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What Children Learn



The *Creative Curriculum* framework’s third component is content—what preschool children learn. Experts have developed standards defining what children should know and be able to do by certain grade levels. States and local school districts have adapted these standards. The content children learn in *The Creative Curriculum* is guided by these standards.

Preschool teachers have always taught content. When they made recipe cards so children could count the cups of flour needed to make a cake, they were teaching math. When they challenged children to find out what kinds of leaves a caterpillar liked to eat, they were teaching science.

Today, because of the standards movement, the knowledge base in each content area is more systematic. Also, the emphasis on teaching content is greater than in the recent past. These changes have set a new challenge for the preschool teacher—knowing what to teach and how to present it. *The Creative Curriculum* explains how to teach content in ways that respect the developmental stages of preschool children. This chapter defines the body of knowledge included in each content area and the process skills children use to learn that content.

Literacy—vocabulary and language, phonological awareness, letters, words, print, comprehension, books, and other texts

Mathematics—numbers, patterns and relationships, geometry and spatial awareness, measurement, and data collection, organization, and representation

Science—the physical properties of objects, living things, and the earth and the environment

Social Studies—how people live, work, get along with others, shape, and are shaped by their surroundings

The Arts—dance, music, dramatic play, drawing and painting

Technology—tools and their basic operations and uses

Process Skills—observing and exploring; problem solving; and connecting, organizing, communicating, and representing information

Connecting Literacy Content, Teaching, and Learning

The chart below shows how to connect literacy content, teaching, and learning. The first column outlines the content of literacy for preschool children. The second column shows some of the ways teachers present this content effectively. The last column lists the objectives on the *Developmental Continuum* that you should be watching for as children work. As you watch children you will be able to observe and identify their progress. This information will help you to determine the kinds of content to introduce and the methods you should use.

Literacy Content	What Teachers Can Do	Creative Curriculum Objectives
<p>Increased Vocabulary and Language</p> <p>(Acquire new words and use them to communicate)</p>	<p>Engage in frequent one-on-one conversations with children.</p> <p>Provide children with many firsthand experiences and give them the words that describe what they are doing.</p> <p>Introduce new words during story time using various strategies: explaining; pointing to pictures; using expression, body language, or tone of voice.</p>	<p>3. Recognizes own feelings and manages them appropriately</p> <p>38. Hears and discriminates the sounds of language</p> <p>39. Expresses self using words and expanded sentences</p> <p>40. Understands and follows oral directions</p> <p>41. Answers questions</p> <p>42. Asks questions</p> <p>43. Actively participates in conversations</p>
<p>Phonological Awareness</p> <p>(Hear and discriminate between the separate sounds of spoken words; recognize words that sound the same and words that sound different)</p>	<p>Lead children in singing songs, saying rhymes, and fingerplays.</p> <p>Sing songs, play language games, and say rhymes that encourage children to play with words.</p> <p>Talk about words and sounds during daily activities: "Tasheen and Tyrone—Your names both start the same way!"</p> <p>Read books that play with the sounds in words, such as those by Dr. Seuss.</p>	<p>38. Hears and discriminates the sounds of language</p> <p>46. Demonstrates knowledge of the alphabet</p> <p>50. Writes letters and words</p>
<p>Knowledge of Print</p> <p>(Learn how print works)</p>	<p>Talk about features of print (top-to-bottom, left-to-right) while writing experience charts.</p> <p>Occasionally run your finger under the words as you read a story.</p> <p>As you write with children, draw their attention to symbols such as periods and question marks: "I better put a period here so others will know to stop when they are reading it."</p> <p>Post a sign with pictures and words on what to take for snack.</p> <p>Post sign up sheet for activities.</p>	<p>45. Demonstrates understanding of print concepts</p> <p>46. Demonstrates knowledge of the alphabet</p> <p>47. Uses emerging reading skills to make meaning from print</p> <p>48. Comprehends and interprets meaning from books and other texts</p> <p>49. Understands the purpose of writing</p> <p>50. Writes letters and words</p>

