



**21ST CENTURY LEARNING
FOR EARLY CHILDHOOD
FRAMEWORK**



21st Century Skills Early Learning Framework

The Partnership for 21st Century Learning (P21) advocates for the integration of 21st century skills (critical thinking, collaboration, communication, creativity, technology literacy, and social-emotional development) in early learning experiences for young children to build the skills they need not only when entering school but also in life. This framework identifies early childhood as the years from toddler/preschooler through kindergarten (ages 18 months – 6 years). Younger infants (ages 0 – 18 months) were not included in the framework at this point.

The 21st Century Skills Early Learning Framework (P21 ELF) was developed to encourage educators, providers of services to young children, administrators, and policymakers to include early learning as they develop strategies for full integration of 21st century skills into their learning programs. The examples provided in the P21 ELF should help to build an understanding of how to support these skills in both formal and informal learning environments. P21 has also developed a guide to support implementation—21st Century Learning for Early Childhood (battelleforkids.org/networks/p21).

Almost all states have early learning standards in core learning areas for language and literacy, mathematics, science, social studies, and physical development in formal learning settings (schools, preschools, and licensed child care facilities). These standards offer guidelines for expected or desired goals for children ages 0 – 5 across many learning domains. In addition to state standards the National Head Start Association has developed national standards for their locations (Head Start Child Outcomes Framework) and the National Association for the Education of Young Children (NAEYC) provides a list of developmentally appropriate practices for the early learning environment.

Many of the state and national early learning standards include areas of learning that cover many of the 21st century skills under a variety of separate descriptive categories, such as creative expression, approaches to learning, social-emotional development, technology, and cognitive thinking. These categories vary from state to state.

The objective of the P21 ELF is not to replicate state early learning standards, but to provide adults with practical guidance, all in one place, that includes specific examples of 21st century skills and knowledge for early learners. These guidelines are designed to be used in both formal (e.g., child care facilities and preschools) and informal settings (e.g., camps, museums, and at home).

P21 ELF OVERVIEW

The P21 ELF follows a similar format as the other 21st Century Skills Maps developed for core academic skill areas for higher grade-levels.

The P21 ELF covers the following 21st century skills:

 **LEARNING AND INNOVATION SKILLS (THE 4CS)**

 **LIFE AND CAREER SKILLS**

 **INFORMATION, MEDIA, AND TECHNOLOGY SKILLS**

There are 4 sections to each of the 21st century skill areas:

DESCRIPTIONS OF A SPECIFIC LEARNING AREA

The first section provides a detailed definition of the skill as it relates to early learning development.

21ST CENTURY LEARNING OUTCOMES FOR K-12

The P21 ELF follows the same list of learning areas and outcomes as those for K-12 students. Each section includes the exact expected outcomes for 21st century skills as a reference. They are listed as 21st Century Learning Outcomes for K-12 in each section. Please note that we have combined the three areas of Information, Media, and Technology Skills to be more developmentally appropriate for young learners.

OPTIMAL EARLY LEARNING (EL) ENVIRONMENTS

The P21 ELF contains a section on how to create an optimal learning environment for skill development in each of the learning areas. The early learning experiences emphasize exploration, discovery, play, creativity, experimentation and joy. An essential element of the intentional integration of 21st century learning is the creation of an environment that allows adaptation to varying interests and skill development of each child, whether that setting is within an early childhood classroom or beyond school learning environment, in children's museums, on the playground, or home settings.

EARLY LEARNING (EL) SKILLS & OUTCOMES

The Skills & Outcomes charts show the adaptations for early learning. The left side of each section presents the 'Skills & Outcomes' and the right side provides 'Examples of Behaviors' for three developmental levels (1. Toddler/Early Preschool, 2. Preschool/Pre-Kindergarten, and 3. Kindergarten). The examples shown are samples of observed outcomes, however, there are many ways where children demonstrate these skills. The P21 ELF does not include specific examples for infancy through young toddler in this version.

