

Designing Learning Centers to Support Cognition and Knowledge of the World: A Resource Set

New York State Education
Department



The Prekindergarten Foundation for the Common Core outlines early learning expectations linked to K-12 standards, organized by key domains of learning. The NYSED, Office of Early Learning is developing a series of resource sets to assist teachers and administrators as they reflect on program practices and supports in each of the key domains. This set focuses on Cognition and Knowledge of the World and includes an overview about planning and designing learning centers and experiences, planning tools for enriching learning centers, and key terms and definitions for teachers of young children. The set also includes a school-wide reflection tool for administrators and teams to plan and implement program improvement, resources, and supports.

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Resources**

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This overview provides an introduction to the set, including information about how children learn best, a teacher self-assessment, a tip sheet about designing learning centers and experiences, and a set of reflection questions. These materials might be used as the basis for discussion among teacher teams, mentors, coaches, and/or administrators.

2. Planning Tool: Enriching Learning Centers to Support Cognition and Knowledge of the World

This section includes a tool to help teachers plan ahead as they design learning centers and learning experiences that support children's cognition and knowledge of the world.

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The School-wide Reflection Worksheet is designed for school leaders and teacher teams to reflect on the systems and supports that promote engaging learning environments and experiences that are aligned to the Prekindergarten Foundation for the Common Core.

6. References and Resources

This series was developed by the New York State Education Department, Office of Early Learning, in partnership with the Northeast Comprehensive Center. For more resources in this series, visit www.p12.nysed.gov/earlylearning



NORTHEAST COMPREHENSIVE CENTER

1. Overview

Introduction

In this resource set, we will focus on ways teachers can plan and design learning centers that support young children’s cognition and knowledge of the world. While the information throughout this set focuses on prekindergarten, the concepts are also applicable to kindergarten through 2nd grade. Specifically, this set provides samples and examples for creating activities and learning centers that can be used to bridge abstract concepts related to mathematics, science, social studies, the arts, and technology to hands-on learning experiences through play, projects, and interactions, which are the conditions necessary for children to learn. Please note that this resource set is a follow-up, companion piece to *A Resource Set for Teachers: Creating Rich Language and Literacy Environments for Young Learners*, which provides several resources and tools about integrating language and literacy throughout the curriculum and provides detailed information about creating rich learning environments.

The goal of any early childhood education teacher is to support children’s learning and development through learner-centered environments, well-developed and intentional learning experiences, and frequent, high quality language interactions. Teachers of young children understand their role is to build the foundation for future success – how teachers approach that work and how program administrators support the work is varied and vast. In this set, we will provide tips and tools to help teachers reflect on current practice and adjust where needed.

What we know about children’s learning¹:

- A supportive early childhood context can strengthen young children’s learning in all domains of learning.
- Children are better prepared for school when early childhood programs expose them to a variety of classroom structures, thought processes, and discourse patterns.
- Children construct knowledge actively, integrating new concepts into existing understandings. Teaching and learning are most effective when they begin with and build on children’s existing understandings.
- Hands-on instructional approaches that encourage children to reflect, predict, question, and hypothesize allow children to learn more deliberately.

¹ Dwyer, Chait, and McKee

Reflecting on what we know about young children’s learning, make notes about how descriptive the statements in the self-assessment chart below describe your program.

Teacher Self-Assessment	Not Descriptive	Somewhat Descriptive	Very Descriptive
1. Program includes explicit learning goals supporting all domains of learning and development, including Cognition and Knowledge of the World sub-domains: <ul style="list-style-type: none"> ○ Mathematics ○ Science ○ Social Studies ○ The Arts ○ Technology 			
2. Daily schedule includes a balance of whole group, small group, peer interactions, and ample individual language interactions between children and teachers			
3. Program provides daily opportunities for child-initiated learning activities that are actively planned and supported by teachers in ways such as: <ul style="list-style-type: none"> ○ building on/creating projects sparked by children’s interests/curiosity ○ incorporating materials of interest across centers ○ capitalizing on children’s interests by expanding on topics of interest (asking open-ended questions, waiting for response, bridging concepts) ○ assessing what children understand and where they need support ○ documenting what is happening with students, building child portfolios recording children’s learning and discoveries ○ analyzing and making sense of children’s learning for future planning ○ adjusting/modifying instruction and learning environment so learning keeps moving forward 			
4. Program includes teacher-structured learning opportunities of interest to children (e.g., planned learning adventure/learning game, story sharing, theme-based play scenario)			
5. During all activities, teachers are fully engaged and frequently use open-ended questions with all children to develop children’s thinking			
6. Teachers ensure all children have opportunities to share their thinking; including opportunities to reflect on what they’ve learned or discovered			
7. Program includes opportunities for children to ask questions and explore responses, reason and problem-solve, and use both deliberate and trial and error approaches for investigations			
8. Children spend the majority of time engaged in active learning through play and practice contexts (e.g., learning centers, hands-on activities, play)			

