decisions can be strengthened by combining them with developmentally appropriate and accessible activities such as play. As argued in Chapter 2, play is essential to child development. Bodrova and Leong's (1996) framework gives useful insight into supporting play.

Play

Within the Vygotsky-inspired *Tools of the Mind* Framework (Bodrova & Leong, 1996) is information to support play in early development and learning based on individual rates. *Tools of the Mind* supports the theory that knowledge is socially constructed through interactions. The creators of this framework include Vygotskian researchers who have worked in the Insititute of

Preschool Education with Vygotsky's students and colleagues, published Vygotskian inspired articles, and worked to apply an international Vygotskian approach to teaching in early childhood and elementary classes.

Because Bodrova and Leong assert that "The developmental accomplishments of the preschool and kindergarten period are imagination, symbolic function, and the integration of thinking and emotions" (p. 57), play is an activity that supports these functions.

As discussed in chapter 2, Vygotskian theory states engaging in play is essential because it helps develop symbolic thought and develop self-regulation. In play, children can control their behavior and outcome of pretend situations (Bodrova & Leong, 1996). Because play essentially acts as practice for real life situations, children engage in pretend play by imitating what they have observed. Through play, teachers can observe what students can do independently and what they need support in.

Zone of Proximal Development (ZPD), Play and Language

Vygotsky's theory of zone of proximal development (ZPD) is "a way of conceptualizing the relationship between learning and development" (Bodrova & Leong, 1996, p. 35). The ZPD demonstrates the area of development that is between what a child can do on their own and what they require help with. For example, a child may count five blocks without support, but based on modeling from a teacher, they can continue to count to 10. Thus, they independently count to 5 and count from 5-10 with assistance (their ZPD is in the area of counting from 5-10). Bodrova and Leong (1996) state that "The ZPD is not static but shifts as the child attains a higher level of thinking and knowledge" (p. 36). Thus, when the child learns to count to 10 independently, the teacher can then model how to count from 10-15. Most importantly, "The zone of proximal

development is different for different children" (Bodrova & Leong, 1996, p. 38), meaning the level of assistance will vary based on the independent level of the student. The ZPD and the level of support will change as the child develops new skills. Vygotskian theory states that "When a skill is outside of the ZPD, children generally ignore, fail to use, or incorrectly use that skill" (Bodrova & Leong, 1996, p. 39). The ZPD is useful in determining level of support for a child, assessing the child, and finding developmentally appropriate activities (Bodrova & Leong, 1996). This aligns with the *Building Blocks* framework concept of providing support at the child's level of need (Sandall et al., 2019). While developmentally appropriate can refer to independent level of ability, Vygotskian theory says "that the child should practice what he can do independently and, at the same time, be exposed to things at the higher levels of the ZPD. Both levels are developmentally appropriate" (p. 41). Bodrova and Leong (1996) discuss two ways of using the ZPD in teaching through amplification and scaffolding.

While amplification refers to using a student's strengths/interests to support them within their current ZPD, Bodrova and Leong (1996) support using scaffolding which is intended to help students reach a different level of ZPD (i.e., the student can achieve independence in what they needed support with before and begin working on a skill/concept that is more challenging with assistance). A specific strategy to increase more independent skill or scaffold, is the use of mediators (Bodrova & Leong, 1996). Like the prompts discussed by Sandall et al. (2019), mediators are "verbal, visual or physical" (Bodrova & Leong, 1996, p. 70) cues to help a child move toward independence.

Based on the suggestions to support students' ZPD, Bodrova and Leong (1996) state that teachers must focus on making play a key component of an early childhood program. Teachers utilize strategies that support effective play include the following:

1. Make sure children have sufficient time for play.
2. Help children plan their play.
3. Monitor the progress of play.
4. Choose appropriate props and toys.
5. Provide themes that can be extended from one day to the next.
6. Coach individuals who need help.
7. Suggest or mode how themes can be woven together.
8. Model appropriate ways to solve disputes. (p. 132)

Vygotskian theory argues that "Language becomes the tool for play" (Bodrova & Leong, 1996, p. 57) and leads to higher mental processes such as "written speech" (Bodrova & Leong, 1996, p. 102). In young children, this refers to emergent drawing and emergent writing skills. To support language and written speech acquisition through play skills, teachers can utilize the following strategies:

1. Make your actions and the children's actions verbally explicit

2. Model your thinking and the strategies you are using aloud.

3. When introducing a new concept, be sure to tie it to actions.

4. Use thinking while talking to check children's understanding of concepts and Strategies.

5. Use different contexts and different tasks as you check whether or not children understand a concept or strategy.

6. Encourage the use of private speech

7. Use mediators to facilitate private speech

8. Encourage "thinking while talking".

9. Encourage children to write to communicate even if it is scribbling.

10. Encourage the use of written speech in a variety of concepts.

11. Revisit the children's writing and reprocess their ideas.

12. Incorporate writing into play. (p. 107)

Thus far, this chapter has discussed strategies for including play in a high-quality early learning environment with strategies for addressing individual needs (Bodrova & Leong, 1996; Sandall et al., 2019). To provide specific details on how project-based learning (PBL) fits, *Implementing Project Based Learning in Early Childhood; Overcoming Misconceptions and Reaching Success* (Lev et al., 2020) will guide the final piece of the proposed curriculum in chapter 4.

Project-Based Learning in Early Childhood

In their text, Lev et al. (2020) advocate for teaching Project-Based Learning (PBL) with young children. Lev et al.'s (2020) framework was authored by early childhood and elementary teachers who served as faculty for PBLworks (an online PBL resource which offers teacher education, resources, and programs in PBL teaching). Lev et al.'s PBL framework includes constructivist values within a learner-centered classroom.

Constructing Knowledge in PBL

Lev et al. (2020) subscribe to 5 constructivist principles guiding their framework. The first principle states that teachers must "Embed Learning in a Complex, Realistic, and Relevant Learning Environment" (Lev et al., 2020, p. 9). This means teachers must first have a deep understanding of the content standards and goals that are to be addressed in the classroom, the prior knowledge, and current level of ability of their students (Lev et al., 2020). Lev et al. (2020) believe that learning must be relevant to issues in young students' lives and feel developmentally appropriate to achieve. Young children must understand the reason that they need to work on certain skills/content (connected to their own interests, lives, and future needs). Teachers should "break down" the larger project into smaller problems, in order for young students to experience success.

The second principle of constructivism that Lev et al. (2020) adhere to is to "Provide for Social Negotiation and Shared Responsibility as Part of Learning" (p. 12). In this principle, teachers must learn to act as a facilitator who "encourages students to co-construct meaning" (Lev et al., 2020, p. 12). Teachers must set up opportunities for students to work together in various groupings (partners, small group, and large group interactions) and practice age-appropriate conflict resolution and social skills. Students can also be made to feel responsible for their learning through teacher-student collaboration of classroom rules/expectations, opportunities for jobs in the classroom and making choices about what and how they want to learn (Lev et al., 2020). Through supporting this guiding principle, students learn that ""my voice counts and we mean something to each other" (Lev et al., 2020, p. 13).

In Lev et al.'s (2020) third principle, the PBL classrooms must "Support Multiple Perspectives and Use Multiple Representations of Content" (p. 16). Like Bodrova and Leong (1996) and Sandall et al. (2019) support, children are individuals who may need various modes of learning and interacting with others/their environment (Lev et al., 2020). In PBL, students should be provided with a mix of opportunities and materials to choose how and what they want to learn with, and more structured opportunities facilitated by the teacher (Lev et al., 2020). Teachers can give more choices in project work depending on the ability of the student and the difficulty of the task at hand (Lev et al., 2020). When students have multiple opportunities to practice what they are learning in a variety of ways, Lev et al. (2020) argue that "Children with diverse learning abilities and languages were able to work and play together because they could access the content of the project using a variety of modalities" (p. 15). Students should also have opportunities to practice sharing their work with others and receiving feedback from peers and teachers.

Lev et al. (2020) contend that the fourth principle of PBL should "Encourage Ownership in Learning" (p. 19). PBL supports investigating a problem or question to be answered by students, but young students will need support in this type of skill and "embedding mini lessons that scaffold decision-making helps young children learn how to make informed choices" (Lev et al., 2020, p. 20). Thus, PBL teachers can encourage children to engage in inquiry-based construction of knowledge; that is asking questions to learn more.

Lev et al.'s (2020) fifth and final principle encourages metacognition skills by having teachers "Nurture Self-Awareness and an Understanding that Knowledge is Constructed" (p. 24). Metacognition, or understanding the way in which one learns best, is a process that is best

facilitated through modeling and multiple opportunities to practice (Lev et al., 2020). PBL teachers can help support learners at their own individual level of self-awareness and understanding by scaffolding and setting up opportunities to grow in their social-emotional skills (Lev et al., 2020). Just as Bodrova and Leong (1996) support, social interactions are key to helping students construct knowledge (Lev et al., 2020). Lev et al. 2020 (2020) argue that "Learning is constructed by harnessing opportunities for students to reflect on their thinking, feelings, actions, and decisions" (p. 24), thus communication and self-awareness skills are essential to build. "Think alouds" and "I wonder statements" (Lev et al., 2020, p. 27) are two strategies which PBL teachers can model to promote self-awareness. PBL teachers must help students find ways to make student learning tangible (drawing, journaling, etc.) so that students can refer to these items for reflection and next steps (Lev et al., 2020). These principles guide the creation of an environmental atmosphere in learner-centered PBL classrooms.

Learner-Centered Classrooms in PBL

Learner-centered means that the classroom is focused on the natural curiosity of children to promote making connections among content and generalizing what is learned to outside the classroom (Lev et al., 2020). Lev et al. (2020) describe this type of classroom as a community atmosphere that supports student movement (not all sitting at desks), has independent and group work opportunities, has a variety of materials that are student accessible, visually displays student work and classroom expectations, and is set up to support independence. Teachers are viewed as facilitators of learning and interactions, while students are viewed as creators and contributors to their own learning (Lev et al., 2020). This type of classroom "requires a high level of collaboration, engagement, and independence from learners" (Lev et al., 2020, p. 42).

Students are encouraged to ask questions, work on finding answers to their questions and engage in social interactions with peers. Lev et al. (2020) argue that early childhood environments lend themselves well to learner-centered classrooms, because early educators focus on building relationships, playfulness, and wholistic learning in high quality early environments. The atmosphere of a learner-centered classroom supports the idea that "Learning occurs best in a positive environment, one that contains positive interpersonal relationships and interactions, that contains comfort and order, and in which the learner feels appreciated, acknowledged, respected and validated" (Lev et al., 2020, p. 45). Lev et al. (2020) describe the atmosphere in these types of environments as supportive of excitement, investment, energy, trust, relevance, and belonging. With a foundation of classroom essential components and principles, teachers can begin to plan their PBL program. Lev et al. (2020) describe PBL in three stages: planning, implementation, and reflection.

Project Planning

Because PBL is in fact "a complete unit of study" (Lev et al., 2019, p. xvii) to answer a question or solve a problem, a "driving question" must be defined to start the project.

This question is created when the students notice and communicate a problem that they can work together to solve. Lev et al. (2019) explain that, particularly in early childhood, teachers may identify a driving question/problem in their planning beforehand but set up scenarios in which children can be guided to ask this question. Teachers can create an "entry event" to influence the driving question during implementation. An entry event is a scaffolding technique to provide context for children which Lev et al. (2020 describe as "A first lesson or experience that sparks student interest and that launches the inquiry process" (p. 14). For example, if a teacher hoped

the driving question of a project would be related to finding a way to engage in gross motor indoors during the winter months (such as creating an obstacle course), then an entry event could be looking out at the winter weather, looking at winter weather books, discussing indoor/outdoor activities and what students like to do when they cannot go the playground. Just as Sandall et al. (2019) suggest in using an activity simplification, teachers can help break down the larger driving question/problem of PBL into smaller components/tasks (Lev et al., 2020). A good method toward intentionally addressing standards, learning goals, and working on creating answers to a driving question is integration.

In developing a project with students, Lev et al. (2020) remind teachers that skills and content will be integrated during the project as opposed to teaching stand-alone skills beforehand which is time consuming and out of context. Integration helps generalize skills to outside of the learning environment into new settings and in new ways. That is to say that "the standards and learning goals are viewed as interconnected parts of a whole rather than as isolated skills and knowledge" (Lev et al., 2020, p. 49). Early childhood fits well with this approach because the standards require a wholistic approach to development and learning (meaning skills in all areas of development are addressed) that must often be taught simultaneously. Lev et al. (2020) argue that "Implementation of integration at the highest level requires the balance of practice and play with the right amount of coaching and support" (p. 51). Many preschools used theme-based (apples, farm, snowmen, etc.) to embed content, but Lev et al. (2020) argue that in PBL, teachers should instead embed instruction and content into the project development. When planning for integration, Lev et al. (2020) describe 3 layers. In the first layer or "intentional integration" (p. 57), teachers should engage in research, familiarize themselves with the topic(s) of the project

and consider how standards can be embedded. In Lev et al.'s (2020) classroom example in the text, the teacher observes students for a few weeks before planning the project in order to understand their abilities and interests, as well as what the "driving question" of the project could be.

Based on the driving question that the teacher hopes to facilitate, teachers can choose the standards and learning goals to address throughout the project. The second level, "parallel integration" (Lev et al., 2020, p. 60) refers to skills/content that can be taught parallel to the project unit but not during project time. This type of integration, Lev et al. (2020) argue, "enables teachers to scaffold, support and extend children's understanding of key concepts" (p. 64) and "enables children to see how the content they are learning directly relates to the broader, authentic and meaningful context of the PBL unit" (p. 64). The third level of integration, "spontaneous integration" (p. 64), describes how instructors can address skills/content that arise during instruction but are not pre-planned and typically occurs during project implementation.