LEARNING AND INNOVATION SKILLS (THE 4CS) - EARLY LEARNING CREATIVITY AND INNOVATION

Children are capable of expressing their creative thoughts and feelings through many activities, including painting, writing, drawing, sculpture, drama, dance, movement, and scientific exploration. Creativity can be expressed in many forms such as how a child approaches a task or a new problem.

Part of creativity is learning to innovate. Innovation with young children is how they test their thinking and interact with their world. Children often start by imitating observed behaviors and begin to innovate using novel ideas or solutions if typical approaches do not work.

21ST CENTURY LEARNING OUTCOMES FOR K-12

CREATIVITY & INNOVATION:

- Uses a wide range of idea generation and creation techniques (e.g., brainstorming)
- Creates new and worthwhile ideas (both incremental and radical concepts) where children engage in evaluating the value and relevance of ideas
- Elaborates, refines, analyzes, and evaluates their own ideas in order to improve and maximize creative efforts
- Views failure as an opportunity to learn; understands that creativity and innovation is a long-term, cyclical process of small successes and frequent unintended results
- Demonstrates originality and inventiveness in work
- Develops new ideas and communicates them to others
- Is open and responsive to new and diverse perspectives
- Acts on creative ideas to make a tangible and useful contribution to the field in which the innovation occurs

EL ENVIRONMENT

CREATIVITY & INNOVATION:

The EL Environment supports both creativity and innovation. This can be done by providing an abundance of opportunities for different types of creative play experiences. Such environments include, but are not limited to, building blocks, clay, recycled materials, measurement tools, items found outside, buckets, balls, and arts and crafts supplies to encourage creativity and innovation. The spaces provide easy access to materials with displays of children's work to inspire ideas and conversations. Children are able to move freely to play areas to innovate and create based on their interests with time to create and save work. Creativity and innovation go beyond art activities and occurs while children are making up a game outside, building with blocks, or pretending during dramatic play, with the goal of encouraging children to express their thoughts and ideas and learn from others.

**EL SKILLS & OUTCOMES • CREATIVITY & INNOVATION
EXAMPLES**

	TODDLER/EARLY PRESCHOOL	PRESCHOOL/ PREKINDERGARTEN	KINDERGARTEN
1. Uses a variety of media in creative activities	Selects a variety of materials for a task (e.g., finger paint and paper or blocks and tubes)	Tries different media in creating a simple drawing to tell a story, express an emotion, etc.	Selects specific media to solve a problem, express an emotion, create structures, etc.
2. Adds own ideas to creative projects	Adds items to a project not necessarily used by other children at that time	Adds unique features to a drawing or to a building when playing with blocks	Combines materials to building with blocks or in playing a game
3. Reviews own work	Shows their work to teachers and parents	Makes simple changes to their work as they play	Makes improvements and adjustments after reviewing work
4. Tries again if actions don't achieve desired result	Tries a different crayon if the color they initially wanted is not there	Considers others' (other children or adults') ideas on a new strategy to complete a task when the first attempt does not work	Corrects minor mistakes recognized in work and tries a different approach in play if first doesn't work
5. Invents new ways of creating during play	Is flexible in following or changing a simple rule when playing (e.g., change from hopping to jumping)	Tests a previously used approach on a new task	Suggests new ways to play a game
6. Provides own ideas during play	Plays with other materials than their peers during dramatic play	Announces what role they will play in dramatic play	Creates props for dramatic play from symbolic materials (e.g., a tube becomes a microphone)
7. Watches others create and comments on their work	Imitates another child's work (e.g., uses similar materials they like)	Looks at another child's work and asks, "What's that?"	Comments on other children's work hung around the classroom
8. Uses creativity to solve a simple problem	Uses a substitute object during play if actual object isn't found (e.g., a ball to represent an apple)	Invents a new way to play with a toy if a toy is broken (e.g., fire engine bell doesn't work, so uses voice as the bell)	Finds a new use for a common object during play (e.g., uses books to support a ramp)

CRITICAL THINKING & PROBLEM SOLVING

Problem solving involves the ability to generate and execute a solution to a problem. Problem solving occurs when a child uses trial and error to solve a problem until a successful solution is found. This includes imitation and observational learning by observing others and using their problem-solving approaches; sorting and classifying to compare, contrast, group, sort, and categorize objects; using logic and reasoning to generate solutions to problems based on rules generally accepted as true; and, planning and sequencing to develop and follow a multi-step plan in order to achieve a goal.