Literacy Content	What Teachers Can Do	<i>Creative Curriculum Objectives</i>
<p>Letters and Words (Identify and write some letters and words)</p>	<p>Display the alphabet at children’s eye level and have alphabet cards available for children to use during play.</p> <p>Add materials such as alphabet puzzles, magnetic letters, foam letters, paper, and pencils to the interest areas.</p> <p>Draw children’s attention to letters and words in the environment as they come up in everyday activities.</p>	<p>21. Uses tools for writing and drawing</p> <p>37. Makes and interprets representations</p> <p>46. Demonstrates knowledge of the alphabet</p> <p>47. Uses emerging reading skills to make meaning from print</p> <p>49. Understands the purpose of writing</p> <p>50. Writes letters and words</p>
<p>Comprehension (Understand and follow what is going on in a book, story, or conversation)</p>	<p>Add storytelling props to the Library Area for acting out a story.</p> <p>Leave off a word at the end of a sentence when reading a predictable book.</p> <p>Ask children open-ended questions while reading: “What do you think will happen next?” “How would you feel if that happened to you?”</p> <p>Encourage children to recall important events in a story: “Do you remember what happened when the wolf blew on the house of straw?”</p>	<p>44. Enjoys and values reading</p> <p>45. Demonstrates understanding of print concepts</p> <p>47. Uses emerging reading skills to make meaning from print</p> <p>48. Comprehends and interprets meaning from books and other texts</p>
<p>Understanding Books and Other Texts (Learn how to use a book and the purpose of books; gain a sense of story; learn about the uses of other texts such as signs, menus, magazines, newspapers, etc.)</p>	<p>Model how to handle books properly and teach children to care for them.</p> <p>Help children find books and magazines to learn more about topics of interest.</p> <p>Add magazines, signs, pamphlets, telephone books, menus, and newspapers to dramatic play areas.</p> <p>Talk about the author and illustrator when introducing a story.</p>	<p>44. Enjoys and values reading</p> <p>45. Demonstrates understanding of print concepts</p> <p>47. Uses emerging reading skills to make meaning from print</p> <p>48. Comprehends and interprets meaning from books and other texts</p> <p>50. Writes letters and words</p>
<p>Literacy as a Source of Enjoyment (Enjoy being read to, reading and writing)</p>	<p>Arrange the Library Area attractively and include high-quality literature and soft, comfortable furniture.</p> <p>Read books to children and encourage them to talk about the story.</p> <p>Place books in all interest area on topics that are relevant.</p> <p>Add interesting materials to the writing area to encourage writing attempts—pencils and pens, stationery, stamps, envelopes, etc.</p>	<p>35. Takes on pretend roles and situations</p> <p>38. Hears and discriminates the sounds of language</p> <p>44. Enjoys and values reading</p> <p>45. Demonstrates understanding of print concepts</p> <p>47. Uses emerging reading skills to make meaning from print</p> <p>48. Comprehends and interprets meaning from books and other texts</p> <p>49. Understands the purpose of writing</p> <p>50. Writes letters and words</p>

Connecting Math Content, Teaching, and Learning

In *The Creative Curriculum*, math content is presented in ways that preschool children learn. The chart below shows how to connect math content, teaching, and learning. The first column shows the content of math for preschool. The second column shows some of the many ways teachers can present this content effectively. The last column lists the objectives on the *Developmental Continuum* you should be watching for as children explore concepts in math. As you watch children engage in these activities, you will be able to observe and identify children’s developmental progress. This information will help you to determine the kinds of math content to present and the methods to use.