Project Implementation and Reflection

During spontaneous integration, the teacher addresses new content which is relatable to the context and will support what is being addressed (Lev et al., 2020). For example, a student is working on designing a puppet with craft supplies and wants to name the puppet after a character in a book the class has read. The teacher could use that teachable moment to help the student act out the story with puppets which addresses the retelling of a story learning goal (in Language and Literacy Domain). The teacher had not planned to address the learning goal during that specific time/lesson, but it came up naturally, was child-directed and complemented the context of what was happening. Lev et al. (2020) also describe using a hybrid method of integration that is

"taking something that has been *intentionally* planned and treating it as *spontaneous* (p. 67), meaning planning something but waiting to see if the students make the connection/initiate the idea first. This could happen when a project involves creating a mural of the student faces, and a child naturally brings up the topic of physical similarities and differences (I.e. height, color of skin, color of eyes, in a wheelchair or not, etc.); the teacher may have *planned* to address this standard of identifying diversity in human characteristics (Social Emotional Development Domain, Self-Strand, Self-Concept Topic), but they waited for the students to initiate the conversation to make the integration *spontaneous* and learner-led. Lev et al. (2020) assert that "When we stop to notice, as children often do, that nearly everything- every academic area- is actually interrelated, and we thus integrate learning, our curriculum becomes richer and more purposeful" (p. 74). Another component of PBL which often leads to integration in all 3 levels is sustained inquiry (Lev et al., 2020). Lev et al. (2020) describe sustained inquiry in early childhood as the expectation that students "engage in careful and diligent searches for information about a particular subject through investigation and experimentation" (p. 76)

Teachers can support and scaffold student abilities to participate in sustained inquiry during the three cycles of research: inquiry, investigation, and experimentation. Because projects in PBL are meant to be a means of answering driving questions, teachers must give students support in question asking and inquiry skills at various levels (Lev et al., 2020). Strategies that can guide students to engage in inquiry include artifact exploration (items/pictures for students to explore comment on and ask questions of- with support as needed), fishbowl discussions (a few students in a small group inside a large group circle model a conversation with question asking – with support as needed), teacher modeled essential questions, facilitating social conversations

during other parts of the day (modeling questioning skills and facilitating conversation between peers), fieldwork and expert visits (fieldtrips and special visitors) and choice time to play. To scaffold investigation and experimentation, teachers can provide materials which are open-ended and relevant to the questions children are asking. Lev et al. (2020) contend that through sustained inquiry, "Project Based Learning gives children the capacity to learn and apply not only the *content* they may learn in other contexts, but also the learning *processes* that connect learning to the outside world" (p. 82). Teachers in PBL must use both formative and summative assessments to monitor how the students are applying their knowledge through this sustained inquiry.

Lev et al. (2020) argued that "Early childhood teachers are actually uniquely positioned to tackle assessment in Project Based Learning because they can administer content-rich one-on-one assessments as well as use their observation and conferring skills to layer in assessments geared toward learning process and product development" (p. 204). Just as with other curricular approaches, PBL supports using initial assessments to find out levels of ability before implementing the project. Teachers can use formative assessment throughout the project to guide instruction and monitor student learning. The culmination of the sustained inquiry and integration that takes place during PBL is the resulting public product that is used as the summative assessment of student learning.

In using PBL, Lev et al. (2020) assert that teachers should "align the public product to student learning goals and that you keep the authentic connections to *what* students create, *why* they create it, and *how* their creations demonstrate learning" (p. 212). Teachers should consider possible products that would demonstrate to the public (families, other classrooms/students, community members, displays in the school, etc.) what they students had set out to learn, how

they worked toward their goals and what was learned. Lev et al. (2020) list examples of public products that can be used in early childhood. Written products can include "Letters...Brochures...Scripts...Book review[s]...Training manual[s]...Book[s]... Scientific study/experiment report[s]...[or] Field guide[s]" (p. 217-218). Projects can also be presented orally through a "Speech...Debate...Play, music, song or dance... poetry slam or poetry café" (Lev et al., 2020, p. 219). Oral products can be scaffolded through visual support (script, pictures, etc), lots of practice and/or recording the presentation ahead of time and presenting the recording to the public (Lev et al., 2020). Media art and technology can be used for a public product such as "Audio recording/Podcast[s]…Slideshow[s]...Drawing[s]/Painting[s]...Video[s]/ Animation...[a] Website..[or] Comic[s]" (Lev et al., 2020, p. 219-220). Products can also be constructed and include a/an "Small scale model...Consumer product...Device/Machine... Invention...Museum exhibit..[or] Garden" (Lev et al., 2020, p. 220-221). Students may present plans they have created as the final product such as a "Proposal..Blueprint/Design...or [an] Event" (Lev et al., 2020, p. 221). Other ideas to consider that are developmentally appropriate for young children include a "Fashion show...Obstacle course...Map...[or] Simulation" (Lev et al., 2020, p. 222). As students work towards creating their summative assessment, formative assessment can be used by teachers to monitor and teach students reflection, feedback, and revision.

Because students are chronologically young and may be even developmentally younger, teachers must utilize scaffolding to support student reflection during PBL. Lev et al. (2020) state that teachers promote reflection when asking questions that are open ended and giving students opportunities to "pause and reflect" throughout their day. Giving choices also allows students to

engage in thinking about what they want and making a choice (Lev et al., 2020). Based on reflection, students can work on engaging in feedback (both giving and receiving).

Feedback with young children needs to be modeled and taught with explicit language. When modeling feedback for children, it should be "Timely and ongoing...Descriptive of Work...Positive...Clear and specific...[and] Differentiated" (Lev et al., 2020, p. 182). Ideas to teach the use of feedback include "Two Stars and A Wish", "I like____ I wonder____" and a Gallery Walk (Lev et al., 2020, p. 177). Students who reflect on their accomplishments and receive feedback can notice what revisions are needed.

Revision in early childhood PBL occurs through content, process, and product. Tips for teaching children to revise content include modeling or prompting students to add details or components to their work (Lev et al., 2020). For example, if a student draws a self-portrait picture with just a face, the teacher might ask "what else is on your body?" to prompt them to think of other features; the teacher might also show students a sample of a student's self-portrait which has a head, body, arms, legs, and various other features. Lev et al. (2020) contend that teachers can support process revision by reminding them to always look at their work after they are done and use specific language to ask them about "next steps". Products can be revised by students when teachers interact 1:1 with students to talk about their product and what else might be added/changed (Lev et al., 2020). Lev et al. (2020) advocate for the use of reflection, feedback, and revision in PBL, because "When teachers layer in opportunities for students to reflect on their thinking and actions, give and receive feedback, and revise their work, students are drawn into the learning process" (p. 167)

When students have presented their public product, the class can reflect on the process. Using the opportunity to use reflection, feedback and future revision possibilities, students can think about what to work on in future projects. After considering the components needed to achieve successful intervention techniques in a playful PBL classroom, teachers must also consider what content should be integrated in these approaches.

Embedding Content in Early Childhood and PBL

As discussed in Chapter 1, Early Learning Content Standards encompass a wholistic view of learning in young children. This means educators are responsible for covering a wide variety of content. To increase opportunities for practice and generalization (mastering a skill across settings and instructors), embedding learning goals in daily and planned activities is one key approach to a high-quality early childhood environment with diverse learners (Bodrova & Leong, 1996; Lev et al. 2020; Sandall et al., 2019). Based on the guidance from the *Building Blocks* framework (Sandall et al, 2019) and Lev et al.'s (2020) PBL approach, content which can be embedded into these approaches include literacy, STEAM, social-emotional and behavior skills (Lev et al., 2020; Sandall et al., 2019).

Literacy and STEAM

In PBL, classrooms should support "an opportunity to purposefully engage in reading, writing, speaking and listening through authentic, age- appropriate opportunities" (Lev et al., 2020, 114). Literacy in PBL does not just refer to reading and writing, but also to communication skills and ways to extend thinking about all content. Thus, integration of literacy daily is fundamental in using PBL with young, diverse learners. Lev et al. (2020) suggest literacy components which can be used to scaffold literacy abilities in a variety of abilities such as "Class

discussions..Print-rich environment [containing]...Project Walls...Anchor Charts...Interactive Writing...Expert Visits and Fieldwork...Interviews...Class Books...Read-Alouds...Choice Time...Imaginative Play...Written Expression...Illustrations...Invented or "Brave Spelling...[and] Labeling illustrations" (p. 118-132). During "choice time" or centers (areas of the room designated with specific materials- such as blocks, art, sensory table, etc.), children can learn literacy skills through play (Lev et al., 2020). Like Bodrova and Leong (1996), Lev et al. (2020) describe using imaginative play for opportunities to focus on literacy skills such as story retelling, vocabulary building, and communication skills.

The *Building Blocks* framework (Sandall et al., 2019) suggests adding STEAM-rich (science, technology, engineering, arts, and math) environmental components as well as literacy-rich. Adding specific centers in the classroom such as science areas, a sensory table, a "creation station" (Sandall et al., 2019, p. 170), and including open-ended and unexpected materials to explore embeds STEAM concepts into everyday opportunities. Even with the incorporation of content specific materials and centers, it does not ensure that students will engage with the content, thus teachers must also make note to facilitate STEAM and literacy learning opportunities with students who are not accessing the intended learning goals with the *Building Blocks* levels of support.

Social Emotional Skills

Sandall et al. (2019) argue that the major social-emotional accomplishments targeted in early learning curricula should be independent behavior, friendships/social relationships, and developmentally appropriate behavior. Because independence "is related to how children take care of themselves, accomplish their basic needs, and interact with the world around them"

(Sandall et al., 2019, p. 161), teachers must choose which skill of independence to target and what supports from the *Building Blocks* framework the child will need (is the environment enough to provide opportunities to learn this? Does the child need curriculum modifications? An ELO? A CFIS?). Breaking down larger tasks into smaller tasks for young children leads to better success (Sandall et al., 2019). For example, when learning to engage in snack time, a student may need to learn independence by sitting at the table, waiting for a snack, serving themselves a snack, asking for help, and cleaning up. It is best to focus on one of these at a time so as not to overwhelm the child. Embedding independence skills within the routine will provide multiple practice opportunities. Sandall et al. (2019) describe the need to focus on executive functioning or "cognitive flexibility, working memory, and inhibitory control" (p. 162) to be successful in independent behavior. Activities to include daily in a high-quality preschool schedule that increase opportunities for executive functioning are gross motor opportunities, music/movement, pretend play, utilizing visual supports, explicit turn-taking teaching, labeling emotions/feelings, supporting persistence and opportunities for multi-step tasks/directions, and assessing and scaffolding to increase challenges as students become more independent (Sandall et al., 2019). When students become more independent and exhibit growing executive functioning skills, they have more ability to engage in relationships with peers.

Sandall et al. (2019) describe 3 levels of socialization in early learning: friendship, social acceptance, and social rejection. Students are friends when both children want to spend time together and the enjoyment together is mutual (Sandall et al., 2019). Social acceptance refers to other students wanting to spend time with someone, but it is more "passive" (p. 176) than friendship. Social rejection means other students do not initiate, respond, or accept invitations to

play from someone (Sandall et al. 2019). Students who have friendships have better long-term outcomes in school (Sandall et al., 2019). Sandall et al. (2019) advise addressing skills that support friendship building through the following:

- Being aware of others
- Sharing
- Helping others
- Persisting or making efforts to maintain social interactions
- Organizing play with others
- Being able to enter play situations
- Giving compliments
- Negotiating
- Solving conflicts (p. 176-177)

To help students make friends and become socially accepted, teachers must give social opportunities throughout the day by setting up materials and activities which support collaboration (games, floor puzzles, etc.). Materials that engage social interaction should especially be incorporated in favorite areas of children that are less likely to engage in socialization (example: putting a train floor puzzle or train tracks to build with peers and support in a child's favorite Transporation/block area). Teachers can provide group activities with visual supports to provide more access to the activity (example of visual cue pictures for a shape mural project: get scissors, cut out shape, glue to shape mural). Teachers can plan "group friendship activities" (Sandall et al., 2019, p. 177) such as changing familiar lyrics/words in musical activities to include a social interaction. For example, adding the line "the children on the bus go

'hi' 'hi' 'hi'" to the Wheels on the Bus song. Sandall et al. (2019) describe a teacher's role in social interactions as a facilitator who must model and observe behaviors, but to be hesitant to jump in to help an interaction before the children have had a chance to practice socializing without help. Teachers must also learn behavior management skills to support successful socialization in the classroom.

When discussing challenging behaviors in early childhood, Sandall et al. (2019) remind teachers that these do not only apply to young children with disabilities, because "Experimentation with rules, boundaries, and consequences is a typical part of child development." (p. 182). Teachers need to understand what is a behavior that is consistent with age-appropriate expectations. Early educators must support desirable behaviors while finding ways to decrease challenging behaviors. In Sandall et al.'s (2019) text, challenging behavior is ongoing, observable by caregivers and teachers, and keeps the child or their peers from learning or making positive progress. Sandall et al. (2019) describes some common developmentally appropriate behaviors as:

- Following simple directions given to an individual
- Following simple directions given to the group
- Making classroom transitions, including putting materials away
- Following basic classroom rules
- Regulating and expressing emotions in an appropriate manner
- Using appropriate and peaceful strategies to resolve conflicts with peers
- Stopping an inappropriate behavior when asked by an adult. (p. 184)

An approach that aligns well with the *Building Blocks* Framework is Positive Behavior Intervention and Support (PBIS). PBIS advocates for strategies that decrease problem behaviors while promoting prosocial behaviors and "A fundamental tenet of PBIS is that challenging behaviors have a communicative function" (Sandall et al., 2019, p. 182). Using an approach like PBIS, teachers can identify replacement behaviors and communication functions of children's behaviors. Sandall et al. (2019) state that aggressive behaviors are particularly challenging and may need teachers to "disregard their preconceived notions and address aggression systematically" (p. 184). Teachers must think of a replacement behavior for the challenging one and collaborate with other team members and caregivers. Sandall et al.'s (2019) approach to address challenging behavior is similar to a functional behavior assessment (FBA) and includes the following steps:

1. Define the challenging behavior.
2. Assess where and when the behavior is a problem.
3. Assess where and when the behavior is not a problem.
4. Assess what happens before and after the challenging behavior.
5. Assess classroom supports (e.g., adult, instructional, environmental).
6. Assess classroom barriers.
7. Determine what the child is attempting to communicate with the behavior.
8. Select an intervention.
9. Implement the intervention.
10. Monitor child behavior to ensure change.

11. Monitor the implementation to make sure that the adults are doing what they planned to do. (p. 186)

As with other taught skills, behavior skills can be addressed through the *Building Blocks* framework hierarchy of support (Sandall et al., 2019).