21ST CENTURY LEARNING OUTCOMES FOR K-12

CRITICAL THINKING & PROBLEM SOLVING:

- Uses a wide range of problem-solving techniques
- Uses various types of reasoning (inductive, deductive, etc.) as appropriate to the situation
- Analyzes how parts of a whole interact with each other to produce overall outcomes in complex systems
- Effectively analyzes and evaluates evidence, arguments, claims, and beliefs
- Analyzes and evaluates major alternative points of view
- Synthesizes and makes connections between information and arguments
- Interprets information and draws conclusions based on the best analysis
- Reflects critically on learning experiences and processes
- Solves different kinds of non-familiar problems in both conventional and innovative ways
- Identifies and asks significant questions that clarify various points of view and leads to better solutions

EL ENVIRONMENT

CRITICAL THINKING & PROBLEM SOLVING:

The EL Environment supports both critical thinking and problem solving skills by providing an abundance of opportunities for different types of social play (dramatic, cooperative, and physical). During playful activities children exhibit their learning and practice what they've been exposed to and are curious about. Children learn through acting out events and solving problems they see in their daily lives.

**EL SKILLS & OUTCOMES • CRITICAL THINKING & PROBLEM SOLVING
EXAMPLES**

	TODDLER/EARLY PRESCHOOL	PRESCHOOL/ PREKINDERGARTEN	KINDERGARTEN
1. Uses simple problem solving techniques in play	Tries another route to get across a room if the path is blocked	Makes multiple attempts in putting puzzle pieces together	Acts out solutions during dramatic play to typical problems (e.g., doesn't have a coat for a doll, so uses a blanket)
2. Shows ability to make choices	Chooses activities with a variety of toys and materials	Asks other children or adults for specific materials to use during a play activity	Suggests ideas on how to change activity in the middle of play
3. Explores and learns from environment making connections of how things work together	Looks around environment and asks about things he/she sees	Observes other children and asks peers why they did something (e.g., "Why did you put the sand in the truck?")	Demonstrates interest in new materials and experiences that are introduced and used during play activities
4. Asks questions or watches others to gauge emotions of others	Shows interest in how to do things	Watches a peer and asks, "How can I do that?"	Joins others in an activity and asks about how to play or what they are doing (observing and pitching in)
5. Understands how behavior can impact others and outcomes (social and physical/causal)	Acts out behaviors from characters of a story or describes what happens when they make something happen (e.g., a block tower falls)	Talks about the effects of a character's behavior on others in the story	Knows the difference between helpful and hurtful methods to solving a problem and infers how a story character would react
6. Uses familiar and new approaches to solve a problem based on outcomes of attempts	Shows preference for familiar toy or game and uses in traditional ways	Tries something new and makes prediction of what could happen next	Attempts to solve a problem by guessing based on previous success
7. Tries new approach after initial approach fails	Changes how to play with an object from original approach	Tries not to repeat a mistake (e.g., adding extra block in building a tower)	Tries another way to do something when asked by a peer
8. Tries problem solving to achieve a positive outcome	Asks for help when trying something new	Describes why a specific approach will solve a problem (e.g., "If we use scissors, we can cut a straight line versus ripping the paper")	Tries and discovers more than one solution to a question, task, or problem
9. Uses information and observation to clarify or understand information	Watches other children and attempts to do the same task	Can identify activities that are easy and ones that are harder to do	Asks teacher for help when struggling with a new task
10. Asks questions and includes others in play to try to solve problems	Watches how other children solve a problem and repeats pattern	Asks a friend or sibling to join in play to solve a problem	Seeks out information on how to play a game in a new way

Listening, speaking, storytelling, and sharing thoughts and ideas are all communication skills. Children learn through listening to others and hearing stories. They imitate languages they hear, body language, facial expression, and eye contact. Children gain an understanding of themselves and the world through communication. Strong early communication skills are directly related to later literacy success. Developing strong patterns of both verbal and nonverbal communication also foster positive self-esteem and social skills.