Math Content	What Teachers Can Do	<i>Creative Curriculum</i> Objectives
<p>Number Concepts</p> <p>(Understand numbers, ways of representing numbers, and relationships between numbers)</p>	<p>Teach children counting songs, rhymes, and chants: “1, 2, 3, 4, 5, I caught a fish alive.”</p> <p>Count during daily activities—the children present, the cups needed for each child, the paintbrushes needed for each container.</p> <p>Encourage child to compare relationships between quantities: “Do we have more red caps or more blue caps?”</p>	<p>22. Observes objects and events with curiosity</p> <p>23. Approaches problems flexibly</p> <p>28. Compares/measures</p> <p>33. Uses one-to-one correspondence</p> <p>34. Uses numbers and counting</p>
<p>Patterns and Relationships</p> <p>(Recognize, copy, extend patterns; make predictions about patterns in the environment)</p>	<p>Clap hands then pat thighs in a pattern (clap, pat, clap, pat). Later move to more complex patterns (clap, clap, pat, clap, clap, pat).</p> <p>Create “people patterns” with children (stand, sit, stand, sit) and help them describe the pattern.</p> <p>Draw children’s attention to various patterns in the environment: “I see a pattern in your shirt today—red, blue, red, blue.”</p> <p>Describe patterns you see children creating: “You made a pattern with the blocks—square, triangle, square, triangle.”</p>	<p>22. Observes objects and events with curiosity</p> <p>23. Approaches problems flexibly</p> <p>27. Classifies objects</p> <p>28. Compares/measures</p> <p>30. Recognizes patterns and can repeat them</p> <p>37. Makes and interprets representations</p>

Math Content	What Teachers Can Do	<i>Creative Curriculum Objectives</i>
<p>Geometry and Spatial Sense</p> <p>(Recognize, name, build, draw, describe, compare and sort two- and three-dimensional shapes; recognize and describe spatial relationships)</p>	<p>Talk about the geometric shapes as children use blocks or shape blocks.</p> <p>Provide empty boxes, tubes, and containers for children to use in creating and constructing.</p> <p>Take children on a walk looking for shapes in the environment.</p> <p>Describe spatial relationships you notice as children play: "You're putting the horse inside the fence you made."</p>	<p>22. Observes objects and events with curiosity</p> <p>23. Approaches problems flexibly</p> <p>27. Classifies objects</p> <p>28. Compares/measures</p> <p>32. Shows awareness of position in space</p> <p>37. Makes and interprets representations</p> <p>39. Expresses self using words and expanded sentences</p>
<p>Measurement</p> <p>(Use non-standard units to measure and make comparisons)</p>	<p>Show children how to use objects to measure things: "Look. This table is five blocks long."</p> <p>Use a sand timer or kitchen timer to let children know that there are only five minutes left until clean-up time.</p> <p>Ask open-ended questions during measurement activities: "I wonder how many cups of water your pitcher will hold."</p> <p>Use words like before, after, next, yesterday, today, tomorrow throughout the day: "Tomorrow is Leo's birthday."</p>	<p>22. Observes objects and events with curiosity</p> <p>23. Approaches problems flexibly</p> <p>27. Classifies objects</p> <p>28. Compares/measures</p> <p>29. Arranges objects in a series</p> <p>31. Shows awareness of time concepts and sequence</p> <p>34. Uses numbers and counting</p>
<p>Data Collection, Organization, and Representation</p> <p>(Pose questions to investigate, organize responses, and create representations of data)</p>	<p>Pose a "question of the day." Show children how to make tally marks under "yes" or "no" on a clipboard: "Do you like to wear your shoes at nap time?"</p> <p>Graph collections of objects found in the classroom such as stickers, leaves, rocks, shells, buttons, etc.</p> <p>Have the children form a "people graph" in response to your questions: "Are there more children here with brown hair than blonde hair?"</p> <p>Ask questions such as, "How did you make your group?" "Where does this one go?" "How are these two alike?"</p>	<p>22. Observes objects and events with curiosity</p> <p>23. Approaches problems flexibly</p> <p>27. Classifies objects</p> <p>28. Compares/measures</p> <p>29. Arranges objects in a series</p> <p>30. Recognizes patterns and can repeat them</p> <p>33. Uses one-to-one correspondence</p> <p>34. Uses numbers and counting</p> <p>37. Makes and interprets representations</p>