As you move through the remainder of this resource set, revisit this self-assessment and make note of some strategies you may want to implement to strengthen your classroom environment and instruction.

Tip Sheet: Reminders about Room Arrangement and Learning Centers

Ultimately, learning centers in a preschool classroom provide the opportunity for children to practice and play using and building on skills and new /expanded knowledge. To make the most of learning centers, teachers should intentionally design learning centers with these key concepts in mind:

Room arrangement and types of learning centers makes a difference. It is an opportunity to send specific messages about what is expected and valued. Create small, defined learning areas where smaller groups of children can fully engage in play and activities. Group types of centers together, for example, quiet activity centers, messy activity centers, and noisy activity centers. Think about learning and development when clustering centers based on content and in some cases shared materials/props. For example, you might cluster sensory (sand and water) near math and science so measuring and experimentation can be linked. All preschool classrooms should also have a small, soft, cozy spot for children who need to remove themselves from active play. This spot should be somewhere that a child can be alone, but still see what classmates are doing. Teachers can use this spot when they notice a child becoming overly stimulated, overwhelmed, or who just needs time to themselves. This should not be used as a punitive area – it should include cuddle animals, pillows, books and other comforting materials.

Dramatic play can cross into multiple learning areas. If you have the space, consider designing your classroom so there are two areas – one that is fixed and one that changes according to your theme or a special project. For example, you may have a fixed “At Home” area with a kitchen, table, couch etc., and another dramatic play area that can be changed into an office, restaurant, pet adoption center, grocery store, firehouse, service station etc. Likewise, consider other centers as opportunities for creating dramatic play opportunities. For example, turn your science center into a laboratory or observatory during the Earth and Space theme; convert the blocks/building into a construction site during the building and construction theme.

Materials, equipment and props influence learning. Each center should be stocked and well organized, and include a variety of appropriate materials and activities, including literacy materials. To be engaging, children need props and materials that promote the intent of the center and that meet their skill level. In other words, differentiate activities and materials so children at multiple skills levels can actively engage. Visit

<https://www.youtube.com/watch?v=P80QjjC3tw&index=7&list=PLyizHCAockpo6Vt8zVHVffo6kwv1i6dE9> to learn more about planning and

designing centers and activities to meet individual children's pace of development. The selection of materials, equipment and props should support and extend curriculum and instruction. Consider the theme and pay close attention to what children are especially interested in at any given time. For example, if you notice children exploring rocks while on the playground, bring several into the classroom so children can make and record observations using magnifying glass; put several in the math area to classify by color, size, shape; include some in the blocks area to enhance landscape designs; add some to the art area so children can draw observations. You may even bring special rocks/stone (e.g., geodes, marble) for children to explore further. In other words, build on their natural curiosity. Another thing to keep in mind is to make sure your learning centers are equally interesting. For example, is the math/game center just as fully stocked, rotated and appealing as the dramatic play area?