21ST CENTURY LEARNING OUTCOMES FOR K-12

COMMUNICATION:

- Articulates thoughts and ideas effectively using oral, written, and nonverbal communication skills in a variety of forms and contexts
- Listens effectively to decipher meaning, including knowledge, values, attitudes, and intentions
- Uses communication for a range of purposes (e.g., to inform, instruct, motivate, and persuade)
- Utilizes multiple media and technologies, and knows how to judge their effectiveness theoretically as well as assess their impact (for higher grade levels)
- Communicates effectively in diverse environments (including multi-lingual)

EL ENVIRONMENT

COMMUNICATION:

Children learn through engaging in conversations, listening to adults and peers, and observing how people communicate. The EL environment is “language rich” and adults encourage children to ask questions, share ideas, express their feelings, as well as respect others through listening. High quality language interactions provide children with experiences that foster growth in language and communication. Language learning and practice is everywhere and storytelling is welcomed.

EL SKILLS & OUTCOMES • COMMUNICATION EXAMPLES

	TODDLER/EARLY PRESCHOOL	PRESCHOOL/ PREKINDERGARTEN	KINDERGARTEN
1. Expresses ideas verbally	Describes what is happening “now”	Talks about making something or completing a task	Adds to a conversation about personal experience
2. Listens attentively to follow directions to perform a task or follow a story	Follows simple directions (one or two-step)	Follows simple directions and can repeat them to help others; retells a simple story after hearing it	Uses listening and speaking strategies during discussions of stories and events
3. Uses spoken and written language for a variety of purposes	Uses language to share a story or describe an event or action	Uses language to repeat simple stories, songs, or rhymes, or to relate experiences	Describes an event or story and then draws a picture about it
4. Asks and answers questions in order to seek help, get information, or clarify something that is not understood	Asks “why” and “how” to gather and clarify information	Gives clear directions to complete a simple task or play a game	Asks and answers questions about key details in a story or information presented orally
5. Describes familiar people, places, things, and events	Engages verbally with stories in books and movies	Makes up simple songs or stories	Recounts or describes key ideas or details from a story or event

Collaboration is how children begin to build friendships and work with others. Young children initially watch others and eventually share or play together. As they get older, they become aware of other children’s feelings and ideas. Young children are motivated by acceptance and they learn to respect others, make compromises, and appreciate each other’s perspective and skills when engaged in collaborative activities. Learning these skills early has the benefit of supporting positive interpersonal relationships.

21ST CENTURY LEARNING OUTCOMES FOR K-12

COLLABORATION:

- Demonstrates the ability to work effectively with diverse teams
- Exercises flexibility and willingness to be helpful in making necessary compromises to accomplish a common goal
- Assumes shared responsibility for collaborative work

EL ENVIRONMENT

COLLABORATION,

Collaboration in the EL environment is enhanced through a combination of small group, large group, game play, and project-based activities. Young children thrive when they feel valued and see they are treated fairly by adults and peers. Adults facilitate discussions among pairs or groups and strive for maximizing the level of participation of all children. There is a focus on what the children are interested in and they are encouraged to explore their interests together.

EL SKILLS & OUTCOMES • COLLABORATION EXAMPLES

	TODDLER/EARLY PRESCHOOL	PRESCHOOL/ PREKINDERGARTEN	KINDERGARTEN
1. Plays with other children in small and large groups	Engages in cooperative play (e.g. doing puzzles together)	Shares ideas and information from personal and shared group experiences	Works with other children to complete a work task or project (e.g., creating a play based on a familiar story)
2. Follows classroom procedures, game rules, and makes transitions	Makes transitions to activities	Plays games with others following the rules	Works with others to create new games or activity rules
3. Recognizes the contributions of other children	Points out what other children are doing (e.g., “Kyle is making a boat!”)	Asks other children to join them after initiating a game	Asks other children how to play a game, build something, etc.