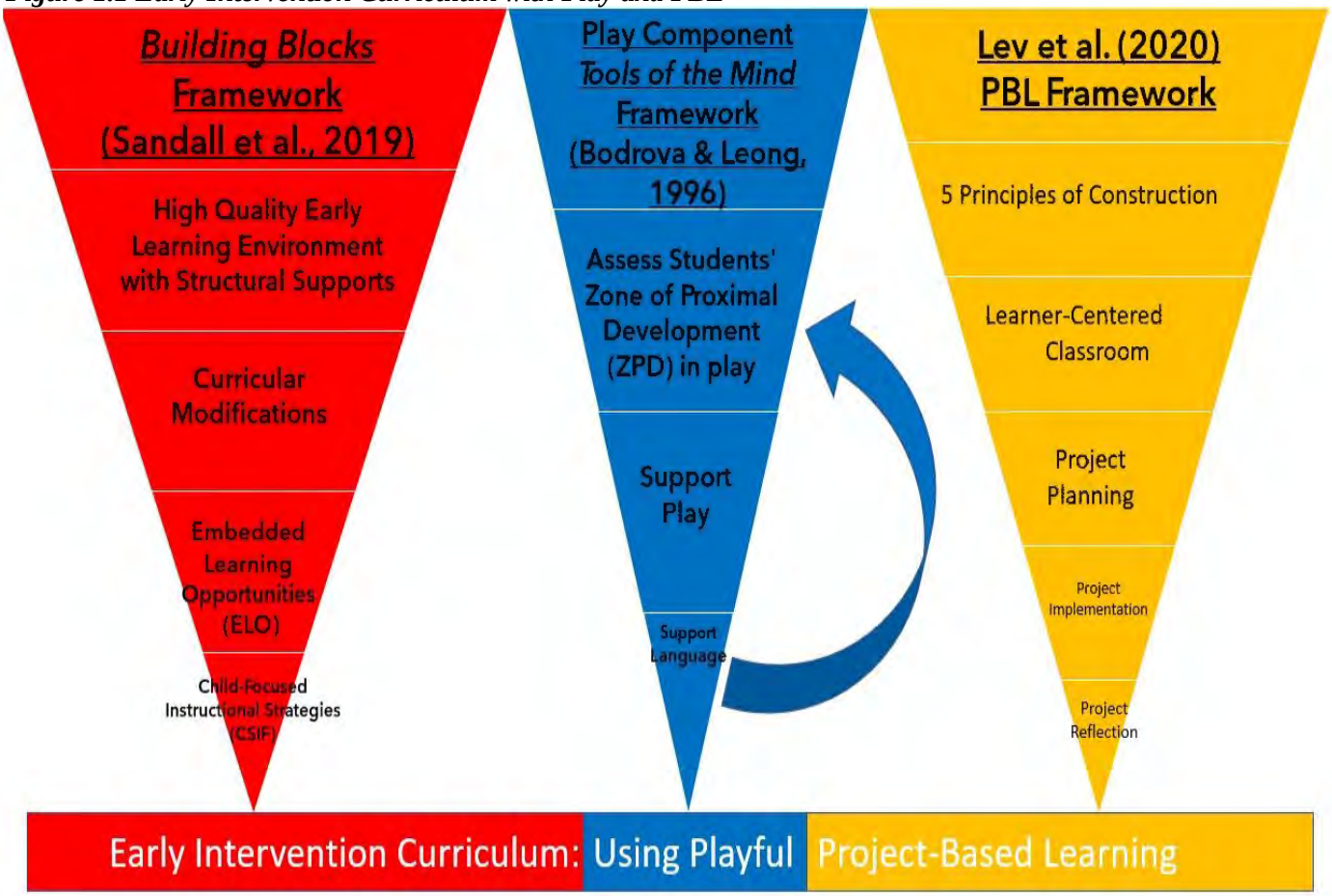
In considering a PBL view of socialization, the two goals of social-emotional embedding are similar to Sandall et al.'s (2019) approach. Lev et al. (2020) cite being an independent learner and collaborating effectively within authentic experiences as essential skills to learn through PBL. Lev et al. (2020) describe the traits of an independent learner as "self-regulation...self-efficacy...perseverance...self-management" (Lev et al., 2020, p. 146). Teachers must embed multiple opportunities for these skills through the project implementation stage (Lev et al., 2020). When students become more independent, they are better able to collaborate (Lev et al., 2020). Strategies which support collaborating with others in PBL are offering extended time, timers, feedback, role play, whole group activities, small group activities, partner activities, multiple times to practice, multiple materials to share, and visual supports.

Conclusion

The goal of exploring these 3 frameworks is to incorporate early intervention, PBL and play approaches into a cohesive curriculum. Using the guidance from Sandall et al. (2019) and Lev et al. (2020), a prospective learning environment with a best practice check list will be provided. A sample daily schedule, based on the research from Sandall et al. (2019), which includes structural supports and opportunities for curricular modifications, ELOs, and CSIFs will be included. Weekly small group lessons and materials will be listed for "choice time" involving play suggestions from Bodrova and Leong (1996). Lessons for the PBL unit will be included

and addressed during a large group entry event, small group work time (during “choice time”) and large group reflection/brainstorming lessons. Differentiation plans will continue to be included in all lessons. Ohio Early Learning Standards will be integrated throughout the curriculum. *Figure 1.1* represents the elements of each framework which will be incorporated into the curriculum.

Figure 1.1 Early Intervention Curriculum with Play and PBL



SECTION FOUR

Chapter 4- The Curriculum

Early Childhood Intervention Curriculum: Using Playful Project-Based Learning

Hannah Shullenberger Million

Otterbein University, 2022

Dear Intervention Team,

Thank you for choosing to try something new, exciting, and research-based in your learning environment this year! This curriculum is designed to help meet the needs of children ages three to six participating in an inclusive special education preschool setting. Students in these settings include students who qualify for an IEP based on preschool disability categories under IDEA (developmental delay, Autism, speech/communication, intellectual disability, etc.) and peers without an IEP. So, you will be teaching students with a variety of abilities- from students significantly below age level ability to students who need above age level challenges- and everything in between. The core of this curriculum is finding an efficient and evidence-based way to facilitate learning for all your students in a way that is meaningful to them and interesting to you.

Working collaboratively within your different fields of expertise (Intervention Specialist, Early Childhood teacher, paraprofessional, OT, PT, SLP, etc.) will allow you to be involved in wholistic development of each child. This collaboration will provide multiple opportunities for generalization of skills to different teachers and settings- and you know this means more opportunities to meet objectives with data to back it up!

Starting your program off right with a welcoming, interesting, and prepared classroom is the first step. Before implementing lessons and diving into those IEP goals, take a look at your classroom. Talk with your team and fill out the **Learning Environment Checklist** based on components from the *Building Blocks* framework (Sandall et al., 2019), the Vygotskian *Tools of the Mind* Framework (Bodrova & Leong, 1996), and Lev et al.'s (2020) PBL in early childhood framework. Check off what you already have and plan to address the gaps. It will help you in the long run if your classroom is ready in the beginning to address some common student needs and decrease the likelihood of common problems.

Next, take a look at the **Sample Daily Schedule.** The way the schedule is set up was done based on personal teaching experience and research (Bodrova & Leong, 1996; Lev et al., 2020; Sandall et al., 2019). It includes:

- minimal transitions needed
- increased independence opportunities
- small group, large group, partner, independent groupings
- Plenty of time to PLAY
- Lots of movement for young learners!
- Daily project work time

Each routine will have a lesson addressing how to implement the activity daily to maximize the amount of content covered and IEP goals addressed.

Feel free to re-arrange the schedule as needed to suit your programs/children's needs. The times suggested are given based on classroom experience. Sample **Embedded Learning Opportunities (ELO)** and **Child-Focused Instructional Strategy (CFIS)** sheets based on the *Building Blocks* framework (Sandall et al.,2019) will be included to utilize if the curricular modifications are not enough support in routines, activities or the PBL unit.

Monthly lessons will be provided for rotational, small group **choice time** with play guidance from the *Tools of the Mind* Framework (Bodrova & Leong, 1996). These are designed to include parallel integration (Lev et al., 2020) of the four-week Project Based Learning (PBL) unit.

PBL Lessons are based on guidance from Lev et al. (2020). This curriculum will give a sample project and timeline from planning to reflection of the project.

The PBL unit will include

- an "**entry event**" large group lesson at the "exploration table" followed by a large group meeting to develop the driving question(s).
- Weekly small group/individual project time lessons
- Biweekly (beginning and ending the week) large group lessons for brainstorming, expert visits, feedback, revisions and reflection.
- The summative assessment of the PBL unit will be provided in the lessons for the **public product presentation** and **project reflection** lessons.

Have a wonderful school year and remember- you can make learning RELEVANT and FUN!

Figure 1.2 Curriculum Layout

Learning Environment Checklist

- Relationships and Interactions
- Rules, Expectations and Schedule
- Materials
- Planning and Teaching Strategies

Sample Daily Schedule

- Minimal transitions needed
- Increased opportunities for independence
- Small group, large group, partner, individual and 1:1 groupings
- Plenty of time to PLAY
- Lots of movement for young learners
- Daily project work and choice time

Daily Routine Lessons

- Description
- Materials
- Early Learning Standards
- IEP (Individualized Education Program) Objectives
- Curricular modifications
- Formative assessment/Data collection

Forms for: Embedded Learning Opportunities (ELO)
and
Child-Focused Instructional Strategies (CFIS)

- **ELO**- an intentional strategy to address specific learning goal(s) with data on student's response to intervention
- **CFIS**- a more intensive strategy with daily data opportunities. This is more explicit, systematic and frequent than an ELO or curricular modifications.

Choice Time Lessons

- Small group
- Rotational
- Play-based
- Four-week unit
- Children can choose what activity they want to do first
- Same components as Daily Routine Lessons

PBL Unit Lessons

- Entry event
- Driving questions
- Weekly small group/independent work time
- Bi-weekly large group lessons (brainstorming, expert visits, feedback, revisions, reflection, etc.)
- Public product presentation
- Large group project reflection/closing
- Gold standard PBL elements

Learning Environment Checklist

This list combines components from Sandall et al.'s (2019) *High Quality Early Learning Environment indicators,* Lev et al.'s (2020) Constructivist Principles, Vygotskian play guidance from the *Tools of the Mind* Framework (Bodrova & Leong, 1996) and early intervention preschool classroom experience complementary to the learning principles described in Chapter 3.

Team Members Who Will Collaborate On this Form:

Name	Position	Days/Times in the Classroom

Directions:

Put a check under **O (Observable),** if the indicator is observable daily and write brief examples to support.

If a component is not observable, put a check under **P (plan needed**), brainstorm with your team and put a strategy in the Planning Column to Address it

***O= Observable; P= Plan Needed**

Daily Quality Indicator:	**O**	**Evidence**	**P**	**Planning**
Relationships and Interactions				
Do Students have time/space to… 1. **Work/ play together** 2. **Explore and engage with toys/material** 3. **Work/Play with teachers and staff?** (Lev et al., 2020; Sandall et al., 2019)				
Groupings: Do students have opportunities/ space for … 1. **small groups** 2. **Large groups** 3. **Partner work** 4. **Independent time or 1:1 teacher/staff interactions** (Lev et al., 2020; Sandall et al., 2019)				
Does staff read to students in various groupings daily? (Sandall et al., 2019)				
Do students have opportunities to engage in collaborative activities? (Games, turn-taking, etc.) (Lev et al., 2020)				

Do students have opportunities to practice discussions (taking turns, listening, etc.)? (Lev et al., 2020)				
Do families have opportunities to visit, observe, meet with staff and/or receive program information/ plans? **Are staff available to talk via email, phone or in person?** (Sandall et al., 2019)				
Rules, Expectations and Schedule:				
Is there a visual schedule posted and accessible for students?				
Does the class create classroom rules/expectations together? (Lev et al., 2020)				
Are classroom rules/expectations posted (visually) for students?				
Is there a mix of child choice, open-ended and teacher-facilitated and/or directed activities? (Lev et al., 2020; Sandall et al., 2019)				
Do students have opportunities for				

independence and responsibilities? (Ex: class jobs, voting, decision making) (Lev et al., 2020)				
Do children have opportunities to engage in gross motor activities (outdoor and/or indoor) daily? (Sandall et al., 2019)				
Do students have chances to practice independence? (Lev et al., 2020; Sandall et al., 2019)				
Are there visual supports available in different areas?				
Is student work (art/creations) posted in the classroom? (Sandall et al., 2019)				
Materials:				
Do students have access to: • **Books (various levels)** • **Art supplies** • **Blocks/ Building Materials** • **Fine Motor Toys**				

• **Imaginative/ Pretend Play Toys?** • **Sensory/ Science Experiences** • **Open ended materials** (Sandall et al., 2019)				
Are materials rotated to include new, interesting items?				
Are materials… • **organized** • **Safe (unbroken, no sharp edges, etc.)** • **Reachable to all children** • **Inclusive of student interests** • **include a variety of levels of ability** (Lev et al., 2020; Sandall et al., 2019)				
Planning and Teaching Strategies:				
Do lesson plans stem from learning goals and early learning standards? (Lev et al., 2020)				
Do lessons incorporate and facilitate student questions?				

(Using visual supports, practice, modeling, a spot to leave questions they want to investigate) (Lev et al., 2020)				
Does staff allow students time to solve their own problems before helping? (Lev et al., 2020)				
Does staff use individualized approaches and/or account for individual needs of students? (Lev et al., 2020; Sandall et al., 2019)				
Are large projects/lessons divided into smaller, more achievable goals for students? (Lev et al., 2020)				
Do planned activities consider the context of students' lives and interests? (Lev et al., 2020; Sandall et al., 2019)				
Do teachers/staff explain *why* students are working on concepts, tasks, etc.? (Lev et al., 2020)				

Do teachers/staff model and explicitly teach learning strategies for students? (Writing out their ideas, scripting how to ask questions) (Lev et al., 2020)				
Do students have opportunities (modeled and supported by staff) to engage in the processes of: • **feedback** • **revision** • **reflection** (Lev et al., 2020)				

Sample Daily Schedule

Write in the Times that fit with your program's hours.

Time:	Activity:
	Arrival and Greetings (5-15 minutes)
	Exploration Table (5-20 minutes)
	Group Meetings (10-15 minutes)
	Play Choice Time/Project Time (45-60 minutes)
	Gross Motor (20-30 minutes)
	Snack (10-15 minutes)
	Literacy Meeting (10-15 minutes)
	Goodbyes and Departure (5-15 minutes)

Daily Routine Lessons

Description: Below are the Lessons for Daily Routines that occur concurrent to the PBL unit.

If students require more support than planned curricular modifications, use an Embedded Learning Opportunities (ELO) form. (Page 106) If a student requires more support than an ELO, use a Child-Focused Intervention Strategy (CFIS) form.(page 107)

A Note about IEP Goals/Objectives*

Review your student's IEP goals and objectives and discuss them with your team. Incorporate their objectives into the routines/activities when the child would need to use these skills. *HINT- do NOT try and address all objectives in one area. Try to incorporate data opportunities for corresponding goals while various related staff (OT, SLP, PT, etc) are present.*

****A Note about Early Learning Standards! ****

When planning for individual children, always remember to use the Zone of Proximal Development or ZPD (Bodrova & Leong, 1996) to balance independent ability with support in reaching their learning goal.

If a student is well below age level, look at the standards in the younger age ranges to build foundational skills towards reaching the pre-Kindergarten standard.

If a student is above skills in certain areas, remember to reassess what standards are relevant to their readiness for kindergarten and how you can expand their goals into higher levels. (HINT- look at Kindergarten/1st Grade standards)

Standards can be found in *Ohio's Early Learning and Development Standards in All Essential Domains of School Readiness (Birth – Age 5)*

Early Learning Content Standards

*****A Note about Assessment and Data Collection! ****

Collaborate with your team and decide who is keeping what data, when and how often certain goals need to be addressed and when new goals can be introduced.