Scheduling the right amount of time for types of

activities is essential. Generally, children can stay engaged in teacher-directed learning for about twice as long as their age at one time. So, four-year-olds *might* be able to focus for about eight minutes. While teachers should continuously work to support young children to attend to

Tips on Managing Learning Center Free Choice Selections

Children love repetition and often choose the same types of play activities – that's ok! Teachers can help broaden children's experiences by:

- Modeling/demonstrating what you can do in each center on a rotating basis so children have a clear idea about what's there. Sometimes, children don't select a learning center because they don't know what happens there.
- Designing a whole or small group project that directly relates to the items and materials in a "less frequented" center to spark interest. For example, design an experiment or a project that takes place in the science center.
- Designing a teacher-initiated play/activity project in each center on a rotating basis, letting the children know which center you have chosen. For example, create a telephone listening game using plumbing parts in the listening area of the library.
- Building in management techniques that ensure children have choices for selecting the center they want to play in. For example, use a name tag or center name system and call on children in random order to ensure fairness. Jot down children's selections – it's a great way to learn more about children's interests.

task, the key is for it to be a developmentally appropriate expectation and meet the needs of a particular group since children develop at their own pace. On the other hand, children need *significant* blocks of time to engage in play and hands-on experiences to move from basic play to more sophisticated play that builds skills, knowledge, and language. As play gets more involved, there are greater opportunities for more interesting and complex concepts and vocabulary to evolve. Generally, this equates to about 45-60 minutes. Teachers should recognize that some center areas solicit more involved play and others may only be for shorter periods of time. To accommodate the variation, teachers should allow children to move around when needed.

Teacher-child and peer interactions should be extended to center activities. When teachers engage (e.g., take on a play role, facilitate dialogue, introduce new/interesting ideas, encourage problem solving, extend language) in child-directed play and activities following the children's interests, children are more likely to deepen their level of understanding and stay engaged in more sophisticated play. Learning center time is a prime-time for teachers to facilitate children's learning. When teachers become part of a play scenario – as a character in blocks/building or a player in a board game - they have more authentic opportunities to reinforce skills or concepts taught earlier. It is also a natural opportunity to observe children and assess their progress. During center and play periods, teachers should *actively* engage in the instructional cycle. Specifically, teachers should be:

- enriching, reinforcing, and building on earlier concepts and vocabulary
- capitalizing on children's new knowledge by talking about topics of interest (asking open-ended questions, waiting for response, bridging concepts)
- facilitating development across developmental domains by providing active modeling and support of children's social and emotional learning and approaches to learning through play and activities
- assessing what children understand and where they need support
- documenting what is happening with children, building child portfolios, recording learning and discoveries
- analyzing and making sense of children's learning for future planning
- adjusting/modifying instruction and learning environment so learning keeps moving forward

Teacher Reflection Questions:

1. Are the different centers in my room equally inviting? Do I need to reconsider the types of centers I have?
2. How many children should be in each center at a time? Do I have a fair system for children to choose where they want to go? Have I thought about how to encourage children to try out different centers?
3. How much time should be allowed for center play/activity?
4. What is the adult (e.g., teacher, teacher aid, specialists, support, volunteers) rotation cycle around the centers? In what ways are teachers and other adults expected to engage with children?
5. What systems do I have in place to continuously monitor my observations about what and how children are learning as they practice and play?
6. What structures do I have in place to reflect and adjust instruction to meet individual children's needs to keep them moving forward?
7. What supports/resources do I need to make the most of learning centers?
8. What do I need to consider if I only have a half day program? What is the best way to structure the time?

2. Planning Tool: Enriching Learning Centers to Support Cognition and Knowledge of the World

This section provides tips to help teachers intentionally plan to better support children’s cognition and knowledge of the world by enriching learning centers to support opportunities for children to practice, play and interact with adults. As a reminder, all of the domains of learning are interconnected, including Communication, Language and Literacy, Approaches to Learning, Social and Emotional Development, and Physical Development. Information about creating robust environments that support the Communication, Language and Literacy domain is provided in *A Resource Set for Teachers: Creating Rich Language and Literacy Environments for Young Learners* and should be used as a foundation to designing the entire early learning environment.

Learning centers offer choices, stimulation, and time for children to experiment and explore new skills. Teachers encourage children to explore by intentionally planning open-ended activities that promote self-expression, curiosity, problem solving, critical thinking, conversation, collaboration, adaptability, getting along with others – all key concepts linked to Approaches to Learning and Social and Emotional Development domains. Teachers are encouraged to review *Approaches to Learning: Teacher Resources for Self-Reflection and Planning* and *Social and Emotional Learning (SEL) Observation and Reflection Tool for Administrators* for more information.

