

Play and Learning in the Primary Years

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During the school day, there should be opportunities for children ages 3-8 to gain a deeper understanding of academic concepts through play. Children's play needs to be encouraged as an essential part of their healthy development. A wide variety of play experiences is necessary to develop a complex and integrated brain.

Research collected as part of the report *Crisis in the Kindergarten: Why Children Need to Play in School* (2009) shows that children are spending fewer than 30 minutes a day in purposeful play or choice time in the kindergarten classroom, even less in grades 1-3. In contrast, young children are spending four to six times longer on formal math and reading instruction.

Our Biological Need to Play

Starting from birth, play serves to strengthen the synaptic connections in the brain. During the age range of 3 to 8 years, the synaptic connections in motor and sensory areas of the brain are well-established and are starting to become more organized. The American Association of Pediatrics (2007) released a report about the importance of play in the early years and stated that play needs to be encouraged as an essential part of children's healthy development and that active child-centered play is a time-tested way of producing healthy, fit young bodies.

Due to the rapid growth of the frontal cortex (cognitive thinking, logic skills, problem-solving skills) during this age range, children's play is at its most elaborate and complex. Through their play, children demonstrate their increasing ability to think symbolically and their abilities to self-regulate and explain their thinking.

A wide variety of play experiences is necessary to develop a complex and integrated brain. Play is important not only for enhancing children's physical skills, but also for the development of self-regulation, cognition, executive functions, language, social skills, emotional regulation, and creativity. Play that integrates sensory, motor, cognitive, and social-emotional experiences provides an ideal setting for developing the brains of young children.

Purposeful Play in the School Environment

Within the framework of the school day, children should have opportunities to manipulate materials and gain deeper understanding of academic concepts through play experiences. Classrooms that provide these opportunities often call play "center time," "choice time," or "work time." Regardless of its name, it is a time reserved for child-initiated play activities.

Although these play experiences are led by children, the teacher and other adults play a major role in the learning that occurs within the children's explorations. The teacher sets up the environment to provide structure to the play experiences, such as setting out new materials in interest areas that will help children further explore academic concepts. The teacher and paraprofessionals engage with children during their play experiences and infuse vocabulary into children's play and peer conversations. In addition, the adults support and foster the children's use of problem-solving skills during these activities.

The characteristics of true play are:

- 1) physically and mentally active;
- 2) enjoyable, flexible, and changing;
- 3) focused on the process not the product or the result; and
- 4) children have some ability to decide what to do, when to do it, and how to do it.

Play in learning or interest centers provides an opportunity for children to try out their ideas and theories and make sense of the academic concepts they are learning through more highly structured, teacher-led instruction. Copple and Bredekamp (2009) in their revised third edition of *Developmentally Appropriate Practice in Early Childhood Programs Serving Children from Birth through Age 8* call for teachers to allocate "extended periods of time in learning centers (60 minutes or more in full-day and at least 45 minutes in half-day kindergarten) so that children are able to get deeply involved in an activity at a complex level."

During child-initiated experiences, the teacher should be engaged with children to ensure that structure and learning

are occurring. This is one of the best ways for the teacher to observe and understand what children know and can do. Providing time for play does not mean that “anything goes” in the classroom. It also does not mean that the teacher prescribes how children will play during the child-led portion of the day.

Classrooms that are disproportionately teacher directed have been shown to be counterproductive to the development of self-regulation because children change rapidly from one task to another, often at the direction of the teacher, and are not allowed to engage deeply with one material for a long period of time.

A Picture of Purposeful Play

Jack returned to school from winter vacation with his new bottle of bubbles. Addison, his friend, said, “You can’t blow bubbles in the wintertime, it’s too cold! They will freeze.” “They will NOT freeze,” Jack exclaimed. Several children expressed their agreement with Jack. Some also agreed with Addison. The teacher, noticing a great learning opportunity, said, “How do you think we could find out?” Several children shouted, “Let’s go outside and see what happens!” The wind chill was very low that day so the children didn’t go out but the classroom paraprofessional had an idea: “I will go out and you can come to the window and see what happens.” The children gathered around the classroom window, making predictions (LA 0.3.1.a., SC 1.2.1) about what would happen to the bubbles. As the students were making their predictions, the teacher was writing their ideas down (LA 0.1.1.b). The paraprofessional blew the bubbles, and they popped on the

windows of the classroom and froze. This provided a canvas of bubbles of various sizes and shapes for the children to investigate (SC 1.1.1).

The next day, the teacher modified the pre-existing lesson plans to follow the children’s interests and created opportunities to enhance the students’ excitement. The students listened to a shared reading (LA 0.3.2.a), then reviewed their predictions from the chart from the day before (LA 0.2.1.a). In preparation for the day, the teacher placed a number of new stations around the room for children to use during center time. The center time experiences allowed for children to select where they would play each day. Students had the option to move from center to center or to stay at one center for many days. The regular work centers (housekeeping, dramatic play, reading, block, and manipulatives) continued to be available to the children as well. The teacher set up the learning environment and during center time circulated throughout the room engaging with children, observing, documenting, and supporting their learning.