LIFE AND CAREER SKILLS – EARLY LEARNING FLEXIBILITY & ADAPTABILITY

Children learn to become flexible and adapt to changes when they feel secure and are provided a continuous feedback loop as they interact within their environment. Flexibility and adaptability skills are the ability to handle transitions, meet new children, shift strategies, and adapt to a new environment.

21ST CENTURY LEARNING OUTCOMES FOR K-12

FLEXIBILITY & ADAPTABILITY:

- Adapts to varied roles, jobs responsibilities, schedules, and contexts
- Works effectively in a climate of ambiguity and changing priorities
- Incorporates feedback effectively
- Deals positively with praise, setbacks, and criticism
- Understands, negotiates, and balances diverse views and beliefs to reach workable solutions, particularly in multi-cultural environments

EL ENVIRONMENT

FLEXIBILITY & ADAPTABILITY:

Young children thrive in an environment where there are routines, predictability, and simple rules. Children are given clear guidance on expectations to lessen stress and give a feeling of security so they are ready to take on new challenges. Transitions during the day are explained so children can adapt to changes. Planned activities can be adjusted based on children’s interests.

EL SKILLS & OUTCOMES • FLEXIBILITY & ADAPTABILITY EXAMPLES			
	TODDLER/EARLY PRESCHOOL	PRESCHOOL/ PREKINDERGARTEN	KINDERGARTEN
1. Changes roles or actions during play	Switches roles in pretend play	Changes actions as part of a game	Participates in class responsibilities (e.g., cleaning up after playing or following playground rules)
2. Adjusts to transitions	Stops playing and makes transitions when asked	Adapts to changes in routine (e.g., shortened outdoor play time because of a class visitor)	Easily shifts from one task or event to another throughout the day
3. Listens to parent/ teacher feedback	Seeks praise and help from familiar adults	Asks questions to get more information on a task, project, or activity	Responds and appropriately asks questions for greater understanding
4. Helps to solve conflicts	Begins to use some simple techniques for preventing conflicts	Negotiates with other children to solve a problem with support	Uses words rather than actions in difficult situations
5. Understands rules and compromise	Gives another child a toy when asked	Shares a puzzle or game during play	Switches to using another item if the one wanted is being used by another child



INITIATIVE & SELF-DIRECTION

Initiative and self-direction include skills that tap into a child's natural curiosity and desire to better understand the world around them. When children are interested and engaged they are more likely to self-direct, focus, demonstrate persistence, and complete a task. When children are involved in planning and organizing activities, they feel a sense of belonging and accomplishment. Building skills of initiative and self-direction helps to strengthen children's self-esteem.

21ST CENTURY LEARNING OUTCOMES FOR K-12

INITIATIVE & SELF-DIRECTION:

- Sets goals with tangible and intangible success criteria (e.g. finishes homework without help)
- Balances tactical (short-term) and strategic (long-term) goals (e.g. learns the rules before playing a game with a group)
- Utilizes time and manages workload efficiently
- Monitors, defines, prioritizes, and completes tasks without direct oversight
- Goes beyond basic mastery of skills and/or curriculum to explore and expand one's own learning and opportunities to gain expertise
- Demonstrates initiative to advance skill levels towards a professional level
- Demonstrates commitment to learning as a lifelong process
- Reflects critically on past experiences in order to inform future progress

EL ENVIRONMENT

INITIATIVE & SELF-DIRECTION:

Offer learning experiences to help children develop the 4Cs—critical thinking, creativity, collaboration, and communication—while developing content knowledge. This intentional approach can be done while reading a story and discussing the characters or during a science experiment through the problem solving experience.