Mathematics (Math Manipulatives and Games Center)

Design a dedicated math manipulatives and games learning center. Arrange space to accommodate objects that can be manipulated, sorted, ordered, quantified, and measured. Ensure shelves are well organized with labeled bins full of objects that are easily accessible and of interest to children (organize by type, size, color). Include age-appropriate games, puzzles, texts and writing materials of varying degrees of difficulty to engage all children. Include a work table in the area for children to spread out as they play. Ensure number lines are visible not only on the wall, but also on flat surfaces so children can really inspect how numbers are written and the representations.

Incorporate mathematical thinking and vocabulary across learning centers, activities, and play. Look around at the other centers in the classroom and embed naturally occurring math concepts and vocabulary. Set up materials for play that will maximize the use of math as children play with each other and with adults. In the dramatic play center, include play money, cash register, measuring devices for cooking, etc. Highlight mathematical thinking while engaging in play scenarios (e.g., “Oh, I need four eggs to make our breakfast. Can you help me count them out?”) Model language to express mathematical concepts (e.g., “Wow! You have *more pieces* than I do! I have *less*” “I am going to drive my car *up* the ramp” “Can you fill one cup with sand?” “We need the same number of blocks to make the road. Do we have the same number?”). Create opportunities for children to use shapes and patterns in the art center (e.g., creating patterns using different noodle shapes to create patterns, manipulating shapes to design landscapes). Create indoor and outdoor games that engage mathematical thinking (e.g., a large number line on the ground and dice to see how many spaces to jump). For more ideas and examples in practice, visit: <https://www.youtube.com/watch?v=JEdWdE0I6r8> and <https://www.youtube.com/watch?v=TLmm3U0eYX4>.

Use classroom routines to reinforce math thinking. Use shapes and shape names throughout your classroom (e.g., shapes on circle time rug, shapes to represent learning center types). Incorporate and emphasize mathematical vocabulary during every day routines (e.g., “Akeel is the first in line. Who is last in line today?”, “We have three groups of snacks today – apple slices, pretzels, and cheese,” “Five more minutes for center time,” “What happens after lunch?”).

Select books with mathematical concepts. Use shared book reading as an opportunity to engage in group math games and dictations (e.g., “Do you think Mrs. McTats has more or less cats?”). Use props (felt board/pieces, charts, number line) to help tell the story and make abstract concepts come to life. When planning, anticipate key common words and rare words to post on a word wall and in appropriate centers.

<https://www.naeyc.org/files/tyc/file/MathbookslistSchickedanzexcerpt.pdf>

Math Manipulatives and Games Center	Ready to go	Needs work	Ideas/Notes
Dedicated area which includes collections of objects, art materials, sorting bins, graph paper, materials for making patterns (e.g., stickers, dots, noodle shapes)		✓	<i>Example: Design a special sorting game for small group work using the bins and talk about the organizing collections by adding one in sequence. Find fun materials to make more interesting.</i>
Posted math visual aids such as number lines (including flat number lines), number lists and representations, calendars, simple graphs, height measurement stick, shapes used in labels, patterns	✓		
Add math manipulatives, e.g., pegs, sorting materials, Cuisenaire rods, geoboards, nesting and linking cubes, shape patterns, abacus, counting beads, measuring tools (length, volume), scales. Cluster water/sand with math area with measuring devices		✓	<i>Example: Cluster sand/water table with math center – use authentic measuring devices.</i>
Games: number-based board games, number puzzles, pattern based games, games that use dice or number spinners, matching games, game cards, Tablet math games	✓		
Books that feature counting, themes with shape patterns, comparisons,	✓		
Incorporate authentic math-oriented materials into other centers, e.g., play money, cash register, clock, shapes, signs/symbols		✓	<i>Example: Add real coupons to class grocery area. Add measuring cups, teaspoons and table spoons to sand/water table.</i>

Science (Science and Discovery Center)