**IEP objectives to be filled in based on your personal students and should be planned to be addressed through teaming with various related staff*
***Some curricular modifications are based on Sandall et al. (2019)* Building Blocks *Framework suggestions*

Activity:	**Arrival and Greetings**
Description	Students will: 1. enter the room 2. go to their cubby area 3. hang up backpack and/or extra layers (coats, hats, etc) 4. get out their folder 5. put their folder in the folder bin 6. go to the exploration table.
Materials	Folder Bin, Visual supports, timer
Early Learning standards	**DOMAIN: Social and Emotional Development** **Strand: Self, Topic: Sense of Confidence** -Show confidence in own abilities making things happen and accomplish routine and familiar tasks independently. **Strand: Relationships, Topic: Attachment** - Separate from familiar adults in a familiar setting with minimal distress. **Strand: Relationships, Topic: Interactions with Adults** - Request and accept guidance from familiar adults. **DOMAIN: Language and Literacy** **Strand: Listening and Speaking, Topic: Receptive Language and Comprehension** **-** Follow two-step directions or requests.
IEP Objectives	
Curricular Modifications	**Environmental Support-** -if a child has a problem entering the classroom, give a "check in" ticket with their picture to put in an envelope inside the room **-**put student pictures next to names on cubbies for children not yet reading their names. -put picture task analysis near cubby area to demonstrate steps - have the Exploration Table open and ready for students when they have completed their arrival routine **Material Adaptation-** -Put folder bin on child size chair so children can reach from multiple levels

	Activity Simplification- -decide how many unpacking tasks a child can do independently or with minimal support and focus on these tasks -if a student struggles with multiple steps, provide support in each step until they are independent in each step **Child Preferences-** -if a student struggles with leaving caregivers, have a favorite toy waiting in the classroom or at exploration table-or- have a preferred staff member support their arrival
Formative Assessment/ Data Collection	-post checklist with student names/initials and learning goals -post student IEP goals data chart for objectives included in this area (use abbreviations for efficiency. suggestions: + = performed independently, V = performed with verbal cue, G = performed with gestural cue, P = performed with physical cue, HOH= performed with hand-over-hand support)
Activity:	**Exploration Table**
Description	Students will join the large group table area to explore and engage with various fine motor and/or sensory materials. ***Occupational therapist can suggest materials to focus on specific skills. This would be an excellent time for OT to see students in the classroom and work on IEP goals.*
Materials	Choose daily materials/toys to explore. Examples: puzzles, beading, lacing, Legos, play-doh with tools and cutters, gears, pop toys, pincer grasp tools, clay, paper and various writing utensils, scissors and thick cardstock to cut or other materials to cut.
Early Learning standards	**DOMAIN: Cognition and General Knowledge** **Strand: Cognitive Skills, Topic: Reasoning and Problem-Solving** - Seek more than one solution to a question, problem or task. - Explain reasoning for the solution selected. **DOMAIN: Language and Literacy** **Strand: Writing, Topic: Writing Process** - Use a 3-finger grasp of dominant hand to hold a writing tool **DOMAIN: Physical Well-Being and Motor Development** **Strand: Motor Development, Topic: Small Muscle, Touch, Grasp, Reach, Manipulate**

	- Coordinate the use of hands, fingers and wrists to manipulate objects and perform tasks requiring precise movements. - Use classroom and household tools independently with eye-hand coordination to carry out activities. **Strand: Motor Development, Topic: Sensory Motor** - Regulate reactions to external sensory stimuli in order to focus on complex tasks or activities.
IEP Objectives	
Curricular Modifications	**Environmental Support** -create boundaries for each student's materials (example- plastic trays) -allow students to engage in other play materials afterwards if there is time before group meeting (if student needs support staying, use a timer or activity simplification before student can leave table area) **Material Adaptation** -use diverse sizes (small vs. larger beads) and levels of materials (example- insert puzzle vs. Jigsaw puzzle) for children's areas of ability **Special Equipment** -adaptive scissors, slant boards (can be homemade with binder), and/or writing utensil grips as needed (*Team with OT about what to use for each child)* **Activity Simplification** -if a student is overwhelmed by several materials, give them one at a time or put a small amount in a bowl/container and let them know they can be finished after they use that many items (example: must put 5 beads on a string) **Adult and/or Peer Support** -model ways to use the materials so students can observe
Assessment/ Data Collection	-post checklist with student names/initials and learning goals -post student IEP goals data chart for objectives included in this area (use abbreviations for efficiency. suggestions: + = performed independently, V = performed with verbal cue, G = performed with gestural cue, P = performed with physical cue, HOH= performed with hand-over-hand support) -Pictures for portfolios when time allows

Activity:	**Group Meeting**
Description:	When a timer goes off and the "welcome song" starts, students will transition from exploration table to meeting area. Group meeting will include the following components: 1. Greetings (through song) with a visual of child's name held up "Let's Find out Who's Here Today, Say Hello!...Hello____!") 2. Review rules created by the class 3. Discuss plan for the day with use of white board (teacher models drawing/writing with verbal commentary). 4. Students will have individual white boards to imitate or engage in their level of writing/drawing (might be scribbling or pre-writing lines) 5. Songs with receptive language skills (direction following) and monthly standards to address 5.When a student's name card is drawn and called, the student will request the choice time area through their level of communication (word, phrase, sentence, question, picture exchange, assistive technology, etc.).
Materials	Timer, Music Player of choice with a "welcome song" set up, Teacher White Board and Markers, Individual White boards, and markers for students
Early Learning Standards	**DOMAIN: Cognition and General Knowledge** **Strand: Cognitive Skills; Topic: Memory** **-** Communicate about past events and anticipate what comes next during familiar routines and experiences. **SUB-DOMAIN Social Studies** **Strand: History, Topic: Historical Thinking and Skills** - Demonstrate an understanding of time in the context of daily experiences. **Strand: Government, Topic: Civic Participation Skills** **-** Understand that everyone has rights and responsibilities within a group. **DOMAIN: Language and Literacy** **Strand: Listening and Speaking, Topic: Social Communication** - With modeling and support, follow typical patterns when communicating with others (e.g., listen to others, take turns talking and speaking about the topic or text being discussed).
IEP Objectives	

Curricular Modifications	**Environmental Support** -use clearly defined, individual spots for children as needed (if they have trouble keeping hands to self, staying at circle, etc). Example: carpet square, colorful dot, child sized chair (*team with OT for suggestions)* -use puppets/props, gestures, or sign language with songs to model **Material Adaptation** -offer an activity choice board to use in requesting choice area after the meeting **Child Preference** -allow child to hold favorite soft toy/object if/when they have difficulty staying for circle -put child's spot next to a preferred peer/adult **Special Equipment** -use cube chair for students who need support in trunk stability (*team with OT and PT for equipment of students with needs sitting on the floor*) **Adult Support** -if a student has difficulty (physically) with imitating song movements, have staff use hand-over-hand to support them **Peer Support** -sit students with difficulty engaging in tasks next to a peer with desirable behavior/outcomes
Assessment/ Data Collection	-Have paraprofessional or other staff take data on Group Meeting Goals and IEP objectives which pertain to large group settings. -post checklist with student names/initials and learning goals -post student IEP goals data chart for objectives included in this area (use abbreviations for efficiency. suggestions: + = performed independently, V = performed with verbal cue, G = performed with gestural cue, P = performed with physical cue, HOH= performed with hand-over-hand support)
Activity:	**Choice Time/Project Time**
Description	***See Choice and PBL small group lessons****
Activity:	**Gross Motor**
Description	Students will engage in daily outdoor gross motor activity on the playground when weather permits. Obstacle course,

	dance/movement activities and yoga will be provided if outdoors is not an option due to weather. ***this would be a great time to have PT work with students on goals within the LRE*
Materials	Outdoor in addition to playground equipment: sports balls, chalk, bubbles, scooters Indoor: tunnel, mini trampoline, scarves, soft balls, balance beam, balance steps, yoga cards, balloons, music player, instruments, etc. **Ask PT for material suggestions*
Early Learning standards	**Domain: Physical Well-Being and Motor Development** **Strand: Motor Development, Topic: Large Muscle: Balance and Coordination** - Demonstrate locomotor skills with control, coordination and balance during active play (e.g., running, hopping, skipping). - Demonstrate coordination in using objects during active play (e.g., throwing, catching, kicking balls, riding tricycle). - Use non-locomotor skills with control, balance and coordination during active play (e.g., bending, stretching and twisting). - Demonstrate spatial awareness in physical activity or movement. **Strand: Physical Well-Being, Topic: Physical Activity** - Participate in structured and unstructured active physical play exhibiting strength and stamina.
IEP Objectives	
Curricular Modifications	**Material Adaptation and/or Special Equipment** -team with PT to address access issues with equipment - -offer an activity choice board to use to support requesting activities/materials **Child Preferences** -include favorite activities/toys and adults in gross motor area if child does not like gross motor area **Adult Support** Model ways to play games with explicit steps **Peer Support** -have peers invite or model skills/games to students in need
Assessment/ Data Collection	-Bring a checklist on a clipboard with student names/initials and learning goals

	-include student IEP goals data chart for objectives included in this area (use abbreviations for efficiency. suggestions: + = performed independently, V = performed with verbal cue, G = performed with gestural cue, P = performed with physical cue, HOH= performed with hand-over-hand support) -Pictures for portfolios when time allows
Activity:	**Snack, Bathroom and Clean Up**
Description	1. After gross motor transition, students will wash hands/use hand sanitizer and choose their placemat (with name on mat) from the "clean" bin. - *This would be a good opportunity for students to either use the restroom before or after snack time if needed.* 2. Student helpers (displayed on job chart by schedule) will pass out a napkin and paper cup to each student. 3. Teachers will provide a bowl of snacks on the table with scoops and small water pitchers to pour water into cups. 4. Students will clean up by throwing away trash and putting their placemat in the "dirty" bin. 5. When cleaning is done, students may go look at books in the large group meeting area. - *Students will work on self-help, feeding, conversational skills and requesting items- this would be another great time for SLP and/or OT to collaborate on goals in the LRE.*
Materials	-Paper napkins, disposable cups, disposable cutlery as needed -Placemats, bin labeled "dirty", bin labeled "clean" -Snacks of variety of textures, flavors -Child size water pitchers, clean serving bowls with serving tongs/utensils
Early Learning standards	**DOMAIN: Social and Emotional Development** **Strand: Self, Topic: Self-Regulation** - Demonstrate the ability to delay gratification for short periods of time. **Strand: Relationships, Topic: Interactions with Adults** **-** Engage in extended, reciprocal conversations with familiar adults. **DOMAIN: Physical Well-Being and Motor Development** **Strand: Motor Development, Topic: Small Muscle: Touch, Grasp, Reach, Manipulate**

	- Use classroom and household tools independently with eye-hand coordination to carry out activities. **Strand: Motor Development, Topic: Oral Motor** - Demonstrate increasingly complex oral-motor skills such as drinking through a straw, blowing bubbles or repeating a tongue-twister. **Strand: Physical Well-Being, Topic: Self-Help** **-** Independently complete personal care tasks (e.g., toileting, toothbrushing, handwashing, dressing etc.). - Follow basic health practices.
IEP Objectives	
Curricular Modifications	**Environmental Support** -If a student does not like to sit near others, make sure to allow them a seat at the end of the table or with a space between if room allows **-**put student pictures next to names on placemats for children not yet reading their names. -put picture task analysis near snack area to demonstrate steps - have Book area open and ready for students when they have completed their snack and cleaned up. **Material Adaptation-** -collaborate with OT for cups and/or feeding adaptations -offer a snack choice board to use for requesting **Activity Simplification-** -decide how many snack and clean-up tasks a child can do independently or with minimal support and focus on these tasks -if a student struggles with multiple steps, provide support in each step until they are independent in each step **Child Preferences-** -if a student is intolerant of many food textures, make sure there is an option that they like; work on having nonpreferred items scooped by them and put on their placemat, but not having to eat it if they don't want **Adult/Peer Support** -model trying different foods
Assessment/ Data Collection	-Post a checklist on a clipboard with student names/initials and learning goals -include student IEP goals data chart for objectives included in this area (use abbreviations for efficiency.

	suggestions: + = performed independently, V = performed with verbal cue, G = performed with gestural cue, P = performed with physical cue, HOH= performed with hand-over-hand support) -Pictures for portfolios when time allows
Activity:	**Literacy Meeting**
Description	1. When lights flash and/or "reading song" begins to play, students will transition to literacy meeting where they will find a spot to sit and engage in: 2. a song/activity about alphabet or phonological awareness concept (see *Appendix A: Songs*) 3. a group reading of daily/weekly book 4. a book extension activity with props and pictures (for example: re-sequencing activities, re-enacting with puppets, character/concept identification with pictures, etc.) 5. When the Literacy Meeting is finished, teachers will hold up one student folder at a time, when a student sees their folder, they may take it to the dismissal (cubby) area for departure routines.
Materials	Daily book and activity materials (*your choice! Just make sure it aligns with your standards/student goals)* Song and props if needed (see *Appendix A: Songs*) Books of variety of levels
Early Learning standards	**DOMAIN: Language and Literacy** **Strand: Listening and Speaking, Topic: Receptive Language and Comprehension** - Ask meaning of words. **Strand: Listening and Speaking, Topic: Expressive Language** - With modeling and support, use words acquired through conversations and shared reading experiences. (Vocabulary) **Strand: Reading, Topic: Reading Comprehension** - Ask and answer questions, and comment about characters and major events in familiar stories. - Actively engage in group reading with purpose and understanding. - With modeling and support use phrasing, intonation and expression in shared reading of familiar books, poems, chants, songs, nursery rhymes or other repetitious or predictable texts. **Strand: Reading, Topic: Letter and Word Recognition**

	- With modeling and support, recognize and name some upper and lower case letters in addition to those in first name.
IEP Objectives	
Curricular Modification	**Environmental Support** -use clearly defined individual spots for children as needed (if they have trouble keeping hands to self, staying at circle, etc). Example: carpet square, colorful dot, child sized chair (team with OT for suggestions) -use puppets/props, gestures or sign language with songs to model **Material Adaptation** -offer an activity choice board for students to request/comment on activities **Child Preference** -allow child to hold favorite soft toy/object if/when they have difficulty staying for circle -put child's spot next to a preferred peer/adult **Special Equipment** -use cube chair for students who need support in trunk stability (team with OT and PT for equipment of students with needs sitting on the floor) **Adult Support** -if student has difficulty (physically) with imitating song movements, have staff use hand-over-hand to support them **Peer Support** -sit students with difficulty engaging in tasks next to a peer with desirable behavior/outcomes
Assessment/ Data Collection	-Have paraprofessional or other staff take data on Group Meeting Goals and IEP objectives which pertain to large group settings. -post checklist with student names/initials and learning goals -post student IEP goals data chart for objectives included in this area (use abbreviations for efficiency. suggestions: + = performed independently, V = performed with verbal cue, G = performed with gestural cue, P = performed with physical cue, HOH= performed with hand-over-hand support)
Activity:	**Goodbyes and Departure**

Description	Students will: 1. receive folder from teacher with daily papers in it 2. put the folder in their backpack 3. put on coat/outerwear if needed 4. put on backpack and wait on designated line up spots.
Materials	Student folders with names, line up spots taped to floor near exit but not in the way of packing area and with room to get to door
Early Learning standards	**DOMAIN: Social and Emotional Development** **Strand: Self, Topic: Sense of Confidence** -Show confidence in own abilities making things happen and accomplish routine and familiar tasks independently. **Strand: Relationships, Topic: Attachment** -Express affection for familiar adults. **Strand: Relationships, Topic: Interactions with Adults** - Request and accept guidance from familiar adults. **DOMAIN: Language and Literacy** **Strand: Listening and Speaking, Topic: Receptive Language and Comprehension** **-** Follow two-step directions or requests. **DOMAIN: Physical Well-Being and Motor Development** **Strand: Motor Development, Topic: Small Muscle: Touch, Grasp, Reach, Manipulate** - Coordinate the use of hands, fingers and wrists to manipulate objects and perform tasks requiring precise movements.
IEP Objectives	
Curricular Modifications	**Environmental Support** -put picture task analysis near cubby area to demonstrate getting ready to leave steps -if a child has a problem exiting the classroom, give them a bus/car pass to carry to pick up person **Activity Simplification** -reduce wait time (have this child get ready last) -decide how many departure tasks a child can do independently or with minimal support and focus on these tasks -if a student struggles with multiple steps, provide support in each step until they are independent in each step **Child Preferences** -allow child to walk with preferred adult or peer if available -allow child to hold favorite home item from backpack

Assessment/ Data Collection	-post checklist with student names/initials and learning goals -post student IEP goals data chart for objectives included in this area (use abbreviations for efficiency. suggestions: + = performed independently, V = performed with verbal cue, G = performed with gestural cue, P = performed with physical cue, HOH= performed with hand-over-hand support)

Here are some curricular modification suggestions for **Transitions** between activities:

Environmental Support

-use timers (digital or visual) to encourage children to move on from preferred activities or when they are having trouble attending

-if needed, a child can have a mobile visual schedule to put pictures in pockets or on the "all done" side when complete

-use songs or rhymes to cue transitions each time

Material Adaptation

-offer activity choice boards for requesting transitions to other areas

Child Preferences

-let child hold a preferred item or small "transitional item" to put in a container when they transition to/from the classroom

-try to have another preferred activity waiting when they are transitioning from a highly preferred activity

-let a preferred peer/adult walk with them during transitions outside the classroom or to choice activities.