**EL SKILLS & OUTCOMES • INITIATIVE & SELF-DIRECTION
EXAMPLES**

	TODDLER/EARLY PRESCHOOL	PRESCHOOL/ PREKINDERGARTEN	KINDERGARTEN
1. Understands goals	Shows satisfaction when completing a task (e.g., finishing a puzzle)	Announces when a task is complete	Accepts responsibility and follows through on tasks
2. Is able to set goals	Selects a progressively harder activity (e.g., tries the puzzle with more pieces or stacks more blocks on a tower)	Shows self-direction in actions (e.g., gets materials together to play a game or create something)	Describes steps to accomplish a desired goal (e.g., learning to dribble a ball or building a sand castle)
3. Is aware of time and how long it takes to do something	Completes short tasks with assistance (e.g., getting dressed)	Completes steps to do something one at a time (e.g. finishes putting on shoes before putting on a coat)	Describes steps in sequence in order to complete a specific task or activity
4. Describes simple steps	Describes how to do something (e.g., washing hands, drying them, etc.)	Follows multi-step directions	Explains how to fix something or describes steps when watching someone else complete a task
5. Is interested in a growing number of activities, ideas, and tasks	Picks up a new toy and plays with it	Chooses a book to look at after lunch or recess	Asks to play a game that the group hasn't played before
6. Demonstrates a willingness to participate in new activities	Joins a small group of other children in an activity	Helps peers get materials needed in pretend play (e.g. "First we will need a bucket and shovel")	Accepts and implements creative suggestions from others
7. Initiates and extends playful activities	Begins a new task with minimal support	Makes own choices for learning center activities	Makes plans in imaginary play (e.g., "First we do this, then that")
8. Attempts to accomplish difficult tasks based on past success	Returns to a difficult puzzle and tries again	Selects the tools needed to accomplish a task	Looks at a diagram that explains a task before starting (e.g., making a robot)



SOCIAL & CROSS-CULTURAL SKILLS

Social skills involve understanding emotions of others, developing empathy, learning consequences of behaviors, and understanding that others may have different thoughts than they themselves do. These skills are essential to a child’s success, critical to a child’s sense of belonging and connections to others, and directly tied to communication, collaboration, and adaptability.

Cross-cultural skills are the understanding of similarities and differences in others. They also include the ability to appreciate and understand one’s own culture, as well as to learn to understand and appreciate others’ cultures in the process.

21ST CENTURY LEARNING OUTCOMES FOR K-12

SOCIAL & CROSS-CULTURAL SKILLS:

- Knows when it is appropriate to listen and when to speak
- Conducts themselves in a respectable, professional manner
- Respects cultural differences and works effectively with people from a range of social and cultural backgrounds, responds open-mindedly to different ideas and values
- Leverages social and cultural differences to create new ideas and increase both innovation and quality of work

EL ENVIRONMENT

SOCIAL & CROSS-CULTURAL SKILLS:

In the EL environment every child is valued. Their natural abilities and individual strengths are recognized. Children learn to appreciate the uniqueness of individuals within the group, respect the feelings of others, and embrace rich linguistic and cultural diversity. The environment is arranged so children can work together with duplicate materials. Role-play is encouraged to help children learn how to take different perspectives and become accustomed to different points of view.

EL SKILLS & OUTCOMES • SOCIAL & CROSS-CULTURAL SKILLS			
EXAMPLES			
	TODDLER/EARLY PRESCHOOL	PRESCHOOL/PREKINDERGARTEN	KINDERGARTEN
1. Develops self-control	Waits with other children during a transition	Takes materials once another child is finished with it or puts it down	Recites the rules in school or at home (e.g., what to do at lunch, walking in halls, etc.)
2. Understands consequences of behavior	Shows an understanding that their actions can affect feelings in other children	Expresses negative responses in appropriate ways	Describe the consequence for a specific behavior
3. Demonstrates empathy towards others	Describes how various situations make the child feel	Shows concern for peers’ feelings	Differentiates between preferences of other children
4. Shows appreciation for others and their uniqueness	Articulates the concepts of “mine” and “his/hers”	Shares materials and experiences, and take turns	Identifies behaviors that are sensitive to the needs of others (e.g., taking turns, listening to one another, etc.)