Design a dedicated science learning center that is clustered with the sand/water table and other sensory materials. Arrange a science area that includes materials, props, and books about earth and space, living things, and physical sciences. This is one area in particular that teachers change often to reflect what is being worked on in class. Include exploratory devices that allow children to use their senses, make guesses, observe and experiment (e.g., magnifying

glass, terrarium, microscopes, droppers, charts). Early learners are naturally inclined toward scientific inquiry – capitalize on that interest by allowing children to question, engage in experiments and observations, talk about and record observations, and think about what it means. The science area can be tricky in terms of room arrangement since some experiments and discussions can get noisy and messy, while others require quiet\calm spaces (e.g., classroom pets, observations). Pick an area near a window to allow light for plants to grow, to use for experiments with light catchers. Remember to think of the science center as a natural extension on the theme by converting it into a dramatic play area when possible. For example, during a habitats theme, convert part of the science center into a rain forest by bringing in posters, rainforest sounds, rainforest animal figures, and books.

<https://www.naeyc.org/files/yc/file/200801/BTJRecommendedNatureBooks.pdf>

Science Center	Ready to go	Needs work	Ideas/Notes
Variety of tools and materials for using senses, observing, and experimenting (e.g., natural materials, magnifiers, art supplies for recording, measuring devices, trays, droppers, etc.)	✓		
Props that support children acting as scientists (e.g., safety glasses, lab coats, gloves, clipboards, charts)		✓	<i>Example: Collect used white shirts to serve as lab coats; add clipboards to the section.</i>
Items of interest for exploring movement and motion (e.g., toy cars, ramps, marble runs, pendulums)		✓	<i>Example: Incorporate more play items of interest in the center</i>
Varied work surfaces for individuals and groups (e.g., wall space, tables, floor areas)	✓		
Wall space/areas for displaying observations and descriptions		✓	<i>Example: Create a "What did we observe?" and "How did we discover?" wall space for displaying children's observations, predictions, drawings etc.</i>
Select books about science for whole group time and rotate texts related to theme for the center	✓		

The Arts

Design dedicated areas that encourage creativity and self-expression. Art centers should include opportunities to explore, express and respond to different modes of art. A creative environment provides opportunities for children to express emotions and ideas, experiment with art forms and materials, and practice fine motor skills.

Visual Arts Center	Ready to go	Needs work	Ideas/Notes
Variety of drawing and painting materials for exploring color, form, and texture (e.g., brushes, cotton swabs, straws, eye droppers; paint, crayons, markers, pencils; different paper sizes, colors, textures)	✓		
Three-dimensional construction materials for exploring the relationship of space and objects as well as color, balance, texture, and design (e.g., boxes, wood pieces)		✓	<i>Example: The materials need to be rotated more often to hold children's interest and expand their work</i>
Collections of natural materials (e.g., rocks, sticks, leaves) and common household objects (e.g., beads, string, stickers) for creating pictures and patterns		✓	<i>Example: Have children collect materials during outdoor time</i>
Modeling clay or play dough for sensory exploration (e.g., rolling, pinching, squeezing, patting, cutting, molding)	✓		
Varied work surfaces for individuals and groups (e.g., easels, tables, floor areas)		✓	<i>Example: Easels and tables are provided but need to find space for creating large wall murals and banners</i>
Wall space/areas for displaying art work	✓		
Music /Dance/Creative Movement Center	Ready to go	Needs work	Ideas/Notes
Audio station with cassette/CD player or computer for listening to different styles of music (e.g., jazz, rock, classical, and songs from other	✓		

cultures and in other languages)			
A variety of musical instruments to explore (e.g., drums, cymbals, triangles, maracas)	✓		
Materials for creating instruments (e.g., boxes, strings, rubber bands, cans)	✓		
Various props for creating movements to music and expressing moods (e.g., scarves, streamers)		✓	<i>Example: Props are available, but space is limited in classroom. Explore other options in the building for special performances.</i>
Space for individual or group singing, dancing, and movement activities		✓	
Theatre/Dramatic Activity Center	Ready to go	Needs work	Ideas/Notes
Space to engage in dramatic play and make believe with classmates (e.g., playing the part of different characters in a familiar story or recreating familiar experiences and events)	✓		
Various props for dramatic expression that reflect diversity in gender, culture, and occupations (e.g., home, restaurant, post office, gas station, office, dress up clothes)	✓		
Variety of materials for creating props to recreate stories or represent experiences		✓	<i>Example: Rotate in theme-based props</i>
Variety of puppets and other objects that can represent people, animals, and community life in telling stories/acting out events	✓		
Audio station with books and story and music cassettes/CDs for listening to, telling, recording stories; and expressing moods and feelings	✓		
Space for performances by individuals and small groups (e.g., imitations, movement and music pantomimes, recreations of familiar stories or fairy tales, plays)	✓		