Science Content	What Teachers Can Do	Creative Curriculum Objectives
<p>Physical Science</p> <p>(Explore the physical properties of the world by observing and manipulating common objects and materials in the environment)</p>	<p>Include science materials such as magnets, magnifying glasses, balance scales, pulleys, and mirrors to encourage exploration.</p> <p>Use open-ended questions to further investigations: "I wonder why this big toy boat floats but the penny sinks."</p> <p>Describe physical changes you see taking place: "When your blue paint ran into the yellow paint, it turned green!"</p> <p>Include old small appliances or broken toys on a "take-apart" table to help children learn how things work.</p>	<p>22. Observes objects and events with curiosity</p> <p>25. Explores cause and effect</p> <p>26. Applies knowledge or experience to a new context</p> <p>27. Classifies objects</p> <p>28. Compares/measures</p> <p>29. Arranges objects in a series</p> <p>30. Recognizes patterns and can repeat them</p> <p>32. Shows awareness of position in space</p>
<p>Life Science</p> <p>(Explore living things, their life cycles, and their habitats)</p>	<p>Add living things such as plants and pets to the classroom environment and study them.</p> <p>After planting seeds with the children, provide markers and paper so they can observe and record the growth over time.</p> <p>During a study of houses, talk with children about different kinds of animal homes such as bird's nests, beehives, anthills, etc.</p> <p>Observe and discuss life cycles of animals such as butterflies and frogs.</p> <p>Help children learn about health and their bodies every day: "Can you feel your heart pounding after running so much?" "Those carrots you're eating are so good for you."</p>	<p>7. Respects and cares for classroom environment and materials</p> <p>12. Shares and respects the rights of others</p> <p>22. Observes objects and events with curiosity</p> <p>25. Explores cause and effect</p> <p>26. Applies knowledge or experience to a new context</p> <p>31. Shows awareness of time concepts and sequence</p>
<p>Earth and the Environment</p> <p>(Explore the properties of the world around them, notice changes, and make predictions)</p>	<p>Lead a discussion about things we do during the day and things we do at night.</p> <p>Paint with water on the sidewalk and talk about why it disappears.</p> <p>Talk about the seasons as you notice the changes in your environment: "I can tell fall is here. The leaves are turning red, yellow, orange, and brown."</p> <p>Discuss the weather each day while preparing to go outdoors: "Jeremy, will you check the weather outside today? Do we need to wear sweaters?"</p>	<p>7. Respects and cares for classroom environment and materials</p> <p>25. Explores cause and effect</p> <p>26. Applies knowledge or experience to a new context</p> <p>27. Classifies objects</p> <p>28. Compares/measures</p> <p>31. Shows awareness of time concepts and sequence</p> <p>32. Shows awareness of position in space</p>

Connecting Social Studies Content, Teaching, and Learning

The *Creative Curriculum* teacher focuses social studies instruction on the world of the children in their class—where they live and what they see around them. The chart below shows how to connect social studies content, teaching, and learning. The first column outlines the general content of social studies for preschool. The second column shows some of the many ways social studies teachers can present this content effectively. The last column lists the objectives on the *Developmental Continuum* you should think about as children work on social studies content. As you watch children engage in these activities, you will be able to observe and identify children’s developmental progress. This information will help you to determine the kinds of social studies content to present and the methods to use.

Social Studies Content	What Teachers Can Do	<i>Creative Curriculum</i> Objectives
<p>Spaces and Geography</p> <p>(Learn about the physical world around us and how we move about the world)</p>	<p>Provide board games like <i>Chutes and Ladders</i> as a way of introducing beginning mapping skills.</p> <p>Create an obstacle course for children to maneuver around and through.</p> <p>Mark the shadow of a tree or a flagpole at different times of the day and talk about why it changed.</p> <p>Draw children’s attention to the physical properties of the earth as they dig in the dirt and create mud by adding water: “There are lots of small rocks in the dirt you’re digging. Would you like a sifter?”</p>	<p>22. Observes objects and events with curiosity</p> <p>23. Approaches problems flexibly</p> <p>25. Explores cause and effect</p> <p>26. Applies knowledge or experience to a new context</p> <p>32. Shows awareness of position in space</p> <p>37. Makes and interprets representations</p>
<p>People and How They Live</p> <p>(Recognize and respect likenesses and differences in people; recognize how people rely on each other for goods and services; learn social skills; understand the need for rules)</p>	<p>Create rules about getting along and cooperating in the context of real problems as they come up: “There seemed to be a problem at the sand table today. Is there a rule we could make so everyone has enough room to play?”</p> <p>Provide paint, crayons, markers, and construction paper in various skin tones.</p> <p>Invite families to participate in the classroom and share aspects of their culture.</p> <p>In the Dramatic Play Area introduce new props that focus on jobs—flower shop, auto repair, restaurant, grocery store.</p> <p>Visit different stores in the neighborhood and discuss the jobs people do.</p>	<p>1. Shows ability to adjust to new situations</p> <p>3. Recognizes own feelings and manages them appropriately</p> <p>4. Stands up for rights</p> <p>9. Follows classroom rules</p> <p>10. Plays well with other children</p> <p>11. Recognizes the feelings of others and responds appropriately</p> <p>12. Shares and respects the rights of others</p> <p>13. Uses thinking skills to resolve conflicts</p> <p>26. Applies knowledge or experience to a new context</p>