Adult Support

-give verbal warnings ("5 minutes…2 minutes…1 minute") to let children know time is almost over for the current activity

-use clear, explicit, and concise instructions

Peer Support

-allow students who struggle with transitions to observe peers' modeling

Embedded Learning Opportunities (ELO)*								
Student Name:								
Routine or Activity	**Learning/IEP Objective**	***What are the instructions you will give?***	**Data Points**					

*Based on Sandall et al. (2019) *Building Blocks* Framework

prompt key:* *Graduated Guidance* = ***GG*, *Time Delay*= ***TD***, *Backward Chaining* =***BC***
consequence key*: *Positive Reinforcement:* ***PR*, *Differential Reinforcement of Other Behavior* = ***DRO***, *Corrective Feedback*= ***CF***

Child-Focused Instructional Strategy (CFIS)*					
Student Name:					
Routine / Activity	***Antecedent***		***Date***	***Behavior- what did the child do?***	***What was the consequence?***
	Instructions given	***Prompt system***			

*Based on Sandall et al. (2019) *Building Blocks* Framework

Choice Lessons

4-week unit with parallel integration to PBL unit

Description: Following the daily Group Meeting routine, students will choose the centers they want to visit each day. Teachers should keep observations of students to assess if they are unable to stay in a center to complete tasks or if they do not engage in certain activities. Teachers may need to use curricular modifications, ELOs or a CFIS if a student is unable to spend a developmentally appropriate (for their own development) amount of time in a center –or- if they are unwilling to transition away from a preferred activity to work on different skills.

Team members can collaborate and plan who will facilitate the centers all day. Some centers should be mostly independent for most children, and some will require an adult with all children to support (base these decisions on YOUR students and their needs).

When planning for individual children, always remember to use the Zone of Proximal Development or ZPD (Bodrova & Leong, 1996) to balance independent ability with support in reaching their learning goal.

**IEP objectives to be filled in based on your personal students and should be planned to be addressed through teaming with various related staff*
***Some curricular modifications are based on Sandall et al. (2019)* Building Blocks *Framework suggestions*

Activity:	**Art Center**
Description	**Week 1**- Students can draw/paint a self-portrait with the prompt "I feel..." and fill in the emotion (or dictate/use choice board for teacher to write in) **Week 2-** Students will create a breathing stick for mindfulness: Students will lace 1-10 beads on a pipe cleaner and twist the ends into circles. Students will take a breath every time they move a bead from one end of the stick to the other. **Week 3**- Students will create their own Color Monster with modeling clay (based on the reading from *The Color Monster: A Story About Emotions* by Anna Llenas) and discuss the emotion that he/she is experiencing. **Week 4**- Students will write and decorate "Welcome" signs for families during the Public Presentation in Week 4 of the PBL unit. *Students are welcome to attempt to create modeled idea and create their own art creation using various mediums. The painting easel can remain open each day with available painting materials.*
Materials	Week 1: drawing paper and various writing utensils/paints Week 2: pipe cleaners and beads Week 3: modeling clay, pipe cleaners, googly eyes Week 4: poster board, markers, stickers, crepe paper Open weekly: Easel, paint brushes, washable paint, glue sticks/bottles, tape, child scissors, craft materials (stickers, buttons, feathers, sequins, foam, popsicle sticks, etc), various types of paper (white paper, construction paper, etc)
Early Learning standards	**DOMAIN: Approaches Toward Learning** **Strand: Creativity, Topic: Expression of Ideas and Feelings Through the Arts** - Express individuality, life experiences, and what they know and are able to do through a variety of media. - Express interest in and show appreciation for the creative work of others. **DOMAIN: Cognition and General Knowledge** **SUB-DOMAIN: Mathematics** **Strand: Geometry, Topic: Analyze, Compare and Create Shapes** - Create shapes during play by building, drawing, etc.

	- Combine simple shapes to form larger shapes. **<u>DOMAIN: Language and Literacy</u>** **Strand: Writing, Topic: Writing Process** - With modeling and support, print letters of own name and other meaningful words with mock letters and some actual letters. **Strand: Writing, Topic: Writing Application and Composition** - With modeling and support, use a combination of drawing, dictating and emergent writing for a variety of purposes (e.g., letters, greeting cards, menus, lists, books). - With modeling and support, use a combination of drawing, dictating and emergent writing to tell a story, to express ideas, and to share information about an experience or topic of interest. (Composition) - With modeling and support, discuss and respond to questions from others about writing/drawing.
IEP Objectives	
Curricular Modifications	**Environmental Support** -create boundaries for each student's materials (example- plastic trays) -use a visual model of art project each week **Material Adaptation** -use q-tips/paint brushes to dip in finger paint or glue if child has sensory aversion -use highlighter or visual points to guide student drawing if needed (example 4 dots for students to connect to make a square in their art) -offer a material choice board for students to request items **Special Equipment** -adaptive scissors -slant boards (can be homemade with binder) vs easel -and/or writing utensil grips as needed *-Collaborate with OT about what to use for each child with fine motor needs* **Activity Simplification**

	-if a student is overwhelmed by several materials, give them one at a time or put a small amount in a bowl/container and let them know they can be finished after the use that many items (example: must put 3 beads on the mindfulness stick) -in mutli-step project, figure out what steps are independent and what steps can be skipped (for example, pre-cut shapes) **Child Preference** -incorporate interests into the art projects/materials (stickers of favorite characters, etc) if student does not typically choose art - have a preferred adult or peer invite student to area if student is uninterested **Adult and/or Peer Support** -model ways to use the materials so students can observe -if a child mouths/eats small items, make sure an adult can be in close proximity to supervise for safety **Invisible Support** -rotate materials as students lose interest
Formative Assessment/ Data Collection	Art samples and -checklist with student names/initials and learning goals -post student IEP goals data chart for objectives included in this area (Use abbreviations for efficiency: + = performed independently, V = performed with verbal cue, G = performed with gestural cue, P = performed with physical cue, HOH= performed with hand-over-hand support)

Activity:	**Book Center**
Description	Students will look at/read various books of interest. Books during the PBL unit could include student interests *and* books on self-regulation and emotions concepts.
Materials	Books of variety of levels, puppets and props based on books Suggested books to include that will be read during PBL Literacy Group Meetings (*Listening to my Body* by Gabi Garcia, *The Color Monster: A Story About Emotions* by Anna Llenas, *I am Peace: A Book of Mindfulness* by Susan Verde, and *I Can Do Hard Things: Mindful Affirmations for Kids* by Gabi Garcia. Do research and talk to your school librarian about what books to include in this center for self-regulation.

Early Learning standards	**DOMAIN: Language and Literacy** **Strand: Listening and Speaking, Topic: Receptive Language and Comprehension** - Ask meaning of words. **Strand: Listening and Speaking, Topic: Expressive Language** - With modeling and support, use words acquired through conversations and shared reading experiences. (Vocabulary) **Strand: Reading, Topic: Reading Comprehension** - Ask and answer questions, and comment about characters and major events in familiar stories. - Retell or re-enact familiar stories. - With modeling and support, discuss some similarities and differences between two texts on the same topic (e.g., illustrations, descriptions). **Strand: Reading, Topic: Print Concepts** - Orient books correctly for reading and turn pages one at a time. **Strand: Reading, Topic: Letter and Word Recognition** - With modeling and support, recognize and "read" familiar words or environmental print.
IEP Objectives	
Curricular Modifications	**Environmental Support** -include various seating options (bean bags, carpet squares, etc.) -position area in a quiet area of the room **Material Adaptation** -collaborate with OT to find ways to adapt books for children that need physical support in page turning. **Special Equipment** -cube chair for students who need trunk support -**Child Preference** -incorporate interests into the books chosen (rotate books based on interests) - have a preferred adult or peer invite student to area if student is uninterested **Adult and/or Peer Support** -have a peer or teacher read with student who wants **Invisible Support**

	-rotate materials as students lose interest
Formative Assessment/ Data Collection	-checklist with student names/initials and learning goals -post student IEP goals data chart for objectives included in this area (Use abbreviations for efficiency: + = performed independently, V = performed with verbal cue, G = performed with gestural cue, P = performed with physical cue, HOH= performed with hand-over-hand support)
Activity:	**Building/Transportation Center**
Description	Students will engage in play schemes with building materials and vehicles (i.e., ramps, racetracks, train tracks, buildings, towns, etc.).
Materials	Wooden blocks, cardboard blocks, Duplo's, toy trains and tracks, small cars/trucks, toy traffic signs (stop signs, yield signs, etc.), masking tape to make blueprints, paper/writing utensils to create maps/blueprints.
Early Learning standards	**DOMAIN: Cognition and General Knowledge** **Strand: Cognitive Skills, Topic: Symbolic Thought** **-** Demonstrate understanding that symbols carry meaning and use symbols to represent thinking (e.g., drawings, construction or movement). **SUB-DOMAIN: Mathematics** **Strand: Geometry Topic: Spatial Relationships** - Demonstrate understanding of the relative position of objects using terms such as in/on/under, up/down, inside/outside, above/ below, beside/between, in front of/ behind and next to. **SUB-DOMAIN: Social Studies** **Strand: Geography, Topic: Spatial Thinking and Skills** - Demonstrate a beginning understanding of maps as actual representations of places.
IEP Objectives	
Curricular Modifications	**Environmental Support** -post pictures of construction models of various levels (a tower, a pyramid, more complex structures, etc.) -put architecture/building/community helper picture books in area for children to look at and model **Material Adaptation**

	-provide a variety of types of building materials (light and heavy) -**Activity Simplification** -if a student is overwhelmed by the number of materials, give one at a time or put a small amount in a bowl/container and let them know they can be finished after the use that many items (example: students must build 5 blocks up) **Child Preference** -incorporate interests into materials (figurines/characters to play with) if student does not typically choose blocks - have a preferred adult or peer invite student to area if student is uninterested **Adult and/or Peer Support** -model ways to use the materials so students can observe and imitate **Invisible Support** -rotate materials as students lose interest
Formative Assessment/ Data Collection	-checklist with student names/initials and learning goals -post student IEP goals data chart for objectives included in this area (Use abbreviations for efficiency: + = performed independently, V = performed with verbal cue, G = performed with gestural cue, P = performed with physical cue, HOH= performed with hand-over-hand support)
Activity:	**Discovery, Science and Sensory Center**
Description	Students will explore and investigate materials which are provided and rotated weekly.
Materials	Sensory table- rotate materials weekly- may include rice (can color with dry watercolor powder), noodles, beans, rocks, outside materials, oatmeal, water, sand, etc. Discovery/Science Table: Magnifying glasses, various small items to experiment with (example: items to sink/float, magnetic/nonmagnetic), scooping tools, containers to fill/dump, measuring cups and spoons, rulers, balance scales, containers for sorting with visual supports of categories (colors, shape, category, qualitative concepts, etc.)

Early Learning standards	**DOMAIN: Cognition and General Knowledge** **SUB-DOMAIN: Mathematics** **Strand: Measurement and Data, Topic: Describe and Compare Measurable Attributes** **-** Describe and compare objects using measurable attributes (e.g., length, size, capacity and weight). **SUB-DOMAIN: Science** **Strand: Science Inquiry and Application, Topic: Inquiry** **-** Explore objects, materials and events in the environment. - Make careful observations. - Pose questions about the physical and natural environment. - Engage in simple investigations. - Use simple tools to extend investigation. - Share findings, ideas and explanations (may be correct or incorrect) through a variety of methods (e.g., pictures, words, dramatization). **Strand: Physical Science, Topic: Explorations of Energy** - With modeling and support, explore the properties of objects and materials (e.g., solids and liquids).
IEP Objectives	
Curricular Modifications	**Environmental Support** - post pictures of qualitative descriptors (hot/cold, wet/dry, bumpy/smooth, etc.) -place by a window if possible and have various easy to grow plants on the windowsill - create a “wait” card for child to hold when waiting their turn -**Activity Simplification** - if a child is overwhelmed by the amount of sensory material in the table, make a smaller container of the materials for the child to explore in their own space **Child Preference** -incorporate interests into materials if student does not typically choose area - have a preferred adult or peer invite student to area if student is uninterested **Adult and/or Peer Support**

	-model ways to use the materials so students can observe and imitate **Invisible Support** -rotate materials as students lose interest
Formative Assessment/ Data Collection	-checklist with student names/initials and learning goals -post student IEP goals data chart for objectives included in this area (Use abbreviations for efficiency: + = performed independently, V = performed with verbal cue, G = performed with gestural cue, P = performed with physical cue, HOH= performed with hand-over-hand support)
Activity:	**Game and Math Center**
Description	Students can participate in board games with facilitation from a teacher. Students can discuss their feelings during common experiences in playing games: winning, losing, waiting turns, etc). Math materials will also be open for students to explore
Materials	Board Game suggestions: Candy Land, memory games with various themes, Hi-Ho! Cherry-O, Connect 4, Don't Break the Ice, Cutie, Sequence for Kids, etc. Open math materials: sorting cups and pattern cards, counters (various objects), pattern blocks and templates, unifix cubes
Early Learning standards	**DOMAIN: Cognition and General Knowledge** **SUB-DOMAIN: Mathematics** **Strand: Number Sense; Topic: Number Sense and Counting** -Identify and name numerals 1-9. - Identify without counting small quantities of up to 3 items. (Subsidize) - Demonstrate one-to-one correspondence when counting objects up to 10. - Understand that the last number spoken tells the number of objects counted. - Identify whether the number of objects in one group is greater than, less than or equal to the number of objects in another group up to 10. **Strand: Algebra, Topic: Group and Categorize**