Social Studies

Strategically incorporate social studies concepts across learning centers. Social studies include increasing awareness and understanding in geography, history, civics/citizenship and government, economics, and careers. Social studies also link to social and emotional learning (SEL) in several ways. For example, children’s sense of self (SEL) is a key concept related to the social studies concept of family/classroom/community. Children’s ability to understand and follow rules and get along with others (SEL) are skills related to social studies concepts of civics and citizenship. In prekindergarten, these highly abstract ideas need context and one of the best ways to give them meaning is through learning centers and activities. The chart below provides only a few examples of how to build social studies concepts into learning centers.

Social Studies Across Centers	Ready to go	Needs work	Ideas/Notes
Blocks/Building: Include play materials representing different types of people, places and areas (farm figurines, varying building types, street signs, topographical features)		✓	<i>Example: Add more art/craft supplies so children can make their own materials (e.g., draw a pond or lake prop, craft building from shoe boxes)</i>
Math and Games: Games with rules and that require team work	✓		
Science and Discovery: Posted maps/depictions of familiar places	✓		
Art: Projects and displays and demonstrations of art that represents different cultures and regions (visual art, music/instruments, types of clothing, dances)		✓	<i>Example: Set up an all about me project where kids draw or craft about themselves and their family. Then set up a walking tour allowing the children to talk about their project.</i>
Dramatic Play: Play scenarios that reflect the types of jobs and services children are familiar with or have learned about through stories/books; food and items that reflect multiculturalism	✓		

Technology

Select and use technology tools in intentional and developmentally appropriate ways. Preschool classrooms should be places where children are exploring, discovering, and experimenting through hands-on experiences and ample child-teacher interactions. Technology is a natural “tool” in the preschool environment that teachers can use to create high-quality learning experiences.

Provide opportunities for children to explore different types of technology in multiple formats. Create play activities and facilitate projects that allow children to work with a variety of tools and materials (e.g., glue, tape, paper, plastic, straws, wood) to discover what works and what doesn’t. For example, a group project to build a structure. Allow ample time for the children to talk about what they are doing, thinking, and discovering.

Incorporate authentic uses of technology into different learning centers. For example, digital/interactive books and audio books for following printed books in the library/listening center, digital cameras and computer art programs in the art center, telephone and appliances in dramatic play, microscopes in science center, computer math games/puzzles in the math center.

Provide equal access for children to operate and become familiar with computer systems (e.g., keyboard, monitor, touch screen, mouse, printer). Children will come with varied levels of experience with technology. Teachers should ensure that all children have supported opportunities for hands-on experience.

The following are some examples of how technology and media might be used in the preschool classroom from the National Association for the Education of Young Children and the Fred Rogers Center for Early Learning and Children’s Media at Saint Vincent College
http://www.naeyc.org/files/naeyc/PS_technology_Examples.pdf.

Technology Tools and Interactive Media: Preschoolers and Kindergarteners

- ✓ Allow children to freely explore touch screens loaded with a wide variety of developmentally appropriate interactive media experiences that are well designed and enhance feelings of success.
- ✓ Provide opportunities for children to begin to explore and feel comfortable using “traditional” mouse and keyboard computers to use Websites or look up answers with a search engine.
- ✓ Capture photos of block buildings or artwork that children have created; videotape dramatic play to replay for children.
- ✓ Celebrate children’s accomplishments with digital media displayed on digital projector or on classroom Website.
- ✓ Incorporate assistive technologies as appropriate for children with special needs and/or developmental delays.
- ✓ Record children’s stories about their drawings or their play; make digital audio or video files to document their progress.
- ✓ Explore digital storytelling with children. Co-create digital books with photos of the children’s play or work; attach digital audio files with the children as the narrator.
- ✓ Share e-books with a small group of children.
- ✓ Use digital microscopes and other science materials to capture images and store them on a computer.
- ✓ Search digital files for photos of places, people, animals, or objects and converse with children about what they are finding.