Social Studies Content	What Teachers Can Do	<i>Creative Curriculum Objectives</i>
<p>People and the Environment</p> <p>(Learn how people affect the environment by changing it and protecting it)</p>	<p>Provide junk that can be used to create sculptures.</p> <p>Plant trees in the schoolyard and help children collect trash.</p> <p>Talk about changes that take place in the immediate environment (a fire that destroys the woods, fish that die as a result of pollution, trees that are cut down to make way for a road or a parking lot).</p> <p>Set aside and sort plastic, paper, and metal to be picked up for recycling.</p> <p>Recycle cardboard tubes and boxes, and use in the Block or Art Area.</p>	<p>7. Respects and cares for classroom environment and materials</p> <p>22. Observes objects and events with curiosity</p> <p>23. Approaches problems flexibly</p> <p>25. Explores cause and effect</p> <p>26. Applies knowledge or experience to a new context</p>
<p>People and the Past</p> <p>(Learn how things and people change over time)</p>	<p>Invite grandparents to talk about their lives as children.</p> <p>Ask children to bring in pictures of themselves as a baby or an article of their baby clothing. Discuss how they have changed over time.</p> <p>Ask children questions that will help them recall the past: "What did you do yesterday when you got home?"</p> <p>Explore toys from long ago. Teach children games you played as a child.</p>	<p>22. Observes objects and events with curiosity</p> <p>25. Explores cause and effect</p> <p>31. Shows awareness of time concepts and sequence</p>

Arts Content	What Teachers Can Do	Creative Curriculum Objectives
<p>Dance</p> <p>(Learn about the body's ability to move and use time and space in different ways)</p>	<p>Offer children scarves and streamers to use as they dance to music.</p> <p>Invite children to move in different ways.</p> <p>Play different kinds of music that inspire children to move quickly (polka) or slowly (lullaby or spiritual).</p> <p>Teach new vocabulary words such as smooth, jerky, gallop, and glide.</p>	<p>14. Demonstrates basic locomotor skills (running, jumping, hopping, galloping)</p> <p>15. Shows balance while moving</p> <p>30. Recognizes patterns and can repeat them</p> <p>35. Takes on pretend roles and situations</p> <p>37. Makes and interprets representations</p> <p>40. Understands and follows oral directions</p>
<p>Music</p> <p>(Develop an awareness of different kinds of music and become comfortable with different forms of musical expression)</p>	<p>Set up an area where children can explore instruments, listen to and create music.</p> <p>Introduce children to music words—rhythm, beat, steady, fast, slow, loud, soft.</p> <p>Teach children songs that might be familiar to their families—folk songs, ballads—so they can sing together.</p> <p>Create songs or chants while pounding clay. Clap rhythmic patterns to music.</p>	<p>25. Explores cause and effect</p> <p>30. Recognizes patterns and can repeat them</p> <p>31. Shows awareness of time concepts and sequence</p> <p>34. Uses numbers and counting</p> <p>35. Takes on pretend roles and situations</p> <p>38. Hears and discriminates the sounds of language</p> <p>40. Understands and follows oral directions</p>
<p>Drama</p> <p>(Communicate a message or story through action or dialogue)</p>	<p>Participate in and encourage children's pretend play.</p> <p>Gather props and invite children to act out familiar stories such as <i>Caps for Sale</i>.</p> <p>Have children show you facial expressions of someone who is happy, sad, angry, tired, excited, or scared.</p> <p>Provide puppets and props and encourage children to act out a story you have read.</p>	<p>3. Recognizes own feelings and manages them appropriately</p> <p>11. Recognizes the feelings of others and responds appropriately</p> <p>32. Shows awareness of position in space</p> <p>35. Takes on pretend roles and situations</p> <p>38. Hears and discriminates the sounds of language</p> <p>39. Expresses self using words and expanded sentences</p>
<p>Visual Arts</p> <p>(Use a variety of media for communication and expression; solve problems using art materials; appreciate many forms of art)</p>	<p>Provide materials children can use to represent their ideas—markers, crayons, paints, clay, collage, wire, wood scraps.</p> <p>Talk about illustration techniques in books, such as torn-paper pictures, watercolors, pastels. Provide materials in the Art Area for children to experiment.</p> <p>Add mirrors to the Art Area and encourage children to look at their own facial features when they draw people.</p> <p>Encourage children to draw pictures to show what they have learned.</p> <p>Display children's work attractively and prominently in the classroom.</p>	<p>3. Recognizes own feelings and manages them appropriately</p> <p>7. Respects and cares for classroom environment and materials</p> <p>19. Controls small muscles in hands</p> <p>21. Uses tools for writing and drawing</p> <p>22. Observes objects and events with curiosity</p> <p>25. Explores cause and effect</p> <p>30. Recognizes patterns and can repeat them</p> <p>32. Shows awareness of position in space</p> <p>37. Makes and interprets representations</p>