	- Sort and classify objects by one or more attributes (e.g., size, number). **Strand: Algebra, Topic: Patterning** - Recognize, duplicate and extend simple patterns using attributes such as color, shape or size. - Create patterns.
IEP Objectives	
Curricular Modifications	**Environmental Support** - post visual task analysis for math activities - post visuals with numerals and amounts - post number line - create a "wait" card for child to hold when waiting their turn **Material Adaptation** -make some dice with smaller numbers if the student is not yet counting to 6. **Activity Simplification** - using a child's ZPD (Bodrova & Leong, 1996), adapt amount of counting required in an activity **Child Preference** -incorporate interests into materials (math games with favorite characters/themes) if student does not typically choose area - have a preferred adult or peer invite student to area if student is uninterested **Adult and/or Peer Support** -model ways to use the materials so students can observe and imitate -model turn taking skills during game and use explicit turn-taking teaching **Invisible Support** -rotate materials as students lose interest
Formative Assessment/ Data Collection	-checklist with student names/initials and learning goals -post student IEP goals data chart for objectives included in this area (Use abbreviations for efficiency: + = performed independently, V = performed with verbal cue, G = performed with gestural cue, P = performed with physical cue, HOH= performed with hand-over-hand support)

Activity:	**Pretend Play Center**
Description	Students can engage in various pretend play schemes.
Materials	Dress up clothes/costumes, various fabrics, accessories (sunglasses, purses, baby dolls, stuffed animals, toy food and dishes, pretend tools, Child size "house" furniture- table, chairs, baby doll bed, small kitchenette, Writing utensils and paper/notepads
Early Learning standards	**DOMAIN: Social and Emotional Development** **Strand: Relationships, Topic: Peer Interactions and Relationships** - Demonstrate socially competent behavior with peers. - With modeling and support, negotiate to resolve social conflicts with peers. - Express concern for the needs of others and people in distress. - Interact with peers in more complex pretend play including planning, coordination of roles, and cooperation. **DOMAIN: Approaches Toward Learning** **Strand: Creativity, Topic: Innovation and Invention** - Use imagination and creativity to interact with objects and materials. - Use creative and flexible thinking to solve problems. - Engage in inventive social play. **DOMAIN: Cognition and General Knowledge** **Strand: Cognitive Skills, Topic: Symbolic Thought** - Participate cooperatively in complex pretend play, involving assigned roles and an overall plan. **SUB-DOMAIN Social Studies** **Strand: History, Topic: Heritage** -Develop an awareness and appreciation of family cultural stories and traditions.
IEP Objectives	
Curricular Modifications	**Environmental Support** -post pictures of people in various roles (community helpers, parents taking care of a baby, etc.) -post visual task analysis for play skills -use a picture for a child to carry to the area -**Activity Simplification**

	-practice 1 step play schema (pretend to rock baby) with children building up play skills **Child Preference** -incorporate interests into materials (favorite pretend food items) if student does not typically choose areas - have a preferred adult or peer invite student to area if student is uninterested **Adult and/or Peer Support** -model ways to use the materials so students can observe and imitate **Invisible Support** -rotate materials as students lose interest
Formative Assessment/ Data Collection	-checklist with student names/initials and learning goals -post student IEP goals data chart for objectives included in this area (Use abbreviations for efficiency: + = performed independently, V = performed with verbal cue, G = performed with gestural cue, P = performed with physical cue, HOH= performed with hand-over-hand support)
Activity:	**Writing Center**
Description	Students will write, draw and work on pre-writing skills at their own level. Some small group PBL units will also occur in this space (*specifically the Calming Journal work- see PBL unit starting page 122*)
Materials	Writing utensils (team with OT for various children's needs) Writing paper/journals Chalk and blackboard and/or whiteboards and markers Scissors Glue, tape, kid staplers
Early Learning standards	**DOMAIN: Cognition and General Knowledge** **SUB-DOMAIN: Mathematics** **Strand: Geometry, Topic: Analyze, Compare and Create Shapes** - Create shapes during play by building, drawing, etc. - Combine simple shapes to form larger shapes. **DOMAIN: Language and Literacy** **Strand: Writing, Topic: Writing Process**

	- With modeling and support, print letters of own name and other meaningful words with mock letters and some actual letters. - With modeling and support, demonstrate letter formation in "writing." - With modeling and support, show awareness that one letter or cluster of letters represents one word. **Strand: Writing, Topic: Writing Application and Composition** - "Read" what they have written. - With modeling and support, notice and sporadically use punctuation in writing. - With modeling and support, use a combination of drawing, dictating and emergent writing for a variety of purposes (e.g., letters, greeting cards, menus, lists, books). - With modeling and support, use a combination of drawing, dictating and emergent writing to tell a story, to express ideas, and to share information about an experience or topic of interest. (Composition) - With modeling and support, discuss and respond to questions from others about writing/drawing. - With modeling and support, participate in shared research and writing projects using a variety of resources to gather information or to answer a question. - With modeling and support, explore a variety of digital tools to express ideas.
IEP Objectives	
Curricular Modifications	**Environmental Support** -post target vocabulary words with pictures -post student names -post alphabet (upper and lowercase) -use a picture for child to carry to area **Material Adaptation** -put tracing pages available with larger letters/shapes to work on **Special Equipment** -adaptive scissors

	-slant boards (can be homemade with binder) vs easel -and/or writing utensil grips as needed -Team with OT about what to use for each child with fine motor needs **Activity Simplification** -have students engage in scribbling or pre-writing lines, if that is their level of ability **Child Preference** -incorporate interests into the art projects/materials (stickers of favorite characters, etc.) if student does not typically choose art - have a preferred adult or peer invite student to area if student is uninterested **Adult and/or Peer Support** -model ways to use the materials so students can observe -if a child mouths/eats small items, make sure an adult can be in close proximity to supervise for safety **Invisible Support** -post models of student work -rotate materials as students lose interest
Formative Assessment/ Data Collection	-checklist with student names/initials and learning goals -post student IEP goals data chart for objectives included in this area (Use abbreviations for efficiency: + = performed independently, V = performed with verbal cue, G = performed with gestural cue, P = performed with physical cue, HOH= performed with hand-over-hand support)
Activity:	**Project Center- see small group lessons/choice time lessons in PBL section**

PBL Lessons

Project	Creating a Calm Space in the classroom (for Self-Regulation)
Driving Question (s) Ideas	**What helps me/us calm down?** **What can I do when I feel overwhelmed?** **Where can I go when I need some space?**
Timeframe	Tentatively 4 weeks at the beginning of the school year -2 large group lessons/week (8 group lessons) -1 project choice time/week (available daily) (4 small group lessons) *(Ideally- observe children for approximately 2 weeks of lessons before implementing this unit in order to see student's interests and teach early routines)*
Description	-Students will decide how to create a Calm Space area in the classroom for self-regulation including what materials are needed and what helps them feel calm. -Students will meet with various experts to discuss, observe and participate in various coping skills (ideas include yoga instructors, Occupational Therapist, School Counselor, musicians?). -Students will brainstorm and create various self-regulation items (photo album of who makes them feel calm, calm down bottles, small bean bags/weighted lap bags, etc) to keep in the Calm Space. -Students will create their own Calming Journal- a strategy journal with coping ideas to refer to and pictures of how they feel during different emotions (happy, sad, mad, overwhelmed, nervous, etc.). **Lessons will include an area for spontaneous integration/ student questions that are not pre-planned but may add to the project along the way.* *****Daily project time should be open to all students during "choice time"; if a student chooses not to engage in project time, a team member can***

	help facilitate participation and engagement that best supports that individual. See strategies included in the project time. ***When planning for individual children, always remember to use the Zone of Proximal Development or ZPD (Bodrova & Leong, 1996) to balance independent ability with support in reaching their learning goal.***
PBL Gold Standards	**Challenging Problem or Question** **Sustained Inquiry** **Authenticity** **Student Voice and Choice** **Reflection** **Critique and Revision** **Public Product** *Each lesson will address the above standards as is appropriate to the activity. These standards can be found on the PBLWorks website: PBLWorks Website
Early Learning Standards	**DOMAIN: Social and Emotional Development** **Strand: Self, Topic: Awareness and Expression of Emotion** - Recognize and identify own emotions and the emotions of others - Communicate a range of emotions in socially accepted ways. **Strand: Self, Topic: Self-Regulation** -Manage the expression of feelings, thoughts, impulses and behaviors with minimal guidance from adults. **DOMAIN: Language and Literacy** **Strand: Writing; Topic Writing Application and Composition** - With modeling and support, use a combination of drawing, dictating and emergent writing to tell a story, to express ideas, and to share information about an experience or topic of interest. (Composition) - With modeling and support, discuss and respond to questions from others about writing/drawing.
IEP Objectives	
Public Product Ideas	Individual: Calming Journal (self-regulation plan and coping ideas), self-regulatory objects/materials Class: presentation to parents/family

Project Week 1	
Large Group Activity:	**Exploration Table**
Description ***Entry Event to Create Driving Question Part 1***	During the exploration table time, Students will investigate various sensory objects and social-emotional pictures. With modeling and support, students will discuss their observations. Students will either write their name, initials, check mark or pre-writing line (in developmental sequence: horizontal line, vertical line, circle) next to their favorite items on a large, posted graph of the items (with pictures and words). (*have an adult make sure to write child's name/initials if they use a checkmark or pre-writing line)
Materials	Hand mirrors Pictures of people portraying different emotions Fidget toys (squishy balls, fidget spinners, etc) Noise canceling headphones Other self-regulatory equipment (collaborate with OT)
PBL Gold Standard	**Challenging Problem or Question** **Sustained Inquiry** **Authenticity** **Student Voice and Choice**
Spontaneous Integration/ Student Questions	***What came up during discussions/project time that might be added to the project?***
Curricular Modifications	**Environmental Support** -create boundaries for each student's materials (example- plastic trays) -allow students to engage in other play materials after engaging in table activity (if student needs support staying, use a timer or activity simplification before student can leave table area) **Special Equipment** -offer a choice board with the above materials/toys for requesting

	Activity Simplification -if a student only interacts with a few materials, cover the other pictures on the list of class list favorites to give them fewer choices to make when deciding their favorite. -if a student is overwhelmed by too many materials, give them a small amount (3-5) in a container. Students can explore the item and then put in an "all done" container." Tell them they can be finished after their items are in the "all done" container -or- Set a visual timer for time that is developmentally (to that child) appropriate to stay at the table **Adult and/or Peer Support** -model ways to use the materials so students can observe
Formative Assessment	-class list of favorite items
Large Group Activity:	**Meeting Entry Event**
Description: ***Entry Event Part 2 "what does being calm mean?"***	When the timer goes off and the welcome song starts, students will transition from exploration table to large group circle area. 1. When students arrive at the meeting area, students will be asked to find their magnetic name tag and put it on the class graph of how they are feeling that day (graph will include pictures of emotions as well- happy, sad, mad, nervous, tired, etc.) 2. Students will sing Greetings (through song) "Let's Find out Who's Here Today, Say Hello!" and students can comment, or teacher can dictate how student responded they are feeling ("it looks like [name] feels tired today") 3. Students will listen and participate in the "Calm Down Song" (*see Appendix A: Songs*) supported with pictures and gestures from the teacher. 4. Discuss the materials at exploration table and ask students what they thought/how they felt about them. 5. KWL Chart: - Students will generate a list of what it looks like to be calm on the they know about "being calm" on the K section of a KWL chart-scripted by teacher (examples: breathing slowly, sitting down, walking feet, etc.)

	- Ask students where they like to go when they are feeling upset, mad, tired, nervous, etc. (put on K section of the KWL chart) - Teacher will guide students in a discussion about where students can go in the classroom to feel calmer. Students will help create the Driving Question with support from the teacher. (Put on W section of KWL chart) 6. Discuss the "project" of creating a calm space in the classroom. 7. Teacher will explain that the materials from the exploration table will remain in the masked off area (future Calm Space) in the classroom to explore. 8. Teachers will dismiss students by name and ask them their choice for choice time.
Driving Question (s)	**What helps me/us calm down?** **What can I do when I feel overwhelmed?** **Where can I go when I need some space?**
Materials	Magnetic (on white board or black board) graph with columns of emotions and space for children's magnetic name tags to go under each one. Pictures/puppets for "calm down song" Large paper to write down student thoughts/questions, KWL Chart
PBL Gold Standard	**Challenging Problem or Question** **Sustained Inquiry** **Authenticity** **Student Voice and Choice**
Spontaneous Integration/ Student Questions	***What came up during discussions/project time that might be added to the project?***
Curricular Modifications	**Environmental Support** -use clearly defined individual spots for children as needed (if they have trouble keeping hands to self, staying at circle, etc).

	Example: carpet square, colorful dot, child sized chair (team with OT for suggestions) -use puppets/props, gestures, or sign language with songs to model -add child's picture to magnetic name tag if they are not yet reading their name **Material Adaptation** -have pictures of activities to choose from for nonverbal students to use in requesting choice area after the meeting - offer a pre-made choice board to make suggestions for KWL discussion (number of choices should be based on their IEP goals/ability. **Hint: make one choice board for all students who are non-verbal of up to 10 choices and cover with paper to make a smaller selection for certain students if needed*). **Child Preference** -allow child to hold favorite soft toy/object if/when they have difficulty staying for circle -put child's spot next to a preferred peer/adult **Special Equipment** -use cube chair for students who need support in trunk stability (team with OT and PT for equipment of students with needs sitting on the floor) **Adult Support** -if a student has difficulty (physically) with imitating song movements, have staff use hand-over-hand to support them **Peer Support** -sit students with difficulty engaging in tasks next to a peer with desirable behavior/outcomes
Formative Assessment	-Picture of class graph with student emotions that day -KWL chart: <u>K (Know)</u>- what being calm looks like, what are things that make them feel calm, where to go when they need to calm down <u>W(Want-to-Know)-</u> driving questions <u>L (Learned)</u>- to be filled out during the large group reflection the last week of the unit

Small Group Rotational	***"How does my body feel when..."***

Center Activity:	
Description	Students will continue to explore the items found from the exploration work. Students will decorate and create a Calming Journal to be worked on during the PBL unit. Students can draw pictures of their different emotions.
Materials	Hand mirrors 1 Calming Journal/student (notebooks, bound plain paper, etc.) Writing utensils Items from the entry event exploration table Stickers (with emotion faces on it or calming images- personalize to student interests)
PBL Gold Standard	**Sustained Inquiry** **Authenticity** **Student Voice and Choice**
Spontaneous Integration/ Student Questions	***What came up during discussions/project time that might be added to the project?***
Curricular Modifications	**Environmental Support** -post target vocabulary words with pictures (sad face, mad face, happy face) -post student names -post alphabet (upper and lowercase) **Material Adaptation** -team with OT to decide what visual supports, tracing, etc. are needed in their journals for students with OT goals - Give non-verbal students and/or students with emergent writing skills an emotions choice board to color in and identify by pointing to emotions as named- with adult support as needed (number of choices should be based on their IEP goals/ability. **Hint: make one choice board for all students who are non-verbal of up to 10 choices and cover with paper to make a smaller selection for certain students if needed*). **Special Equipment**

	-adaptive scissors -slant boards (can be homemade with binder) vs easel -and/or writing utensil grips as needed -Team with OT about what utensils to use for each child with fine motor needs **Activity Simplification** -include precut-out pictures of various emotions to glue in their journal and/or **Child Preference** -incorporate interests into the art projects/materials (stickers of favorite characters, etc.) if student does not typically choose art - have a preferred adult or peer invite student to area if student is uninterested **Adult and/or Peer Support** -model ways to use the materials so students can observe -if a child mouths/eats small items, make sure an adult can be in close proximity to supervise for safety **Invisible Support** -post models of student work as the week goes on
Teacher Feedback and Formative assessment	Have students put their Calming Journals on the "project shelf" when they are done with working on it/choice time is over. -Collect journals at the end of the week, leave post-it notes with feedback for students to review (teachers will read over these with them the following week) -Anecdotal observation notes
Large Group Activity:	**Literacy and Reflection Meeting**
Description:	Students will listen to a reading of *Listening to my Body* by Gabi Garcia and participate in the following activities: 1. Students will each have a laminated picture with Velcro of one of the descriptions of how a body might feel emotions (example: butterfly in their tummy) and put it on the body part of a child size drawing of the character in the book. 2. Students will then discuss and generate a list of what furniture/items may be needed in a Calm Space. 3. Students will partner with a peer (teacher facilitated) to discuss/show their Calming Journals.