- ✓ Use a video-conferencing software to communicate with families and children in other places.
- ✓ Arrange play experiences for children to construct and explore their ideas about how technology works.
- ✓ Provide access to photographs and experiences children may not otherwise encounter (a visit to the crayon factory, for example, or images of people and places not represented in their environment)

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3. Key Terms and Definitions

Activities/Projects/Expeditions: Teacher-planned or child-initiated activities that involve the whole class – either in a whole group setting or with smaller groups of children that link to the theme and used as a mode of instruction to strengthen skills. For example, the class theme might be “Earth and Space” and a class activity might be to build a large rocket ship using large shipping boxes which then becomes part of the dramatic play center. Small groups of children may work on different parts of the rocket. Teachers are actively engaging children in scientific thinking, promoting observations, scaffolding, and expanding language.

Assessment: An integral aspect of the instructional cycle that helps teachers understand what children know and are able to do in order to adjust and plan learning environments and instruction to keep learning moving forward. In early childhood, assessment is primarily done through teacher observation of children in action (at play and during activities) and performance assessment. It often includes samples of work to build a portfolio and show progress over time. Information is documented, analyzed, and then used to adjust and plan further instruction. For more information about the different types of assessment, see the New York State Education Department, Office of P-12 Education, Office of Early Learning’s OEL Newsletter, Volume 2, Issue I October 2015.

Curriculum: The content of what is being taught. Curricula include all domains of learning, follow a developmental sequence, align to the Prekindergarten Foundation for the Common Core, and link to school standards. Curricular expectations are modified to meet the individual needs of children in the class and are designed to allow children to work at different levels on different activities.

Instruction: How things are taught – the approach and strategies. In a preschool setting, instructional approaches are developmentally appropriate, differentiated, responsive, and includes ample play-based experiences and frequent one-to-one language interactions between adults and children. Instruction includes a mix of whole group, small group and individual interaction with teachers and other staff. Instruction attends to how preschool

Teachers ensure meaningful *play* and *practice* when they:

- Plan adequate time, space, materials and flexible, heterogeneous grouping primed for language interactions
- Develop rich content linked to themes (preparatory experiences, prompts, materials)
- Set up environments for extended, focused play
- Provide a range of materials to meet various developmental levels and needs
- Engage in play with children, scaffolding experiences, engaging shy or timid children, promoting curiosity, and extending language
- Provide for different types of play (functional, constructive, sociodramatic, games with rules)

children build knowledge and skills by beginning with and building on children's existing understanding.

Instructional Cycle: Teaching and learning is a cyclical and on-going process that includes planning, teaching, assessing, reflecting and adjusting. The instructional cycle essentially asks: What skills/goals should I be teaching? How do I teach them? How do I determine what children understand and are able to do? How do I make sense of the information? How do I adjust and modify to keep learning moving forward? An illustration that includes more detailed information about each part of the cycle is provided at the end of this section to illustrate how the pieces work together.

Learning Centers: Specially designated, active learning areas in a classroom where children have opportunities to practice and play. Learning centers should be dynamic and serve as an instructional tool that links to the curriculum, themes or units.

Learning Environment: The whole classroom environment, including physical space, furnishings, materials, learning centers, routines, schedule, class size, staffing, culture and climate. The learning environment is emphasized in the early years because it strongly influences what is learned, how it is learned, and if it is learned.

Play: In the early years, including kindergarten, play is a context for learning and understanding. There are multiple types of play: 1) *functional* – involves simple sensorimotor activities that involves using senses and muscles to experiment with materials and learn how things go together; 2) *constructive* – involves handling materials with purpose to represent something, discovers different uses for materials and that actions are purposeful and goal oriented; 3) *socio-dramatic/pretend play* – includes acting out roles, involves planning and prior knowledge or learning; and 4) *games with rules* – including formal games and invented games, involves planning and collaboration. Play should occur in multiple contexts throughout the daily schedule, including free play, teacher-structured activities, center choice, indoor/outdoor group games etc.

Practice: Teacher-planned or child-initiated opportunities for practicing a new skill. In preschool, teachers can develop activities, projects, expeditions, games, routines, and environments that allow children to practice new skills in ways that are engaging.