Technology Content	What Teachers Can Do	Creative Curriculum Objectives
<p>Awareness of Technology</p> <p>(Gain awareness of technology as a tool for finding information, communicating, and creating)</p>	<p>Offer toy cell phones, cameras, microphones for children to use during play.</p> <p>Point out how technology is used while on field trips: "The computer helps firefighters see a map leading them to the fire."</p> <p>Take videos of children during play and replay them.</p>	<p>22. Observes objects and events with curiosity</p> <p>35. Takes on pretend roles and situations</p> <p>36. Makes believe with objects</p> <p>39. Expresses self using words and expanded sentences</p> <p>42. Asks questions</p>
<p>Basic Operations and Concepts</p> <p>(Learn basic skills to operate technology; use appropriate terminology to communicate about technology)</p>	<p>Show children how to use a mouse, keyboard, or touch screen to operate a computer.</p> <p>Teach children about the picture cues (icons) that will help them navigate through a software program.</p> <p>Use computer terminology when showing children how to use a software program: "I'm going to paste the picture here."</p> <p>Teach children how to exit a program before turning off the computer.</p>	<p>5. Demonstrates self-direction and independence</p> <p>7. Respects and cares for classroom environment and materials</p> <p>19. Controls small muscles in hands</p> <p>22. Observes objects and events with curiosity</p> <p>23. Approaches problems flexibly</p> <p>25. Explores cause and effect</p> <p>37. Makes and interprets representations</p> <p>46. Demonstrates knowledge of the alphabet</p> <p>47. Uses emerging reading skills to make meaning from print</p>
<p>Technology Tools</p> <p>(Understand that there are different tools of technology, and they can be used in a variety of ways)</p>	<p>Encourage children to retell a story into a tape recorder and ask others to listen.</p> <p>Set up a drawing program so children can create a picture to represent what they have learned.</p> <p>Show children how they can use a simple word processing program to type their names or words.</p> <p>Provide tools such as magnifying glasses, balance scales, binoculars to explore and investigate.</p>	<p>22. Observes objects and events with curiosity</p> <p>23. Approaches problems flexibly</p> <p>25. Explores cause and effect</p> <p>26. Applies knowledge or experience to a new context</p>
<p>People and Technology</p> <p>(Understand that technology is controlled by people; use technology safely and responsibly; work collaboratively while using technology)</p>	<p>Show children that by dragging the mouse, they create a line on a paint program.</p> <p>Encourage children to work with a friend to figure out how to navigate through a software program.</p> <p>Develop rules with the children for using the computer safely and properly.</p>	<p>5. Demonstrates self-direction and independence</p> <p>22. Observes objects and events with curiosity</p> <p>23. Approaches problems flexibly</p> <p>25. Explores cause and effect</p> <p>26. Applies knowledge or experience to a new context</p>