	*Teachers can facilitate discussion practice (asking/answering questions, pointing out what they like about others' journals),
Materials	*Listening to my Body* by Gabi Garcia Child size drawing of main character in Garcia's book Laminated pictures of various vocabulary/concepts in the book Large chart paper for student list of Calm Space needs Students' Calming Journals
PBL Gold Standard	**Sustained Inquiry** **Authenticity** **Student Voice and Choice** **Reflection** **Critique and Revision**
Spontaneous Integration/ Student Questions	***What came up during discussions/project time that might be added to the project?***
Curricular Modifications	**Environmental Support** -use clearly defined individual spots for children as needed (if they have trouble keeping hands to self, staying at circle, etc.). Example: carpet square, colorful dot, child sized chair (team with OT for suggestions) -use puppets/props, gestures, or sign language with songs to model **Material Adaptation** -have pictures of activities to choose from for nonverbal students to use in requesting choice area after the meeting - offer a pre-made feedback choice board to comment on peer journals with adult support as needed (number of choices should be based on their IEP goals/ability. **Hint: make one choice board for all students who are non-verbal of up to 10 choices and cover with paper to make a smaller selection for certain students if needed*). **Child Preference** -allow child to hold favorite soft toy/object if/when they have difficulty staying for circle -put child's spot next to a preferred peer/adult **Special Equipment**

	-use cube chair for students who need support in trunk stability (team with OT and PT for equipment of students with needs sitting on the floor) **Adult Support** -if a student has difficulty (physically) with imitating song movements, have staff use hand-over-hand to support them **Peer Support** -sit students with difficulty engaging in tasks next to a peer with desirable behavior/outcomes
Student Feedback and Formative Assessment	-observation of participation in group reading, group picture activity and partner sharing -Class list of Calm Space material needs

Project Week 2	
Large Group Activity:	**Group Meeting Expert Visit**
Description: **Yoga Instructor Visits**	When the timer goes off and the welcome song starts, students will transition from exploration table to large group circle area. 1. When students arrive at the meeting area, students will be asked to find their magnetic name tag and put it on the class graph of how they are feeling that day (graph will include pictures of emotions as well- happy, sad, mad, nervous, tired, etc) 2. Students will sing Greetings (through song) "Let's Find out Who's Here Today, Say Hello!" and verbalize their feeling or teacher will dictate how student responded ("it looks like [name] feels tired today") 3. Students will listen and participate in the "Calm Down Song" (*see Appendix A: Songs*) supported with pictures and gestures from the teacher. 4. Teacher will introduce the Expert Visitor-Yoga instructor. The instructor will demonstrate/discuss yoga, breathing practice, basic poses, and how they feel when they do yoga and work on breathing. 5. Before dismissing students to choice time, the teacher can discuss/show items that have been added to the Calm Space that the class generated during the entry event (*see small group rotational center activity of this week*).
Materials	Magnetic (on white board or black board) graph with columns of emotions and space for children's magnetic name tags to go under each one. Pictures/puppets for "calm down song" (Collaborate with yoga instructor beforehand) pictures of basic poses and breathing techniques
PBL Gold Standard	**Sustained Inquiry** **Authenticity** **Student Voice and Choice**

Spontaneous Integration/ Student Questions	***What came up during discussions/project time that might be added to the project?***
Curricular Modifications	**Environmental Support** -use clearly defined individual spots for children as needed (if they have trouble keeping hands to self, staying at circle, etc.). Example: carpet square, colorful dot, child sized chair (team with OT for suggestions) -use puppets/props, gestures, or sign language with songs to model -add child's picture to magnetic name tag if they are not yet reading their name **Material Adaptation** -use activity choice board for students to use in requesting choice area after the meeting **Child Preference** -allow child to hold favorite soft toy/object if/when they have difficulty staying for circle -put child's spot next to a preferred peer/adult **Special Equipment** -use cube chair for students who need support in trunk stability (team with OT and PT for equipment of students with needs sitting on the floor) **Adult Support** -if a student has difficulty (physically) with imitating song movements, have staff use hand-over-hand to support them **Peer Support** -sit students with difficulty engaging in tasks next to a peer with desirable behavior/outcomes
Formative assessment	-observational notes of student participation

Small Group Rotational	***"What can I do when my body feels…"***

Center Activity:	
Description	1. Teachers will review feedback on journals with students 2. Students can work on their Calming Journal by drawing/writing strategies they use to feel calm. Students can make a plan with prompted pages (example "when I feel ...., I can ....") 3. Students can arrange new items suggested as a class in Week 1's entry event of what is needed in a calm space (examples: bean bags, music player, tent, bookshelf for books, dim lights, etc.)
Materials	Hand mirrors Calming Journal (notebooks, bound plain paper, etc.) Writing utensils Items from the entry event exploration table Yoga posters/pictures Furniture/items for calm space to arrange (examples: bean bags, something to play music with, tent, bookshelf for books, dim lights, etc.)
PBL Gold Standard	**Sustained Inquiry** **Authenticity** **Student Voice and Choice** **Reflection** **Critique and Revision** **Public Product**
Spontaneous Integration/ Student Questions	***What came up during discussions/project time that might be added to the project?***
Curricular Modifications	**Environmental Support** -post target vocabulary words with pictures (yoga poses, breathing, calm) -post student names -post alphabet (upper and lowercase) **Material Adaptation** -team with OT to decide what visual support, tracing, etc. are needed in their journals for students with OT goals

	- -Give non-verbal students and/or students with emergent writing skills an emotions choice board to color in and identify by pointing to emotions as named- with adult support as needed (number of choices should be based on their IEP goals/ability. **Hint: make one choice board for all students who are non-verbal of up to 10 choices and cover with paper to make a smaller selection for certain students if needed*). **Special Equipment** -adaptive scissors -slant boards (can be homemade with binder) vs easel -and/or writing utensil grips as needed -Team with OT about what to use for each child with fine motor needs **Activity Simplification** -for students who need simplification: they can use precut out pictures of "calming strategies" to glue in their journal and/or have an activity choice page glued in their journal that they can circle to indicate preferences **Child Preference** -incorporate interests into the art projects/materials (stickers of favorite characters, etc.) if student does not typically choose art - have a preferred adult or peer invite student to area if student is uninterested **Adult and/or Peer Support** -model ways to use the materials so students can observe -if a child mouths/eats small items, make sure an adult can be in close proximity to supervise for safety **Invisible Support** -post models of student work as the week goes on
Teacher Feedback and Formative Assessment	-Have students put their Calming Journals on the "project shelf" when they are done with working on it/choice time is over. -Collect journals at the end of the week, leave post-it notes with feedback for students to review -Anecdotal observation notes
Large Group Activity:	**Literacy and Reflection Meeting**

Description:	Students will listen to a reading of *I am Peace: A Book of Mindfulness* by Susan Verde and participate in the following activities: 1. Students will practice yoga poses and breathing techniques in the book. 4. Students will vote on their favorite poses (use large chart paper with pre-written/drawn poses). 5. Students will partner with a peer (teacher facilitated) to discuss/show their Calming Journals and/or practice poses together. *Teachers can facilitate discussion practice (asking/answering questions, pointing out what they like about other journals)
Materials	*I am Peace: A Book of Mindfulness* by Susan Verde Laminated pictures of various yoga poses Students' "Calming Journal"
PBL Gold Standard	**Sustained Inquiry** **Authenticity** **Student Voice and Choice** **Reflection** **Critique and Revision**
Spontaneous Integration/ Student Questions	***What came up during discussions/project time that might be added to the project?***
Curricular Modifications	**Environmental Support** -use clearly defined individual spots for children as needed (if they have trouble keeping hands to self, staying at circle, etc). Example: carpet square, colorful dot, child sized chair (team with OT for suggestions) -use puppets/props, gestures, or sign language with songs to model **Material Adaptation** - Offer a pre-made feedback choice board to comment on peer journals with adult support as needed (number of choices should be based on their IEP goals/ability. **Hint: make one choice board for all students who are non-verbal of up to 10*

	choices and cover with paper to make a smaller selection for certain students if needed). -offer a yoga pose choice board for voting **Child Preference** -allow child to hold favorite soft toy/object if/when they have difficulty staying for circle -put child's spot next to a preferred peer/adult **Special Equipment** -use cube chair for students who need support in trunk stability (team with OT and PT for equipment of students with needs sitting on the floor) **Adult Support** -if student has difficulty (physically) with imitating song movements, have staff use hand-over-hand to support them **Peer Support** -sit students with difficulty engaging in tasks next to a peer with desirable behavior/outcomes
Student Feedback and Formative Assessment	-observation of participation in group reading, yoga poses imitation, and partner sharing -class votes on favorite pose

Project Week 3	
Large Group Activity:	**Group Meeting with Expert Visit**
Description: **School Counselor Visit**	When the timer goes off and the welcome song starts, students will transition from exploration table to large group circle area. 1. When students arrive at the meeting area, students will be asked to find their magnetic name tag and put it on the class graph of how they are feeling that day (graph will include pictures of emotions as well- happy, sad, mad, nervous, tired, etc.) 2. Students will sing Greetings (through song) "Let's Find out Who's Here Today, Say Hello!" and verbalize their feeling response or teacher will verbalize how students responded ("it looks like [name] feels tired today") 3. Students will listen and participate in the "Calm Down Song" (*see Appendix A: Songs*) supported with pictures and gestures from the teacher. 4. Teacher will introduce the Expert Visitor-School Counselor. The counselor will discuss "big feelings" and strategies on what to do with them.
Materials	Magnetic (on white board or black board) graph with columns of emotions and space for children's magnetic name tags to go under each one. Pictures/puppets for "calm down song" (Collaborate with school counselor beforehand) to create pictures/props needed for discussing big feelings and how to cope. Self-regulating items (fidget toys, calm down bottles)
PBL Gold Standard	**Sustained Inquiry** **Authenticity** **Student Voice and Choice**
Spontaneous Integration/ Student Questions	***What came up during discussions/project time that might be added to the project?***

Curricular Modifications	**Environmental Support** -use clearly defined individual spots for children as needed (if they have trouble keeping hands to self, staying at circle, etc). Example: carpet square, colorful dot, child sized chair (team with OT for suggestions) -use puppets/props, gestural or sign language with songs to model **Material Adaptation** -offer an activity choice board to use in requesting choice area after the meeting **Child Preference** -allow child to hold favorite soft toy/object if/when they have difficulty staying for circle -put child's spot next to a preferred peer/adult **Special Equipment** -use cube chair for students who need support in trunk stability (team with OT and PT for equipment of students with needs sitting on the floor) **Adult Support** -if student has difficulty (physically) with imitating song movements, have staff use hand-over-hand to support them **Peer Support** -sit students with difficulty engaging in tasks next to a peer with desirable behavior/outcomes
Formative Assessment	-observational notes of student participation

Small Group Rotational Center Activity:	**"What do I need when my body feels..."** **"How do I cope with big feelings?"**
Description	Students will create self-regulation toys/objects. Items may include: -calm down bottles -small bean bag -photo album of their family/favorite things -puppets Students may record ideas of their own and write/draw about their objects in their Calming Journals.

Materials	Hand mirrors Calming Journal (notebooks, bound plain paper, etc.) Writing utensils Items from the entry event exploration table Yoga posters/pictures Calm Down Bottle Materials (plastic bottles, glitter glue/glitter, jewels/beads small objects, water, duct tape/glue gun- to be used by teacher to seal up cap to avoid spills) Bean Bag materials (precut fabric with 2-3 sides sewn/hot glued shut, beans to fill, funnel big enough for beans to go through, hot glue gun- used by adult only, kids sewing needles/yarn with precut holes to thread) Photo albums/ notebooks for family photos or favorite things (families can send in family pictures to use or students can draw their family pictures, or cut pictures of things out of magazines) Puppet materials (fabric, brown lunch bags, googly eyes, foam shape cut outs, buttons, glue, markers)
PBL Gold Standard	**Sustained Inquiry** **Authenticity** **Student Voice and Choice** **Public Product**
Spontaneous Integration/ Student Questions	***What came up during discussions/project time that might be added to the project?***
Curricular Modifications	**Environmental Support** -post target vocabulary words with pictures (big feelings, cope, breathing, calm) -post student names -post alphabet (upper and lowercase) **Material Adaptation** -team with OT to decide what visual support, tracing, etc. are needed in their journals for students with OT goals - offer a pre-made feedback choice board to request materials/what object to make adult support as needed (number of choices should be based on their IEP goals/ability. **Hint: make one choice board for all students who are non-*

	verbal of up to 10 choices and cover with paper to make a smaller selection for certain students if needed). **Special Equipment** -adaptive scissors -slant boards (can be homemade with binder) vs easel -and/or writing utensil grips as needed -Team with OT about what to use for each child with fine motor needs **Activity Simplification** -for students who need simplification: they can use precut out pictures of "calming strategies" to glue in their journal and/or have an activity choice page glued in their journal that they can circle to indicate preferences **Child Preference** -incorporate interests into the art projects/materials (stickers of favorite characters, etc.) if student does not typically choose art - have a preferred adult or peer invite student to area if student is uninterested **Adult and/or Peer Support** -model ways to use the materials so students can observe -if a child mouths/eats small items, make sure an adult can be in close proximity to supervise for safety **Invisible Support** -post models of student work as the week goes on
Teacher Feedback and Formative Assessment	-Have students put their objects and Calming Journals on the "project shelf" when they are done with working on it/choice time is over. -Collect journals/objects at the end of the week, leave post-it notes with feedback for students to review -Anecdotal observation notes
Large Group Activity:	**Literacy and Reflection Meeting**
Description:	Students will listen to a reading of *The Color Monster: A Story About Emotions* by Anna Llenas and participate in the following activities: 1. Students will be given colored tokens with corresponding emotions written/pictured on them (example: in the book, yellow corresponds with "happy")

	2. When called by name, students will sort their tokens into the correct color/emotions jar with support as needed. 3. Students will partner with a peer (teacher facilitated) to discuss/show their calming journals and/or practice poses together. *Teachers can facilitate discussion practice (asking/answering questions, pointing out what they like about other journals),
Materials	*The Color Monster: A Story About Emotions* by Anna Llenas Color tokens with corresponding emotions written/pictured on them (taken from the book suggestions) Large jars with emotion labels/corresponding colors clearly written in big letters) Students' Calming Journals
PBL Gold Standard	**Authenticity** **Student Voice and Choice** **Reflection** **Critique and Revision**
Spontaneous Integration/ Student Questions	***What came up during discussions/project time that might be added to the project?***
Curricular Modifications	**Environmental Support** -use clearly defined individual spots for children as needed (if they have trouble keeping hands to self, staying at circle, etc). Example: carpet square, colorful dot, child sized chair (team with OT for suggestions) -use puppets/props, gestures, or sign language with songs to model **Material Adaptation** -have bigger tokens for students who have trouble with pincer grasp and putting objects in containers - Offer a pre-made feedback choice board to comment on peer journals with adult support as needed (number of choices should be based on their IEP goals/ability. **Hint: make one choice board for all students who are non-verbal of up to 10 choices and cover with paper to make a smaller selection for certain students if needed*).