Themes or Units: An organizing/planning framework for the curriculum that provides context for abstract concepts. The theme provides a context for enriching learning centers, developing special class projects/activities, identifying texts, building vocabulary etc. Themes should be rich so there are many things to talk about and do related to the theme and be of interest to the whole class.

4. Instructional Cycle Infographic



5. School-wide Reflection Worksheet

Program Improvement, Resources and Supports: Cognition and General Knowledge				
	CURRENT STATUS			Next Steps
	Already in Place	N/A	Area to Develop	
<p>A. Program Leadership Principal/site manager:</p> <ol style="list-style-type: none"> 1. Identifies professional development, materials and other resources to support cognition and general knowledge. 2. Ensures equitable access of materials and resources across all preschool classrooms. 3. Is familiar with what learning centers and environment in preschool looks and sounds like. 				
<p>B. Research-Based and Effective Curriculum and Instruction in Support of State and District Standards Principals/site managers ensure that:</p> <ol style="list-style-type: none"> 1. All classroom educators receive training about how to design curriculum that includes cognition and general knowledge in developmentally appropriate ways. 2. Classroom staff have access and resources to select books and materials to support instruction. 3. Learning centers are used as extensions/enrichments that support the curriculum. 				

	CURRENT STATUS			Next Steps
	Already in Place	N/A	Area to Develop	
<p>C. Supporting Teachers in the Classroom</p> <p>Principals/site managers ensure that:</p> <ol style="list-style-type: none"> 1. Teachers have opportunities and access to coaches or mentors to strengthen cognition and general knowledge, including how to use materials and resources, engage children, and set-up learning environments. 2. Teachers receive feedback about their implementation of practices and techniques. 3. Paraprofessionals and volunteers are included in training and feedback opportunities. 				
<p>D. Engaging Families and Community</p> <p>Principals/site managers ensure that:</p> <ol style="list-style-type: none"> 1. School/preschool program has ongoing and reciprocal communication with parents about what and how children are learning. 2. School/preschool program provides information to families in ways they understand about cognition and general knowledge and ways they can support children's development. 3. School/preschool program provides paid time for staff to learn about children's interests and activities. 				

6. Resource Set References and Resources

Center for Early Childhood Education at Eastern Connecticut State University.

https://www.youtube.com/channel/UCmPfoBQuol_sPfOpr0WzH9Q

Enz, Billie, Christie, James F. (1993) Teacher Play Interaction Styles and Their Impact on Children's Oral Language and Literacy Play. Charleston, SC. Paper presented at the Annual Meeting of the National Reading Conference.

NAEYC and Fred Rogers Center for Early Learning and Children's Media at Saint Vincent College. (2012). A joint position statement: Technology and Interactive Media as Tools in Early Childhood Programs Serving Children from Birth through Age 8.

http://www.naeyc.org/files/naeyc/PS_technology_WEB.pdf

New York State Education Department (2014). Open-ended Art Supply List.

<http://www.p12.nysed.gov/earlylearning/>

New York State Education Department (2015). Integrated Instruction.

http://www.p12.nysed.gov/earlylearning/documents/OELResource_IntegratedInstruction.pdf

Preschool Development Grants (2015). *Early Learning Language and Literacy Series*.

<https://pdg.grads360.org/#program/early-learning-language-and-literacy-series>. Module 12:

Physical Environments to Promote Early Language and Literacy. Washington, DC: U.S.

Department of Health and Human Services and U.S. Department of Education.

Texas Early Learning Council (2013). *Partners in action: A mentoring toolkit for early childhood providers*. Houston, TX. <http://www.earlylearningtexas.org/mentoring-toolkit.aspx>

The University of the State of New York. (1998). *Preschool planning guide: Building a foundation for development of language and literacy in the early years*. Albany, NY: The State Education Department.

The University of the State of New York. *New York State Prekindergarten Foundation for the Common Core*. Albany, NY: The State Education Department.

U.S. Department of Education, Planning and Evaluation Service, Building Strong Foundations for Early Learning: Guide to High-Quality Early Childhood Education Programs, by M. Christine Dwyer, Robin Chait and Patricia McKee. Washington, DC: 2000.