PRODUCTIVITY & ACCOUNTABILITY

In early childhood, productivity and accountability begins with focus, attention, and task completion. Children learn to set goals or plan an activity, such as “I am going to play with the puzzle” or “I can do it!” Learning to follow directions and rules in a game is a part of learning to be accountable. Children also demonstrate being productive and accountable as they play with greater independence and decreased adult guidance.

21ST CENTURY LEARNING OUTCOMES FOR K-12

PRODUCTIVITY & ACCOUNTABILITY:

- Sets and meets goals, even in the face of obstacles and competing pressures
- Prioritizes, plans, and manages work to achieve the intended result
- Demonstrates additional attributes associated with producing high quality products

EL ENVIRONMENT

PRODUCTIVITY & ACCOUNTABILITY:

In the EL environment there is a focus on children’s work, which is displayed throughout the environment. The children are encouraged and inspired to play, explore, generate ideas, innovate, and create. Adults ask questions to help the children reflect on how they did things – what worked and what didn’t work. Demonstrating independence and task completion is acknowledged.

EL SKILLS & OUTCOMES • PRODUCTIVITY & ACCOUNTABILITY EXAMPLES

	TODDLER/EARLY PRESCHOOL	PRESCHOOL/ PREKINDERGARTEN	KINDERGARTEN
1. Continues to work on tasks or activities despite interruptions	Chooses one activity over others and sticks to it over a period of time	Stays on a difficult task without becoming overly frustrated	Works or interacts with a specific toy or object until complete
2. Breaks simple tasks into steps	Follows simple directions in an activity	Completes one step at a time and checks for approval before moving on or clarifies next steps	Explains steps to others to play a game or share an activity
3. Demonstrates empathy towards others	Participates in new games or activities	Tries new experiences independently and with confidence	Seeks out increasingly difficult activities



LEADERSHIP & RESPONSIBILITY

Leadership and responsibility are closely related to executive function and social skills. Executive function is often defined as self-regulation, planning and organization, working memory, and critical thinking. These are exhibited in how a child asks for assistance, includes other children in a game, or cleans up after playing. Taking care of oneself and others is part of responsibility. When children take initiative by inviting other children to help them with a task or to play a game, they demonstrate early leadership skills.

21ST CENTURY LEARNING OUTCOMES FOR K-12

LEADERSHIP & RESPONSIBILITY:

- Uses interpersonal and problem-solving skills to influence and guide others toward a goal
- Leverages strengths of others to accomplish a common goal
- Inspires others to reach their very best via example and selflessness
- Demonstrates integrity and ethical behavior in using influence and power
- Acts responsibly with the interests of the larger community in mind

EL ENVIRONMENT

LEADERSHIP & RESPONSIBILITY:

Children work with other children to explore their interests and engage in problem-solving activities. The daily activities include a variety of independent, small group, and large group activities that follow children’s interests. Children are supported to help each other and take responsibility for their environment.

EL SKILLS & OUTCOMES • LEADERSHIP & RESPONSIBILITY			
EXAMPLES			
	TODDLER/EARLY PRESCHOOL	PRESCHOOL/PREKINDERGARTEN	KINDERGARTEN
1. Plays cooperatively in small and large groups	Plays with other children	Initiates games with other children	Engages in group discussions
2. Seeks help from adults and peers	Seeks out assistance from adults	Asks other child to help with a task or activity	Demonstrates use of strategies to seek help from peers and adults
3. Takes turns	Seeks out assistance from adults	Takes turns as part of a game	Takes turns or waits for turn, shares with other children
4. Is polite and kind in interactions with adults and peers	Looks for companionship for other children	Establishes relationships after conflicts	Invites other children to play or join activity
5. Shows an understanding and respect for differences in peers	Is aware of emotions of characters in stories	Identifies differences and similarities with peers	Shows understanding that others may feel differently from self



INFORMATION, MEDIA, & TECHNOLOGY SKILLS – EARLY LEARNING

INFORMATION & MEDIA LITERACY

Children demonstrate information literacy in early childhood by articulating the difference between real and make-believe, as well as by using familiar practices to learn new skills or gather information. As curious learners, young children begin to ask questions and learn how to get the information they desire.