	Child Preference -allow child to hold favorite soft toy/object if/when they have difficulty staying for circle -put child's spot next to a preferred peer/adult **Special Equipment** -use cube chair for students who need support in trunk stability (team with OT and PT for equipment of students with needs sitting on the floor) **Adult Support** -if a student has difficulty (physically) with imitating song movements, have staff use hand-over-hand to support them **Peer Support** -sit students with difficulty engaging in tasks next to a peer with desirable behavior/outcomes
Student Feedback and Formative Assessment	-observation of participation in group reading, sorting skills, and partner sharing

Project Week 4- Final Week	
Activity:	**Group Meeting Feedback and Revision**
Description:	When the timer goes off and the welcome song starts, students will transition from exploration table to large group circle area. 1. When students arrive at the meeting area, students will be asked to find their magnetic name tag and put it on the class graph of how they are feeling that day (graph will include pictures of emotions as well- happy, sad, mad, nervous, tired, etc.) 2. Students will sing Greetings (through song) "Let's Find out Who's Here Today, Say Hello!" and verbalize how they are feeling, or teacher will dictate how student responded ("it looks like [name] feels tired today") 3. Students will listen and participate in the "Calm Down Song" (*see Appendix A: Songs*) supported with pictures and gestures from the teacher. Students will review a list of what it looks like to be calm on the K section of a KWL chart-scripted by teacher (examples: breathing slowly, sitting down, walking feet, etc.) 4. Teachers will ask and generate a list of student responses to what "finishing touches" they would like to add to the Calm Space (artwork, notes, pictures, etc.) before their Public Presentation at the end of the week (family visits). 5. Teachers will dismiss students by name and ask them their choice for choice time.
Materials	-Magnetic (on white board or black board) graph with columns of emotions and space for children's magnetic name tags to go under each one. -Pictures/puppets for "calm down song" -Large paper to write down student "finishing touch" suggestions

PBL Gold Standard	**Sustained Inquiry** **Authenticity** **Student Voice and Choice** **Reflection** **Critique and Revision** **Public Product**
Spontaneous Integration/ Student Questions	***What came up during discussions/project time that might be added to the project?***
Curricular Modifications	**Environmental Support** -use clearly defined individual spots for children as needed (if they have trouble keeping hands to self, staying at circle, etc.). Example: carpet square, colorful dot, child sized chair (team with OT for suggestions) -use puppets/props, gestures or sign language with songs to model **Material Adaptation** -offer an activity choice board for requesting choice area after the meeting - offer students a choice board to make suggestions on "finishing touches" discussion (number of choices should be based on their IEP goals/ability. **Hint: make one choice board for all students who are non-verbal of up to 10 choices and cover with paper to make a smaller selection for certain students if needed*). **Child Preference** -allow child to hold favorite soft toy/object if/when they have difficulty staying for circle -put child's spot next to a preferred peer/adult **Special Equipment** -use cube chair for students who need support in trunk stability (team with OT and PT for equipment of students with needs sitting on the floor) **Adult Support** -if a student has difficulty (physically) with imitating song movements, have staff use hand-over-hand to support them

	Peer Support -sit students with difficulty engaging in tasks next to a peer with desirable behavior/outcomes
Formative Assessment	-chart with student ideas of "finishing touches" suggestions to Calm Space (write student initials/names by ideas).

Small Group Rotational Center Activity:	**Practice Presentation of Public Product**
Description	Students can continue to work on their Calming Journals, self-regulation objects or work on arranging the Calm Space. Students can practice presenting to peers their journals, objects, and Calm Space for their Public Product Presentation at the end of the week. Teachers can provide small verbal scripts to practice (with visual support). Students can pre-record a video message to families if they wish instead of presenting it at the public product presentation.
Materials	Calming Journals Writing Utensils Hand mirrors Calming Objects (*same materials offered as in week 3 small group rotational center activity*) Small presentation script to practice with (use visuals and prompts/models)
PBL Gold Standard	**Student Voice and Choice** **Critique and Revision** **Public Product**
Spontaneous Integration/ Student Questions	***What came up during discussions/project time that might be added to the project?***

Curricular Modifications	**Environmental Support** -post target vocabulary words with pictures (big feelings, cope, breathing, calm) -post student names -post alphabet (upper and lowercase) **Material Adaptation** -team with OT to decide what visual support, tracing, etc. are needed in their journals for students with OT goals - offer a pre-made feedback choice board to request materials/what object to make adult support as needed (number of choices should be based on their IEP goals/ability. **Hint: make one choice board for all students who are non-verbal of up to 10 choices and cover with paper to make a smaller selection for certain students if needed*). -offer a pre-made choice board for students to make comments on **Special Equipment** -adaptive scissors -slant boards (can be homemade with binder) vs easel -and/or writing utensil grips as needed -Team with OT about what to use for each child with fine motor needs **Activity Simplification** -for students who need simplification: they can use precut out pictures of "calming strategies" to glue in their journal and/or have an activity choice page glued in their journal that they can circle to indicate preferences **Child Preference** -incorporate interests into the art projects/materials (stickers of favorite characters, etc.) if student does not typically choose art - have a preferred adult or peer invite student to area if student is uninterested **Adult and/or Peer Support** -model ways to use the materials so students can observe -if a child mouths/eats small items, make sure an adult can be in close proximity to supervise for safety **Invisible Support** -post models of student work as the week goes on

Summative Assessment	Students will present their Calming Journals, calming objects and Calm Space to families at the end of the week. Students can individually present to their families, in small groups or during a group discussion/presentation facilitated by the teacher/staff.
Large Group Activity:	**Project Reflection and Brainstorming for Next PBL Unit Meeting**
Description:	Families can join students for a group meeting to discuss the project reflection: 1. Students will contribute to the L (what they learned during the project) on the KWL chart that was created during Week 1. 2. Students will listen to a reading of *I Can Do Hard Things: Mindful Affirmations for Kids* by Gabi Garcia 3. Students will create a list of ideas for their next project
Materials	*I Can Do Hard Things: Mindful Affirmations for Kids* by Gabi Garcia Large class chart/paper
PBL Gold Standard	**Challenging Problem or Question** **Student Voice and Choice** **Reflection**
Spontaneous Integration/ Student Questions	***What came up during discussions/project time that might be added to the project?***
Curricular Modifications	**Environmental Support** -use clearly defined individual spots for children as needed (if they have trouble keeping hands to self, staying at circle, etc.). Example: carpet square, colorful dot, child sized chair (team with OT for suggestions) -use puppets/props, gestural or sign language with songs to model **Material Adaptation** -have bigger tokens for students who have trouble with pincer grasp and putting objects in containers

	- Offer a pre-made feedback choice board to comment on KWL and next project discussions with adult support as needed (number of choices should be based on their IEP goals/ability. **Hint: make one choice board for all students who are non-verbal of up to 10 choices and cover with paper to make a smaller selection for certain students if needed*). **Child Preference** -allow child to hold favorite soft toy/object if/when they have difficulty staying for circle -put child's spot next to a preferred peer/adult **Special Equipment** -use cube chair for students who need support in trunk stability (team with OT and PT for equipment of students with needs sitting on the floor) **Adult Support** -if a student has difficulty (physically) with imitating song movements, have staff use hand-over-hand to support them **Peer Support** -sit students with difficulty engaging in tasks next to a peer with desirable behavior/outcomes
Assessment/ Data Collection	-Filled in section L (learned) of the class KWL chart from the first week with student names/initials by contributions -Student list of ideas for next project with student names/initials by contributions

Appendix A: Songs

Calm Down Song

Calm Down Song Lyrics and Motions

Clean Up Song

Clean up clean up everybody everywhere.
Clean up clean up everybody do your share.
Clean up clean up everybody everywhere.
Clean up clean up everybody do your share.
Clean up clean up everybody everywhere.
Clean up clean up everybody do your share

Greeting Song

Preschool Songs

Transition Song(s)

Preschool Transition Songs

Appendix B: Lesson Templates

Routine or Choice Center Template

Activity:	
Description	
Materials	
Early Learning standards	
IEP Objectives	
Curricular Modifications	
Formative Assessment/ Data Collection	

PBL Unit Description Template

Project	
Driving Question (s) Ideas	
Timeframe	
Description	
PBL Gold Standards	**Challenging Problem or Question** **Sustained Inquiry** **Authenticity** **Student Voice and Choice** **Reflection** **Critique and Revision** **Public Product**
Early Learning Standards	
IEP Objectives	
Public Product Ideas	Individual: Class:

PBL Individual Lesson Template

Project Week :_____	
Activity:	
Description:	
Materials	
PBL Gold Standards (*Circle what applies*)	**Challenging Problem or Question** **Sustained Inquiry** **Authenticity** **Student Voice and Choice** **Reflection** **Critique and Revision** **Public Product**
Spontaneous Integration/ Student Questions	***What came up during discussions/project time that might be added to the project?***
Curricular Modifications	
Formative Assessment	

SECTION FIVE

Chapter 5- Conclusion

This curriculum was created to address a gap in both the research literature and a lack of satisfaction during personal teaching experience with early intervention curricula. Through researching elements of inclusive early intervention, play and PBL, I observed the emergence of key principles and themes: access to general education curriculum and peers, individualized differentiation, collaboration among staff, a foundation of a quality early learning environment, multiple opportunities and materials to explore/play with, guided support of learning and play using individualized support, integration of content and skills, sustained inquiry, student voice, feedback, revision, and reflection. When I narrowed the research lens to explore three specific frameworks (Bodrova & Leong, 1996; Lev et al., 2020; Sandall et al., 2019), I was able to use evidence-based elements to create a comprehensive curriculum for a range of young learners. Having finalized the curriculum, I can now answer the initial research questions which guided this project:

1. What does a Project-Based Learning curriculum model look like in high quality early childhood special education?
2. How does PBL curriculum work in conjunction with play?

The broad thematic elements of both early intervention and PBL can work cohesively in a curriculum. While analyzing quality special education and specifically early childhood intervention, I noticed main themes emerged regarding inclusive practices, access to the core curriculum, collaboration between staff, and differentiation (Campbell & Ramey, 1991; Cross et al., 2004; Dessemontet et al., 2012; Huberman et al., 2012; Roach & Elliott, 2006; Schweinhart & Weikart, 1997; Warren et al., 2016). PBL research provided themes of Constructivist

principles, integration of content, authenticity of planning, extended implementation, and thoughtful reflection (Bell, 2010; Beneke & Ostrosky, 2009; Duke, 2014; Harris & Gleim, 2008; HQPBL, 2018; Kincaid & Jackson, 2006; Larmer, 2020). Thus, the research led to an early intervention, PBL curriculum which blends access to collaboration/content while also providing support for learners of various abilities. This can be seen in the curriculum's combination of independent, small group, partner and large group lessons with multiple curricular modifications and plans for more intensive intervention (CFIS and ELO forms) if needed. The early intervention routines, lessons and activities were created to provide parallel integration (Lev et al., 2020) to the PBL unit. The PBL unit lessons intentionally integrate early learning standards and common early intervention issues (self-regulation teaching), but also leave room for spontaneous integration of content as the children engage in their learning. The play integration throughout all lessons provides yet another connection to the PBL principles and quality inclusive, early intervention.

As proved through the research, play's benefits are linked to supporting child development (Creaghe et al., 2021; Diamond et al., 2007; Doernberg et al., 2021; Fisher et al., 2013; Goldstein & Lerner, 2018; Hirsh-Pasek et al., 2009; Lee et al., 2019). Thus, play was essential to include in this early childhood curriculum. Because play informs the ZPD (zone of proximal development) -or a child's level of independence vs. support needed- (Bodrova & Leong, 1996), it can guide PBL scaffolding techniques (Lev et al., 2020). Much like Lev et al.'s (2020) PBL Constructivist principles, play is enriched through ample materials and hands-on opportunities for young learners (Bodrova & Leong, 1996) Thus, the play opportunities in this curriculum blend the individualization and developmental guidance of quality early intervention

with the hands-on, engaged knowledge construction and sustained inquiry of PBL (Lev et al., 2020). Playful opportunities are provided throughout the curriculum during the learning environment checklist, routine lessons/activities and PBL unit.

This curriculum is based in educational research with some guidance from personal experience. It provides a strong framework for theoretical implementation and informs many common special education needs within an inclusive early childhood setting. Because the curriculum is structured to support chronologically developmental activities of preschool ages while providing opportunities for higher or lower levels of thinking, it can address the large gap of abilities often found in these settings. However, because this curriculum has yet to be implemented, there is no quantitative or qualitative data supporting the benefits of implementing this specific curriculum.

While implementing this curriculum, educators should collect data on student outcomes (linked to IEP and early learning standards) and teacher satisfaction and/or comfort levels with the approach. Future research could focus on the achievement levels of students with and without disabilities in the program and implementation success in a variety of early childhood settings. Educators who implement this curriculum should also consider the individual needs of their students when applying the hierarchy of support and timeline of the lessons. Some classes may need longer or shorter PBL units based on the ability of the learners.

After sharing the results of this curriculum creation with my committee and through the Otterbein Graduate Student Conference, I will use any feedback to make alterations to the curriculum and present it to the next district in which I teach. It is my hope that this curriculum could be incorporated into my next teaching assignment or educational degree work.

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