Center Time Options

- A tub of bubble solution with wands for students to blow bubbles (SC 1.2.1).
- There is paper and paint, along with bubbles, for students to “bubble paint.”
- Along with these materials, the teacher has provided writing tools for the students who are ready or interested in writing or labeling their bubble picture (LA 0.2.1.a, LA 0.2.1.b, LA 0.2.1.c, LA 0.2.2.a).

Throughout this activity the teacher designed opportunities for the students to	Incorporating Nebraska Language Arts (LA), Math (MA), and Science (SC), Standard(s)/Indicator(s)
Read and be read to and engage in the writing process.	LA 0.3.2.a (listening skills); LA 0.1.1.b (purpose of print); LA 0.1.5.c (awareness of context clues); LA 0.2.1.a, LA 0.2.1.c (writing process skills)
Talk with teachers and peers and write about their predictions, construct new ideas and theories, and describe (orally and graphically) their processes and findings.	LA 0.3.1.a (communicate ideas orally); LA 0.3.3.b & LA 0.3.3.c (reciprocal communication); LA 0.2.2.a (writing genre skill); LA 0.3.2.a, LA 0.3.2.b, LA 0.3.2.c (listening skills) SC 1.2.1 (scientific inquiry)
Engage in meaningful conversations with peers surrounding the process and outcomes of their work during center time.	LA 0.3.1.a (speaking skill); LA 0.3.2.a (listening skill); LA 0.3.3.b, LA 0.3.3.c (reciprocal communication skills)
Draw representations of bubbles and represent their process for creating and using bubbles.	LA 0.2.1.c (representations of ideas) SC 1.2.1 (scientific inquiry)
Use math and science skills in a meaningful and authentic setting, including active measurement and engagement in the scientific process.	MA 0.1.1a, MA 0.1.1.b (counting); MA 0.2.1 (name two-dimensional objects) SC 1.1.1 (using senses for observation); SC1.1.4 (understanding form and function); SC 1.2.1 (scientific inquiry); SC 1.3.1 (differences between solids, liquids, and gasses)

- There are pipe cleaners and bendable wire at another station for kids to try to create bubbles of different shapes.
- There is a clipboard for students to make their plans or represent their ideas (LA 0.2.1.b, LA 0.2.1.c, SC 1.1.4, SC 1.2.1).
- At another station, different liquids are available for students to make their own bubbles.
- Students who would like to may write their bubble recipe on a card to add to the class's bubble book (LA 02.2.a, SC 1.2.1, SC 1.3.1).

A few of the children were so interested in bubbles that they continued to return to the bubble activities for several days, exploring in many different ways — catching them, naming colors within the bubbles, measuring the size of the bubbles (SC 1.1.3), talking about what bubbles are made of (SC 1.3.1), seeing how high the bubbles would go, and designing bubble representations in the art center (LA 0.2.1c).

The children's questions continued, "Our bubbles are round; could we make square bubbles (MA 0.2.1, SC 1.1.4)?" Small groups of children had new experiences with bubbles in which they were able to use and extend their new skills. Through these experiences children developed skills in predicting and making hypotheses (SC 1.2.1), sharing information and ideas (LA 0.3.1.a), listening (LA 0.3.2.a), comparing and contrasting, understanding size and shape (MA 0.2.1), and understanding quantities by graphing the number of bubbles each child was able to create (MA 0.1.1.a, MA 0.1.1.b). Children also had to employ their problem-solving skills during their center time experiences with the bubbles (LA 0.3.3.c).

Putting It All Together

Children in the primary years actively look for new experiences, information, and challenges in play. They are problem solvers and investigators! They are able to go beyond their personal interests and family activities to consider others and the world around them. At this age, children are more independent, able to make basic decisions, and peer groups and friendships are formed.

As demonstrated in the bubble activity example, intentionally designing play activities that build upon children's natural curiosity, abilities, and interests is essential to their learning and academic growth, and appropriately links to educational standards and outcomes for children. Play should be purposeful, link to educational standards, be structured and unstructured, child led, and overall, fun and intellectually stimulating. In summary, *it's okay to play* in the primary years!

Resources

A Kindergarten for the 21st Century: Nebraska's Kindergarten Position Statement: <http://www.education.ne.gov/oec/pubs/KStatement.pdf>

Texts4Teachers: <http://extensiontexts.unl.edu>

The Learning Child: www.extension.unl.edu/child

The Alliance for Childhood: <http://www.allianceforchildhood.org/>

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