Children develop media literacy as early as the toddler years. A toddler is capable of recognizing that a device can be used to talk to a friend or family member or that devices have games on them that are fun to play. They learn how to use the varying devices, understand what they can do with them, and explore other uses. These skills also include learning to create media, such as drawings with a writing app or watching media where characters tell a story. Children gradually learn the use of media and make selections based on their interests and needs.

21ST CENTURY LEARNING OUTCOMES FOR K-12

INFORMATION & MEDIA LITERACY*:

- Accesses information efficiently and effectively
- Evaluates information critically and competently
- Applies information accurately and creatively to the issue or problem at hand
- Manages the flow of information from a wide variety of sources
- Applies a fundamental understanding of the ethical/legal issues surrounding the access and use of information

**Some of the higher grade levels information, media, and technology skills were not used for comparison in ELF as they were seen as repetitive or not developmentally appropriate for early learners.*

EL ENVIRONMENT

INFORMATION & MEDIA LITERACY:

The optimal environment integrates technology within a play-based and student-centered approach where the technology is part of hands-on educational experiences. Young children are bombarded with information through a vast amount of media (e.g., apps, online games, advertisements, TV shows, movies, etc.) and social interactions (e.g., with peers and adults). Caregivers support children's navigation of this information-rich environment by asking questions, discussing what is read, and tapping into each child's curiosity to gather, assess, and use information. They help children plan, research, and discuss what they are going to do with the information along with helping children recognize fact versus fiction.

The use of Information and Communication Technology (ICT) like computers, cameras, printers, etc. in the EL environment offers a variety of educational opportunities from practicing learned skills to collaboration with others. There are a variety of devices today in the early learning environment, therefore it is important that children begin to understand not only how to operate these devices, but also discover constructive uses for learning, communicating, and creating.

**EL SKILLS & OUTCOMES • INFORMATION & MEDIA LITERACY
EXAMPLES**

	TODDLER/EARLY PRESCHOOL	PRESCHOOL/ PREKINDERGARTEN	KINDERGARTEN
1. Understands how tablets or computers are used to obtain information (including tools/technology like television)	Is familiar with how to play with tablets or computers with adult supervision	Describes how you can get information on a device, learns simple technology vocabulary	Uses a device to locate information (e.g., game or app) or describes how others use a technology (e.g., “Mom gets pictures from her friends on her phone”)
2. Judges between real and make believe (as seen on varying media)	Knows that animals can’t really talk even though they talk on an app or game	Describes the main character’s point of view as compared to other’s in an article or story	Knows difference between a simple fact and someone’s opinion
3. Uses learned knowledge in new situations	Tries same practices in playing a new game or activity	Uses familiar information source to find something new	Shares a game app with friends and describes how to play
4. Asks how to find information or uses device/software creatively	Asks for help to find a favorite app or game	Asks where to look to learn how to do an activity online and works on activity independently	Is able to do a simple search in a group project (e.g., finding out how balloons work)
5. Uses devices with adult consent	Plays a simple activity on a device with supervision	Works with support to search information (e.g., finds a game or items in activity)	Works independently to search information (e.g., finds a game or items in activity)

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ABOUT BATTELLE FOR KIDS

Battelle for Kids is a national not-for-profit organization committed to collaborating with school systems and communities to realize the power and promise of 21st century learning for every student, without exception.

Formed in 2001, the organization's leadership in 21st century education now encompasses early learning, during school (K–12), and beyond school experiences. The Partnership for 21st Century Learning (P21) joined Battelle for Kids in 2018. P21's members and partners have been pioneers of 21st century learning since 2002. EdLeader21, also a network of Battelle for Kids as of 2017, started its industry-leading network in 2010 and now has more than 220 member districts and schools. Collectively, Battelle for Kids and its networks serve members and districts across 45 states.

As the premier leader in 21st century education, Battelle for Kids innovates and partners with its networks, association and business partners, and school system leaders to design and implement educational experiences that prepare all students to become lifelong learners and contributors in an ever-changing world.

Learn more and get involved at battelleforkids.org/networks/p21.

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